GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(IA DIVISION-INDUSTRY-3 SECTOR)
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Dated: 02.02.2023

MINUTES OF THE 45th EXPERT APPRAISAL COMMITTEE (INDUSTRY-3 SECTOR) MEETING HELD ON 11th- 13th JANUARY, 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 44th Meeting of the EAC (Industry-3 Sector) held during December 16th and 19th 2022 through VC.

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

Subsequently, one PP of 43rd EAC meeting requested for a few modifications in the MoM. The EAC confirmed the MoM with the following modifications.

Agenda No. 43.8

Expansion in manufacturing unit of Phthalocyanine Blue (0 TPD to 4 TPD), Di-Nitroso Tetramine Pentamethylene (1 TPD to 2 TPD) and Hexamine (0TPD to 8 TPD) located at Hadbast No. 29, Sampla Kharkhoda Road, Village Hasangarh, Tehsil Sampla, District Rohtak, Haryana by M/s Haryana Polymers Limited - Consideration of ToR (under violation category)

[Proposal No. IA/HR/IND3/403607/2022; File No. No. IA-J-11011/266/2022-IA-II(I)]

1. The proposal was recommended by the EAC in its 43rd Meeting held on 30th November, 1st and 2nd December, 2022 and the MoM were published on 21.12.2022. The PP vide e-mail dated 22.12.2022 requested the following corrections in the MoM:

Reference of MOM	As per MOM	Corrections Required	Ministry's Remarks
Page 50, Title of Project	Expansion in manufacturing unit of Phthalocyanine Blue (0TPD to 4TPD), Di-Nitroso Pentamethylene Tetramine) (1 TPD to 2TPD), and Hexamine (0 TPD to 8.0 TPD) located at Hadbast No. 29,Sampla Kharkhoda Road, Village-Hasangarh, Tehsil-Sampla, District-Rohtak, Haryana by M/s Haryana Polymer.	**Capacity expansion for manufacturing of Phthalocyanine Blue (4 TPD to 10 TPD,** Di-Nitroso Pentamethylene Tetramine (1 TPD to 3TPD), and Hexamine (0 TPD to 8.0 TPD) located at Hadbast No. 29,Sampla Kharkhoda Road, Village-Hasangarh, Tehsil-Sampla, District-Rohtak, Haryana by M/s Haryana Polymer.	Corrected capacity is given in executive summary of PFR of the project on pg. number 7
Point no. 10, Page no. 53	The PP reported that the project, being in notified area, is exempted from the public hearing as per the Ministry's OM.J-111011/321/2016-IA.II(I) dated 27.04.2018	The PP reported that the project site is located **outside the notified industrial area,** Hence, Public Hearing is recommended as per EIA Notification, 2006.	Refer to PFR, Para 1.2, Page no. 4 & 5
Point no. 13, Para 4, Page no. 54,	The EAC noted that the PP reported that Industry is located in the notified industrial area i.e. RIICO. Further, as per Para 7 (i) stage III (i)(b) of EIA notification 2006 (as amended) and in	The EAC noted that the PP reported that Industry is located **outside the notified industrial area.** Hence, Public Hearing is recommended as per EIA Notification, 2006.	Refer to PFR, Para 1.2, Page no. 4 & 5

	pursuant to OM dated 27.4.2018, the Public consultation is exempted for this category i.e. 5(f).		
Point no. 14, Page no. 54,	The Committee, after detailed deliberations, recommended for issuing Standard ToR [Annexure-II] with Public Hearing as the project site is not located in the notified industrial area RIICO	The Committee, after detailed deliberations, recommended for issuing Standard ToR [Annexure-II] **with Public Hearing as the project site is not located in the notified industrial area.**	Refer to PFR, Para 1.2, Page no. 4 & 5
Page 55, Point no. 14(ix)	The State Government/SPCB to take action against the project proponent under the provisions of the Environment (Protection) Act, 1986, and **further no consent to operate to be issued till the project is granted EC**	The State Government/SPCB to take action against the project proponent under the provisions of the Environment (Protection) Act, 1986, and **no consent to operate be issued for CPC Blue** till the project is granted EC.	Refer to PFR, pg. 7

2. The EAC noted that the above modifications are typographical errors and recommended the modifications, as per the above table.

Agenda No. 45.1

Proposed expansion of technical grade pesticides with production capacity 300 MTPA located at UNIT – 2, VPO Nagla Megha, Meerut Road, Khasara No. 36/24 (Khewat No. 317/284 & Khatoni Tehsil Gharounda, District Karnal, Haryana by M/s. Shree Ram Agro India – Reconsideration of EC.

[Proposal No. IA/HR/IND3/401133/2022; File No. IA-J-11011/3/2021-IA-II(I)]

1. The proposal is for environmental clearance for the proposed Expansion of technical grade pesticides with production capacity 300 MTPA located at UNIT – 2, VPO Nagla Megha,

Meerut Road, Khasara No. 36/24 (Khewat No. 317/284 & Khatoni No. 366), Tehsil Gharounda, District: Karnal (Haryana) by M/s. Shree Ram Agro India.

2. The project/activity is covered under Category 'A' of item 5(b) Pesticides industry and pesticide specific intermediates (excluding formulations), of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) and appraised at the Centre.

3. The PP reported that the Public Hearing for the proposed project has been conducted by the Haryana State Pollution Control Board on 9th June, 2022. The main issues raised during the public hearing are related to Employment, Discount to local farmers on the pesticide product, Environment safety, Rate of Pesticide, Water level, VOC Control measures, Water Demand, Quality of pesticide, Online monitoring system of the plant, Mitigation measures taken while construction. The PP applied for Environment Clearance on 4.10.2022 in Form-2 and submitted EIA/EMP Report and other documents. The PP reported in Form-2 that it is a **Fresh EC**. Due to the shortcoming the Proposal was referred back to the PP on 10.10.2022 and the reply for the same has been submitted on 12.10.2022. The proposal was earlier placed in 40th EAC Meeting held on 18-19 October 2022 and was deferred. The proposal is now placed in the 45th EAC Meeting held on 11-13th January, 2023, wherein the Project Proponent and an accredited Consultant, **M/s.Wolkem India Limited** [Accreditation number NABET/EIA/2124/RA0216 up to 5.10.2024], 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 **1846.37** m^2 and no R& R is involved in the Project. The details of products are as follows:

S.No.	Product details (Complete Name)	CAS No.	Existing Quantity	Proposed Quantity	Total Quantity (TPA)	Uses
1	Clodinafop Propargyl	105512-06-9	Nil	150	150	Herbicide
2	Thiamethoxam	153719-23-4	Nil	150	150	Insecticide
Total					**300**	

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 proposed project is an existing formulation unit. All formulation activities have been discontinued with effect from 1st March 2020. This project involves production of new technical grade pesticides of capacity 300 MTPA in existing premises. RO, HSPCB has issued a letter Vide no. HSPCB/KAR/2022/4230, dated 15th September 2022 statin that the unit was not operating on 09.07.2022 and from the site conditions, it also appears that the unit had not run for a long time.

7. The PP reported that there are no National Parks, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from site. No forest land is involved for the proposed project. River Yamuna is flowing at a distance of 2.55 k.m. in ESE direction from the project site. No Schedule-I species exist in the 1 Km study area.

8. **Ambient air quality** - The PP reported that the ambient air quality monitoring was carried out at **8** locations during 1st December 2020 to 28th February, 2021 and the baseline data indicates the ranges of concentrations as: PM_{10} (86.22 µg/m^3 to 55.74 µg/m^3), $PM_{2.5}$ (51.33 µg/$m^3$to 31.99 µg/m^3), SO_2 (11.46 µg/m^3 to 4.11 µg/m^3) and NO_2 (20.13 µg/m^3 to 5.56 µg/m^3). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.22 µg/m^3, 0.45 µg/m^3 and 0.04 µg/m^3 with respect to PM_{10}, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

9. **Noise-** The PP reported that the day time (Leq day) noise levels are observed in the range of minimum 48.2 dB(A). and maximum 74.2 dB(A). The night time (Leq night) Noise levels are observed to be in the range of minimum 40.0dB(A) and maximum 48.0 dB(A).

10. **Ground water** - The analysis results of ground water samples of study area indicate that the quality of ground water is good and suitable for drinking purpose. The water quality at Rameshngar village is very good, over all, the obtained results are meeting the permissible limit of Indian Standard IS: 10500-2012.

11. **Surface water-** No metallic contamination was found in the River water. The water quality of River was found to meet the Best Designated Use – 'D' Criteria of CPCB (i.e. fit for fish propagation).

12. **Soil-** It was observed that levels of Cu, Cd, Fe, Zn were found to be in the range of 16.42 mg/kg, Lalupura village S8 to 29.26 mg/kg Manglaura Oadim village S5, Cd 2.2 mg/kg Lalupura village S8 to 7.6 mg/kg Udpur village, Fe 1.22% Kutali village S7 to 2.98% Udpur Village S4. No toxic metals are observed in the soil-water extract.

13. The PP reported that the water requirement will be **24.63KLD. 13.38 KLD** treated wastewater will be recycled in cooling tower, boiler, scrubber and reactor washing, hence, freshwater requirement for the proposed project will be **11.25 KLD** and will be met through bore-well. Total wastewater generation shall be 16.32 KLD. Industrial effluent of 11.82 KLD will be treated in ETP, MEE and RO and will be reused in process, Boiler, cooling tower, scrubber. Domestic wastewater of 4.5 KLD will be collected in separate collection tank and send to STP for aerobic and anaerobic treatment. The plant will be based on Zero Liquid Discharge system.

14. The PP reported that Power requirement will be **580kVA** and will be met from **UHBVN (Uttar Haryana Bizali Vitaran Nigam)**. Unit has DG Sets of 100 HP capacity DG Sets. Stack (height 15 m) will be provided as per CPCB norms to the proposed DG set.

15. Unit propose **2 MT/Day Rice Husk Briquettes for Boiler**. Additionally, **no** boiler will be installed. Multi cyclone separator/ bag filter with a stack of height of **30 m** shall be installed

for controlling the particulate emissions within the statutory limit of 115 mg/Nm^3 for the proposed boilers.

16. **Details of process emissions generation and its management.**

S. No.	Name of Product	Name of Gas	Gas emission (MT/MT)	Mode of Treatment
1	Clodinafop Propargyl	SO_2	0.350	Wet Scrubber having caustic lye solution.
		HCL	0.200	
		DMF	0.100	**VOC Control system** (vent condensers in series to reactors, distillation columns, driers, centrifuges etc. to mitigate VOCs vapor. Activated carbon absorption system for
		Methanol	0.075	
2	Thiamethoxam	DMF	0.300	
		Methanol	0.100	

17. **Details of solid waste/hazardous waste generation and its management:**

S. No.	HW/Solid Waste	Category	Quantity	Disposal Method
A. Hazardous Waste MTPA				
1	Process Residue	28.1	33.00	TSDF - M/s Gujarat Enviro Protection and Infrastructure (Haryana) (MoU dated 1st June 2022.)
2	ETP Sludge	35.3	45.00	
3	MEE Sludge	35.3	222.00	
4	Empty	……	100 No/M	Sale to Authorized
5	Used/spent oil	5.1	50 L/M	Sale to Authorized
6	Fly Ash (Boiler)	…….	115.00	Sale to bricks manufacturer, M/s Ganesh Bhatta Company (MoU dated 10th February 2022)

18. The Budget earmarked towards Environmental Management Plan (EMP) is ₹ 1.655 Crore (capital) and the Recurring cost will be about ₹ 0.1675 cr per annum. The project proponent is committed towards the CER i.e. (Rs. 0.33 Crore)

19. The PP reported that the industry will develop greenbelt over an area of 33.90 % i.e., 626 m^2 (6738.21sq. ft-33.90%) out of total area of the project.

20. The PP proposed to set up an Environment Management Cell (EMC) by engaging Unit Head-Production manager- Manager/ safety manager- Assistant Manager- Exceutive Enviornment – Executive utilities for the functioning of EMC.

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

22. The PP reported that total gross emission is 8714.535 t Co_2 eq/year. The emissions reduction due to carbon sequestration and avoided emissions (rain water harvesting and renewable energy use) are 1114.897 t CO2 eq. / year 7599.638, Therefore, net emissions= 7599.638 t CO_2 eq. /yr. The emissions reduction that can be achieved is 12.79%- 13%

23. The estimated project cost is Rs. 8.06 crore (Existing: 2.26 Crore, proposed: 5.80 Crore) including existing investment of Rs. 2.26 crore. Total Employment will be 30 persons as 15 direct and 5 indirect persons.

24. The proposal was placed in 40th EAC Meeting held on 18-19 October 2022, wherein the EAC deferred the proposal for want of requisite information. Reply to the same was submitted by the PP on 29.12.2022, which is as follows:

S. No.	Queries Raised by EAC	Reply by PP	Observation of EAC
1.	Green Belt Development per CPCB to be revised	Green belt Plan has been revised and 6738.21 sq. feet (33.90%) area will be covered as greenbelt out of 19874.263 sq. feet	The EAC found the reply submitted by the PP to be satisfactory.
2.	Water Balance needs to be rechecked.	Water balance has been revised and submitted.	The EAC found the reply submitted by the PP to be satisfactory.
3.	Information regarding the carbon footprint and the life cucle assessment to be provided.	Details study of carbon footprint and LCA prepared has been submitted.	The EAC found the reply submitted by the PP to be satisfactory.

25. **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, water balance, carbon footprint, Life cycle assessment, Greenbelt development plan, capital and Recurring cost of EMP and CER and advised the PP to submit the following:

- Revised water balance with separate treatment system for domestic wastewater in STP plant.
- Revised carbon footprint and life cycle and life cycle assessment with its mitigative measures.
- Revise the Greenbelt development plan.
- Final capital cost and Recurring cost of EMP.

The PP submitted the above information/documents and the EAC found it 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 Experts 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.

26. 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 626 m^2 by planting 228 trees (after considering 80% survival rate) in 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 ₹ 3.0 Lakhs and 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 Unit Head-Production manager- Manager/ safety manager- Assistant Manager- Exceutive Enviornment – Executive utilities. In addition to this one safety & health officer as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(iii) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. The budget propose under EMP is ₹ 1.655 Crore (Capital cost) and ₹ 0.1675 crore 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 water requirement will be **24.63KLD** and the freshwater requirement for proposed project will be **11.25. KLD** and will be met through bore well. 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 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.

(vii) The project proponent shall comply with the environment norms for 'Pesticide Industry' as notified by the Ministry of Environment, Forest and Climate Change, vide GSR 446 (E), dated 13th June 2011 under the provisions of the Environment (Protection) Rules, 1986.

(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) The industrial effluent of 11.82 KLD shall be treated in ETP, MEE and RO and shall be reused in process, boiler, cooling tower and scrubber. Domestic wastewater of 4.5 KLD shall be collected in separate collection tank and sent to STP. The treated wastewater shall be reused for plantation. The plant shall be based on Zero Liquid Discharge system.

(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. 45.2

Proposed Pesticide Products and Specialty Chemicals Manufacturing Unit (8712 MT/Annum) located at Plot No. D-2/17/16, Dahej-II, GIDC Estate, Taluka Vagra, Dist. Bharuch, Gujarat by M/s Shree Ganesh Remedies Ltd. (Unit-5) - Reconsideration of EC

[Proposal No. IA/GJ/IND3/241900/2021; File No. IA-J-11011/396/2021-IA-II(I)]

1. The proposal is for environmental clearance to the proposed Pesticide Products and Specialty Chemicals Manufacturing Unit (8712 MT/Annum) located at Plot No. D-2/17/16,

Dahej-II, GIDC Estate, Taluka Vagra, Dist. Bharuch, Gujarat by M/s Shree Ganesh Remedies Ltd. (Unit-5).

2. The project/activity is covered under Category 'A' of item 5(b), Pesticide Industry and pesticide specific intermediates (excluding formulations) and 5(f), Synthetic Organic Chemicals industry of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) and requires appraisal at Central Level by Expert Appraisal Committee (EAC).

3. The PP applied for ToR vide proposal number. IA/GJ/IND3/241900/2021 dated 6.12.2021 and the ToR has been issued by the Ministry, vide letter IA-J-11011/396/2021-IA-II(I) dated 10.12.2021. The PP submitted as the project site is in a Notified Industrial Area i.e., Unit is located in Notified Industrial Area of GIDC, Dahej -2, which falls in PCPIR. **EC of PCPIR Region was obtained vide File No. 21-49/2010-IA-III Dated 14th September, 2017.** Hence, Public Hearing is exempted. The PP applied for Environment Clearance on 13.9.2022 in Form-2 and submitted EIA/EMP Report and other documents. The PP reported in Form-2 that it is a Fresh EC. Due to some shortcomings, the Project was referred back to the PP on 22.9.2022 and reply to the same was submitted on 21.10.2022. The proposal was placed in 41st EAC Meeting held on 31st October & 1st November, 2022, wherein the PP deferred the proposal, and now the proposal is placed in 45th EAC Meeting held on 11-13 January, 2023 and an accredited Consultant, M/s. Aqua Air Environmental Engineers Pvt. Ltd. [Accreditation number NABET/EIA/2023/IA0062 (Rev.03) valid till 7.10.2023], made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that the proposed land area is 4.05543 Ha and no R& R is involved in the Project. The details of products are as follows:

Sr. No.	Name of Products	Quantity MT/Annum	CAS No.	LD50 (mg/Kg)	Category
Agro Chemicals					
1	2,4 dichlorophenoxyacetic acid (2,4-D)	1200	94-75-7	3670	5(b)
2	Benfuresate		68505-69-1	2031	5(b)
3	Fluopicolide		239110-15-7	5000	5(b)
4	Anilofos		64249-01-0	1681	5(b)
5	Triazophos		24017-47-8	1100	5(b)
6	Deltamethrin		52918-63-5	5	5(b)
7	Flumethrin		69770-45-2	2000	5(b)
Intermediates					

8	1-[4-[2-(cyclopropylmethoxy)ethyl]phenoxy]-3-(propan-2-ylamino)propan-2-ol	1200	56392-17-7	--	5(f)
9	(R)-3-Amino-1-butanol		61477-40-5	--	5(f)
10	2-Aminomethyl-1-ethylpyrrolidine		22795-99-9	--	5(f)
11	1,3-Dimethyladamantane		702-79-4	--	5(f)
12	(R)-2-hydroxy-4-phenylbutanoic acid ethyl ester		90315-82-5	--	5(f)
13	Trans-4-aminocyclohexanol		27489-62-9	--	5(f)
14	2-Ethyl-2-methylbutanoic acid		19889-37-3	--	5(f)
15	trans-4-(4-Chlorophenyl)cyclohexanecarboxylic acid		49708-81-8	--	5(f)
16	4,4’-dimethylbiphenyl		613-33-2	--	5(f)
17	4-Phenylbenzonitrile		2920-38-6	--	5(f)
18	2-Methyl-[1,1'-biphenyl]-3-yl)methanol--		76350-90-8	--	5(f)
19	3-Chloro-2-methyl-1,1'-biphenyl		20261-24-9	--	5(f)
20	2-Fluorophenol		367-12-4	--	5(f)
21	2-Fluoroanisole		321-28-8	--	5(f)
22	2-Chloro-6-fluoroanisole		363-51-9	--	5(f)
23	(2-Chloro-4-fluoro-3-methoxyphenyl)boronic acid		944129-07-1	--	5(f)
24	1H-Pyrrole		109-97-7	--	5(f)
25	2-Chlorobenzonitrile		873-32-5	--	5(f)
26	1-Methoxy-2-propylamine		37143-54-7	--	5(f)
27	Bicyclo[4.2.0]octa-1,3,5-triene [Benzocyclobutene]		694-87-1	--	5(f)
28	N,N'-(2-(4-(2-aminobenzamido)butyl)pentan		951-985-7	--	5(f)

	e-1,5-diyl)bis(2-aminobenzamide)				
29	4,5,6,7-Tetrahydrothieno[3,2-c]pyridine Hydrochloride		28783-41-7	--	5(f)
30	3,5-Dimethylbenzoyl chloride		6613-44-1	--	5(f)
31	1-(4-Chlorophenyl)-4,4-Dimethyl-3-Pentanone		66346-01-8	--	5(f)
32	2,4,6-Triaminopyrimidine		1004-38-2	--	5(f)
33	Dl-2,2-Dimethyl Cyclopropane- 1-Carboxylic Acid		931-26-0	--	5(f)
34	4-Morpholinopiperidine		53617-35-9	--	5(f)
35	4,4'--Dimethoxytrityl Chloride		40615-36-9	--	5(f)
36	4-Hydroxy Benzyl Alcohol		623-05-2	--	5(f)
37	4 (2-chloro Ethyl) MorpholineHCl		3647-69-6	--	5(f)
38	Di Methyl Amino Isopropyl Chloride HCl		4584-49-0	--	5(f)
39	4- ChloroButyryl Chloride		4635-59-0	--	5(f)
40	Methyl 4-Chlorobutyrate		3153-37-5	--	5(f)
41	Cyclorpropane Carbonyl Chloride		4023-34-1	--	5(f)
42	Cyclohexane Carbonyl chloride		2719-27-9	--	5(f)
43	2- Furoyl Chloride		527-69-5	--	5(f)
44	O- Acetylsalicloyl Chloride		5538-51-2	--	5(f)
Building Blocks					
45	1,1-Cyclobutane Dicarboxylic Acid	**1200**	5445-51-2	--	5(f)
46	Cyclobutane Carboxylic Acid		3721-95-7	--	5(f)
47	Cyclobutane Carbonyl Chloride		5006-22-4	--	5(f)
48	Cyclobutyl Carbinol		4415-82-1	--	5(f)

49	Cyclobutyl Carboxaldehyde		3019-25-8	--	5(f)
50	Cyclobutyl Methyl Chloride		5911-08-0	--	5(f)
51	Cyclopropyl Boronic Acid		411235-57-9	--	5(f)
Aroma					
52	1-Cyclopropylmethyl-4-Methoxybenzene	**1200**	16510-27-3	--	5(f)
53	2-(3,5-Dimethylhex-3-En-2-Yloxy)-2-Methylpropyl Cyclopropanecarboxylate		676532-44-8	--	5(f)
54	4-Methylpropiophenone		5337-93-9	--	5(f)
55	Cyclopropyl 4-Methoxyphenyl Ketone		7152-03-6	--	5(f)
56	1-(4-Chlorophenyl) Cyclopropanecarboxylic Acid		72934-37-3	--	5(f)
57	Para Anisyl Acetate		104-21-2	--	5(f)
58	(E,Z)-7,9-Dodecadienyl Acetate		55774-32-8	--	5(f)
59	(Z)-13-Icosen-10-One		63408-44-6	--	5(f)
60	Cis-7,8-Epoxy-2-Methyloctadecane		29804-22-6	--	5(f)
61	(Z,E) -9,12-Tetradecadienyl Acetate		69775-62-8	--	5(f)
62	(Z)-11-Tetradecenyl Acetate		20711-10-8	--	5(f)
63	(E,Z)-3,13-Octadecadien-1-Ol		53120-26-6	--	5(f)
64	(Z,Z)-3,13-Octadecadien-1-Ol		53120-27-7	--	5(f)
65	(Z)-4-Tridecen-1-Yl Acetate		65954-19-0	--	5(f)
66	(E)-4-Tridecen-1-Yl Acetate		72269-48-3	--	5(f)
67	(E,E) -8,10-Dodecadien-1-Ol		77967-64-7	--	5(f)
68	(Z)-11-Hexadecenyl Acetate		34010-21-4	--	5(f)
69	Methyl P-Anisate		121-98-2	--	5(f)
Fine Chem					

70	Norcamphor	**1200**	497-38-1	--	5(f)
71	Anethol		104-46-1	--	5(f)
72	2,4 Dihydroxy Benzophenone		131-56-6	--	5(f)
73	7-Octyne-1-Ol		871-91-0	--	5(f)
74	4-Pentenoic Acid		591-80-0	--	5(f)
75	4-Hexy Resorcinol		136-77-6	--	5(f)
76	2-Cyano Phenol		611-20-1	--	5(f)
77	7 – Bromo, 1 - Heptene		4117-09-3	--	5(f)
78	1-Cyano-Cyclobutane-1,2-Dicarboxylic Acid Dimethyl Ester		14132-45-7	--	5(f)
79	E-Tetraacetate		15956-28-2	--	5(f)
80	N-Methyl-4-Chloro Piperidine Hcl		5570-77-4	--	5(f)
81	Syringaldehyde		134-96-3	--	5(f)
82	Indoline		120-72-9	--	5(f)
83	2-P-Anisyl Propanal		5462-06-6	--	5(f)
84	4-Amino Benzonitril		873-74-5	--	5(f)
85	Acrylamide Purified		79-06-1	--	5(f)
86	Ethylenediaminetetraacetic Acid Metal Chelate Salts		60-00-4	--	5(f)
87	Sodium Selenite Pentahydrate		26970-82-1	--	5(f)
88	Peonile		10461-98-0	--	5(f)
89	4,5-Dichloro Phthalic Acid		56962-08-4	--	5(f)
90	2-Nitro 4-Methoxy Aniline		96-96-8	--	5(f)
91	4-Nitro-2-Methoxy Aniline and 5-Nitro 2-Methoxy Aniline		97-52-9/ 99-59-2	--	5(f)
Inorganic Products					

92	Sodium Sulfite	**867**	7757-83-7	--	--
93	Calcium Chloride Fused Powder / Lumps	**1785**	7440-70-2	--	--
94	R&D	**60**	--		
TOTAL		**8712 MT/ ANNUM**	--		

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

6. The PP reported that there are no National Parks, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from site. River Narmada is flowing at distance of 5.60 Km in south direction. The PP reported that 5 Schedule I species exist within 10 km study area of the project, for which conservation plan has been submitted for Rs. 8 Lakhs to PCCF & Chief Wildlife Warden, which was approved by CWLW dated 3.6.2022.

7. The PP reported that ambient air quality monitoring was carried out at 9 locations during October, 2020 to December, 2020 and the baseline data indicates the ranges of concentrations as: PM_{10} (71.88 – 78.04 µg/m^3), $PM_{2.5}$ (41.74 – 46.46 µg/m^3), SO_2 (11.92 – 17.82 µg/m^3) and NO_2 (12.34 – 18.83 µg/m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.02 µg/m^3, 0.04 µg/$m^3$and 0.01 µg/$m^3$with respect to PM_{10}, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). Ground water quality monitoring was carried out at 9 locations during October, 2020 to December, 2020 and the baseline data indicates the ranges of concentrations as: pH (7.14 – 8.16), TSS (<10.0 mg/l), Total Hardness (116.5 – 622.8 mg/l), Total Dissolved Solids (190 – 1856 mg/l) & Chlorides (15.02 – 695.3 mg/l). The resultant concentrations are within the Indian Standard (IS 10500:2012).

8. Surface water quality monitoring was carried out at 8 locations during October, 2020 to December, 2020 and the baseline data indicates the ranges of concentrations as: pH (7.70 – 8.79), DO (6.49 – 6.96 mg/l), COD (9.25 – 21.76 mg/l) & BOD (1.81 – 1.98 mg/l). Noise quality monitoring was carried out at 9 locations during October, 2020 to December, 2020 and the baseline data indicates the ranges of concentrations as: Leq (Day) (48.7 – 53.95 dB (A)), Leq (Night) (41.2 – 44.9 dB (A)). Soil quality monitoring was carried out at 9 locations during October, 2020 to December, 2020 and the baseline data indicates the ranges of concentrations as: pH (6.98 – 8.71), Nitrogen (N) (934.2 – 2691.9 mg/l), Phosphorus (P) (19.55 – 43.15 mg/l), Potassium (K) (30.09 – 264.2 mg/l) & Electric Conductivity (0.093 – 0.396 mg/l).

9. Total water requirement is 570.5 KL/Day of which fresh water requirement of 300 KL/Day will be met from GIDC Water Supply, permission for the same was granted vide letter no. GIDC/BRH/DEE/WS/1311 dated 11.01.2022 and the Total Reuse Quantity will be 270.5 KL/Day. The total effluent generated would be 352.5 KL/Day (341 KL/Day Industrial + 11.5 KL/Day Domestic). Effluent from Process, R&D (141 KL/Day) & washing (20 KL/Day) = 161 KL/Day will be treated in Solvent Stripper followed by ETP having primary treatment and

then in MEE. MEE Condensate (131 KL/Day) will be reused in plant premises. Utility wastewater (84 KL/Day) & low COD stream (96 KL/Day) from process, total (180 KL/Day) will be treated in ETP having primary treatment & then sent to common CETP, Dahej. Domestic wastewater (11.5 KL/Day) will be treated in STP and will be reused in gardening.

10. Power requirement will be 1000 kVA and will be met from Dakshin Gujarat Vij Company Limited (DGVCL). Unit will have 2 Nos. DG sets of 1000 kVA & 500 kVA capacity, additionally DG sets are used as standby during power failure. Stack (height 12 m) will be provided as per CPCB norms to the proposed DG sets.

11. Unit will have 3 Nos. of Steam Boilers (8 TPH*1 & 3 TPH*2), 1 Nos. of Thermic fluid heater (3 Lakhs Kcal/Hr) & 2 Nos. of Hot Air Generator (1 Lakh Kcal/Hr) will be installed. Adequate Stack Height of 20 m & 30 m will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm3 for the proposed boilers.

12. **Details of Process emissions generation and its management:**

1) Flue Gas Stack

S. No.	SOURCE OF EMISSION	STACK HEIGHT	Fuel	AIR POLLUTION CONTROL SYSTEM
1	Boiler -(8 TPH)	30 Meters	Imported Coal - 13.5 MT/Day	ESP + Scrubber
2	Boiler -(3 TPH)	30 Meters	Imported Coal - 6.5 MT/Day	MCS + Bag filter + Scrubber
3	Boiler -(3 TPH)	30 Meters	Briquette- 7.75 MT/Day Or Imported Coal - 6.5 MT/Day	MCS + Bag filter + Scrubber
4	Thermic Fluid Heater (3 Lakhs Kcal/Hr)	20 Meters	Natural Gas - 50 M^3/Hr	Adequate stack height
5	HAG – 1 Lakh Kcal/Hr - 2 Nos. (For Spray Dryer)	20 Meters	Natural Gas – 30 M^3/Hr	Adequate stack height
6	D G Set(1000 KVA)	12 Meters	HSD - 480 Liters/hr	--
7	D G Set(500 KVA)	12 Meters	HSD - 240 Liters/hr	--

2) Process Stack

S. No.	Vent attached to	Stack Height (Meter)	Pollutants	Air pollution Control System

1	Process vent(Product No -29)	12	HCl	Two Stage Water Scrubber
2	Process vent(Product No - 94)	12	Cl_2	Two Stage Water+ Alkali Scrubber
3	Process vent (Product No - 26)	12	NH_3	Two Stage Water Scrubber
4	Process vent (Product No - 83)	12	HBr	Two Stage Water Scrubber
5	Process vent (Product No - 3)	12	HCl & SO_2	Two Stage Water +Alkali Scrubber

13. **Details of solid waste/ hazardous waste generation and its management.**16 Categories of Hazardous/Solid Wastes and their management & 1 Nos. of Non-Hazardous waste.

Hazardous/Solid Wastes

S. No.	Name of waste	Source of Generation	Category No.	Proposed Quantity (MT/Annum)	Mode of Disposal
1	Discarded Containers/Bags/Liners	Storage & handling of Raw Materials	Sch-I/ 33.1	120	Collection, Storage, Transportation, Decontamination & Disposal by selling to registered recycler.
2	Used/Spent oil	Equipment & Machineries	Sch-I/ 5.1	15	Collection, Storage, Transportation and reused for Machine Lubrication / Given to GPCB registered reprocessor.
3	Spent Solvent	Process	Sch-I/ 28.6	19696	Collection, Storage, distill & Reuse within plant premises.
4	Distillation Residue	Solvent Distillation	Sch-I/ 20.3	560	Collection, Storage, Transportation and sell to co-
5	Stripper Residue	Solvent Stripper	Sch-I/ 35.3	1152	

6	Spent Carbon	Process (Product No 6)	Sch-I/ 29.1	72	processing or sent to Common Incineration Facility.
7	MEE Salt	MEE	Sch-I/ 35.3	1134	Collection, Storage, Transportation and sent to common TSDF.
8	Inorganic Salt	Process	Sch-I/ 29.1	891	
9	ETP Sludge	In-house ETP	Sch-I/ 35.3	1265.82	
10	Spent Catalyst	Process (Product No 12)	Sch-I/ 29.5	222	Collection, Storage, Transportation and sent to regenerator.
11	Sodium Chloride	Process (Product No 24 + Scrubber)	Sch-I/ 29.1	938.46	Collection, Storage, Transportation & Disposal by selling to authorized end user registered under Rule-9.
12	NaSH(30%)	Process (Product No 4)	Sch-I/ 29.1	708	
13	Dilute HBr	Scrubber	Sch-I/ 28.1	547.5	
14	Dilute NH3	Scrubber	Sch-I/ 28.1	547.5	
15	Sodium Bisulphite	Process (Product No 43 + Scrubber)	Sch-I/ 28.1	3034.8	Collect, Storage & will reuse in production of Sodium Sulfite within the plant premises.
16	HCl (30%)	Process (Product No 45) + Scrubber	Sch-II-Class B(15)	2976.30	Collect, Storage & will reuse in production of Calcium Chloride Fused Powder / Lumps within the plant premises.
Non-Hazardous Waste					
17	Ash from Boiler	--	--	365	Collect, Storage & Sell to Brick Manufacturer.

14. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 5.0 Crore (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 5.11 Crore, Industry proposes to allocate ₹ 110 Lakh towards CER.

15. The PP reported that they will develop Greenbelt in an area of 33% i.e., 13383 m^2 out of total area of the project. Total 40554.30 m^2 land area is available at site; out of this area about 13383 m^2 (33 %) area will be covered as greenbelt. Trees will be planted in the plant premises with spacing of 2m x 2m and Approx. 4015 number of trees will be developed accordingly (considering 80 % of survival rate of trees).

16. The PP proposed to set up an Environment Management Cell (EMC) by engaging Assistant manager- EHS manager- Shift in charge- executive- operator for the functioning of EMC.

17. The PP reported that Total Tonnes of CO_2 emission will 6587.76 tCO_2/annum and company will be reduced 1914.12 tCO_2/annum in 1st year, further 1992.27 tCO_2/annum in 2nd year & 2191.24tCO_2/annum in 3rd year and 2599.16 tCO_2/annum in 5th year. 125 Nos. of Solar LED lights will be install instead of conventional light in all premises i.e. 7.2 KW Power of 125 Nos. of Solar LED lights and that will be reduced to 122.45 tCO_2/annum equivalent Total Tonnes of CO_2 emission will 6587.76 tCO_2/annum and company will be reduced 1914.12 tCO_2/annum in 1st year, further 1992.27 tCO_2/annum in 2nd year & 2191.24 tCO_2/annum in 3rd year and 2599.16 tCO_2/annum in 5th year.

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

19. The estimated project cost is Rs. 55 crores and total employment will be 100 persons as direct.

20. The proposal was placed in 41st EAC Meeting held on 31st October & 1st November, 2022, wherein the EAC deferred the proposal for want of requisite information. The PP provided the said information, which is as follows:

<table>
<tr><th>S. No.</th><th>Queries Raised by EAC</th><th>Reply by PP</th><th>Observation of EAC</th></tr>
<tr><td>1</td><td>Detailed environmental and economic justification</td><td>
Utility Uses Costing as per Committee Suggestion to use Natural Gas
<table>
<tr><th rowspan="2">Sr. No.</th><th rowspan="2">Source Of Emission</th><th rowspan="2">Fuel</th><th rowspan="2">Requirement</th><th rowspan="2">Unit</th><th rowspan="2">Price</th><th colspan="3">Per Day Cost in Rs.</th></tr>
<tr><th>Natural Gas</th><th>Imp. Coal</th><th>Briquettes</th></tr>
</table>
</td><td>The EAC found the reply submitted by the PP to be</td></tr>
</table>

	for usage of natural gas as fuel vis-à-vis agro briquettes and imported coal.	**1**	Boiler - (8 TPH)	Natural Gas	6800	M3/ Day	69.59	SCM	4,73,212.00	--	--	satisfactory.
		2	Boiler - (3 TPH)	Natural Gas	3600	M3/ Day	69.59	SCM	2,50,524.00	--	--	
		3	Boiler - (3 TPH) (Stand By)	Imported Coal	6.5	MT /Day	10660	MT	--	69,290.00	--	
				Briquettes	7.75	MT /Day	11500	MT	--	--	89,125.00	
		Total Cost per Day in Rs.							**7,23,736.0**	**69,290.0**	**89,125.0**	
		Grand TOTAL Use of (Natural Gas & Imp.Coal)in Rs.							**7,93,026.0**			
		Grand TOTAL Use of (Natural Gas & Briquettes)in Rs.							**8,12,861.0**			

Conclusion:

❖ **PROPOSAL SEND BY US**

- If unit will use Imported Coal in Boiler (8 TPH & 3 TPH) & Natural Gas in Standby Boiler (3 TPH), the total fuel cost will be **Rs. 4,63,724.0 (Per Day)**.
- If unit will use Briquettes in Boiler (8 TPH & 3 TPH) & Natural Gas in Standby Boiler (3 TPH), the total fuel cost will be **Rs. 5,37,449.0 (Per Day)**.

❖ **AS PER COMMITTEE SUGGESTION**

- If unit will use Natural Gas in Boiler (8 TPH & 3 TPH) & Imported Coal in Standby Boiler (3 TPH) then the total fuel cost will be **Rs. 7,93,026.0 (Per Day)** Respectively.
- If unit will use Natural Gas in Boiler (8 TPH & 3 TPH) & Briquette in Standby Boiler (3 TPH) then the total fuel cost will be **Rs. 8,12,861.0 (Per Day)** Respectively.
- **Maximum Production will be taken from the 8 TPH and 3 TPH Fuel Imported Coal/Briquettes fired Boiler, if we switch it into natural gas then it is not economically viable to our project as per difference created between of those total costs and with time it will be huge and difficult to stay in market with those higher prices.**

2	ECs accorded for proposals in the same area based on natural gas, agro briquettes and imported coal.	• **M/s. Crystal Crop Protection Pvt. Ltd.,** located at Plot. No. D2/CH-14, **Dahej – II,** GIDC Industrial Estate, Taluka Vagra, District Bharuch, Gujarat. Vide EC Letter No.: **F. No. IA-J-11011/7/2016-IA-II(I) Dated: 9th May, 2022**. • **M/s. Indofil Industries Limited** located at plot no. D-2/CH-12, **GIDC, Industrial Estate, Village Dahej**, Taluka Vagra, Dist. Bharuch, Gujarat Vide EC Letter No. **F. No. J-11011/265/2013-IA-II (I) Dated: 2nd December, 2022.** • **M/s. Tagros Chemicals India Pvt. Ltd.** Located at Plot No. 43/1 & 43/3**, GIDC Dahej,** Dist: Bharuch, Gujarat-392 130. Vide EC Letter No. **F. No. J-11011/122/2016-IA-II (I) Dated: 16th September, 2021.** • **M/s MGA Crop Care Co.** located at Plot No. C-367, **Saykha GIDC Industrial Estate**, Saykha, Taluka Vagra, District Bharuch, Gujarat vide EC Letter No. **F. No. J-11011/75/2021-IA-II (I) Dated: 18th November, 2022.** • **M/s. Nissan Bharat Rasayan Pvt. Ltd.** located at Plot No. DP 53-55, Saykha - I, GIDC Industrial Estate, Saykha, Taluka-Vagra, District Bharuch, Gujarat vide EC Letter No. **F. No. IA-J-11011/170/2019-IA-II(I) Dated: 17th June, 2022.**	

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 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 fuels, emission effects and advised the PP to submit an undertaking that, the industry will use Briquettes as the priority fuel in 8 TPH and 3 TPH steam boiler and natural gas as the priority fuel in the 3.0 TPH Steam Boiler (stand by).

The PP submitted the above information/documents and the EAC found it 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 Experts 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.

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 at least 13383 m^2 by planting 4015 trees in 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 ₹ 22,75,000 (every year) and 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 Assistant manager- EHS manager- Shift in charge- executive- operator. In addition to this one safety & health officer as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person

engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(iii) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. The budget propose under EMP is ₹ 5.0 Crore (Capital cost) and ₹ 5.11 crore 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) As committed by the PP, PP shall use briquette and imported coal shall be used in case of unavailability of briquette.

(v) The Total water requirement shall not exceed 570.5 KL/Day of which fresh water requirement shall not exceed 300 KL/Day and shall be met from GIDC Water Supply and the total reuse quantity shall be 270.5 KL/Day. 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.

(vi) 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.

(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) The project proponent shall comply with the environment norms for 'Pesticide Industry' as notified by the Ministry of Environment, Forest and Climate Change, vide GSR 446 (E), dated 13th June 2011 under the provisions of the Environment (Protection) Rules, 1986.

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

(x) 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.

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

(xiii) The total effluent generated shall be 352.5 KL/Day (341 KL/Day Industrial + 11.5 KL/Day Domestic). Effluent from Process, R&D (141 KL/Day) & washing (20 KL/Day) = 161 KL/Day shall be treated in Solvent Stripper followed by ETP having primary treatment and then in MEE. MEE Condensate (131 KL/Day) shall be reused in plant premises. Utility wastewater (84 KL/Day) & low COD stream (96 KL/Day) from process, total (180 KL/Day) shall be treated in ETP having primary treatment & then sent to common CETP, Dahej. Domestic wastewater (11.5 KL/Day) shall be treated in STP and reused in gardening.

(xiv) 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.

(xv) 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.

(xvi) 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.

(xvii) 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.

(xviii) 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.

(xix) 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.

(xx) 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.

(xxi) 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. 45.3

Proposed Expansion of Surfactants and Pigments Manufacturing Facility (production capacity from 6550 TPM to 6400 TPM) located at S. F. No. 52 & 846 and Plot No. 25B, SIPCOT Industrial Complex Ranipet, Karai Village, Walajah Taluka, Vellore District (Now Ranipet), Tamil Nadu by M/s. Ultramarine and Pigments Ltd. - Reconsideration of EC

[Proposal No. IA/TN/IND3/271453/201, File No. IA-J-11011/114/2019-IA-II(I)]

1. The proposal is for Expansion of Surfactants and Pigments Manufacturing Facility (production capacity from 6550 TPM to 6400 TPM) located at S. F. No. 52 & 846 and Plot No. 25B, SIPCOT Industrial Complex Ranipet, Karai Village, Walajah Taluka, Vellore District (Now Ranipet), Tamil Nadu by M/s. Ultramarine and Pigments Ltd.

2. The project/activity is covered under 5(f) – Synthetic Organic Chemicals Industry under category 'B'. However, since the project site is located in a critically polluted area (CEPI – 79.38), the project attracts the general condition and considered as Category 'A' at Centre.

3. The PP applied for the Environment Clearance on 6.5.2022 in Form-2 and submitted the EIA/EMP Report and other documents. Due to some shortcomings, the project was referred back to PP on 23.5.2022 and reply to the same was submitted by the PP on 2.11.2022. The PP in the Form-2 reported that it is an Expansion case. The proposal was placed in 42nd EAC Meeting held on 14th -15th November, 2022, wherein the EAC deferred the proposal and now the proposal is placed in this 45th EAC meeting held on 11th-13th January, 2023, wherein the PP and an accredited Consultant, Hubert Enviro Care Systems (P) Ltd, Chennai

[Accreditation number NABET/EIA/1922/RA0172 Valid up to 3.1.2023], 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 8.66 Ha and no R&R is involved in the Project. The details of products are as follows:

S.No.	Product Details (complete name)	CAS No.	Existing Quantity	Proposed Quantity	Total Quantity	Uses
1	Ultramarine Blue	57455-37-5	200	100	300	For coloring Plastics, Engineering Plastics, Laundry application
2	Linear Alkyl Benzene Sulphonic acid – LABSA	68411-30-3	1350	-350	1000	Raw Material for Detergents cake, Powder & liquids, wetting agent for textiles
3	Alpha olefin Sulphonate – AOS	68439-57-6	1000	Nil	1000	Raw Material for Detergents, Hand wash, Toilet soaps, Pesticides, Textile & leather
4	Synthetic detergents	68411-30-3 / 68439-57-6/ 497-19-8	4000	-2000	2000	For Home & Fabric care application
5	Mixed Metal Oxide Pigments	1345-16-0 (PBl) 68186-85-6 (PG) 68186-90-3 (PB) 68412-38-4 (PY)	--	50	50	For specialty application in automotive coatings, ceramics etc.
6	Bismuth Vanadate pigments	14059-33-7	--	50	50	Engineering Plastics, Road Marking etc.
7	Sodium Lauryl Ether Sulphate (SLES) or Sodium Lauryl Sulphate (SLS)	68891-38-3	--	1500	1500	For mfg shampoo, Body wash, hand wash, detergents etc
8	Speciality surfactants	85409-22-9 (BKC)	--	500	500	Floor Cleaners, Shampoo, Hand

		101403-98-9 (CPO) 61789-40-0 (CPB) 68403-42-9 (CDA) 68140-001 (CMA) 73398-61-5 (MCT)				Wash, Body wash, Dish wash liquids, Car wash liquids, flavours & fragrances, hair care application etc.
	Total		**6550**	**-150**	**6400**	

5. The PP reported that there is no violation as per the EIA notification, 2006, no court case is pending against the proposal and one direction issued under E(P) Act/Air Act/Water Act i.e. received direction from TNPCB to pay environmental compensation.

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. Lake near Edapalaiyam – 0.4km (NNE), Lake near Karai – 0.84km (S), Lake near Tandalam – 0.93km (E), Puliyankannu Lake – 1.82km (W), Lake near Puliantangal – 2.35 (WNW), Palar R - 2.82 (S), Ponnai R – 4.17 (W), Mahendravadi Channel – 9.77 (SE), Kaveripak Main Channel – 9.82 (SE). The PP reported that no forest area is involved in the proposed project. and two Schedule I species i.e. Indian Peafowl & Hypolimnas misippus exist within 10 km study area of the project, for which conservation plan is submitted to District Forest Officer on 20.7.2021 with budgetary provision of Rs. 2,02,500 Lakh for three years.

7. The PP reported that the certified compliance of consent was issued by TNPCB vide Lr. No. T3/TNPCB/F.0108/VLR/2022 dated 29.1.2022. Out of the total 18 conditions, 13 conditions were reported to be complied and the remaining 5 conditions, although specifically not reported as complied, but their compliance was justified.

8. The PP reported that the ambient air quality monitoring was carried out at 8 locations during Mid of January 2020 – Mid of April 2020 and the baseline data indicates the ranges of concentrations as: PM_{10} 55.14 – 74.92 µg/m³), $PM_{2.5}$ (23.11 – 31.01 µg/m³), SO_2 (7.86 - 12.93 µg/m³) and NO_2 (16.64 – 26.89 µg/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.55 µg/m^3 of PM. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). In Industrial areas day time noise levels was about 68.5 dB(A) and 61.3 dB(A) during night time, which is within prescribed limit by CPCB (75 dB(A) Day time & 70 dB(A) Night time). In residential areas day time noise levels varied from 52.2 dB(A) to 54.9 dB(A) and night time noise levels varied from 41.1 dB(A) to 44.3dB(A) across the sampling stations. The field observations during the study period indicate that the ambient noise levels are within the prescribed limit by CPCB (55 dB(A) Day time & 45 dB(A) Night time).

9. The pH of the collected ground water samples ranged from 7.12 to 8.25 which are within the acceptable limit of IS 10500:2012. Total Dissolved Solids (TDS) value of the collected ground water sample varies from 374 mg/l to 1332 mg/l, where TDS value of some of the samples exceeds the acceptable limits but all the TDS value of the collected ground water samples are within the permissible limits of IS 10500: 2012. Total hardness of the collected ground water sample ranges from 172 mg/l to 595 mg/l, where Total Hardness value of most samples exceeds the acceptable limits but all are within the permissible limits of IS 10500: 2012. Sulphate content of the collected ground water samples ranges from 30.61 to 162.63 mg/l, where sulphate content of all the collected ground water samples are well below the acceptable limit of IS 10500:2012. Chloride content of the collected ground water samples ranges from 74.29 to 431.72 mg/l, where chloride content of all the collected ground water samples are well below the acceptable limit of IS 10500:2012. pH in the collected surface water samples varies between 6.89 to 7.83 which is within the limit of IS 2296:1992. The Total Dissolved Solids (TDS) value of collected surface water sample ranges from 1017 mg/l to 3088 mg/l. The Total hardness value of the collected surface water sample ranges between 353.8 mg/l – 900.5 mg/l. BOD value of the collected surface water samples ranges between 1.9 mg/l and 82.3 mg/l. COD value of the collected surface water varies from 12 mg/l to 258 mg/l.

10. The pH of the soil samples ranged from 6.52 – 8.07 indicating that the soil is neutral to moderately alkaline in nature. Conductivity of the soil samples ranged from 97.5 – 273.4 µmho/cm. Nitrogen content in the collected soil samples ranges from 158.34 mg/kg to 309.52mg/kg. Phosphorous content in the collected soil samples ranges from 19.71 mg/kg to 43.78mg/kg. Potassium content in the collected soil samples ranges from 117.63 mg/kg to 381.24 mg/kg

11. The PP reported that the total water requirement is 412.8 m^3/day of which fresh water requirement of 329.5 m^3/day will be met from SIPCOT. Effluent of 39.2 KLD quantity will be treated through ETP followed by RO, MEE and VTFD. The plant will be based on Zero Liquid Discharge system.

12. The PP reported that the power requirement after expansion will be 1425 kVA including existing kVA and will be met from Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO). Existing unit has 2 nos. of DG sets of 725 kVA capacity, additionally no DG sets are used as standby during power failure. Stack (height 9m) is provided as per CPCB norms to the proposed DG sets.

13. Details of process emissions generation and its management: The proposed pigment plant dryers with stack height of 10 m and emitting 0.0089 g/s of PM.

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

	Waste	**Quantity (kg/day)**		

S. No.		Existing	Proposed	After Expansion	Collection method	Treatment/Disposal method
1	Organic	67.5	-	67.5	--	Vermi composting
2	Inorganic wastes	45	-	45	Bins	Send to TNPCB authorized recyclers
Total		**112.5**	**-**	**112.5**	--	

S. No.	Other Waste	Quantity (kg/day)			Collection method	Treatment/Disposal method
		Existing	Proposed	After Expansion		
1	Packing materials	5	-	5	Bins	Send to TNPCB authorized recyclers
2	STP sludge	0.05	-	0.05	Sludge drying bed	Used as manure for green belt development

Hazardous Waste Management:

S. No.	Schedule No. As per HWM rule, 2016	Hazardous waste Type	Quantity (MT/Year)			Disposal Method
			Existing	Proposed	After Expansion	
1	5.1	Used/ Spent oil	4.5	-	4.5	Recover and Reuse- TNPCB Authorized recyclers
2	5.2	Wastes/ residues containing oil	1.2	-	1.2	Gujarat Enviro Production and Infrastructure Limited (GEPIL), Vellore
3	17.1	Residues, dusts or filter cakes	6	-	6	TNWML, Gummidipoondi
4	A70	Vanadium Compounds	0.2	-	0.2	TNWML, Gummidipoondi
5	33.1	Discarded containers / barrels / liners contaminated with hazardous	1.2	-	1.2	Gujarat Enviro Production and Infrastructure Limited (GEPIL), Vellore

S. No.	Schedule No. As per HWM rule, 2016	Hazardous waste Type	Quantity (MT/Year)			Disposal Method
			Existing	Proposed	After Expansion	
		wastes /chemicals				

15. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 40.00 Lakh (capital) and the Recurring cost (operation and maintenance) will be about 14.5 Lakhs per annum. The industry proposes to allocate 2 Lakhs towards CER for Green Belt Development outside the premises, providing solar lights for the school nearby, desilting the oxidation pond (in between NH & service road) – 2 nos. and planting trees.

16. The PP reported that as the project site is located within a Notified SIPCOT Industrial Complex (**G.O. Ms. No. 83 (Ind.) dated 20.01.1973**), Public Hearing is exempted under the provisions as per paragraph 7-III Stage (3)(b) of the EIA Notification, 2006 and also as per, MoEF&CC O.M dated 27th April 2018.

17. As per the rules and regulations laid by the Ministry of Environment and Forest, Central Pollution Control Board (CPCB) and State Pollution Control Board (SPCB), it is legally mandatory to earmark 40% of the project area for greenbelt development to promote integration of environmental issues with industrial development projects. The total plot area is 8.66 Ha. i.e., 21.4 Acres. 9.02 Acres of land is dedicated for green belt which is 42.1 % of the total plot area.

18. The PP proposed to set up an Environment Management Cell (EMC) consisting of Direc tor- Head EHS-Senior Engineer- Quality Head for the functioning of EMC.

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

20. The estimated project cost is ₹ 86.79 Crores (Existing – ₹ 85.79 Crores and proposed ₹ 1 Crore). The total employment in the existing facility is 250 persons including contractual workers (203 regular and 47 contractual).

21. The proposal was placed in 42nd EAC Meeting held on 14th -15th November, 2022, wherein the EAC deferred the proposal for want of requisite information. Reply to the same is submitted by PP on 19.12.2022, which is as follows:

S. No.	Queries Raised by EAC	Reply by PP	Observation of EAC
	The detailed greenbelt plan along	Our plant is being operated from 1975 and we do not have adequate land to achieve 40% green belt coverage, within the existing plant area of 21.4 acres. Despite above plot	The EAC found

	with budgetary allocation for completion of greenbelt in one year and details of green belt developed/number of trees. Action plan for high carbon sequestration species trees in the greenbelt needs to be submitted.	space limitation within existing plant area, after setting aside the setback needs as per statutory requirement, we have developed 5.62 Acres of Green belt area within the premises, which translates to 26.3% green belt coverage. Hence, we had to develop the deficit green belt area of 15.8 % outside our premises. However, giving due consideration to EAC observations, we have explored options available to develop remaining warranted green belt area outside the premises, within 2 – 3 km from our existing site boundary. Accordingly, we commit to develop green belt in our own 3.4 acre land, which we had reserved for a future project proposal. This 3.4 Acre plot is located in the East North east direction of our existing site, at a distance of 0.56 km. With this Green belt proposal in 3.4 acre plot, we would be achieving a total green belt area of 9.02 acres, which corresponds to 42.1 % coverage (based on our existing site area of 21.4 Acres). Proposed Green Belt Compliance statement as per EAC Recommendation along with detailed Greenbelt plan has been given below: Table 1 – Area details of greenbelt development **S. No** | **Description** | **%** | **Area in Acre** | **Area in Ha.** | **Trees required (Nos)*** | **Trees existing (Nos)** | **Remarks** 1 | Original area of GB within existing site | 26.3 | 5.62 | 2.27 | 5686 | 2397 | Remaining 3289 no. of plants will be planted. 2 | Committed area of GB Outside the premises at a | 15.8 | 3.4 | 1.38 | 3440 | 580 | Remaining 2860 no. of plants will be	the reply submitted by the PP to be satisfactory.

	distance of 0.56 km, ENE from the existing site (Proposed)						planted.
Grand Total		**42.1**	**9.02**	**3.65**	**9126**	**2977**	**6149 no. of plants yet to be planted**

However as per committee's recommendation, we will plant approximately 11,000 no of trees including trees mentioned in the above table.

***Note: 2500 nos of trees required per hectare.**

B. Action Plan on Implementation Period of the above compliance:

- Development of Green belt in the 3.4 Acre land area (at a distance of 0.56 km, ENE from the existing site) hereby committed to compensate for the deficit Green Belt (15.8%) for the proposed expansion.
- The Work was already started.
- The proposed amount allocated for the completion of tree plantation is about INR 15 lakhs.
- The techniques made for the plantation will be 2x2 sq.m for each tree will be followed. Thus, we are planning to plant 8600 trees, to conform to mandate 2500 trees per hectare & considering 20% additional trees factoring in survival.
- Plantation of trees will be undertaken in alternating rows to control air pollution dispersion.
- The period of completion for the plantation will be 1 year as per the following activity plan:

C. Activity Plan:

Table 2 – Activity plan for the greenbelt development

Month	**Activity**

			1 | Cleaning of Area 2 | Digging of additional Pits 3 | Purchase of Farm yard manure 4 | Guard in various Row 5 | Filling up pits with Farm yard manure and Soil 6 | Transportation of Plants 7 | Planting of Saplings 8 | Watering in periodical intervals across the period further 9 | Maintenance **D. Monitoring Schedule** Table 3 - Monitoring parameters across the period **Phase** | **Monitoring Parameter** 1st Year-1st 6 months (Advance Soil Work) | Plantation of Saplings. 1st Year-2nd 6 months (Plantation of Sapling) | Survival % of Saplings 2nd Year (Maintenance of Plantation) | Survival % before and after causality replacement. Height of Plants. 3rd Year (Maintenance of Plantation) | Survival % before and after causality replacement. Height of Plants.	
	The PP shall submit the details of carbon foot print and carbon sequestration study w.r.t. proposed project. Proposed mitigation measures also needs to be submitted for further	As per the suggestion given by EAC, the Carbon Footprint and Carbon Sequestration study conducted in industrial facility. The detailed Carbon Footprint and Carbon Sequestration study report has been submitted.	**The EAC found the reply submitted by the PP to be satisfactory.**

	appraisal of the EAC		
	The PP needs to submit the details of Onsite/Offsite emergency plan and mitigation measures to be proposed during implementation of the project.	M/s. Ultramarine & Pigments Limited has prepared a detailed Emergency Preparedness and Response plan for the facility in Ranipet has been submitted. The On-Site Emergency Plan describes the procedure, methods & arrangements in place by which Emergencies can be managed at Ultramarine & Pigments Limited. The plan has been prepared in accordance with Legal requirements under Tamil Nadu Factories Act & MSIHC Rule taking into account significant incident, which could have an Environmental Impact. The Plan covers: 1. General Emergency & Disaster Control System (Fire, Explosion & Toxic release.) 2. Specific emergency Situations (Natural Disaster & Severe Personal Injury) The Objectives of the Emergency Plan is identified as: 1. Control, localize the emergency and minimize the risk to People and Environment 2. To meet the Health & Safety policy as per Rules 62-B of Tamilnadu Factories Rules, 1950 3. Rescue of persons. 4. Welfare of persons managing the disaster. 5. Head-count and rescue operations. 6. Treatment of injured persons. 7. Safeguard others. 8. Minimize injury to persons and damage to property and environment. 9. Information and assistance to kith and kin. 10. Information to and collaboration with statutory authorities. 11. Communication to news media. 12. Preservation of records and institute investigation. 13. Ensure Safety of the Works before Personnel re-enter and resume duties. 14. Investigation and initiation of steps to prevent recurrence. 15. Restoration of normalcy. The Emergency Preparedness and Response plan clearly defines the Local Emergency Management (LEM) team-starting from director to security- their duties and responsibilities and their contact details along with the	The EAC found the reply submitted by the PP to be satisfactory.

<table>
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<td>Emergency Contact details including fire station, police, ambulance, SIPCOT Emergency, Hospitals etc.
The plan also explain the procedure for the Project/Process related emergencies and natural calamities viz,
1. Fire at sulphur melter and Solid sulphur storage yard- FS Plant and Pigments plant
2. Fire at diesel, furnace oil & SKO storage yard
3. Collapse of Storage Tanks of Raw materials and products
4. General Fires in the RM storage and Engineering stores
5. Chimney collapse
6. Boiler Explosion
7. In cases of any spills
8. SO2 leaks due to Scrubber failure including line damages in FS Plant/Pigment plant
9. Fire at LPG Storage area
10. Electrical fires.
11. Bomb Threats
12. Natural Disaster (Rain/Cyclone/Earthquake)
If the accident is such that it affects inside the factory uncontrolled and it may spread outside the factory premises, it is called as Off-site Emergency. Assessment reveals that an Off-site emergency is a very remote possibility in the factory. If situation dictates, local police may be availed to warn and advice the local public on mitigation in an emergency situation. The emergency contact details of all the Govt. Departments concerned are given in the Emergency Preparedness and Response Plan.

The copy of the same is made available to all staff and communicated properly. The emergency procedures are included in their training sessions and mock drill will also be conducted periodically. The procedures and checklist for Mock Drills have also been explained in the Plan.</td>
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<td>The PP needs to submit details of water and energy conservation measures proposed in the Unit.</td>
<td>Water Conservation Plan:
Table 8 – Proposed water Conservation Plan
<table>
<tr><th>S.No</th><th>Details of Plan</th><th>Saving / Day (KL/Day)</th><th>Target Time</th></tr>
<tr><td>1.</td><td>Providing condensate collection system and reusing the same in boiler</td><td>9</td><td>Mar-23</td></tr>
<tr><td>2.</td><td>Providing condensate collection system in dryer</td><td>1.4</td><td>Mar-23</td></tr>
</table>
</td>
<td>The EAC found the reply submitted by the PP to be satisfactory.</td>
</tr>
</table>

	plant and reusing the same in boiler		
3.	Constructing rain water collection system near retain packing unit to collect and reuse rain water	320 KL /Year	Dec-23
4.	Replacing water ring vacuum pumps with water ejectors in pigment washing to eliminate the water usage in vacuum pumps	28.8	Oct-23
5.	Conducting steam survey and providing the thermodynamic steam traps in sulphur melting chambers and VAHP to reduce the steam consumption	4.1	Mar-23
6.	Recycling the low TDS water for pigment washing there by reducing the water consumption in pigment washing	6	Mar-23

Energy Saving Plan:

Table 9 – Proposed Energy Saving Plan

S. No	Details of Plan - Power	Power Saving / Day (KWh/Day)	Target Time
1.	Installation of IE-4 motor in Process air compressor to reduce the power consumption sulphonation plant	196	Dec-23
2.	Installation of IE-3 motors in both sulphonation plant and pigment plant	4182	Mar-24
3.	Reducing the cycle time of ball mill operation in pigment raw mix preparation by 20 min / Lot	120	Mar-23
4.	Installation of solar power panels in MEE floor	30	Mar-24

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<tr><th>S.No</th><th>Details of Plan - Fuel</th><th>Fuel Saving / Day (kg /Day)</th><th>Target Time</th></tr>
<tr><td>1.</td><td>Installation of heat recovery system in Thermic fluid Heating system to reduce the fuel consumption</td><td>37.3 kg / day</td><td>Sep-23</td></tr>
<tr><td>2.</td><td>Optimizing the process time in pigment drying operation</td><td>22 kg / day</td><td>Mar-23</td></tr>
<tr><td>3.</td><td>Collecting and reusing the condensate in MEE & dryer plants</td><td>696</td><td>Mar-23</td></tr>
</table>
</td><td></td></tr>
<tr><td></td><td>The PP shall submit revised designing of STP.</td><td>The STP will be installed within a period of 6 months for which an undertaking has been submitted.

The details of proposed STP design and flow sheet is given below as advised by EAC:
➢ Plant Capacity: 5 KLD
➢ Operating Hours: 24hrs
➢ Plant Flow rate: 208LPH
➢ Peak Factor: 2.5
➢ Peak flow rate: 520LPH</td><td>The EAC found the reply submitted by the PP to be satisfactory.</td></tr>
</table>

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

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

The EAC noted that the PP has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the PP.

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

The EAC deliberated on the query raised during the last 42nd EAC meeting i.e greenbelt development plan, carbon sequestration, balance, Onsite/offsite emergency plan, water and energy conservation measures and EAC found it to be satisfactory.

The EAC deliberated the Onsite and Offsite Emergency plans and also the various mitigation measures 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, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996, as amended from time to time.

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

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

(i) Adequate stack height as per CPCB/SPCB guidelines shall be provided. Stack emission levels shall be stringent than the existing standards in terms of the identified critical pollutants.

(ii) Online monitoring system shall be installed for pigment plant and Sulphonation Plant and the same shall be connected to SPCB/CPCB Server.

(iii) Effective fugitive emission control measures shall be adopted in the process, transportation, packing etc. and Fugitive emission monitoring shall be done by third party lab periodically.

(iv) The PP shall receive raw materials in HDPE Bags by closed trucks and shall be unloaded in closed sheds. The PP shall also explore transportation of materials by rail/belt conveyer.

(v) LNG and LPG shall be proposed as a primary fuel in the proposed project.

(vi) The best available technology shall be used. Emissions from reactors shall be scrubbed by individual scrubbers and dispersed through stacks.

(vii) The PP shall develop Greenbelt over an area of at least, 5.62 ha (within the project site) by planting 6149 number of trees within a period of one year of grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft (about 2m). The budget earmarked for the plantation shall be ₹ 15 Lakhs and shall be kept in separate account and should be audited annually. The PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of 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.

(viii) The PP shall develop Greenbelt 3.4 Ha (15.8%) outside the project site.

(ix) The PP shall maintain sufficient road space available within the site for existing and proposed change in product mix, and the width of the existing road shall be maintained.

(x) Treated effluent shall be used for process and washing and treated sewage shall be used for green belt development.

(xi) Continuous monitoring of effluent quality/quantity shall be done. The CEMS shall be connected to SPCB/CPCB server as well, to comply with the norms.

(xii) Existing STP of 4 KLD shall be utilized to treat the Sewage and treated sewage shall be used for green belt development.

(xiii) The Unit shall install and maintain rain water harvesting structures.

(xiv) Fly ash shall be stored at a designated place within the site and shall be sold to brick manufacturers.

(xv) Hazardous wastes shall be stored in designated area within the site and shall be disposed as per Hazardous and other Waste (Management Handling and transboundary movement) amendment Rules 2016.

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

(xvii) An amount of ₹ 2 lakhs shall be allocated towards CER for Green Belt Development outside the premises, providing solar lights for the school nearby, desilting the oxidation pond (In between NH &service road) – 2 no. and planting trees

(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 by engaging Director- Head EHS-Senior Engineer- Quality Head -. 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. The PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the 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 [₹40.00 Lakh (Capital cost) and ₹ 14.5 (Recurring cost)] shall be kept in a 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.

(xx) The total water requirement is 412.8 m^3/day of which fresh water requirement of 329.5 m^3/day will be met from SIPCOT. 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 prior permission 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 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.

(xxii) 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.

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

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

(xxv) 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.

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

(xxvii) As committed by the PP, Zero Liquid Discharge shall be ensured. Effluent of 39.2 KLD quantity shall be treated through ETP followed by RO, MEE and VTFD.

(xxviii) 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.

(xxix) 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.

(xxx) 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.

(xxxi) 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.

(xxxii) 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.

(xxxiii) 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.

(xxxiv) 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.

(xxxv) 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.

(xxxvi) 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. 45.4

Expansion of "Active Pharmaceutical Ingredients & Intermediates" manufacturing unit with production capacity from 733.8 TPA to 378.6 TPA located at Plot No. C-216 & 217, MIDC Chincholi, Taluka- Mohol, Dist: Solapur, Maharashtra, (INDIA) by M/s Vaasavaa Pharmaceuticals Pvt. Ltd - Consideration of ToR

[Proposal No. IA/MH/IND3/402801/2022; File No. IA-J-11011/479/2022-IA-II(I)]

The PP vide email dated 03.01.2023 informed that there are some changes in the application w.r.t products and their quantities, so they would be unable to attend the meeting and requested to withdraw the proposal. Hence, the EAC recommended to **return the proposal in the present form.**

Agenda No. 45.5

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

[Proposal No. IA/GJ/IND3/292095/2022; File No. J-11011/1098/2007-IA-II(I)]

1. The proposal is for amendment in the Environmental Clearance granted by the Ministry vide letter no. 11011/1098/2007-IA II (1) dated 25.8.2018 for Sebacic Acid manufacturing unit at

Block/Survey No. 452/A&B, 457,259,460,461,465,466,468 at village Umaraya, Padra Taluka in Dist. Vadodara by MIS Sebacic Mfg. & Expo lndia Limited.

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

Sr. No.	Para of EC issued by MOEF & CC	Details as per the EC	To be revised read as	Justification/reasons
1	**EC CONDITION NO. 4, LINE NO. 3**	Two 12 TPH boiler would be installed for which 10 TPD of coal/lignite will be used as fuel	One 12 TPH boiler and Two TFH of 10 lakh kilo calorie each (One standby)would be installed for which 100 TPD of coal/lignite will be used as fuel	In two steam boilers lignite consumption cannot be 10 TPD instead it will be 52.20 x 2 = 104.40 TPD The 10 MTD of lignite consumption may be a typographical mistake.

3. **Deliberations by the EAC**:

The EAC, constituted under the provision of the EIA Notification, 2006 comprising Experts Members/domain experts in various fields, examined the proposal.

After detailed deliberations, the EAC observed many deficiencies in the proposal. The PP was advised to revise the application with justification and resubmit the same along with the following information:

(i). Chronology of the project since grant of EC.

(ii). Detailed justification with references to the EIA/EMP for the proposed amendment. The same needs to be certified by the PP etc.

(iii). The PP shall submit an undertaking for using biomass as a primary fuel.

In view of above, the EAC **returned** the proposal in its present form.

Agenda No. 45.6

Proposed Pesticide Technical, Pesticide Intermediates, Specialty chemicals & synthetic organic chemicals of production capacity (5886 TPM) located at Plot No. Z/96/B, Dahej SEZ II, Tal. Vagra, Dist. Bharuch, Gujarat by M/s HLE Engineers Private Limited - Consideration of EC

[Proposal No IA/GJ/IND2/146592/2020; File No. IA-J-11011/479/2022-IA-II(I)]

1. The proposal is for environmental clearance for the Proposed Pesticide Technical, Pesticide Intermediates, Specialty chemicals & synthetic organic chemicals of production capacity (5886 TPM) located at Plot No. Z/96/B, Dahej Sez Ii, Tal: Vagra, Dist: Bharuch, Gujarat by M/s HLE Engineers Private Limited

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

3. The PP applied for ToR vide proposal number IA/GJ/IND2/146592/2020 dated 2.3.2020 and the ToR has been issued by the Ministry, vide letter no. IA- J-11011/59/2020-IA-II(I) dated 18.04.2020. The PP submitted that the Unit is located in Notified Industrial Area of GIDC, Dahej -2, which falls in PCPIR. **EC of PCPIR Region was obtained vide File No. 21-49/2010-IA-III dated 14th September, 2017.** Hence, Public Hearing is exempted. The PP applied for Environment Clearance on 27.5.2022 in Common Application Form and submitted EIA/EMP Report and other documents. The PP in the Form reported that it is a **Fresh EC case.** Due to the shortcoming the proposal was refereed back to PP on 8.6.2022, 15.7.2022, 22.8.2022, 4.10.2022 and reply for the same has been submitted on 1.7.2022, 4.8.2022, 21.9.2022, 12.12.2022. The proposal is placed in this 45th EAC meeting on 11-13th January, 2023, wherein the PP along with accredited Consultant, M/s. Aqua-Air Environmental Engineers Pvt. Ltd [Accreditation number–NABET/EIA/2023/IA0062 (Rev.03) Valid up to 7.10.2023] 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 total land area is 43502.42 m^2, and no R& R is involved in the Project. The details of products and by–products are as follows:

Sr. No.	Group	Name Of Products	CAS No.	Quantity (Mt/Month)
	Group-1	**Chlorination Products Category -1**		
1		Ortho & Para- Dichloro Benzene	95-50-1/106-46-7	**2000**
2		1:2:4 & 1:2:3 Trichloro Benzene	120-82-1/87-61-6	
3		Mono Chloro Benzene	108-90-7	
4		O- Chloro Phenol & P-Chloro Phenol	95-57-8/106-48-9	
5		2,4 Dichloro Phenol & 2,6 Dichloro Phenol	120-83-2/87-65-0	

6		Ortho Chloro Toluene & Para Chloro Toluene (Oct-Pct)	95-49-8/106-43-4	
7		Benzyl Chloride, Benzal Chloride, Benzyl Trichloride	100-44-7/	
	Group-2	**Chlorination Products Category -2**		
8		3 - Chloro Nitro Benzene	121-73-3	**100**
9		2,4,6 Trichloro Aniline	634-93-5	
10		2,6 Dichloro 4 Nitro Aniline	99-30-9	
	Group-3	**Chlorination Products Category -3**		
11		N- Valeroyl Chloride	638-29-9	**75**
12		Butyryl Chloride	141-75-3	
	Group-4	**De-Amination & Isomerisation Compounds**		
13		3:5 Dichloro Nitro Benzene	618-62-2	**150**
14		1:3:5 Trichlorobenzene	108-70-3	
15		Meta -Dichlorobenzene	541-73-1	
	Group-5	**Nitro Compounds**		
16		Ortho & Para Nitro Cumene	6526-72-3 / 1817-47-6	**1250**
17		Nitro Naphthalene (Crude Nn)	86-57-7	
18		1:5 & 1:8 Dinitro Naphthalene	605-71-0/ 602-38-0	
19		2,4 Dimethyl Nitro Benzene (2,4 Dmnb)	89-87-2	
20		2,6 Dimethyl Nitro Benzene (2,6 Dmnb)	81-20-9	
21		2,3 Dimethyl Nitro Benzene (2,3 Dmnb)	83-41-0	
22		3,4 Dimethyl Nitro Benzene (3,4 Dmnb)	99-51-4	
23		2,5 Dimethyl Nitro Benzene (2,5 Dmnb)	89-61-2	
24		2,5 Dichloro Nitro Benzene (25 Dcnb)	89-61-2	
25		3,4 & 2,3 Dichloro Nitro Benzene (3,4 & 2,3 Dcnb)	99-54-7/ 3209-22-1	
26		2,4 & 2,6 Dichloro Nitro Benzene	611-06-3/ 601-88-7	
27		2,4,5 Trichloro Nitro Benzene	89-69-0	
28		2,3,4 Trichloro Nitro Benzene	17700-09-3	
29		2,6 Dichloro 4 - Nitro Phenol	618-80-4	
30		2,3 Dichloro 4 - Nitro Phenol	59384-57-5	
31		2,5 Dichloro 4 - Nitro Phenol	5847-57-4	
32		Para Nitro & Ortho Nitro Toluene (Pnt-Ont)	99-99-0/	

			88-72-2	
	Group-6	**Hydrogenation Compounds**		
33		Ortho Chloro Aniline	95-51-2	**750**
34		Para Chloro Aniline	106-47-8	
35		Ortho Cumidine	643-28-7	
36		Para Cumidine	99-88-7	
37		Alpha Naphthyl Amine	134-32-7	
38		2,4 Xylidine	95-68-1	
39		2,6 Xylidine	87-62-7	
40		2,3 Xylidine	87-59-2	
41		3,4 Xylidine	95-64-7	
42		2,5 Xylidine	95-78-3	
43		Ortho Anisidine	90-04-0	
44		Para Anisidine	104-94-9	
45		O - Tertiary Butyl Cyclo Hexyl Acetate (Otbcha)	88-41-5	
46		Para - Tertiary Butyl Cyclo Hexyl Acetate (Ptbcha)	32210-23-4	
47		Phenyl Ethyl Acetate	103-45-7	
48		Citronellol	106-22-9	
49		Dimethyl Octanol	106-21-8	
50		Cis - Pinane	6876-13-7/ 4795-86-2	
51		Iso Propyl Para Chloro Aniline (Ippca)	770-40-1	
52		Ortho Toludine	95-53-4	
53		Para Toludine	106-49-0	
54		Meta Toludine	108-44-1	
55		3,5 Diamino Benzoic Acid	535-87-5	
56		3,5 Dimethyl N- Iso Pentyl Amine	35448-31-8	
57		4:4 Disec Butyl Para Phenyline Diamine	101-96-2	
58		3 - Amino 9 (N Ethyl) Carbazole	132-32-1	
59		3,4 Dimethyl N-Iso Pentyl Amine	107-85-7	
60		4- Amino 2,5 Dichloro Phenol	50392-39-7	
61		4 -Amino 2,3 Dichloro Phenol	39183-17-0	
62		4 -Amino 2,6 Dichloro Phenol	5930-28-9	
63		Phenyl Ehtyl Alcohol (2-Pea)	60-12-8	
64		2,5 Dichloro Aniline	95-82-9	
65		2,3 Dichloro Aniline	608-27-5	
66		3,4 Dichloro Aniline	95-76-1	
67		2,4 Dichloro Aniline	554-00-7	
68		2 - Chloro 1,4 Diamino Benzene	615-66-7	
69		2,4,5 Trichloro Aniline	636-30-6	
70		2,5 Dichloro 1,4 Diaminobenzene	2213-82-3	

71		3,5 Dichloro Aniline	626-43-7	
72		3 - Chloro Aniline	108-42-9	
73		P-Tertiary Butyl Cylcohexanon	98-53-3	
74		P-Tertiary Butyl Cylcohexanole	98-52-2	
75		Nitro Rf	1728-46-7	
76		O-Tertiary Butyl Cylcohexanole	13491-79-7	
77		O-Tertiary Butyl Cylcohexanone		
78		Meta Phenoxy Benzyl Alcohol (Mpbalcohol)	13826-35-2	
79		2,4 Dimethoxy 5 - Chloro Aniline	97-50-7	
80		N-Ethyl Caprolactam	19797-08-1	
	Group-7	**Specialty Phenol Compounds**		
81		2,5 Dichloro Phenol	583-78-8	**300**
82		2,3 Dichloro Phenol	576-24-9	
83		3,4 Dichloro Phenol	95-77-2	
84		3,5 Dichloro Phenol	591-35-5	
85		3-Chloro Phenol	108-43-0	
86		2,5 Dichloro 4 - Bromo Phenol	1940-42-7	
87		2,3 Dichloro Anisol	1984-59-4	
88		2,5 Dichloro Anisol	1984-58-3	
	Group-8	**Acetylated Compounds**		
89		2':5' Dichloro Acetophenone	2476-37-1	**200**
90		2':4' Dichloro Acetophenone	2234-16-4	
91		2':4' Dichloro Velerophenone	61023-66-3	
92		2':4' Dichloro 5 - Fluoro Acetophenone	704-10-9	
93		2':4' Dichloro Phenacylchloride	4252-78-2	
94		2':4' Dichloro Buterophenone	3874-54-2	
	Group-9	**Fungicides**		
95		Azaconazole	60207-31-0	**200**
96		Bromuconazole	116255-48-2	
97		Difenoconazole	119446-68-3	
98		Etraconazole	60207-93-4	
99		Hexaconazole	79983-71-4	
100		Penconazole	66246-88-6	
101		Propiconazole	60207-90-1	
102		Prothioconazole	178928-70-6	

103		Fenhexamide	126833-17-8	
104		Imazalil	35554-44-0	
105		Quinoxyfen	124495-18-7	
106		Pyraclostrobin	175013-18-0	
107		Azoxystrobin	131860-33-8	
108		Tebuconazole	107534-96-3	
109		Dithianon	3347-22-6	
	Group-10	**Amination Compounds**		
110		Orthochloro Paranitro Aniline	121-87-9	**100**
111		Parachloro Orthonitro Aniline	89-63-4	
112		Ortho Nitro Aniline	88-74-4	
113		Para Nitro Aniline	100-01-6	
114		2,3 Dichloro 6 - Nitro Aniline	65078-77-5	
115		3,4, Dichloro 6 - Nitro Anilne	2683-43-4	
116		5 - Chloro 2- Nitro Aniline (Ammonia)	1635-61-6	
	Group-11	**Specialty Chemical Compounds**		
117		Cumac	7169-34-8	50
118		Nitro Rf	64131-85-7	
119		Para Chloro Aniline Hydrochloride	20265-96-7	
120		4 - Nitro Phthalo Nitrile	31643-49-9	
121		Fhia	54041-17-7	

122		Mstt	27603-25-4	
123		Thisa New	317815-81-9	
124		Tbsa	1869-24-5	
125		4 - Chloro 2' - Nitro Dipenylamine (Ndpa)	23008-56-2	
126		2h-Hexafluoro Propoxy Propylene-2,5-Dichloro 4-Amino Benzene	103015-84-5	
127		2,4 Dimethoxy 5 - Chloro Nitrobenzene	119-21-1	
128		2,5 Dichloro 4 - Nitro Aniline	6627-34-5	
129		4'- Chloro 2- Amino Diphenylamine (Adpa)	68817-71-0	
130		Amino Rf	52664-35-4	
131		4- Amino Benzonitrile	873-74-5	
132		Iron Acetylacetonate	14024-18-1	
133		1,5 Diamino Naphthalene	2243-62-1	
134		1,8 Diamino Naphthalene	479-27-6	
135		4 -Chloro 2 - Amino Phenol	95-85-2	
136		2- Chloro 4 - Amino Phenol	3964-52-1	
137		2,4 Dihydroxybenzophenone	131-56-6	
138		3 -Hydroxy Acetophenone	121-71-1	
139		2- Amino 4- Chloro Di Phenyl Ether	93-67-4	
140		Amino Resorcine Di Orhto Cresyl Ether	73637-04-4	
141		2- Amino 2',4, 4' Tri Chloro Di Phenyl Ether	56996-52-0	
142		4- Amino 2, 4’ Di Chloro Di Phenyl Ether	14861-17-7	
143		2- Amino 2,' 4- Di Chloro Di Phenyl Ether	56966-48-4	

144		2- Amino 4,4'- Di Chloro Di Phenyl Ether	121-27-7	
145		1,3 Bis (3-Amino Phenoxy) Benzene	10526-07-5	
146		5- Amino 2,2',3 Tri Chloro 4- Nitro Di Phenyl Ether	118353-04-1	
147		Ape/ Aluminium Hydroxy Bis [2,2'-Methylene Bis (4,6-Di-Tert – Butylphenyl) Phosphate	151841-65-5	
	Group-12	**Herbicide Compounds**		
148		2,4 D Acid	94-75-7	100
149		Aclonifen	74070-46-5	
150		Fluridone	59756-60-4	
151		Flufenacet	142459-58-3	
152		Quinoclamine (Can)	2797-51-5	
153		Clethodim	99129-21-2	
	Group-13	**Insecticides Compounds**		
154		Fenvalerate	51630-58-1	75
155		Alpha Cypermethrin	67375-30-8	
156		Deltamethrin	52918-63-5	
157		Permethrin	52645-53-1	
158		Lambda Cyhalothrin	91465-08-6	
159		Cypermethrin	52315-07-8	
160		Ethiprole	181587-01-9	
161		Deet (N, N Diethyl-3-Methyl Benzamide)	134-62-3	

	Group-14	**Sulphonated Compounds**		
162		Sodium Naphthionate	130-13-2	100
163		Sulphnilillic Acid	121-57-3	
	Group-15	**Oxidation Compounds**		
164		Meta Toluic Acid	99-04-7	200
	Group-16	**Advance Pesticide Intermediates**		
165		Meta Phenoxy Benzaldehyde (Mpbad)	39515-51-0	200
166		Cypermethric Acid Chloride (Cmac)	52314-67-7	
	Group-17	**Miscelleneous Compounds**		
167		1 - Naphthol	90-15-3	26
	Group-17	**Research & Devlopment Based Products**		
168		Research & Development Based Products		10.0
		TOTAL		**5886**

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. falling within 10 km distance from the project site. Narmada is flowing at distance of 21.60 Km in East direction. The PP reported that no forest area is involved in the proposed project and two Schedule-I species i.e. Indian peafowl), Common pierrot Butterfly is found in the study area. Wildlife conservation plan has been approved by Chief wildlife warden with budgetary provision of ₹ 2,60 ,000.

7. The PP reported that the Ambient air quality monitoring was carried out at 6 locations during March, 2022 to May, 2022 and the baseline data indicates the ranges of concentrations as: PM_{10} (79.46 – 71.32 µg/m^3), $PM_{2.5}$ (46.38 – 43.12 µg/m^3), SO_2 (18.25 – 16.09 µg/m^3) and NO_2 (19.65 – 17.88 µg/m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.08 µg/m^3, 1.67 µg/m^3 and 0.58 µg/m^3 with respect to PM_{10}, SO_x and NO_x. The resultant

concentrations are within the National Ambient Air Quality Standards (NAAQS). Noise quality monitoring was carried out at 6 locations and the baseline data indicates the ranges of concentrations as: Leq (Day) (47.6 – 54.7 dB (A)), Leq (Night) (39.3 – 44.2 dB (A)). Ground water quality monitoring was carried out at 6 locations and the baseline data indicates the ranges of concentrations as: pH (8.02 – 7.39), TSS (<10.0 mg/l), Total Hardness (570.9 – 121.6 mg/l), Total Dissolved Solids (1838 – 275 mg/l) & Chlorides (499.8 – 53.6 mg/l). The resultant concentrations are within the Indian Standard (IS 10500:2012). Surface water quality monitoring was carried out at 2 locations and the baseline data indicates the ranges of concentrations as: pH (8.41 – 7.59), DO (6.31 – 6.07 mg/l), COD (22.39 – 9.24 mg/l) & BOD (3.45 – 2.57 mg/l). Soil quality monitoring was carried out at 6 locations and the baseline data indicates the ranges of concentrations as: pH (7.12 – 8.25), Nitrogen (N) (1291.4 – 3668.9 mg/l), Phosphorus (P) (15.57 – 39.52 mg/l), Potassium (K) (186 – 872.9 mg/l) & Electric Conductivity (0.395 – 2.47 mg/l).

8. The PP reported that the total water requirement will be 538.0 KL/day (Fresh: 367 KLD + Recycled: 171 KLD) which will be met through GIDC water supply. The wastewater generation will be 291.0 KL/day. Industrial Effluent (Dilute Stream-107.0 KL/Day) will be treated in ETP and treated effluent (105.0 KL/Day) will be disposed to Drainage Network of Dahej for Deep Sea Marine discharge into Arabian Sea and Evaporation loss & sludge is 2.0 KL/Day. 176 KLD effluent (Concentrated Stream) will be treated in ETP and then sent to In-house MEE and MEE Condensate (163 KLD) will be reused within premises. Domestic Effluent (8.0 KL/day) will be sent to STP and treated sewage will be used in Gardening.

9. The PP reported that Power requirement will be 2500 KVA and will be met from Torrent power. Unit will have 1 Nos. DG sets of 500 KVA capacity, additionally DG sets are used as standby during power failure. Stack (height 11 m) will be provided as per CPCB norms to the proposed DG sets. Unit will have 1 Nos. of Steam Boilers (15 TPH) & 1 Nos. of Thermic fluid heater (1000 U) will be installed. Adequate Stack Height of 32 m will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm3 for the proposed boilers.

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

Flue Gas Stack

Sr. No.	Source of Emission With Capacity	Stack Height (meter)	Type of Fuel	Quantity of Fuel	Air Pollution Control Measures (APCM)
1	Steam Boiler (Capacity: 15.0 MT/hr) x 1 Nos	32	Briquettes / Imported Coal	96 MT/Day / 65 MT/Day	ESP + Scrubber

2	Thermo Pack (Capacity:1000 U)				
3	D. G. Set (500 KVA)	11	HSD	700./ Day	--

Process Stack

Sr. No.	Vent Attached to	Vent Height & Diameter	Pollutants	Air Pollution Control System
1	Reaction Vessel	Height-11 Meters	HCl	Two Stage Water Scrubber
2	Reaction Vessel	Height-11 Meters	HBr	Two Stage Water Scrubber
3	Reaction Vessel	Height-11 Meters	HCl & SO_2	Two Stage Scrubber System with 1st Water & 2nd Alkali
4	Reaction Vessel	Height-11 Meters	HCl & Cl_2	Two Scrubber system with 1st Water & 2nd Alkali

11. **Details of Solid/ Hazardous Waste Generation and its Management**: 23 Categories of Hazardous/Solid Wastes and their management & 2 Nos. of Non-Hazardous waste.

Hazardous/Solid Wastes

Sr. No.	Type of Waste	Source	Category	Qty. MT/ Annum	Mode of Treatment	Mode of Disposal
1	ETP Waste	From ETP	35.3	1825	Dried, Packed in bags	Collection, Storage, Transportation and Disposal into GPCB authorized TSDF.
2	Salt from MEE	From MEE	35.3	3650	Dried, packed in bags	
3	Used Oil	From Machineries & Equipments	5.1	300	Packed in carboys	Collection, Storage, Transportation and Sell to GPCB registered recycler.
4	Discarded Containers	From RM Storage	33.1	120	De-contaminated , stored	Collection, Storage, Transportation and Sell to GPCB authorized recycler.

5	Process Waste (Inorganic)	From Process	29.1	2256	Packed in bags	Collection, Storage, Transportation and Disposal into GPCB authorized TSDF.
6	Distillation Residue	From Distillation Unit	36.1	8976	Packed in drums	Collection, Storage, Transportation and Sent to GPCB authorized co-processing or incineration facility.
7	Spent Carbon	From Process	29.5	912	Packed in drums/bags	Collection, Storage, Transportation and Sent to GPCB authorized co-processing or incineration facility.
8	Spent Catalyst	From Process	29.5	1800	Packed in drum	Collection, Storage, Transportation and Disposal into GPCB authorized Regenerator.
9	Used rubber hand gloves/pipes etc	--	--	3	Packed in drums/bags	Collection, Storage, Transportation and Sent to GPCB authorized incineration facility.
10	Iron sludge	From Process	29.1	2040	Packed in drums/bags	Collection, Storage, Transportation and Sent to GPCB authorized co-processing or TSDF.
11	Date expired/off specification pesticide	From Process	29.3	12	Packed in drums/bags	Collection, Storage, Transportation and Sent to GPCB authorized incineration facility.
12	Spent Sulphuric Acid (55-60%)	From Scrubber	28.1	2482	Packed in drums	Collection, Storage, Transportation and Sell to end users having Rule-9 Permission.

13	Sodium Sulphite (20% Solution)	From Scrubber	28.1	3173	Packed in drums	
14	Aluminum Chloride (18-20% Solution)	From Scrubber	28.1	3490	Packed in drums	
15	Hydro Bromic Acid (28% Solution)	From Scrubber	28.1	187.2	Packed in Drums	
16	Sodium Sulphate Powder	From Process	28.1	5401	Packed in drums/ bags	Collection, Storage, Transportation and Sell to end users having Rule-9 Permission Or sent to GPCB authorized TSDF.
17	Potassium Bromide Powder	From Process	28.1	85.0	Packed in drums/ bags	
18	Potassium Chloride Powder	From Process	28.1	60.0	Packed in drums/ bags	
19	Potassium Bi Carbonate Powder	From Process	28.1	56.0	Packed in drums/ bags	
20	Acetic Acid (80% Solution)	From Process	28.1	196.0	Packed in drums	Collection, Storage, Transportation and Sell to end users having Rule-9 Permission.
21	Sodium Bromide (20-25% Solution)	From Scrubber	28.1	424.5	Packed in drums	

22	Bromine (99%) liquid	From Process	28.1	39	Packed in Bottles	
23	MgBr Salt	From Process	28.1	59	Packed in drums/ bags	Collection, Storage, Transportation and Sell to end users having Rule-9 Permission Or sent to GPCB authorized TSDF.
Non-Hazardous Waste						
24	Fly Ash	From Boiler	1920	Packed in covered truck	Collection, Storage, Transportation and Sell to brick manufacturer.	24
25	STP Sludge	From STP	4	Packed in drum	Collection, Storage, Transportation and Sent to TSDF for further disposal.	25

12. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 5.91 Crores (capital) and the Recurring cost (operation and maintenance) will be about ₹ 19.55 Crores per annum. Industry proposes to allocate ₹ 1.4 Crore as corporate environmental responsibility.

13. Total 43,502.42 m^2 land area is available at site; out of this area about 14,355 m^2 (33%) area will be covered as greenbelt.

14. The PP proposed to set up an Environment Management Cell (EMC) by engaging Director-Plant Head- Environment Chemist- ETP operator for the functioning of EMC.

15. The PP reported that the total carbon sequestered through trees (4310 trees) =1077.5 t CO_2 eq./year. **The total carbon sequestered through trees (4310 trees) =1932.085 t CO_2 eq. /year.** The emissions reduction due to carbon sequestration are 937.5 t CO_2 eq./year. Net emissions = gross emissions – carbon sequestration Net emissions = 40230.455 – 1932.085 = 38298.37 t CO_2 eq./year. The net emissions of M/s HLE Engineers Pvt. Ltd. are 38298.37

t CO_2 eq./year **The emission reduction due to carbon sequestration is 4.80 (5%)**

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

17. The estimated project cost is Rs. 70 Crores. Total Employment will be 150 persons as direct

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

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

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

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

The EAC inter-alia, deliberated on the fuels, fly ash, Greenbelt development plan Carcinogenic toxicity control measures, Revised Product List and advised the PP to submit the following:

- Undertaking for Briquettes as the 1st priority fuel and to use imported coal only on unavailability of Briquettes.
- Undertaking for Fly Ash Disposal to only brick manufactures instead of land filling.
- Undertaking for Green Belt Development within one year instead of two years.
- Human Carcinogenic toxicity control measures.
- Revised Product List.

The PP submitted the above information/documents and the EAC found it 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 Experts 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 14355.0 m^2 by planting 4310 trees in 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 ₹ 30,17,000 and 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 by engaging Director- Plant Head- Enviornment Chemist- ETP operator .In addition to this one safety & health officer as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(iii) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. The budget propose under EMP is ₹ 5.91 Crore (Capital cost) and ₹ 19.55 crore 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) As committed by the PP, PP shall use Briquette as first priority, and imported coal shall be used during the unavailability of Briquette.

(v) As committed by the PP, PP shall dispose fly ash to brick manufacturer only.

(vi) The total water requirement will be 538.0 KL/day (Fresh: 367 KLD + Recycled: 171 KLD) which will be met through 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 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.

(vii) 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.

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

(ix) The project proponent shall comply with the environment norms for 'Pesticide Industry' as notified by the Ministry of Environment, Forest and Climate Change, vide GSR 446 (E), dated 13th June 2011 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 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.

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

(xiii) The wastewater generation shall be 291.0 KL/day. Industrial Effluent (Dilute Stream-107.0 KL/Day) shall be treated in ETP and the treated effluent (105.0 KL/Day) shall be disposed to Drainage Network of Dahej for Deep Sea Marine discharge into Arabian Sea and Evaporation loss & sludge is 2.0 KL/Day. 176 KLD effluent (Concentrated Stream) shall be treated in ETP and then sent to In-house MEE and MEE Condensate (163 KLD) shall be reused within premises. Domestic Effluent (8.0 KL/day) shall be sent to STP and the treated sewage will be used in Gardening.

(xiv) 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.

(xv) 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.

(xvi) 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.

(xvii) 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.

(xviii) 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.

(xix) 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.

(xx) 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.

(xxi) 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. 45.7

Proposed Pesticide Manufacturing Project with Production Capacity of 9000 MT/Annum by M/s Advance Agrolife Pvt. Ltd., located at E-39, RIICO Industrial Area, Bagru (EXT.), Jaipur, Rajasthan by M/s Advance Agrolife Pvt. Ltd. - Amendment in Environmental Clearance

[Proposal No. IA/RJ/IND3/295018/2022; File No. IA-J-11011/98/2021-IA-II(I)]

1. The proposal is for the Amendment in EC for Proposed Pesticide Manufacturing Project with Production Capacity of 9000 MT/Annum by M/s Advance Agrolife Pvt. Ltd., located at E-39, RIICO Industrial Area, Bagru (EXT.), Jaipur, Rajasthan by M/s Advance Agrolife Pvt. Ltd.

2. The proposal is for amendment in the Environmental Clearance granted by the Ministry vide EC letter dated 9th May, 2022 for the Proposed Pesticide Manufacturing Project with Production Capacity of 9000 MT/Annum by M/s Advance Agrolife Pvt. Ltd., located at E-39, RIICO Industrial Area, Bagru (EXT.), Jaipur, Rajasthan.

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

Sr. No.	Para of EC issued by MoEF&CC	Details as per EC	To be revised/read as	Justification/Reasons
1.	*Title of Project, Page 2 of 11*	Proposed Pesticide Manufacturing Project with Production Capacity of 9000 MT/Annum by M/s Advance Agrolife Pvt. Ltd., located at E-39, RIICO Industrial Area, Bagru (EXT.), Jaipur, Rajasthan - Environmental Clearance	Proposed Pesticide Manufacturing Project with Production Capacity of 9000 MT/Annum by M/s Advance Agrolife Pvt. Ltd., located at E-39, **G-49, G-48,** RIICO Industrial Area, Bagru (EXT.), Jaipur, Rajasthan - Environmental Clearance	After due diligence and further planning for the proposed project, the company had observed that setting up the plant would require some spare space for setting up the utilities. To achieve the same, adjacent plots located to the existing plot has been leased by the organization.

2.	Point No. 2; Page 2 of 11	The Ministry of Environment, Forest and Climate Change has examined the proposal for Pesticide Manufacturing Project with Production Capacity of 9000 MT/Annum located at E-39, RIICO Industrial Area, Bagru (EXT.), Jaipur, Rajasthan by M/s Advance Agrolife Pvt. Ltd.	The Ministry of Environment, Forest and Climate Change has examined the proposal for Pesticide Manufacturing Project with Production Capacity of 9000 MT/Annum located at E-39, **G-49, G-48,** RIICO Industrial Area, Bagru (EXT.), Jaipur, Rajasthan by M/s Advance Agrolife Pvt. Ltd.	
3.	Point No 6; Page 4 of 11	The PP reported that the total land area of the project site is 4000 m^2. Industry will develop greenbelt in an area of 33 % i.e., 1320 m^2 out of the total area of the project. The estimated project cost is Rs. 40.0 crores. Total capital cost earmarked towards environmental pollution control measures is Rs.150 Lacs and the Recurring cost (operation and maintenance) will be about Rs. 15.0 Lacs per annum. Total Employment will be 95 persons during operation phase. Industry proposes to allocate Rs. 80.0 Lakhs towards CER.	The PP reported that the total land area of the project site is **7390 m^2.** Industry will develop greenbelt in an area of 33 % i.e., **2438.70 m^2** out of the total area of the project. The estimated project cost **is Rs. 41.5 Crores.** Total capital cost earmarked towards environmental pollution control measures is **Rs.160 Lacs** and the Recurring cost (operation and maintenance) will be about **Rs. 16.0 Lacs** per annum. Total Employment will be 95 persons during operation phase. Industry proposes to allocate Rs. 80.0 Lakhs towards CER.	Due to additional plot, the total plot area of project and green area after amendment will change. Cost of the project along with Cost on Environment Management Plan will also change in accordance with cost spent on additional plot land.

4.	Point No. 9; Page 4 of 11	Total water requirement is 13 KLD of which freshwater requirement of 9.5 KLD will be met from borewell. Effluent of 6 KLD (Industrial Effluent-4 KLD; Domestic Sewage- 2 KLD) quantity will be treated through ETP (5 KLD) and MEE followed by ATFD (5 KLD). Domestic sewage shall be disposed through Septic Tank. The plant will be based on Zero Liquid discharge system.	Total water requirement is **13.5 KLD** of which freshwater requirement of **10 KLD** will be met from borewell. Effluent of 6 KLD (Industrial Effluent-4 KLD; Domestic Sewage- 2 KLD) quantity will be treated through ETP (5 KLD) and MEE followed by ATFD (5 KLD). Domestic sewage shall be disposed through Septic Tank. The plant will be based on Zero Liquid discharge system.	Minimal Increase (Additional of 0.5 KLD for increase in requirement of green area).
5.	Point No. 13; Page 5 of 11	The PP committed that company will adopt the technology for reducing the carbon emission. Green field technology- company will do sufficient plantation in factory campus. The emitted carbon from boiler is designed with well-equipped Bag filter and scrubber for capturing carbons from boiler. The PP informed that approx. 330 nos. of trees will be planted, and an average of 78 kg Carbon will be sequestered per tree, thus 330 trees will	The PP committed that company would adopt the technology for reducing the carbon emission. Green field technology- company will do sufficient plantation in factory campus. The emitted carbon from boiler is designed with well-equipped Bag filter and scrubber for capturing carbons from boiler. The PP informed that approx. **610 nos. of trees** will be planted, and an average of 78 kg Carbon will be sequestered per tree, thus 330 trees will	Due to increase in green belt & quantity of trees, the amount of carbon will be sequestered will change accordingly.

		have reduced about 257 MT/Year.	have reduced about **476 MT/Year.**	
6.	Point No. 16; Page 6 of 11	Based on the proposal submitted by the project proponent and recommendations of the EAC (Industry-3 Sector), Ministry of Environment, Forest and Climate change hereby accords the Environmental Clearance for the proposed Pesticide Manufacturing Project with production capacity of 9000 MT/Annum, located at E-39, RIICO Industrial Area, Bagru (EXT.), Jaipur, Rajasthan by M/s Advance Agrolife Pvt. Ltd., under the provisions of the EIA Notification, 2006, subject to the compliance of terms and conditions as under: -	Based on the proposal submitted by the project proponent and recommendations of the EAC (Industry-3 Sector), Ministry of Environment, Forest and Climate change hereby accords the Environmental Clearance for the proposed Pesticide Manufacturing Project with production capacity of 9000 MT/Annum, located at E-39, **G-49, G-48,** RIICO Industrial Area, Bagru (EXT.), Jaipur, Rajasthan by M/s Advance Agrolife Pvt. Ltd., under the provisions of the EIA Notification, 2006, subject to the compliance of terms and conditions as under: -	-
7.	Condition (xix); Specific Conditions; Page 8 of 11	Total freshwater requirement shall not exceed 9.5 KLD will be met from Borewell. Prior permission in this regard shall be obtained from the concerned regulatory authority/CGWA and renewed from time to time.	Total freshwater requirement shall not exceed **10 KLD** will be met from Borewell. Prior permission in this regard shall be obtained from the concerned regulatory authority/CGWA and renewed from time to time.	Minimal Increase (Additional of 0.5 KLD for increase in requirement of green area).

4. **Deliberations by the EAC**:

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

The EAC inter-alia, deliberated on the Greenbelt development plan, proposed technical plant layout and advised the PP to submit the following:

- The green belt of area 2438.70 sq. m (33% of total plot area) will be developed all around the periphery of the project site and total 732 no. of trees (610 +122- considering 80% of survival rate) will be developed in the green area within one-year post grant of Environmental Clearance of the project.
- Revised layout plan

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

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

(i). Industry shall develop Greenbelt at an area of 2438.70 sq. m (33% of total plot area and about 732 saplings shall be planted within one-year post grant of Environmental Clearance considering a density of 2500 trees per ha. and 80% survival rate.

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

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

Agenda No. 45.8

Modernization of Existing Manufacturing Unit of Dyes and Dyes Intermediates by Addition of New Plots and Redevelopment of Manufacturing Plant (For Intermediates Products) located at Shed No.: C1/2 to 4, C1B/2, Plot No.: 4 – A (Proposed New) 28 to 32, 34, 35 (Proposed New), 37 to 40, 66 (Proposed New) & 67, GIDC Pandesara, District Surat, Gujarat, India by M/s Colourtex Industries Private Limited (Unit-4) - Consideration of EC (under Para 7 (ii))

[Proposal No. IA/GJ/IND3/402063/2022; File No. IA-J-11011/476/2022-IA-II(I)]

1. The proposal is for Modernization of Existing Manufacturing Unit of Dyes and Dyes Intermediates by Addition of New Plots and Redevelopment of Manufacturing Plant (For Intermediates Products) located at Shed No.: C1/2 to 4, C1B/2, Plot No.: 4 – A (Proposed New) 28 to 32, 34, 35 (Proposed New), 37 to 40, 66 (Proposed New) & 67, GIDC Pandesara, District – Surat, Gujarat, India by M/s Colourtex Industries Private Limited (Unit-4).

2. The project/activity is covered under 5(f) – Synthetic Organic Chemicals Industry under category 'B'. 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 Environment Clearance on 29.10.2022 in Form-2 and submitted the EIA/EMP Report and other documents. Due to some shortcomings, the project was referred back to PP on 9.11.2022 and reply to the same was submitted by the PP on13.12.2022. The PP in the Form-2 reported that it is an Expansion case. The proposal is now placed in 45th EAC meeting to be held on on 11-13th January, 2022, wherein the PP along with accredited Consultant, **ENPRO Enviro Tech and Engineers Pvt. Ltd.** [Accreditation number – NABET / EIA / 2225 / RA 0236_Rev 01 Valid up to 12.1.2025] 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 existing land area is 21,029.17 m^2. Additional 3,470 m^2 land will be used for proposed modernization. Total land area after proposed modernization will be 24,499.17 m^2 and no R&R is involved in the Project.

5. The PP reported that Ministry (SEIAA, Gujarat) had issued EC earlier vide letter no. SEIAA/GUJ/EC/5(f)/248/2009; dated 01 September 2009 to the existing project of synthetic organic chemicals in favour of M/s. Colourtex Industries Pvt. Ltd. (Unit 4).

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. River/ water body Tapi river is flowing at a distance of approx. 6.1 km in NW direction. The PP reported that no forest area is involved in the proposed project

7. The PP reported that the Certified Compliance Report was issued on 23rd August 2022 vide letter no. J–11/36-2022-IROGNR by IRO, Gandhinagar, MoEF&CC. Out of total, 61 conditions, 43 are complied, 8 are partly complied and 5 are agreed to comply, 2 are noted by the unit and 3 conditions are not applicable to unit. Later on, the unit has submitted action plan cum compliance report for partly complied conditions dated 26th August 2022. With reference to the same, the unit has obtained review report from IRO, Gandhinagar vide F. No. J-11/36-2022-IROGNR dated 05th September 2022 and as per ATR, out of 8 partly complied conditions, 7 are complied and 1 compliance in progress i.e. installation of rain water harvesting system.

8. The PP reported that total water requirement is/will be 1520 m^3/day (1477 m^3/day for industrial activities + 43 m^3/day for domestic activities) of which fresh water requirement of 1275 m^3/day is/will be met from group companies (own water supply network). In addition, Steam (177 KLD) shall be sourced from Colourtex Industries Pvt. Ltd. (Unit-2). Total effluent generation is/will be 1547 m^3/day (1505 m^3/day from industrial activities + 42 m^3/day from domestic activities). There is/will be two stream segregation based on effluent characteristics. (1) Low COD effluent stream of 1187 m^3/day & (2) High COD effluent stream of 360 m^3/day. Out of 1187 m^3/day low COD effluent stream, 798 m^3/day will be treated into well designed ETP consisting of primary, secondary and tertiary treatment units at Colourtex Industries Pvt. Ltd. (Unit 4) and then it will be discharged to CETP of M/s. Pandesara Infrastructure Limited (PIL). Remaining 389 m^3/day will be transferred and treated in ETP consisting of primary, secondary and tertiary treatment units at Colourtex Industries Pvt. Ltd. (Unit 3 – Sister Concern). High COD effluent stream of 360 m^3/day will be treated into inhouse MEE plant. MEE concentrate generated shall be treated in Spray dryer. Total MEE condensate generation will be 404 m^3/day including steam condensate, out of which about 202 m^3/day of MEE condensate shall be reused after treatment and remaining 202 m^3/day condensate shall be treated in ETP along with other effluent. The quantity 1187 m^3/day of effluent included the quantity 202 m^3/day of MEE condensate.

9. The PP reported that there shall be no change in existing power requirement of 3050 kVA after modernization and is/will be met from Dakshin Gujarat Vij Company Limited (DGVCL). Existing unit has 3 nos. of DG sets having capacity of 380 kVA, 725 kVA and 725 kVA respectively. DG sets are / will be used as standby during power failure. Stack (height) 11 m has been provided as per CPCB norms to the all-DG sets. Existing unit has Hot Air Generator (45,00,000 Kcal/Hr), Thermopack (200 U), Hot Air Generator (38,00,000 Kcal/Hr). Teema Cyclone & ESP + Dry Scrubber (Lime Dosing System) is Provided along with 34 m Stack Height is provided to Hot Air Generator (45,00,000 Kcal/Hr). Multiple Cyclone Separator + Dry Scrubber (Lime Dosing System) Along with Stack Height of 34 meters is provided to Thermopack (200 U) and Spray Dryer, Cyclone Separator and Scrubber has been provided to Hot Air Generator (38,00,000 Kcal/Hr) to control emission of PM, SOx, NOx and to achieve emission standards as per NAAQS.

10. **Details of Process emissions generation and its management:** One stack is attached with reaction sulphonator & nitrator to control emission of SO_2 and NOx and 2 stage alkali scrubber is provided with 11 m stack height as APCM. Second stack is attached with spray drier – 1 to control emission of SPM and cyclone & wet scrubber is provided with 19.825 m stack height as APCM. Third stack is attached to spray drier – 2 to control emission of SPM and cyclone & wet scrubber has been provided with 19.825 m stack height. Fourth stack is attached with spray drier – 3 to contro l emission of SPM and cyclone & wet scrubber is provided with 19.825 m stack height as APCM. Fifth stack is attached with spray drier – 4 to control emission of SPM and cyclone & wet scrubber is provided with 24 m stack height as APCM. Sixth stack is attached with reactor sulphonator to control emission of SO_2 and NOx. One stage alkali scrubber is provided with 8.25 m stack height as APCM. Seventh stack is attached with reactor diazotization to control emission of HCL and one stage alkali scrubber is provided with 11 m stack height as APCM. Eighth stack is attached with reactor metal complexing to control emission of CO_2.

One stage alkali scrubber is attached with 11 m stack height as APCM. Ninth stack is attached with reactor diazotization to control emission of HCL and 2 stage alkali scrubber is provided with 11 m stack height as APCM. Tenth stack is attached with reactor to control emission of acetate fumes and alkali scrubber is provided with 11 m stack height as APCM. Eleventh stack is attached to spray drier to control emission of SPM, SO_2, NOX and quadruple cyclone & ventury Scrubber is provided with 35 m stack height as APCM. Twelfth stack is attached with reactor – sulphonator & nitrator to control emission of SO_2, NOx and alkali scrubbing system is provided with 12 m stack height as APCM. Thirteenth stack is attached with reactor – sulphonator to control emission of SO_2, NOx and alkali scrubbing system is provided with 11 m stack height as APCM. Fourteenth stack is attached with reactor - diazotization to control emission of HCL and alkali scrubbing system is provided with 11 m stack height as APCM. Fifteenth stack is attached with reactor to control emission of acetate fumes and alkali scrubbing system is provided with 11 m stack height as APCM. Sixteenth stack is attached with reactor – diazotization and alkali scrubbing systems is provided with 11 m stack height as APCM.

11. **Details of Solid Waste/Hazardous Waste Generation and its Management:** Unit is/will be generating ETP sludge (614.5 MT/Month), MEE salt (Inorganic salt) (870 MT/Month), Used oil (0.956 MT/Month), Empty Barrels / Containers / Liners Contaminated with Haz. Chemicals / Wastes (1100 nos./Month (15.4 MT/Month)), Liners (17.5 MT/Month), organic sludge (16 MT/Month), Oily sludge (4.8 MT/Month), Metal sludge (18.75 MT/Month), Waste / Residues Containing Oil (0.5 MT/Month), Spent acid (900 KL/Month). All the haz. Waste is being/ will be managed as per haz. waste management rules, 2016. Waste generated during construction/demolition/modification activities shall be disposed as per C&D Waste Management Rules, 2016.

12. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 35.334 Crores (capital) and the Recurring cost (operation and maintenance) will be about 20.074 Crores per annum. Industry proposes to allocate Rs. 79 Lakhs (2 % of additional project cost Rs. 39.5 Crores) towards CER.

13. The PP reported that as the project site is located in a Notified Pandesara GIDC, Public hearing may kindly be exempted under the provisions as per paragraph 7-III Stage (3)(b) of the EIA Notification, 2006 and also as per, MoEF&CC O.M dated 27th April 2018.

14. Industry has already developed green belt in 9582 m^2 (192 m^2 within and adjacent to premises + 9423 m^2 at own TSDF site) (which is 45.56 % of existing plot area of 21029.17 m^2). Unit has proposed additional plots (with total area of 3470 m^2) in proposed modernization. Unit will develop additional greenbelt in 3543 m^2 (743 m^2 within plant premises + 2800 m^2 in GIDC corridor). This way, unit will maintain greenbelt in total 13,125 m^2 area (9582 m^2 existing greenbelt + 743 m^2 additional greenbelt within plant premises + 2800 m^2 outside plant premises in GIDC corridor) which will be 53.57 % of total plot area of 24,499.17 m^2 after proposed modernization.

15. The PP proposed to set up an Environment Management Cell (EMC) consisting of Enviornment Manager- Enviornment Engineer- Laboratory Chemist- Supervisiors and opeartors- Maintenanace Engineer for the functioning of EMC.

16. The PP reported that total carbon emission for present scenario is 46,846.27 MT/annum and the reduction due to Plantation (Greenbelt Development) (in MT/Annum) is 192.28 MT/annum and Reduction due to Use of Renewable Energy Resources (in MT/Annum) is 4032 MT/annum.

17. The PP submitted the Onsite and Offsite disaster management plans in the Addendum EIA report.

18. The estimated project cost is Rs. 133.3 Crores including existing investment of Rs. 93.8 Crores. The total Employment will be 281 persons as direct & indirect (temporary & permanent basis) after modernization

19. **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 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 observed that Public Hearing is not required for this proposal under Para 7 (ii) (a) of the EIA Notification, 2006.

The EAC inter-alia, deliberated on the existing and proposed plots, existing and proposed Greenbelt development, water balance, details of carbon sequestration and advised the PP to submit the following:

- Cleary demarcating existing and proposed new plots along with greenbelt details of existing plots and additional greenbelt for new proposed plots after modernization.

- Details of existing and proposed green belt development along with trees species and budget allocation for proposed greenbelt development
- Simplification of Water Balance Diagram.
- Details of carbon sequestration

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

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

The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The expert members of the EAC found the proposal in order and recommended for grant of environmental clearance.

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

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

(i) Adequate stack height as per CPCB/SPCB guidelines shall be provided. Stack emission levels shall be stringent than the existing standards (80 %) in terms of identified critical pollutants.

(ii) The unit shall install two stage scrubbing system of appropriate media for the control of the process gas emission.

(iii) The Unit shall install Continuous Emission Monitoring System- CEMS with existing Flue Gas Stacks and connected with GPCB/CPCB server.

(iv) The Unit shall adhere to Sector specific guidelines/SOP published by GPCB / CPCB from time to time for effective fugitive emission control.

(v) The PP shall handle all the material in closed system and process shall be carried out in closed reactor to control odour nuisance.

(vi) The PP shall explore transportation of materials by rail/belt conveyer.

(vii) The PP shall not use pet-coke, furnace oil, LSHS as a fuel.

(viii) The PP shall adopt sectoral Best Available Technology.

(ix) The PP shall develop Greenbelt over an area of at least, 2919 m^2 (743 m^2 in plant premises and 2,176 m^2 adjacent to plant premises within GIDC by planting 6680 number of trees within a period of one year of grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft (about 2 m). The budget earmarked for the plantation shall be ₹ 13.50 Lakhs and 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.

(x) The transportation load on roads shall be within their carrying capacity and adequate width of roads shall be maintained inside the industrial premises. All the vehicle movement areas shall be provided with paved road to avoid dusting.

(xi) The Unit shall use treated effluent for preparation of lime and other slurry in ETP and no fresh water shall be utilized in ETP.

(xii) The domestic sewage shall be treated with industrial effluent in in-house ETP consisting of primary, secondary and tertiary treatment and sent to CETP of Pandesara Infrastructure Limited (PIL) along with other industrial effluent. The Unit shall also not dispose domestic sewage through septic tank/soak pit.

(xiii) Continuous monitoring of effluent quality/quantity shall be done. The CEMS shall be connected to SPCB/CPCB server as well, to comply with the norms.

(xiv) The unit shall explore Techno-Economic feasibility of Zero Liquid Discharge (ZLD) and if feasible, ZLD should be adopted.

(xv) The Unit shall install and maintain rain water harvesting structures.

(xvi) The Unit shall handle and dispose fly-ash as per prevailing guidelines. Separate storage area shall be provided for fly ash within the plant premises.

(xvii) Industry shall dispose its hazardous wastes through co-processing, pre-processing to the extent possible prior its disposal to incineration/ landfill as per provisions of Hazardous and Other Wastes (Management and Trans boundary Movement) Rules, 2016.

Transportation of hazardous wastes shall be carried out through GPS mounted vehicles only.

(xviii) Spent Acid shall be reused and part of Spent Acid shall be neutralized in ETP and the generated Gypsum sludge shall be sent to Cement Industries/ disposed at TSDF.

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

(xx) An amount of ₹ 33 crores shall be allocated towards CER for Preventing healthcare, Animal welfare, Animal welfare, Ensuring environmental sustainability, Eradicating hunger poverty and malnutrition, Promoting gender equality, Rural development projects, Protection of national heritage, art & culture, Contribution for sanitation including contribution to the Swachh Bharat Kosh, Making available safe drinking water, Differently abled and livelihood enhancement projects, Measures for the benefit of armed forces veterans, Enhancing vocation skills.

(xxi) 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 Manager- Environment Engineer- Laboratory Chemist- Supervisors and operators-Maintenance Engineer, In addition, one safety & health officer as per the qualification given in Factories Act, 1948 shall be engaged within a month of grant of EC. The PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.

(xxii) 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 [₹35.334 Crores (Capital cost) and ₹ 20.074 Crores (Recurring cost)] shall be kept in a 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.\

(xxiii) The total water requirement is/shall be 1520 m^3/day (1477 m^3/day for industrial activities + 43 m^3/day for domestic activities) of which fresh water requirement of 1275 m^3/day is/shall be met from group companies (own water supply network). 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 prior permission 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.

(xxiv) 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.

(xxv) 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.

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

(xxvii) 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.

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

(xxix) Total effluent generation shall not exceed 1547 m^3/day (1505 m^3/day from industrial activities + 42 m^3/day from domestic activities). Out of 1187 m^3/day low COD effluent stream, 798 m^3/day shall be treated in the well designed ETP consisting of primary, secondary and tertiary treatment units at Colourtex Industries Pvt. Ltd. (Unit 4) and then it shall be discharged to CETP of M/s. Pandesara Infrastructure Limited (PIL). Remaining 389 m^3/day shall be transferred and treated in ETP consisting of primary, secondary and tertiary treatment units at Colourtex Industries Pvt. Ltd. (Unit 3 – Sister Concern). High COD effluent stream of 360 m^3/day shall be treated in in-house MEE plant. MEE concentrate generated shall be treated in Spray dryer. About 202 m^3/day of MEE condensate shall be reused after treatment and remaining 202 m^3/day condensate shall be treated in ETP along with other effluent.

(xxx) 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.

(xxxi) 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.

(xxxii) 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.

(xxxiii) 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.

(xxxiv) 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.

(xxxv) 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.

(xxxvi) 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.

(xxxvii) 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. 45.9

Establishment of API Manufacturing Unit at Gat No. 88/2/C, 96, 97, 98/1/A/1, 98/1/A/2, 98/2, 98/3, 92/1 Watwate, Post Inchgaon, Taluk Mohol, District Solapur, Maharashtra by Yenky Multiple Nutrients Pvt. Ltd. - Amendment in Environmental Clearance

[Proposal No. IA/MH/IND3/294242/2022; File No. IA-J-11011/260/2020-IA-II(I)]

1. The proposal is for the Amendment in EC for Establishment of API Manufacturing Unit at Gat No. 88/2/C, 96, 97, 98/1/A/1, 98/1/A/2, 98/2, 98/3, 92/1 Watwate, Post Inchgaon, Taluk Mohol, District Solapur, Maharashtra by Yenky Multiple Nutrients Pvt. Ltd.

2. The proposal is for amendment in the Environmental Clearance granted by the Ministry vide EC letter dated 6th May, 2021 and transfer of EC vide letter dated 28.11.2022 for Establishment of API Manufacturing Unit at Gat No. 88/2/C, 96, 97, 98/1/A/1,98/1/A/2, 98/2, 98/3, 92/1 Watwate, Post Inchgaon, Taluk Mohol, District Solapur, Maharashtra in favour of M/s Yenky Multiple Nutrients Pvt. Ltd.

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

<table>
<tr><th>S. No.</th><th>Para of approved EC</th><th>Description as per approved EC</th><th>To be Revised /Read as</th><th>Justification/ Reason</th></tr>
<tr><td>1</td><td>Point No. 3, Page No. 1 & 2 (List of Product table)</td><td>The details of products and capacity are as under:
<table>
<tr><th>No</th><th>Products</th><th>Qty. (MT/M)</th><th>CAS No.</th><th>Uses</th></tr>
<tr><td>1</td><td>Pefloxacin</td><td>4</td><td>70458-92-3</td><td rowspan="2">Treatment of bacterial infections</td></tr>
<tr><td>2</td><td>Ciproloxacin HCL</td><td>20</td><td>93107-08-5</td></tr>
<tr><td>3</td><td>Enrofloxacin</td><td>2</td><td>93106-60-6</td><td>In veterinary medicine for bacterial infections</td></tr>
</table></td><td>The details of products and capacity are as under:
<table>
<tr><th>No</th><th>Products</th><th>Qty. (MT/M)</th><th>CAS No.</th><th>Uses</th></tr>
<tr><td>1</td><td>Peflox acin</td><td>4</td><td>70458-92-3</td><td rowspan="2">Treatment of bacterial infections</td></tr>
<tr><td>2</td><td>Ciprol oxacin HCL</td><td>20</td><td>93107-08-5</td></tr>
<tr><td>3</td><td>Enrofl oxacin</td><td>2</td><td>93106-60-6</td><td>In veterinary medicine for bacterial infections</td></tr>
</table></td><td>As per market demand management has decided to reduce capacity of two products i.e. Metformin HCL from 1000 MT/M to 700 MT/M, Erythromycin Thiocynate from 66.67 MT/M to 34</td></tr>
</table>

		4	Diloxanide Furoate	15	3736-81-0	To treat infection by Entamoeba	4	Diloxanide Furoate	15	3736-81-0	To treat infection by Entamoeba	MT/M and **add 3 new products-** **1. Faropenem Sodium-2.5 MT/M** **2. Dydrogesterone - 0.32 MT/M** **3. D Vitamin-0.50 MT/M** (as against capacities mentioned in EC dated 05.01.2021). The total capacity of products reduced from **1144.67 MT/M to**
		5	Metformin HCL	1000	1115-70-4	Treatment of Diabetes (blood sugar control)	**5**	***Metformin HCL***	***700***	***1115-70-4***	***Treatment of Diabetes (blood sugar control)***	
		6	Amlodipine Besylate	5	1114 70-99-6	To treat chest pain (angina) & other conditions caused by coronary artery disease	6	Amlodipine Besylate	5	1114 70-99-6	To treat chest pain (angina) & other conditions caused by coronary artery disease	
		7	Amlodipine Maleate	1	8815 0-47-4		7	Amlodipine Maleate	1	8815 0-47-4		
		8	Amlodipine Base	5	8815 0-42-9		8	Amlodipine Base	5	8815 0-42-9		
		9	Phthaloyl Amlodipine	6	8815 0-62-3		9	Phthaloyl Amlodipine	6	8815 0-62-3		
		10	S-Amlodipine Besylate	1	1505 66-71-5		10	S-Amlodipine Besylate	1	1505 66-71-5		
		11	Temisartan	4	1447 01-	Treatment of high	11	Temisartan	4	1447 01-48-4	Treatment of high BP	

			48-4	BP (hypertension), preventing strokes; heart attacks & kidney problems.	
12	Norfloxacin	15	70458-96-7	To treat infections by bacteria.	
13	Erthromycin Thiocynate (TIOC)	66.67	7704-67-8	To treat infections by gram-positive & gram-negative bacteria.	
	Total	**1144.67**			

				(hypertension), preventing strokes; heart attacks & kidney problems.	***815.32 MT/M***
12	Norfloxacin	15	70458-96-7	To treat infections by bacteria.	
13	***Erthromycin Thiocynate (TIOC)***	***34***	***7704-67-8***	***To treat infections by gram-positive & gram-negative bacteria.***	
14	***Faropenem Sodium***	***2.50***	***1225 47-49-3***	***To treat infections by bacteria.***	
15	***Dydrogesterone***	***0.32***	***152-62-5***	***Treatment of menstrual***	

				disorders			
				16	***Vitamin D***	***0.5***	***67-97-0***	***Helps regulate calcium and phosphorus in the body.***	
					Total	***815.32***			
2	Point No. 7, Page No. 2.	The total water requirement is **1558.2 m^3/Day** of which fresh water requirement of **386.2 m^3/Day** and will be met from Bhima River. The industry has obtained water permission from Water Resources Department, Pune vide Letter No Outgoing No. Chief Engineer Head of Department / Project branch 8 / Jakraya Sugar 6558, Dated 17/11/2008 to draw water up to 0.2 million m3 /annum from Bhima river. Generated effluents of **1150 m3/Day**, 22 m3/Day shall be treated by ETP & STP respectively and needs to be recycled. Effluent of quantity **1235.97 m3/Day** shall be treated through two stream ETP. The plant shall be based on Zero Liquid Discharge.	The total water requirement is ***1145 m^3/Day*** of which fresh water requirement of ***380 m^3/Day*** and will be met from Bhima River. The industry has obtained permission from Water Resources Department, Pune vide Letter No Outgoing No. Chief Engineer Head of Department / Project branch 8 /Jakraya Sugar 6558, Dated 17/11/2008 to draw water up to 0.2 million m3 / annum from Bhima river. Generated effluents of ***743 m3/Day***, 22 m3/Day shall be treated by ETP & STP respectively and needs to be recycled. Effluent of quantity ***843.5 m3/Day*** shall be treated through two stream ETP. The plant shall be based on Zero Liquid Discharge.	Due to reduction in product capacity, the water requirement will be reduced from **1558.2 m^3/day** **to 1145 m^3/Day**. Also effluent generation will be reduced from **1235.97 m3/Day** **to 843.5 m3/Day**

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<td>Point No. 10, (Solid Waste Table)

Page No. 3</td>
<td>Solid Waste
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<tr><th>No</th><th>Type</th><th>Quantity (MT/M)</th><th>Disposal</th></tr>
<tr><td>1</td><td>Boiler Ash</td><td>145.00</td><td>Sale to Brick Manufacture</td></tr>
<tr><td>2</td><td>Fermenter Bio-mass Sludge</td><td>135.00</td><td>Used as manure</td></tr>
<tr><td>3</td><td>Metal Scrap</td><td>5.00</td><td rowspan="5">Sale to authorized recyclers</td></tr>
<tr><td>4</td><td>Empty Containers & Drums</td><td>50 Nos.</td></tr>
<tr><td>5</td><td>Packaging Material</td><td>1.50</td></tr>
<tr><td>6</td><td>Battery Waste</td><td>5 Nos.</td></tr>
<tr><td>7</td><td>E-Waste</td><td>0.08</td></tr>
</table>
</td>
<td>Solid Waste
<table>
<tr><th>No</th><th>Description</th><th>Quantity (MT/M)</th><th>Disposal</th></tr>
<tr><td>1</td><td>Boiler Ash</td><td>145.00</td><td>Sale to Brick Manufacture</td></tr>
<tr><td>2</td><td>Fermenter Bio-mass Sludge</td><td>70.00</td><td>Used as manure</td></tr>
<tr><td>3</td><td>Metal Scrap</td><td>5.00</td><td rowspan="5">Sale to authorized recyclers</td></tr>
<tr><td>4</td><td>Empty Containers & Drums</td><td>40 Nos.</td></tr>
<tr><td>5</td><td>Packaging Material</td><td>1.50</td></tr>
<tr><td>6</td><td>Battery Waste</td><td>5 Nos.</td></tr>
<tr><td>7</td><td>E-Waste</td><td>0.08</td></tr>
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<td>Solid waste quantities will be reduced due to reduction in production capacity of couple of high capacity products e.g. Metformin HCl & Erythromycin Thiocyanate therefore Fermenter Bio-mass Sludge will be reduced from 135 MT/M to 70 MT/M and Empty Containers & Drums will be</td>
</tr>
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				from 50 Nos. to 40 Nos.

4. **Deliberations by the EAC**:

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

The EAC inter-alia, deliberated on the Greenbelt augmentation development plan, STP, solvent recovery and advised the PP to submit the following:

- The industry will plant 7680 nos. of trees by considering survival rate as 75-80% within next two months. Moreover, industry will do additional plantation of trees in the vicinity of industry Development of Greenbelt and tree plantation consisting of area environment specific species and try to obtain maximum carbon sequestratation through greenbelt development plan.
- Industry will install Daiki Axis Johkasou Technology - Packaged STP and treated STP effluent will be reused for flushing and greenbelt.
- Industry will achieve 99.7 % of solvent recovery.

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

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

(i). About 7680 saplings shall be planted within next two months considering a density of 2500 trees per ha. and 80% survival rate and industry shall also plant additional plantation in the vicinity of industry Development of Greenbelt and tree plantation consisting of area environment specific species.

(ii). Industry shall also install Daiki Axis Johkasou Technology - Packaged STP and treated STP effluent shall be reused for flushing and greenbelt

(iii). Industry shall achieve 99.7 % of solvent recovery.

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

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

Agenda No. 45.10

Proposed Expansion of Existing Ammonia, Urea, Ethyl Acetate & Ammonium Nitrate Melt Plants & installation of New Weak Nitric Acid and Ammonium Nitrate Prills Plants at Survey No. 5, 24/1-B, 99/3-A, 127, 38, 15 and 74, Ta & Dist: Bharuch, Gujarat by M/s Gujarat Narmada Valley Fertilizers & Chemicals Limited (Unit-1 & 2) - Amendment in ToR

[Proposal No. IA/GJ/IND3/295184/2022; File No. J-11011/310/2012-IA-II(I)]

1. The proposal is for the Amendment in ToR for Proposed Expansion of Existing Ammonia, Urea, Ethyl Acetate & Ammonium Nitrate Melt Plants &installation of New Weak Nitric Acid and Ammonium Nitrate Prills Plants by M/s. Gujarat Narmada Valley Fertilizers & Chemicals Limited at Survey No. 5, 24/1-B, 99/3-A, 127, 38, 15 and 74, Ta& Dist: Bharuch, Gujarat by M/s Gujarat Narmada Valley Fertilizers & Chemicals Limited (Unit-1 & 2).

2. The standard ToR was issued vide letter no J-11011/310/2012-IA-II(I) dated 28.11.2022 by the Ministry. Now the project proponent has requested for amendment in the EC with the details as under:

S. No.	Para of ToR issued by MoEF&CC	Details as per the ToR	To be revised/ read as	Justification/reasons
1	Standard ToR letter granted by the Ministry vide letter No. J-11011/310/2012-IA-II(I) on 26th November 2022	• GNFC has submitted **ToR application to MoEF&CC on 19th November 2022** under following sectors as per the EIA notification dated 14th September, 2006 : ➢ 5(a): "Chemical fertilizers" ➢ 5(f): "Synthetic Organic	➢ Issuance of ToR Letter for 5(f) category ➢ Request for Waiver of Public hearing	• GNFC has submitted **ToR application to MoEF&CC on 19th November 2022** under following sectors as per the EIA notification dated 14th September, 2006 : ➢ 5(a): "Chemical fertilizers" ➢ 5(f): "Synthetic Organic Chemical Industry" • **Granted standard ToR letter by MoEF&CC:** vide file no. J-11011/310/2012-IA-II(I)

		Chemical Industry" • **Granted standard ToR letter by MoEF&CC:** vide file no. J-11011/310/2012-IA-II(I) on 26th November 2022 for **Category 5(a) only.**		on 26th November 2022 for **Category 5(a) only.** • **Hence, we have submitted ToR Amendment Application on 14th December 2022 for following two reasons:** ➢ Issuance of ToR Letter for 5(f) category ➢ Request for Waiver of Public hearing as we have applied under 7(ii) a.

3. **Deliberations by the EAC**:

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

The EAC inter-alia, deliberated on the location of the project i.e gazette notification of the notified industrial area, Greenbelt development plan, effluent process, carbon footprint study and advised the PP to submit the following:

- Greenbelt will develop on an area of 12,83,600 m^2, Industry will plant 1,55,350 number of trees.
- Industry will treat domestic and industrial effluent seprately.
- To submit carbon footprint study along with EIA/EMP report.

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

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

(i). About 1,55,350 saplings shall be planted considering a density of 2500 trees per ha. and 80% survival rate.

(ii). Industry shall treat domestic and industrial effluent seprately.

(iii). The PP shall submit the details of carbon foot prints and carbon sequestration study w.r.t proposed project. Proposed mitigation measures also needs to be submitted.

Agenda No. 45.11

Expansion of Existing Fertilizer Plant for Manufacturing of Nano-Fertilizer, Paradeep Unit located at IFFCO Paradeep Unit, Khatta no. 29 (Plot no. 401(p)) & 44 (Plot no. 400(p)), Surinder Jakhar Nagar, Village- Musadia, PO-Paradeep, Tehsil-Kujang, District Jagatsinghpur, Odisha by M/s Indian Farmers Fertilizer Cooperative Limited (IFFCO)- Consideration of EC

[Proposal No. IA/OR/IND3/410256/2022; File No. J-11011/34/1997-IA-II(I)]

1. The proposal is for environmental clearance for the Expansion of Existing Fertilizer Plant for Manufacturing of Nano-Fertilizer, Paradeep Unit located at IFFCO Paradeep Unit, Khatta no. 29 (Plot no. 401(p)) & 44(Plot no. 400(p)), Surinder Jakhar Nagar, Village-Musadia, PO-Paradeep, Tehsil-Kujang, District Jagatsinghpur, Odisha by M/s Indian Farmers Fertilizer Cooperative Limited (IFFCO).

2. The project/activity is covered under Category 'A' of item 5(a), Chemical Fertilizers of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended). **The project is located in Paradeep Industrial Area, a Severely Polluted Area (SPA).**

3. The PP applied for the EC vide proposal number IA/OR/IND3/410256/2022 dated 15.12.2022 and the standard ToR was issued by the Ministry, vide letter no. J-11011/34/1997-IA-II(I) dated 16.1.2022. The PP submitted that the Public Hearing of the project was successfully conducted on 14.09.2022 at land in front of Kalyan Mandap, Paradeep located nearby IFFCO Paradeep Plant, which was presided by Additional District Magistrate. The main issues raised during the public hearing were Employment, CSR activities, Pollution, etc. for which appropriate responses were provided in the action plan. The PP applied for Environment Clearance on 15.12.2022 in CAF and submitted the EIA/EMP Report and other documents. The PP in the Form-2 reported that it is an **Expansion case.** The proposal is now placed in 45th EAC Meeting held on 11th to 13th January, 2023, wherein the Project Proponent and an accredited Consultant, M/s EQMS India Pvt. Ltd. [Accreditation number NABET/EIA/1922/RA0197 valid up to 3.5.2023], made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that existing land area of the project is 2127.6 Acres. Proposed expansion will be done in an area of 9.26 Acres within existing project premises. The details of products and by–products are as follows:

S. No.	Product	Unit	Existing	Proposed	Total after Expansion	Impact
1.	Phosphatic Fertilizer	MMTPA	2.304	0	2.304	No Change
2.	Sulphuric Acid	MTPD	7000	0	7000	
3.	Phosphoric Acid	MTPD	2650	0	2650	
4.	Electrical Energy	MW	64	0	64	

5.	**Nano-Urea/ Nano-DAP***	**kL/year**	**0**	**33,000**	**33,000**	**Additional Product**
The primary product of the project will be Nano DAP. Nano Urea will be manufactured as per requirement in the same plant.						

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 issued under E (P) Act/Air Act/Water Act.

6. The PP reported that Ministry had issued EC earlier vide letter no. F. No. J-11011/34/1997-IA. II (I) dated 03.04.2017 to the existing project in favour of M/s Indian Farmers Fertiliser Cooperative Limited (IFFCO).

7. The project has been granted Certified Compliance from IRO, MoEF&CC vide Letter No. 101-97/EPE/278 dated 23.02.2022. Closure Report with compliance & consideration of action taken has been granted by IRO, MoEF&CC, Bhubaneswar vide Letter No. 101-97/EPE/502 dated 25.04.2022.

8. The PP reported that the unit was originally constructed by M/s. Oswal Chemicals and Fertilizers Limited (OCFL) and commissioned in the year 2000. The plant was operated under OCFL management till taken over by IFFCO in October 2005. Earlier, the project was granted Environmental Clearance for Phosphatic Fertilizer Complex under the ownership of M/s Oswal Chemicals and Fertilisers Limited vide File No. J-11011/34/97-IA. II dated 31.07.1998. The project was then acquired by IFFCO. IFFCO had given undertaking that they have acquired Phosphatic Fertiliser Manufacturing from M/s Oswal Chemicals & Fertilisers Ltd. IFFCO had submitted an affidavit to abide by the conditions prescribed in EC Letter dated 31.07.1998. Thereafter, Environmental clearance was transferred to IFFCO vide **F. No. J-11011/34/1997-IA. II (I) dated 03.04.2017**. Recently, the unit has been granted Certificate of "No Increase in Pollution Load" by State Pollution Control Board, Odisha vide Letter No. 3003/IND/II-CTE-NIPL-13 dated 26.02.2021 for enhancement of production of Phosphatic Fertilizer by 20% (1.92 million TPA to 2.304 million TPA) without increase in production of Sulphuric Acid, Phosphoric Acid as well as Electrical Energy. The industry is operational as per valid Consent to Operate granted by SPCB, Odisha vide Letter No. 16755/IND-I-CON-5204 dated 30.10.2021 with increased production capacity of Phosphatic Fertilizer (2.304 MMTPA) & same production capacity of other products in the complex i.e., Sulphuric Acid (7000 TPD), Phosphoric Acid (2650 TPD) and Electrical Energy (64 MW).

9. The PP reported that there there are 3 no. of reserved forests located in the 10 km study area of unit. The nearest protected forest is located 7.07 km, N from the plant. Along with, mangroves are also located in the vicinity of project at 0.18 km, S from the project. Nearest surface water body located from the project is Shyamkoti Nalla at 1.74 km, SW from site. Mahanadi River is the nearest river flowing 0.2 km, N from the project site. The PP reported that no forest area is involved in the proposed project and no Schedule-I species exist within 10 km study area of the project.

10. The PP reported that **Ambient air quality** monitoring was carried out at eight (8) locations during October,2021 to December,2021 the baseline data indicates that ranges of

concentrations as: PM_{10} (50-112 μg/m^3), $PM_{2.5}$ (20-61 μg/m^3), SO_2 (10.8-28.40 μg/m^3) and NOx (14.60-80 μg/m^3), CO (0.12- 0.68 mg/m^3). Since the manufacturing process of nano-fertilizer plant is a closed loop reactor vessel setup with regulated control, the nano-fertilizer plant will no contribute to air emissions. No stack has been proposed in expansion. Therefore, AAQ Modelling studies were not done. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). Ambient noise quality monitoring was done at eight (8) locations during study period. Noise level values were ranged from 52.3 to 69.6 dB(A) during day and 41.6 to 62.3 dB(A) during night-time. The noise levels at all locations were observed to be within CPCB limits.

11. The PP reported that **Ground water quality** monitoring was done at eight (8) locations during the study period. pH levels ranged between 7.55-7.92. Total hardness was ranged from 256 to 392 mg/l. The Total Dissolved Solids (TDS) concentration recorded ranged between 458 to 2180 mg/l. Chlorides levels were ranged between 122 to 1082 mg/l. Sulphate levels were ranged between 32 to 98.6 mg/l. Bacteriological studies reveal that no coliform bacterial are present in the samples. All physical and general parameters were observed within the permissible limit except TDS and Chloride levels we observed to be higher than permissible limits at the project site as per IS10500:2012 (Second Revision).

12. The PP reported that **Surface water quality** monitoring was done at three (5) locations during study period out of which, 3 locations were under sea water and 2 locations were under surface water. The sea water quality parameters are compared with water quality standards for coastal waters marine Outfalls (EPA Rule 1986). The sea water quality is comply with the Class SW-II of coastal waters marine Outfalls (EPA Rule 1986) which suits for ***"Bathing, Contact Water Sports and Commercial marine fishing".*** On analysis of surface water locations, pH values of all analyzed samples ranged between 7.65-7.92. TDS levels were observed to be in range from 290- 514 mg/l. Dissolved Oxygen values ranged between 4.6 to 6.4 mg/l. The chlorides level was observed to be in range of 36 to 48 mg/l. Total Coliform levels were found to be in the range of 1240 MPN/100 ml. Biochemical Oxygen Demand (BOD) was observed to be in range of 3 to 6.4 mg/l. Comparing the values as per classification for designated best use water quality criteria CPCB, surface water locations SW-4 i.e., Talananda Canal falls under "Category -C" i.e, Drinking water source after conventional treatment and disinfection while SW-5 i.e., Bhitargarh Nalla falls under "Category D" i.e., Propagation of Wildlife & Fisheries.

13. The PP reported the existing freshwater requirement of the project is 25970 KLD being sourced by Taladanda Canal originated from Mahanadi River at Cuttack. Freshwater required for proposed nano fertilizer plant will be 170 KLD. The total freshwater requirement of plant after expansion will be 26140 KLD sourced from existing water supply. In existing unit, Industrial wastewater along with effluent generated from the plant are completely recycled/consumed in the scrubber /cooling tower/filtration process of PAP plant because PAP plant is negative water balance plant. Hence, the plant is Zero liquid effluent discharge (ZLD) based plant. There will be no generation of effluent from manufacturing process of Nano-fertilizer. However, there will be generation of additional 3 KLD wastewater from cleaning of reactor vessels, floor washing & cooling tower in the plant along with 9 KLD domestic sewage generated from proposed nano-fertilizer plant. 9 KLD domestic sewage will

be treated in proposed STP of capacity 10 KLD. 8.5 KLD treated water will be reused in horticultural purposes within the plant. For treatment of 3 KLD industrial effluent, ETP of capacity 6 KLD and Multi-Effect Evaporator & Stripper of capacity 35 KLD will be installed. 2 KLD (Weak Effluent) generated from cooling tower blowdown, process & washing wastewater will be treated in ETP & 1 KLD (Strong Effluent) generated from vessel washing & pump drains etc. will be treated in ETP+Stripper+MEE. 2.5 KLD treated water will be reused within the plant for horticultural purposes. There will be increment of only 12 KLD in the existing wastewater generation i.e., 3652 KLD. Total wastewater generation after expansion will be 3664 KLD. Industrial effluent from other units will be discharged to reuse for PAP Ball Mill and PAP Cooling Tower after treatment in existing Effluent Treatment Plant (Capacity-4800 KLD). All the standards of SPCB and MoEF&CC shall be maintained.

14. The PP reported the total contracted demand is 11 MVA from TPCODL {TP Central Odisha Distribution Limited, Two Turbo Generators each of 55 MWH and the normal plant load is 45 MW. Existing infrastructure for electrical power will, therefore, be adequate to meet the total requirement of existing plant as well as proposed nano-fertilizer plant. Power required for proposed nano-fertilizer plant will be 4.0 MW. Total power requirement after expansion will be 49 MW. For power backup purposes, DG sets of capacity 3x500 kVA and 3125 kVA (2.5 MW) has been installed. No additional DG is proposed.

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

S. No.	Stack Attached	Stack Height (m)	APCS	Limit
1	Auxiliary Boiler (Capacity-)	93	Electrostatic precipitators	PM- 100 mg/Nm^3 SO2- 600 mg/Nm^3 NOx- 600 mg/Nm^3
2	SAP (2 no's)	131	Alkali scrubbers for startup, mist eliminator, DCDA Process	SO2- 2.0 kg/T
3	PAP	36	Fumes Scrubber & Pre scrubber	PM- 100 mg/Nm^3 Total F- 25 mg/Nm^3
4	DAP (3 no's)	55 (each)	Tail gas scrubber & Dust and fumes scrubber	PM- 100 mg/Nm^3 Total F- 25 mg/Nm^3
5	Ammonia Tank from Flaring	60	-	-
6	DG Sets	30	-	-

The manufacturing process of nano-fertilizer plant is a closed loop reactor vessel setup with regulated control. Hence, nano-fertilizers plant will not contribute to air emissions. There shall

be no gaseous emission from Nano Fertilizer Unit. No additional process Stack is proposed in expansion and there shall be no gaseous emission from Nano Fertilizer Unit.

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

S. No.	Name of Waste	Category No. (As per Sch-I&II 2016)	Quantity (MTPA)			Mode of Treatment & Disposal Method
			Existing	Proposed	After Expansion	
1	Sulphur Muck (Residues, Dust or Filter Cakes)	Schedule-I Stream-17.1	2000	0	2000	Storage in impervious pits/containers under covered shed followed by recycle as filler in DAP/NP/disposal in Secured Landfill (SLF)/ Common Hazardous Waste Treatment Storage Disposal Facility (CHWTSDF)
2	Spent Catalyst	Schedule-I Stream-17.2	63	0	63	Storage in impervious pits/containers over impervious floor under well ventilated covered shed followed by disposal through actual users having authorization from SPCB, Odisha/Disposal in Captive SLF/Common Hazardous Waste Treatment Storage,

						Disposal Facility (CHWTSDF), Jaipur.
3	Chemical Sludge from Wastewater Treatment	Schedule -I Stream-35.3	300	Minimal increase	300	Collected through sludge drying bed followed by recycle as filler in DAP/NP/Disposal in Captive SLF/CHWTSDF.
4	Used/Spent Oil	Schedule -I Stream-5.1	30 kL/year	1.2 kL/year	31.2 kL/year	Storage in containers over impervious floor under well ventilated covered shed followed by disposal through actual users having valid authorization from SPCB, Odisha.
5	Disposal Containers/Barrels/ Liners/Contaminated with hazardous waste/chemicals	Schedule -I Stream-33.1	1000	----	1000	Storage on impervious floor under well ventilated covered shed followed by disposal trough actual users having authorization from SPCB, Odisha.
6	Spent Ion Exchange containing toxic metal	Schedule -I Stream-35.2	30	0	30	Storage in impervious pits/containers under well ventilated covered shed followed by final disposal in

						Authorized Common HW Incinerator/Co-processing in cement kiln authorized by SPCB, Odisha/Disposal in Captive SLF/CHWTSDF.
7	Plastic Waste	-	0	0.72	0.72	Will be sold/disposed of to registered recycler.
8	Fly Ash	-	1.23	0	1.23	Fly Ash will be used for reclamation of low lying areas in the plant.
9	Gypsum	-	35.62	0	35.62	Stored in designated surge pond with HDPE liners. Although MoEF vide GOI Gazette Notification dated 24.9.08, has excluded phosphogypsum from Hazardous Waste category, yet proper precautionary measures are adopted during handling, storage, transportation and disposal of phospho-gypsum as per guidelines provided in "Hazardous Solids Wastes

						Storage & Handling Rules" Notification 24th September 2008 of MOEF to avoid any environmental degradation. IFFCO has selling Phosphogypsum to various cement and fly ash bricks manufacturers.

17. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 27.90 Crores (capital) and the Recurring cost (operation and maintenance) will be about 300 Lakh per annum. Industry proposes to allocate ₹ 2.53 Crores towards CER.

18. The PP reported that Industry has already developed greenbelt in an area of 619 Acres ((i.e., 29% of total plot area). As per NGT Order dated dated 10.07.2019, 23.08.2019 & 14.11.2019, the project falls in Paradeep i.e., Severely Polluted Area (SPA) & latest Office Memorandum by MoEF&CC vide F.No. 22-23/20180IA.III [E115231] dated 05.7.2022, it has been directed for increase in green area of the project upto 40% of total area as an environmental safeguard prescribed by NGT & CPCB. Hence, IFFCO Paradeep has planned for increment in green area from 619 Acres (29 % of total area) to 851.04 Acres (40% of total plot area). Under proposed expansion, additional 232.04 Acres of green area will be developed. Most the remaining land available within IFFCO Paradeep Unit is mainly water bodies around creek and so not suitable for plantation. Due to the same, 58 Acres of available land within the premises will be developed into green area. The industry has requested district administration and nearby Panchayat authorities to provide suitable bare land to develop rest of the green belt area.

19. The PP proposed to set up an Environment Management Cell (EMC) to engage Director- General manager- Dy. General Manager- Dy. Manager – Enviornment Officer and field operator for the functioning of EMC.

20. The PP submitted that Public Hearing for the project was successfully conducted on 14.09.2022 at 10:30 AM at land in front of Kalyan Mandap, Paradeep, Jagatsinghpur District. Advertisement announcement of Public Hearing for the project was published in newspapers namely "The Times of India" and "The Prameya" on 05.08.2022. The main issues raised during the public hearing Employment, CSR activities, Pollution, etc. for which appropriate responses were addressed in the action plan.

21. The PP reported that in case of LCA of Di-Ammonium Phosphate (DAP), the usage of phosphoric acid and ammonia are the leading cause of environmental impacts. When compared with the nano-DAP the maximum share of environmental impacts traces back to the raw material B1, I and power consumption in the overall life cycle. For conventional DAP, electricity consumption has the maximum share in ozone layer depletion potential (ODP) after phosphoric acid, whereas life cycle analysis of nano-DAP shows that electricity contributes to major impacts in ODP and HTP category as well. Similar to the nano-Nitrogen, the effectivity of nano-DAP is much more as compared to the conventional DAP and the cost benefit analysis also shows the environmental benefit worth Rs. 32,114 for replacing one tonne of DAP by 12 Kg nano-DAP or 20 bottles of 500 ml which provides the same effectiveness on the ground. Thus, proposed plant of 33000 KL/annum of nano DAP would accrue an environmental benefit of worth ₹ 10,597 Crores per annum.

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

23. The estimated cost for proposed expansion is Rs 225 Crores. Existing manpower of the plant is 4984 no. (Contractual- 3775 no.; Permanent- 1209 no.). Under proposed expansion, employment will be given to 200 (Permanent- 35 no.; Contractual Workers- 165 no). The total employment generation of the plant after expansion will be 5184 no.

24. **<u>Deliberations by the EAC</u>**:

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

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

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

The EAC inter-alia, deliberated on the details for efforts & measures, evaporation loss and fire hydrant water requirement, CEPI compliance OM dated 31.10.2019 and advised the PP to submit the following:

- Details of efforts and measures for reduction in coal consumption to be provided.

- Justification of evaporation loss and fire hydrant water requirement to be provided. Measures/efforts for reduction of the same to be provided.

The PP submitted the above information/documents and the EAC found it 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 Experts 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.

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

(i) Adequate stack height as per CPCB/SPCB guidelines shall be provided. Stack emission levels shall be stringent than the existing standards in terms of the identified critical pollutants.

(ii) The Unit shall install Continuous Emission Monitoring System (CEMS) (as per CPCB guidelines for relevant parameters) which shall be connected with GPCB/CPCB server.

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

(iv) The PP shall explore transportation of materials by rail/belt conveyor.

(v) The PP shall use furnace oil and coal with high calorific value and low ash content which does not lead to increased air emissions.

(vi) The PP shall adopt sectoral Best Available Technology.

(vii) The PP shall develop Greenbelt over an area of at least 40% (851.04 acres) of the proposed project and additional 232.04 acres of green area will be developed, by planting approx. 9,07,400 numbers of saplings within a year of grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft. The budget of Rs. 990 Lakhs earmarked for the plantation shall be kept in separate account and should be audited annually. The PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

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

(ix) Effluent generated from cleaning of reactor vessels, floor washing & cooling tower shall be treated in ETP & MEE+Stripper system and completely reused within the plant. Domestic sewage shall be treated in STP & reused within the plant for horticultural purposes. ZLD shall be maintained.

(x) Continuous monitoring system for checking effluent quality/quantity shall be installed in the plant.

(xi) Storm water channel & effluent channel shall be segregated. Effluent channel shall be routed to Effluent Treatment Plant whereas the storm water channel shall be channelized and collected in a pond known as Balancing Pond. Arrangement for lime addition and mixing shall be made in Balancing Pond to take care of any accidental contamination. Pumping arrangement shall be made in the Balancing Pond to transfer balancing pond water to ETP route, where water can be reused after treatment.

(xii) Fly ash shall be used for reclamation of low-lying areas in the plant. Major Hazardous wastes shall be stored in impervious pits/containers over impervious floor under well ventilated covered shed followed by disposal through actual users having authorization from SPCB, Odisha/Disposal in Captive SLF/Common Hazardous Waste Treatment Storage, Disposal Facility (CHWTSDF).

(xiii) Spent Ion Exchange containing toxic metals shall be disposed in HW Incinerator/Co-processing in cement kiln authorized by SPCB, Odisha/Disposal in Captive SLF/CHWTSDF.

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

(xv) As Committed, the PP shall allocate Rs. 2.53 Crores for CER i.e Infrastructural & Rural Development, Education, Covid 19 Expenses, Health, Drinking water, Relief Distribution, Swachha Bharat, Sports, Environment & Plantation, Cultural Activities.

(xvi) A separate Environmental Management Cell (having qualified persons with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. PP shall engage Director- General manager- Dy. General Manager- Dy. Manager – Enviornment Officer and field operator. In addition to this one safety & health officer as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(xvii) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. The budget propose under EMP is ₹ 2790 Lakh (Capital cost) and ₹ 300 Lakh per annum (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(xviii) The total freshwater requirement of plant after expansion will be 26,140 KLD sourced from Taladanda Canal originated from Mahanadi River at Cuttack. 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.

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

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

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

(xxii) 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.

(xxiii) 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.

(xxiv) 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.

(xxv) 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.

(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 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.

(xxxi) 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.

(xxxii) 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.

(xxxiii) 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. 45.12

Proposed Polymerization Plant within the Existing Facility of production capacity from 60 TPD TO 83 TPD located at Survey No: A35, A36 & Behind A33part, A34part, PIPDIC Industrial Estate, Mettupalayam, Mettupalayam Village, Mettupalayam Taluk, Puducherry by M/s. Swathi Organics & Specialities Private Limited - Consideration of EC

[Proposal No. IA/PY/IND3/408617/2022; File No. IA-J-11011/504/2022-IA-II(I)

1. The proposal is for environmental clearance for the Proposed Polymerization Plant within the Existing Facility of production capacity from 60 TPD TO 80 TPD located at Survey No: A35, A36 & Behind A33part, A34part, PIPDIC Industrial Estate, Mettupalayam, Mettupalayam Village, Mettupalayam Taluk, Puducherry by M/s. Swathi Organics & Specialities Private Limited.

2. The project/activity is covered under Category 'B' of item 5(f), Synthetic organic chemicals industry of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended). However, due to non-existence of SEIAA/SEAC, Puducherry, the project is appraised at the Centre.

3. The PP applied for the ToR vide proposal number IA/PY/IND3/408617/2022 dated 3.2.2022 and the standard ToR was issued by the SEIAA, vide letter no. SEIAA/PDY/EE/71864/2022 dated 12.2.2022. The PP submitted that the Proposed project being located in Notified PIPDIC Industrial Complex (**G.O. Ms. No. 62 dated 14.05.1980**), Public Hearing is exempted under the provisions as per para 7 III stage (3) (b) of the EIA notification, 2006. The PP applied for Environment Clearance on 1.12.2022 in CAF and submitted the EIA/EMP Report and other documents. The PP in the CAF reported that it is an **Expansion case.** Due to some shortcomings, the Project was referred back to the PP on

7.12.2022 and reply to the same was submitted on 15.12.2022 respectively. The proposal is now placed in 45th EAC Meeting held on 11thJanuary, 12th Jnauary, 2023, wherein the Project Proponent and an accredited Consultant, **M/s. Hubert Enviro Care Systems (P) Ltd., Chennai,** [NABET certificate no. **NABET/EIA/1922/RA 0172 Valid up to: 20.03.2023**], made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that existing land Area is 6434.502 m^2, no additional land will be used for proposed expansion and no R& R is involved in the Project. The details of products and by–products are as follows:

S. No	Product Details (Complete name)	CAS NO.	Unit	Existing Quantity	Proposed Quantity	Total Quantity	Uses
1	Textile Chemicals & Formulation	5949-29-1, 68551-12-2,69011-36-5,61791-26-2, 9003-04-7, 9000-90-268439-49-6 &64-19-7	TPD	36	-	36	Various stages in textile processing
2	Textile softener	7447-40-7	TPD	1	-	1	Textile processing
3	Fat Liquor formulations	90459-60-2	TPD	6	-	6	Textile and leather processing
4	Synthetic Tanning agent	84617-36-7	TPD	6	-	6	Leather processing
5	Blended dye stuff	4129-84-4	TPD	1	-	1	Textile and detergents
6	Plastic Injection moulding	9002-88-4	TPD	5	-	5	Pen components
7	Repacking of Agromicro	14025-15-1	TPD	1	-	1	Micronutrients for plants

S. No	Product Details (Complete name)	CAS NO.	Unit	Existing Quantity	Proposed Quantity	Total Quantity	Uses
	nutrient (300 TPA as per CTO)						
8	Hand Sanitizer	64-17-5	TPD	2	-	2	Sanitization for hand
9	Disinfectant	3380-30-1	TPD	2	-	2	For floor washing
10	Acrylic polymers – Emulsion and Solution	371-47-1	TPD	0	18	18	Textile and detergents
11	Polyimide resin	2421-28-5	TPD	0	5	5	Adhesives & coating
Total			TPD	**60**	**23**	**83**	

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 issued under E (P) Act/Air Act/Water Act.

6. The PP reported that a litigation was made against M/s Swathi Organics & Specialities Private Limited under Show Cause Notice (No. 24/2007(C) C. NO. V/Ch.29/15/63/2007-CX.ADJ dt. 22.05.2007) issued by the jurisdictional commissioner of Central Excise, proposing the packaging of micronutrients under the tariff item 2922.49.90 of the Central Excise Tariff attracting Excise duty @ 16% adv. The litigation was further cleared.

7. The PP reported that EC was not applicable to the existing project, as it was established in 1994. Compliance report submitted by MS, Puducherry Pollution Control Committee vide F. No. 3785/PPCC/CCS/SEIAA/OMM/PDY/JE/2022/1458 dated 07.11.2022 with site inspection dated 10.09.2022. It has been reported in the above report that the unit is operating the unit, largely complying with the conditions and clauses, imposed vide Consent Renewal Orders and Consent to Operate Orders

8. The PP reported that there are no national parks, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km distance from the project site. Ossudu Lake Birds Sanctuary ESZ is at a distance of ~2.16km in the Western direction. Ossudu Lake Birds Sanctuary core is at a distance of ~2.66km in the Western direction. The PP reported that no forest area is involved in the proposed project and one Schedule-I species exist within 10 km study area of the project.and conservation plan has been submitted to Directorate of Forest and Wildlife

9. The PP reported that **Ambient air quality monitoring** was carried out at 8 locations during February 2022 - April 2022 and the baseline data indicates the ranges of concentrations as: PM_{10} (50.3 to 57.4 µg/m³), $PM_{2.5}$ (19.3 to 27.5 µg/m³), SO_2 (5.9 to 10.2 µg/m³), NO_2 (13.9 to 19.1 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.054 µg/m^3, 0.002 µg/m^3, 1.526 µg/m^3 with respect to PM_{10}, SO_2, NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). **Noise** - The observations of day equivalent and night equivalent noise levels at all locations are given below in Commercial Zone (Project Site) day time noise levels was about 67.3 dB(A) and during night time noise levels was about 58.3 dB(A) and the prescribed limit by CPCB is 75 dB(A) Day time & 70 dB(A) Night time. In residential areas day time noise levels varied from 46.4 dB(A) to 53.3 dB(A) and night time noise levels varied from 40.2 dB(A) to 43.5 dB(A) across the sampling stations. The field observations during the study period indicate that the ambient noise levels are within the prescribed limit by CPCB (55 dB(A) Day time & 45 dB(A) Night time). **Ground water monitoring** was carried out at 8 locations during February 2022 - April 2022 and the baseline data indicates the ranges as: pH (6.24 -7.45), TDS (844 mg/l –1182 mg/l), Total Hardness (267 mg/l – 405 mg/l), Chlorides (283.3 mg/l – 393.3mg/l) and Fluoride (0.27 mg/l -0.37 mg/l). **Surface water monitoring** was carried out at 8 locations during February 2022 - April 2022 and the baseline data indicates the ranges as: pH (7.22 – 7.8), TDS (798 -1155 mg/l), TSS (5 mg/l -9 mg/l), Total Hardness (269.7 mg/l – 371.7 mg/l), Chlorides (256.7 mg/l -376.7 mg/l), Fluoride (0.24 mg/l -0.36 mg/l), BOD (8.3 mg/l - 15.0 mg/l), COD (23.3 mg/l - 71.3 mg/l) and DO (4.6 mg/l -6.2 mg/l). Marine sample indicates the ranges as: pH (7.83 - 7.91), TDS (21956.86 mg/l and 22350 mg/l), TSS (6mg/l), Total Hardness (8081.6 mg/l and 8259.2 mg/l), Chloride (9828.0 mg/l and 10044.0 mg/l), Fluoride (0.66mg/l-0.68 mg/l), BOD (11.1 mg/l and 12.3 mg/l.), COD (43.4 mg/l and 52.3 mg/l) and DO (5.7 mg/l-5.9mg/l). Soil monitoring was carried out at 8 locations during February 2022 - April 2022 and the baseline data indicates the ranges as: Nitrogen (125 mg/kg to 187 mg/kg), Phosphorus (11.53 mg/kg to 39.61 mg/kg) and Potassium (213.99 mg/kg to 294.30 mg/kg)

10. The PP reported that the total water requirement is **32.345 m^3/day** (Existing 21.74 m^3/day & Proposed 10.605 m^3/day) of which fresh water requirement of **28.22 m^3/day** (Existing 21.115 m^3/day & Proposed 7.105 m^3/day) will be met from PIPDIC. Sewage generation after expansion is 3.51 KLD and will be sent to 5 KLD STP. Effluent of **2.45 m^3/day** (Existing 1.25 m^3/day & Proposed 1.2 m^3/day) quantity will be treated through ETP capacity of **3 m^3/day** and followed by RO and Electrical evaporator (1 m^3/day). Treated wastewater is reused for boiler make up water. Zero Liquid Discharge (ZLD) System is implemented and the same will be adopted after expansion.

11. The PP reported the Power requirement after expansion will be **326 kVA (0.326 MW)** including existing **256 KVA(0.256MW)** and will be met from **Pondicherry Electricity Board.** Existing unit has EMDG sets of **200 kVA**. Stack height of **7m** is provided as per CPCB norms and additionally **no** DG sets are proposed. Existing unit has **2x 600 kg/hr capacity HSD fired Boiler**. Additionally, **no fired Boiler boiler will be installed** but there is additional fuel quantity to existing unit. Adequate stack of height 12 **m** for **2x 600 kg/hr**

capacity HSD fired Boiler for controlling the particulate emissions within the statutory limit of 115 mg/Nm^3 for the proposed boilers.

12. **Details of Process Emissions Generation and their Management:** There will be no process emission from the proposed manufacturing process. The entire process is being carried out in the closed system and only safety vent is provided in the condenser unit. No additional stack proposed for the proposed project.

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

S. No	Waste	Quantity (kg/day)			Treatment / disposal Method
		Existing	Proposed	After Expansion	
1	Organic	19.44	4.05	23.49	Organic solid waste is being composted and used as manure for greenbelt and same will be followed after expansion as well.
2	Inorganic	12.96	2.7	15.66	Inorganic solid waste like scrap, paper and plastics are being segregated and sold for recycling. Other MSW wastes are being handing over to Oulgaret Municipality and the same will be followed after expansion.

Hazardous waste Management

S. No.	Category	Type of the Hazardous waste	Quantity (TPA)			Mode of Disposal
			Existing as per HWA	Proposed	After Expansion	
1	5.1	Used oil	0.05	-	0.05	Stored in barrels and kept in concrete floor and disposed to the authorized recyclers.
2	5.2	Oil contaminated waste like waste cotton	0.05	-	0.05	Stored in barrels and kept in concrete floor and dispose to the authorized facility.
3	33.1	Discarded containers / barrels / liners	72.0	-	72.0	Stored on concrete floor under roof and

		contaminated with hazardous wastes /chemicals				sold to authorized person
4	20.2	Spent solvent	2.5	-	2.5	Stored in barrels and kept on concrete floor and dispose through authorized reprocessor

14. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 0.25 crore (capital) and the Recurring cost (operation and maintenance) will be about ₹ 0.08 crore per annum, Industry proposes to allocate Rs 5 Lakhs, towards CER.

15. The PP reported that Industry has already developed greenbelt in an area of 33% i.e., 2104.365 m^2 out of total area of the project.

16. The PP proposed to set up an Environment Management Cell (EMC) to engage managing Director- Executive Director- Production manager- Accounts Manager- production lab/team- admin team- maintenance. for the functioning of EMC.

17. The PP submitted that The Proposed project being located in Notified PIPDIC Industrial Complex, Public Hearing is exempted under the provisions as per para 7 III stage (3) (b) of the EIA notification, 2006.

18. The PP reported that –

S. No	**Parameters**	**Carbon Footprint in MTA of CO_2**		
		Existing	**Proposed**	**After Expansion**
1	Power consumption	234.4	9.3	243.7
2	Fuel usage	374.6	31.2	405.8
3	Raw Material Transport	1890.6	1251.7	3142.3
4	Product Material Transport	4268.6	2277.0	6545.6

Total Carbon Emission	6768.1	3569.2	10337.4
Carbon sequestration from the existing green belt development (106 trees) (MTA of CO_2)	121.66	---	---
Existing Carbon Reduction in percentage	= (121.66/6768.1)*100 = 1.8 %		
Carbon Emission reduction from the proposed expansion process by solar energy (MTA of CO_2)		12.408	

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

20. The estimated project cost is Rs 6.68Crores (Proposed project cost is Rs. 5 Crores) including existing investment of Rs 1.68 Crores. Total Employment will be **87 persons** as direct & **0 persons** indirect after expansion.

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

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

The EAC noted that the PP has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the PP.

The Committee 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 Greenbelt development plan and carbon sequestration, and advised the PP to submit the following:

- PP shall provide additional green belt to increase the existing Carbon sequestration of about 1.8% to 10 times higher than the delta along with the action plan for greenbelt development shall be provided.
- Revised Carbon Footprint and its sequestration.

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 1.2104 m^2 by planting 3236 number of trees within a period of one year grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft (about 2m). In addition to this, the budget earmarked for the plantation shall be ₹ 55 Lakh and 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 Director- Executive Director- Production manager- Accounts Manager- production lab/team- admin team. 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 ₹ 0.25 crore (Capital cost) and ₹ 0.08 crore 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 the previous year.

(iv) The total water requirement shall not exceed **32.345 m^3/day** (Existing 21.74 m^3/day & Proposed 10.605 m^3/day) of which fresh water requirement of **28.22 m^3/day** (Existing 21.115m^3/day & Proposed 7.105 m3/day) will be met from PIPDIC. 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 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.

(vi) 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.

(vii) The PP 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.

(viii) 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.

(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 PP 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 **2.45 m^3/day** (Existing 1.25 m^3/day & Proposed 1.2 m^3/day) quantity shall be treated in ETP of capacity **3 m^3/day** and followed by RO and Electrical evaporator (1 m^3/day). Treated wastewater shall be reused for boiler make up water. The sewage generated (3.51 KLD after expansion) shall be treated in 5 KLD STP and reused for green belt. Zero Liquid Discharge (ZLD) shall be maintained.

(xii) 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.

(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 the 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.

Agenda No. 45.13

Proposed manufacturing of Synthetic Organic Chemicals (Dyes & Dyes intermediates and Pigment Intermediates) of production capacity 40.5 MT/Month at Plot No.: C1B/42/1, Nandesari GIDC, Dist.: Vadodara, Gujarat by M/s. Shiv Ohm Speciality Chemicals Pvt. Ltd. - Consideration of EC

[Proposal No. IA/GJ/IND3/402527/2022; File No. IA-J-11011/432/2022-IA-II(I)

1. The proposal is for the environmental clearance for the proposed manufacturing of Synthetic Organic Chemicals (Dyes & Dyes intermediates and Pigment Intermediates) of production capacity 40.5 MT/Month at Plot No.: C1B/42/1, Nandesari GIDC, Dist.: Vadodara-Gujarat by M/s. Shiv Ohm Speciality Chemicals Pvt. Ltd.

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

3. The standard ToR has been issued by SEIAA vide letter no. SIA/GJ/37203/2022 dated 3.3.2022. **The PP submitted that Public hearing is exempted as the project site is located in the notified Industrial area i.e. Nandesari GIDC notified on 06.05.1975.** The PP applied for Environment Clearance on 29.10.2022 in CAF and submitted EIA/EMP Report and other documents. The PP reported in Form that it is a **Fresh EC**. Due to some shortcomings, the Project.was referred back to PP on 9 .11.2022 and the reply for the same has been submitted on 20.12.2022. The proposal is now placed in 45th EAC Meeting held on 11th &13th January 2023, wherein the PP and an accredited consultant, Consultant **M/s. ECOGREEN ENVIRO SERVICES [Accreditation number NABET/EIA/2023/IA0070, Valid up to 22.12.2023**] 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 total land area of **789.9 m^2** will be used for proposed project and no R& R is involved in the Project. The details of products are as follows:

S. no.	Name of the Products	CAS no./ CI no.	Quantity MT/Month	End-use of products
1	HC Yellow 5	56932-44-6	20	Hair Colors and other dyes
2	HC Yellow 2	4926-55-0		
3	HC Yellow 4	59820-43-8		
4	HC Red 7	24905-87-1		
5	HC Red 3	2871-01-4		
6	HC Blue 16	74918-21-1		
7	HC Blue 15	74578-10-2		
8	HC Blue 2	33229-34-4		
9	Basic Green 1	633-03-4		
10	Basic Green 4	569-64-2		
11	Basic violet 1	8004-87-3		
12	Basic violet 2	3248-91-7		
13	Basic orange 1	4438-16-8		
14	Basic Red 76	68391-30-0		
15	Basic Red 51	77061-58-6		
16	Basic Yellow 87	68259-00-7		
17	Basic yellow 57	68391-32-2		
18	Basic Orange 31	97404-02-9		
19	Basic blue 99	68123-13-7		
20	Basic brown 17	68391-32-2		

21	Basic brown 16	26381-41-9		
22	Basic blue 124	67846-56-4		
23	Basic violet 15	61901-64-2		
24	Acid violet 43	4430-18-6		
25	Acid Orange 7	633-96-5		
26	Acid Red 88	1658-56-6		
27	Acid Scarlet 3R	2611-82-7		
28	Solvent black 27	12237-22-8		
29	Solvent Orange 162	2646-17-5		
30	Solvent Red 127	61969-48-0		
31	Solvent Blue 63	6408-50-0		
32	Fast Red B salt	49735-71-9		
33	Fast Orange GC Base	108-42-9		
34	Fast Scarlet G Base	99-55-8		
35	Methylene Blue (Zinc free)	61-73-4		
36	Janus Green B	2869-83-2		
37	Basic Yellow 1 (Thioflavin **T)**	2390-54-7		
38	2,5 Di Methyl PPD	6393-01-7	10	Dye Intermediates
39	2 Chloro 5 Methyl PPD	5307-03-9		
40	N-(5-Chloro-2 Methyl-4 Nitrophenyl Benzene Sulfonamide	17560-53-1		
41	1,6 Naphthalene Disulfonic Acid Disodium Salt	1655-45-4		
42	1,8 Di Nitro Naphthalene	602-38-2		
43	Dehydro Thio P-Toluidine	92-36-4		
44	3-Hydroxy-2-naphthanilide (Naphthol AS)	92-77-3	10	

45	3-Hydroxy-3'-Nitro-2-Naphthanilide (Naphthol ASBS)	135-65-9		Pigment Intermediate
46	3-Hydroxy-N-(1-naphthyl)-2-naphthamide (Naphthol ASBO)	132-68-3		
47	3-Hydroxy-2'-Methyl-2-Naphthanilide (Naphthol ASD)	135-61-5		
48	3-Hydroxy-2'-methoxy-2-Naphthanilide (Naphthol ASOL)	135-62-6		
49	4-Chloro-3-hydroxy-2-naphthanilide (Naphthol ASE)	92-78-4		
50	Naphthol ASSW	--		
51	3-Hydroxy-2-Naphthoyl-Ortho-Phenetidide (Naphthol ASPH)	92-74-0		
52	2-Naphthalenecarboxamide (Naphthol ASCL)	137-52-0		
Total (A)			**40**	
53	**R & D(B)**		**0.5**	
Total (A+B)			**40.5 MT/month**	

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 There are no any national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors, Reserve Forest etc. within 10 km distance from the project site. Mahi river is flowing at a distance of 1.8 km in Southwest direction, Mini River - is at a distance of 1.8 km in E direction, Mahi Canal is at a distance of 3.9 km in W direction, Nandesari Village Pond is at 0.4 km in SW direction. There is no forest land involved in the proposed project. Schedule-I species i.e., Black kite (Milvus migrans), Shikra (Accipiter badius), Indian peafowl (Pavo cristatus), Black-shouldered kite (Elanus axillaris) were observed in the 10 km radius from the proposed project site during baseline monitoring conducted by Function Area Expert. Wildlife Conservation Plan is submitted at the PCCF & Chief Wildlife Warden, Gandhinagar**.**

7. The PP reported that the **Ambient Air Quality**: Ambient air quality monitoring was carried out at 8 locations during 1st December, 2021 to 28th February, 2022 and the baseline data indicates the ranges of concentrations as: PM_{10} (45.4 - 81.5 µg/m^3), $PM_{2.5}$ (22.6 - 50.0 µg/m3), SO_2 (9.2-35.4 µg/m3), NO_x (10.5-26.7 µg/m3), CO (243-1497 µg/m3), VOC (BDL-1.4 µg/m3) and HCl & H_2S (BDL). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.04256 µg/m^3, 0.02123 µg/m^3, 0.01691 µg/m3, 0.01075 µg/m^3, 0.00231 µg/m^3 and 0.00231 µg/m^3 with respect to PM_{10}, $PM_{2.5}$, SO_2, NO_x, HCl and H_2S. The resultant concentrations value of PM_{10} & $PM_{2.5}$ are within permissible limit at project site during baseline study period which is may be due to project is located in Nandesari GIDC. Also, average values of PM_{10} & $PM_{2.5}$ are within NAAQS standards. Other values are within the National Ambient Air Quality Standards (NAAQS). **Noise monitoring** was carried out at 8 locations during 1st

December 2021 to 28th February 2022. The monitored noise level during the daytime Leq (day) varied from 47.5 to 69.6(A) and during night time Leq (night) varies from 39.6 to 68.5 dB(A) within the study area. Highest noise value of 69. dB(A) during daytime was recorded at Project Site & lowest noise value of 47.5 dB(A) during day time was recorded at Harsidhhi Mata Temple. Highest noise value of 68.5 dB(A) during night time was recorded at Project Site & lowest noise value of 39.6dB(A) during night time was recorded at Harsidhhi Mata Temple. The monitored noise levels were compared with the standards prescribed by MoEF&CC which indicates that the noise levels were found within the limit for day & night time

8. **Ground Water:** Ground water monitoring was carried out at 8 locations during 1st December, 2021 to 28th February, 2022 and the baseline data indicates the ranges of concentrations as: pH of ground water samples varied from 7.21 to 7.93. Turbidity was found 0.40 to 0.80 NTU, Total Dissolved Solids varied in the range of 685.45– 962.53 mg/L. DO is found in range of 1.02-2.12 mg/L. COD & BOD found BDL. Total Hardness (as CaCO3) varied from 150.35 to 301.84 mg/L. Total Alkalinity varied from 155.49 to 289.35 mg/L. Chlorides are found in the range of 140.56 to 189.36 mg/L and Sulfates are found in the range of 61.25 to 87.45 mg/L. Hence, the parameters of Ground Water Samples are within the permissible Limits as per Drinking water standards IS: 10500 – 2012. Ground water is suitable for domestic and agricultural purpose after adequate treatment such as Tertiary treatment and disinfection.

9. **Surface Water:** Surface water monitoring was carried out at 8 locations during 1st December, 2021 to 28th February, 2022 and the baseline data indicates the ranges of concentrations as: pH of ground water samples varied from 7.12 to 7.90. Turbidity was found 0.30 to 1.0 NTU, Total Dissolved Solids varied in the range of 409.68 – 784.76 mg/L. DO is found in range of 4.55-6.89 mg/L. COD is found range of 11.89 to 36.90 mg/L & BOD3 is found range of 4.13 to 13.45 mg/L. Total Hardness (as CaCO3) varied from 125.32 to 312.84 mg/L. Total Alkalinity varied from 202.55 to 287.57 mg/L. Chlorides and Sulfates are found in the range of 98.84 to 170.9 mg/L and 32.55 to 89.63 mg/L, respectively. Hence, the parameters of Surface Water Samples are within the permissible Limits as per Drinking water standard IS: 10500 – 2012.Surface water can be used after conventional treatment followed by disinfection in only domestic activities. **Soil:** Soil monitoring was carried out at 8 locations during 1st December 2021 to 28th February, 2022 and the baseline data indicates the ranges of concentrations as: pH of ground water and the baseline data indicates the ranges of concentrations as: The soils of the proposed project area were found moderately alkaline nature. The porosity of soils varied from 40.75 % to 53.58 % and can be considered as very good for air and water movement in the soil. The water holding capacity varied from 46.04 % to 59.25 % which indicates very well and suited for proper plant root development. Bulk density varied from 1.22 to 1.57 g/cm3. The moisture content varied from 5.52 % to 16.89 %. pH varied from 7.36 to 7.95 which indicates soil slightly alkaline nature. Calcium varied from 176.59 to 478.96 mg/kg. Magnesium varied from 35.32 to 95.79 mg/kg. The electrical conductance is ranges from 396.5 to 812.10 µS/cm that is good for seed germination and plant growth. Nitrogen varied from 96 to 211.68 kg/h, Phosphorous varied from 22.2 to 64.28 kg/h and Potassium varied from 21.42 to 342.56

kg/h that indicates good physical condition and with good availability of nutrients like Nitrogen, Potassium and Phosphorus. In short, the soils of proposed project area are Fine sand, moderately fertile, good water holding capacity and moderately alkaline in nature.

10. The PP reported that total water requirement is 28.5 KLD, out of which 0.5 + 0.5 + 5.0 + 1.0 + 20.0 + 1.0 + 0.5 KLD will be used in Domestic, Gardening, Process, washing, Boiler, Cooling & Scrubbing respectively. Boiler condensate 13.0 KLD, Cooling & Boiler Blowdown 0.5 KLD and MEE Condensate 6.7 will be recycled/reused within the premises. Hence total Fresh water requirement will be reduced up to 7.9 KLD (Industrial + Domestic), which will be met from GIDC water supply. Permission for water requirement has been obtained from GIDC, Dated: 27.09.2021. Total reuse/recycle of 20.6 KLD water within premises. Industrial wastewater @7.66 KLD will be treated in in-house ETP & will be sent to in-house MEE, out of which 6.7 KLD MEE condensate will be reused within Plant Premises and 13 KLD Boiler Condensate recovery and Cooling & Boiler Blowdown @ 0.5 KLD will be reused within plant premises in order to reduce overall freshwater consumption from 28.5 KLD to 7.9 KLD.

11. Power requirement will be 100 KVA and will be met from **Madhya Gujarat Vij Co. Ltd. (MGVCL)**.

12. Unit has proposed one Natural gas-based or LDO based Steam Boiler of capacity 1 TPH and Hot Air generator of capacity 3 Lac kcal/hr. and adequate 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 proposed boilers.

S. No.	Source of emission With Capacity	Stack Height (meter)	Type of Fuel	Quantity of Fuel MT/Day	Type of emissions i.e. Air Pollutants	Air Pollution Control Measures (APCM)
1	Steam Boiler (1 TPH) (1 Nos.)	30	Natural Gas OR LDO	1045 SCM/DAY OR 1593 Liter/Day	SPM: 120 mg/Nm^3 SO_2: 80 ppm NO_X: 40 ppm	Adequate Stack height
2	Hot Air Generator Nos. 1 (Cap: 3 lac kcal/hr.)	30	Natural Gas OR LDO	235 SCM/DAY OR 318 Liter/Day		Adequate Stack height

13. **Details of emissions generation and its management:** Unit has proposed Spray dryer for which Water Scrubber & Dust Collector will be installed for controlling the emissions of PM and Process gas stack for reaction vessel of Sulphonation, Nitration, Chlorination &H_2S for which Two Stage alkali scrubber will be installed with adequate stack height of 18 m for

controlling the emissions of PM, SO_2, NO_x, H_2S & HCL within the statutory limit prescribed by CPA notification.

S. No.	Stack Attached To	Type of emission	Permissible limit	Stack/Vent Height (meter)	Air Pollution Control Measure (APCM)
1	Spray Dryer	PM	<120 mg/Nm3	18	Water Scrubber & Dust Collector
2	Reaction Vessel (From mfg. Grp. A: Acid violet 43) (**Sulphonation**)	SO2	<32 mg/Nm3	18	Two Stage Alkali Scrubber
3	Reaction Vessel (From Mfg. Grp. A: Fast Scarlet G Base & Grp. B: N-(5-Chloro-2 Methyl-4 Nitrophenyl Benzene Sulfonamide)**(Nitration)**	NOX	<20 mg/Nm3	18	Two Stage Alkali Scrubber
4	Reaction Vessel From Mfg. Grp. B: Dehydro Thio P-Toluidine)	H_2S	<16 mg/Nm^3	18	Two Stage Alkali Scrubber
5	Reaction Vessel (From Mfg. Grp. A: Basic Yellow 87 & Grp. C.: Naphthol ASBS) **(Chlorination)**	HCl	<16 mg/Nm^3	18	Two Stage Alkali Scrubber

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

Municipal Solid Waste

Particulars	No.	@kg/day/Person	Quantity of waste (in kg/day)
Workers	20	0.1 kg/day/person	2.0
		Total	**2.0 kg/day**

Hazardous Waste

S. No	Type/Name of Hazardous waste	Specific Source of generation (Name of the Activity, Product etc.)	Category and Schedule as per HW Rules.	Quantity (MT/Year)	Management of HW
1	Used Oil	Maintenance	5.1/ SCH-I	0.5	Collection, Storage, Reuse & sell to authorized vendor

					through GPS mounted vehicles.
2	Discarded containers/ Bags/Linears	Packing Materials, Storage of Raw material	33.1/ SCH-I	50	Collection, Storage, Reuse & sell to authorized vendor through GPS mounted vehicles.
3	ETP Sludge	ETP	35.3/ SCH-I	55	Collection, Storage, Transportation, disposal at nearest TSDF site through GPS mounted vehicles.
4	MEE Salt	MEE	35.3/ SCH-I	15	
5	Distillation Residue	From Mfg. Grp: A Basic violet 2 Grp B: 2 Chloro 5 Methyl PPD Grp C: Naphthol ASSW	36.1/ SCH-I	32	Collection, Storage, Transportation & send to pre/co-processing units (cement industries) OR disposal at nearest CHWIF site through GPS mounted vehicles.
6	Spent catalyst	Mfg. process Grp A: Solvent Blue 63	26.5/ SCH-I	3	
7	Spent Solvent	From Mfg. Grp A: Basic violet 2 Grp B: 2,5 Di Methyl PPD Grp 3: Naphthol ASSW	26.4/ SCH-I	1077	Collection, Storage, Handling recovered & recycled by Solvent Distillation Plant within premises OR will be sent to end users having permission Rule-9 through GPS mounted vehicles.
8	Process Inorganic Waste	From Mfg. Grp: A Basic blue 99	21.1/ SCH-I	70	Collection, Storage, Transportation, disposal at nearest TSDF site. Through GPS Mounted Vehicles through GPS mounted vehicles.
9	Scrubbing Sodium Hydrosulfide Solution (10-12%)	Mgf. Process Grp: B Dehydro Thio P-Toluidine	21.1/ SCH-I	88	Collection, Storage, Transportation & Sell to end users having permission Rule-9 through GPS mounted vehicles.
10	Scrubbing $NaNo_2$ Solution (10-12%)	Mgf. GRP A: Fast Scarlet G Base	21.1/ SCH-I	22	Collection, Storage & Treatment in ETP.

		GRP B: N-(5-Chloro-2 Methyl-4 Nitrophenyl Benzene Sulfonamide			
11	Scrubbing Na_2SO_3 Solution (10-12%)	**Scrubbing** Grp. A: Mgf. Acid violet 43	21.1/ SCH-I	37	Collection, Storage, Transportation & Sell to end users having permission Rule-9 through GPS mounted vehicles.
12	Scrubbing NaCl Solution (10-12%)	**Scrubbing** From Mfg. Grp. A: Basic Yellow 87 & Grp. C.: Naphthol ASBS	21.1/ SCH-I	37	Collection, Storage & Treatment in ETP.
13	Spent Acetic acid (12-15%)	Mgf. Process Grp: B 2,5 Di Methyl PPD	26.3/ SCH-I	135	Collection, Storage, Transportation Sell to End Users having permission under Rule-9 through GPS mounted vehicles.
14	Spent Hydrochloric Acid (8-10%)	Mfg. process Grp: B N-(5-Chloro-2 Methyl-4 Nitrophenyl Benzene Sulfonamide	26.3/ SCH-I	66	Collection, Storage, Transportation Sell to End Users having permission under Rule-9 through GPS mounted vehicles.
15	Contaminated Cotton Rags or Other Cleaning Materials	Process & Maintenance	33.2/ SCH-1	0.5	Collection, Storage, Transportation, Disposal to nearest CHWIF site through GPS mounted vehicles.

15. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 1.32 Crore (capital) and the Recurring Cost (operation and maintenance) will be about ₹0.25 Crores per annum., Industry proposes to allocate Rs. 0.20 Crores towards Corporate Social Responsibility

16. Industry will develop greenbelt in an area of **46 % i.e., 361.91 m^2** out of total area of the project.

17. The PP proposed to set up an Environment Management Cell (EMC) by engaging General Manager- Office assistant- warehouse incharge- work manager- manager – operator for the functioning of EMC.

18. The PP reported that Difference between Carbon footprint & Sequestration = (1068 – 655) CO_2 TPA = 413 CO_2 TPA. In Nutshell, Industry will save/capture/reduce approx. 655.0 tons per year or 61 % of total carbon dioxide generated during year (considering direct as well as indirect Source of CO_2 emission) through above mitigation measures suggested.

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

20. The estimated project cost is **Rs. 4.82 Crores**. Total Employment will be 20 persons as direct & 15 persons indirect.

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

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

The EAC noted that the PP has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the PP.

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

The EAC inter-alia, deliberated on the water balance, budget of greenbelt development plan, CEPI compliance, and EAC found it to be satisfactory.

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

The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The expert members of the EAC found the proposal in order and recommended for grant of environmental clearance.

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

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

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

(i) The Unit shall comply with the stringent air pollutants standards i.e. 80 % of proposed flue gas & process gas emission standards. Further, the PP shall install APCM like Adequate Stack Height (30 meters) for flue gas emission & Water & Two stage Alkali Scrubber, Dust Collector for Process gas emissions.

(ii) The Unit shall install Continuous Emission Monitoring System (CEMS) (as per CPCB guidelines for relevant parameters) which shall be connected with GPCB/CPCB server.

(iii) The Unit shall adhere to Sector specific guidelines/SOP published by GPCB/CPCB from time to time for effective fugitive emission control.

(iv) The PP shall take adequate measures to control odour nuisance from the industrial activities which may include measures like- use of masking agent with atomizer System (water curtain), closed / automatic material handling system, containment of the odour vulnerable areas etc.

(v) Natural gas shall be used as the primary fuel for the boiler and Pet-coke, furnace oil, LSHS shall not be used.

(vi) The PP shall explore transportation of materials by rail/belt conveyer.

(vii) The PP shall adopt sectoral Best Available Technology.

(viii) The PP shall develop Greenbelt over an area of at least 46% (316.0 m^2 within plant premises and 45.91 sq.m. on outer periphery of the plant) of the proposed project within plant premises and 45.91. m^2 on outer periphery of the plant, by planting approx. 146 numbers of saplings within a year of grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft. The budget Rs. 10.0 Lakh earmarked for the plantation shall be kept in separate account and should be audited annually. The PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(ix) The PP shall develop RCC road (in periphery of the plot area of 6.0 mtr. with adequate turning radius) in premises and shall also sprinkle the water on road to avoid the dusting due to vehicular movement. The transportation load on roads shall be within their carrying capacity.

(x) MEE Condensate shall be reused in washing, boiling and Cooling Purpose & Boiler Condensate shall be recycled in Boiler. Also, Wastewater from Cooling & Boiler shall be directly reused for makeup of scrubbing solution.

(xi) Total wastewater stream generated from Process, Washing, Scrubbing shall be treated in Primary in-house ETP. Treated wastewater from primary ETP shall be subjected to Secondary ETP followed by in-house MEE. MEE Salt and ETP Sludge shall be sent to TSDF site. Domestic wastewater shall be treated in septic tank and will be reused in Gardening. The unit shall achieve **Zero Liquid Discharge.**

(xii) Domestic wastewater generation shall be 0.4 KLD which shall be reused within plant premises after treating in Septic tank. The PP shall also install Filtration System after Septic Tank of 1.0 KLD.

(xiii) PP shall install Flow meter & PTZ camera at reuse line and it's connectivity shall connect to CPCB and GPCB server.

(xiv) Industry shall install 1.0 KL capacity of rainwater harvesting tank (u/g) for 1.0 KL rainwater harvesting during monsoon season.

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

(xvi) The PP shall strictly follow Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016 for disposal of hazardous wastes. The PP shall also explore possibility to dispose its hazardous wastes through co-processing, pre-processing to the extent possible prior its disposal to incineration/ landfill and carry out transportation of hazardous wastes through GPS mounted vehicles only.

(xvii) The PP shall strictly comply with all the measures specified in guidelines for spent solvent management, spent acid management and other guidelines/directions published from time to time by GPCB and/or CPCB etc.

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

(xix) As Committed, the PP shall allocate Rs. 20.0. lakhs for CER i.e. Drinking water treatment facility @ 50 KLD (Tertiary Treatment + Disinfection system) – 2 Nos., Village-Kanvadi, Rainwater Recharge System @ Anagad village Village-4 Nos, Greenbelt development @ Nandesari village – 500 Nos. Trees

(xx) 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 General Manager- Office assistant- warehouse incharge- work manager- manager – operator. 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.

(xxi) 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 ₹ 1.32 Crore (Capital cost) and ₹ 0.25 Crore 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.

(xxii) The total water requirement shall be 28.5 KLD, of which fresh water shall not exceed 7.9 KLD, which shall be met 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.

(xxiii) 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.

(xxiv) 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.

(xxv) 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.

(xxvi) 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.

(xxvii) 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.

(xxviii) 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.

(xxix) 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.

(xxx) 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.

(xxxi) 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.

(xxxii) 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.

(xxxiii) 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. 45.14

Proposed Expansion in Production capacity from 419935 Kg/Annum to 917764 Kg/Annum by addition of new API & API Intermediates at Existing unit located at Plot No. 3102/C, 3103 to 3109 and 3109/A, GIDC Estate, Ankleshwar, District: Bharuch, Gujarat by M/s. Glenmark Lifesciences Limited - Consideration of EC

[Proposal No. IA/GJ/IND3/405399/2022 File No. IA-J-11011/481/2022-IA-II(I)]

1. The proposal is for the environmental clearance for the Proposed Expansion in Production capacity from 419935 Kg/Annum to 917764 Kg/Annum by addition of new API & API Intermediates at Existing unit located at Plot No. 3102/C, 3103 to 3109 and 3109/A, GIDC Estate, Ankleshwar, District: Bharuch, Gujarat by M/s. Glenmark Lifesciences Limited.

2. The project/activity is covered under Category 'A' of item, 5(f) -Synthetic Organic Chemicals of Schedule of EIA Notification, 2006 (as amended) and requires appraisal at Central Level by the EAC. **The PP also reported that the project is located in the critically polluted area.**

3. The standard ToR has been issued by Ministry vide letter no. SIA/GJ/87805/2022 dated 11.5.2022. The PP submitted that the project site is located inside the notified industrial area of Ankleshwar notified vide Gazette Notification No. GHU-78-20-GID-1977-660-CH dated 01.02.1978. The PP applied for Environment Clearance on 5.11.2022 in CAF and submitted EIA/EMP Report and other documents. The PP reported in Form that it is an **Expansion EC**. Due to some shortcomings, the Projectwas referred back to the PP on 10.11.2022 & 24.11.2022 and the reply for the same has been submitted on 14.11.2022 & 20.12.2022 respectively. The proposal is now placed in 45th EAC Meeting held on 11th -13th January, 2023, wherein the PP and an accredited consultant, **M/s. Shree Green Consultants**. [Accreditation number – NABET/EIA/2124/IA0072, Valid up to24.2.2024] 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 **2,01,780.00 m^2,** additional land **is not required for** proposed expansion and no R& R is involved in the Project. The details of products are as follows:

S. No.	Name of Products	Quantity in Kg/Annum			CAS No.	End Use
		Existing	Proposed	Total		
1	Fluconazole	12000	00	12000	86386-73-4	Anti-fungal
2	Trandolapril	200	00	200	87679-37-6	Anti-hypertensive
3	Trospium chloride	2000	00	2000	10405-02-04	Overactive bladder
4	Bupropion HCl	20000	00	20000	100643-71-8	Anti-depressant
5	Perindopril Erbumine	7000	00	7000	8068-28-8	Anti-hypertensive
6	Amiodarone HCl	30000	00	30000	145202-66-0	Anti-arrhythmic
7	Desloratadine	2000	00	2000	82586-52-5	Anti- histaminic
8	Topiramate	20000	00	20000	144598-75-4	Anti-convulsant
9	Zolpidem Tartrate	1500	00	1500	145202-66-0	Hypnotic, Sedative

S. No.	Name of Products	Quantity in Kg/Annum			CAS No.	End Use
		Existing	Proposed	Total		
10	Glimepiride	3500	00	3500	171596-29-5	Anti-Diabetic
11	Zolmitriptan	100	00	100	19774-82-4	Acute treatment of migraine
12	Moexipril HCl	250	00	250	119141-88-7	Anti-hypertensive
13	Rizatriptan	700	00	700	99294-93-6	Antimigraine
14	Tadalafil	1000	00	1000	93479-97-1	Anti- Erectile Dysfunction
15	Olmesartan Medoxomil	20000	00	20000	1744-22-5	Anti – Hypertensive
16	Riluzole	1000	00	1000	115256-11-6	Anti – Alzheimer
17	GPL-820C – Etoricoxib	8000	00	8000	78628-80-5	Anti - rheumetics
18	Terbinafine HCl	2000	00	2000	084625-61-6	Anti-fungal
19	Rosuvastation Calcium	12000	00	12000	265121-04-8	Anti - Hyperlipidemia
20	Zonisamide	16000	00	16000	106685-40-9	Anti - convulsant
21	Fosaprepitant	250	00	250	144689-63-4	Prevention of nausea & Vomiting Caused by chemotherapy
22	Levocetrizine 2HCl	300	00	300	147098-20-2	Anti-Histaminic
23	Adapalene	500	00	500	68291-97-4	Anti - Acne
24	Oxcarbazepine	60000	00	60000	73963-72-1	Epilepsy
25	Linezolid	3600	00	3600	163222-33-1	Antibiotic
26	Frovatriptan Succinate	150	00	150	95233-18-4	Antimigraine
27	Cilazapril	150	00	150	132866-11-6	Anti- hypertensive
28	Atovaquone	24000	00	24000	28721-07-5	Anti – pneumocystic

S. No.	Name of Products	Quantity in Kg/Annum			CAS No.	End Use
		Existing	Proposed	Total		
29	Cilostazol	20000	00	20000	144701-48-4	Platelet Aggregation Inhibitor
30	Solifenacine Succinate	500	00	500	242478-38-2	Renal and Genitourinary Agent
31	Ezetimibe	2000	00	2000	155141-29-0	Treatment of insomnia
32	Palonosetron HCl	100	00	100	157212-55-0	Anti-emetic
33	Bosentan Monohydrate	100	00	100	133099-07-7	In pulmonary arterial hypertensive
34	Lercanidipine HCl	20000	00	20000	165800-03-3	Anti-hypertensive
35	Derifenacin Hydrobromide	100	00	100	158930-17-7	Treat Urinary Incontinence
36	Telmisartan	30000	00	30000	92077-78-6	Anti-hypertensive
37	Aprepitant	400	00	400	170729-80-3	Anti-emetic
38	Imiquimod	400	00	400	099011-02-6	Treat Genital Warts (Actsas immune response modifier)
39	Voriconazole	2000	00	2000	148465-45-6	Anti- Fungal
40	Ropinirole Hydrochloride	600	00	600	145040-37-5	Anti – Acne
41	Crofelmer	500	00	500	118292-40-3	For diarrhea in adult patients with HIV/AIDS
42	Eszopiclone	150	00	150	137234-62-9	Treat insomnia
43	Tazarotene	100	00	100	118292-40-3	Anti - Psoriasis
44	Esomeprazole Magnesium Dihydrate	24000	00	24000	217087-10-0	Antiucler Agent
45	Dronedarone HCl	1000	00	1000	141625-93-6	Antiarrythmic
46	Vildagliptin	2600	00	2600	274901-16-5	Antidiabetic

S. No.	Name of Products	Quantity in Kg/Annum			CAS No.	End Use
		Existing	Proposed	Total		
47	Lurasidone	2000	00	2000	367514-88-3	Antipsychotic drug
48	Lornoxicam	1200	00	1200	70374-39-9	Anti-influammatory: analgesic
49	Luliconazole	1000	00	1000	187164-19-8	Anitfungal
50	Milanacipran	1000	00	1000	92623-85-3	Antidepressant
51	Perindopril Arginine	425	00	425	612548-45-5	Treat High blood pressure
52	Prasugrel	250	00	250	389574-19-0	Anti – platelet
53	Eso Sodium	150	00	150	161796-78-7	Proton – pump inhibitors
54	Lacosamide	2000	00	2000	175481-36-4	Anti – epileptic
55	Canagliglozin Hemihydrate	100	00	100	928672-86-0	Type 2 diabetic
56	Ivacaftor	100	00	100	873054-44-5	Cystic Fibrosis
57	Vilazodone	250	00	250	163521-08-2	Serotonergic Antidepressant
58	Sitagliptin Anhydrous	150	00	150	654671-77-9	Antidiabetic
59	Sitagliptin Monohydrate	150	00	150	654671-77-9	Antidiabetic
60	Fingolimod	100	00	100	162359-55-9	Multiple Scierosis Agents
61	Linagliptin	200	00	200	668270-12-0	Agents for type 2 diabetes
62	Saxagliptin	1000	00	1000	361442-04-8	Hypoglycemic
63	Tofacitnib Citrate	100	00	100	540737-29-9	Treatment of Rheumatoid Arthritis
64	Rasagiline Mesylate	100	00	100	161735-79-1	Parkinson’s Disease
65	Rasagiline Phosphate	100	00	100	161735-79-1	Parkinson’s Disease
66	Rasagiline Tartrate	100	00	100	136236-52-7	Parkinson’s Disease

S. No.	Name of Products	Quantity in Kg/Annum			CAS No.	End Use
		Existing	Proposed	Total		
67	Apixaban	100	00	100	503612-47-3	Lower the risk of stroke
68	Deferasirox	2000	00	2000	201530-41-8	Iron-chelating agent
69	Arformoterol Tartrate	10	00	10	200815-49-2	Bronchodilators
70	Atomoxetine	2000	00	2000	82248-59-7	Attention-deficit hyperactivity disorder (ADHD)
71	Olopatadine	1000	00	1000	113806-05-6	Antihistamine
72	Favipiravir	30000	00	30000	259793-96-9	Antiviral
73	Umifenovir	5000	00	5000	131707-23-8	Antiviral
74	Rufinamide	2000	00	2000	106308-44-5	Anticonvulsant
75	Ralanozile	1000	00	1000	142387-99-3	Treat chronic angina
76	Bilastine	1000	00	1000	202189-78-4	antihistamine
77	Crisaborole	100	00	100	906673-24-3	Treat eczema
78	Proguanil HCl	500	00	500	500-92-5	Treat malaria
79	R & D Products at Pilot Plant for development	12000	00	12000	-	
80	Verapamil	00	38000	38000	52-53-9	Treat high blood pressure and control chest pain
81	Hydralazine HCL	00	8000	8000	304-20-1	Treat high blood pressure
82	Isavuconazonium Sulphate	00	749	749	946075-13-4	Treat serious fungal infections
83	Bempedoic Acid	00	1080	1080	738606-46-7	Treat hypercholesterolemia (HeFH) and for lowering of bad cholesterol (LDL) levels

S. No.	Name of Products	Quantity in Kg/Annum			CAS No.	End Use
		Existing	Proposed	Total		
84	Amiodarone KSM	00	150000	150000	145202-66-0	Treat life-threatening heart rhythm problems (ventricular arrhythmias)
85	Oxcarbazepine KSM	00	150000	150000	73963-72-1	Treat partial seizures
86	Telmesartan KSM	00	150000	150000	144701-48-4	Treat high blood pressure (hypertension)
Grant Total (Kg/Year)		**419935**	**497829**	**917764**	-	-
87	Recovered solvent \Distilled solvent [MT\Annum]	20736	1800	22536	-	-

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

6. The PP reported that Ministry had issued EC earlier vide letter no. **SEIAA/GUJ/EC/5(f)/630/2021** dated **11th May, 2021** to the existing project for expansion of setting up for manufacturing plant of "Synthetic Organic Chemicals" [API& its Intermediates] at Plot No. 3102/C, 3103 To 3109 And 3109/A, GIDC Estate, Ankleshwar, District: Bharuch, Gujarat in favor of **M/s. Glenmark Lifesciences Limited**.

7. Certified compliance report submitted by MoEF&CC, Gandhinagar-File No. J-11/31-2022-IROGNR dated 30th June, 2022.

8. 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. River/ water body Narmada River is flowing at a distance of 6.8 km in North West direction. No Schedule I species Peacock or Indian Peafowl) exist within 10 km study area of the project.

9. The PP reported that Ambient air quality monitoring was carried out at **10** locations during 1st March 2022 to 31st May 2022 to and the baseline data indicates the ranges of concentrations as: PM_{10} (**43.7 –77.2 µg/m^3**), $PM_{2.5}$ (**17.3 – 55.7 µg/m^3**), SO_2 (**12.4 - 49.7 µg/m^3**) and NOx (**16.8 to 52.1 µg/m^3**). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be **1.13** µg/m^3**, 1.98** µg/m^3 and **0.710** µg/m^3 with respect to PM_{10}, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). Ambient noise levels were measured at 10 locations around the existing project site and also on the

project site location. Noise levels monitoring was done during the day as well as night time. Near and in the Industrial area the minimum and maximum noise levels recorded during the day time was 46.2 Leq dB(A) to 65.0 Leq dB(A) and during night time was 40.2 Leq dB (A) to 58.7 Leq dB(A) respectively. It was observed that the noise levels in the study area are well within the prescribed limits as prescribed by the CPCB.

10. Ground water were measures at 8 locations around the existing project site and also on the project site location. pH of ground water samples varied from 6.47 to 8.04. Turbidity was found <1 NTU, Total Dissolved Solids varied in the range of 328.0 to 1176.0 mg/L. COD and BOD are found in range was found to be BDL. Total Hardness (as CaCO3) varied from 105 to 490 mg/L. Total Alkalinity varied from 209 to 569 mg/L. Chlorides is found in the range of 110 to 485 mg/L.

11. Surface water were measures at 3 locations around the existing project site pH of Surface water samples varied from 7.11 to 7.63., Total Dissolved Solids varied in the range of 238 to1004 mg/L. COD varied in the range of 24.1 to 38.7 mg/L and BOD varied in the range of 11.7 to 15.7 mg/L BOD. Total Hardness (as CaCO3) varied from 140 to 350 mg/L. Chlorides is found in the range of 27.5 to 112 mg/L.

12. The PP reported that the total water requirement is **1631.5 m^3/Day** of which fresh water requirement of **993.0 m^3/Day** will be met through the GIDC water supply. Effluent of **714.5 KLD** quantity will be treated through proposed in house ETP, MEE, RO & STP. Industrial effluent (598 KLD) will be segregated into two streams having High COD and TDS effluent & Low COD and TDS effluent stream. 79 KLD High COD and TDS effluent from process will be sent to stripper followed by MEE & ATFD for further treatment along with RO reject 24 KLD and Scrubber water 15 KLD. MEE condensate will be sent to ETP for treatment. MEE salt will be sent to TSDF site. 616 KLD Low COD and TDS effluent (Process 213 KLD + MEE Condensate 112 KLD + Washing 98 KLD + Cooling & Chilling 107 KLD + Boiler 86 KLD) will be treated in in-house ETP consists of primary, secondary & tertiary treatment units followed by RO system. The ETP treated effluent will be send to RO for further treatment. 336 KLD RO permeate will be reused within premises and remaining 200 KLD will be sent to FETP of M/s. NCT for further treatment & disposal into deep sea after conforming GPCB norms. Domestic effluent (116.5 KLD) will be treated in STP and treated water will be reused in Gardening and plantation within premises after achieving prescribed GPCB norms.

13. Power requirement after expansion will be **12 MW** and will be met from Dakshin Gujarat Vij Company Limited (**DGVCL**) Power Supply. Eight **D.G Set (500 kVA x 2 Nos), (750 kVA x 1 Nos), (1250 kVA x 3 Nos), (1010 kVA x 1 Nos), (1500 kVA × 1 Nos)** will be used as standby during power failure. Stack height **11 & 30 meter** will be provided as per CPCB norms to the proposed DG sets.

14. 4 Nos of Boiler (**5 TPH, 10 TPH, 21TPH & 15 TPH as Stand by**) & 1 No. of Thermos pack (2 Lakh Kcal/hr) will be installed after proposed expansion. ESP and Water Scrubber System with adequate stack height will be installed for controlling particulate emission.

Sr. No.	Particulars	Fuel	Quantity of Fuel	Stack Height (m)	Pollutant	APCM
Existing						
1	Boiler (10 TPH)	Natural Gas	700 m^3/hr	30	PM SO_2 NOx	Stack with adequate height
2	IBR Boiler (5 TPH)	Natural Gas			PM SO_2 NOx	Stack with adequate height
3	IBR Boiler (5 TPH)*	Natural Gas + Furnace Oil	710 Lit/hr		PM SO_2 NOx	Stack with adequate height
4	D.G. Set (1150 KVA)- 2 nos.*	Diesel	400 lit/hrs	30	PM SO_2 NOx	Stack with adequate height
5	D.G. Set (500 KVA)- 1 no.	Diesel		11		Stack with adequate height
6	D.G. Set (1250 KVA)- 1 no.	Diesel		30		Stack with adequate height
7	D.G. Set (1010 KVA)- 1 no.	Diesel		30		Stack with adequate height
8	D.G. Set (750 KVA)- 1 no.	Diesel		11		Stack with adequate height
9	Boiler (15 TPH)	Natural Gas	1040 Nm^3/hr	30	PM SO_2 NOx	Stack with adequate height
10	IBR Boiler (5 TPH)*	Natural Gas				Stack with adequate height

11	D.G. Set (1000 KVA)- 2 nos.*	Diesel	175 Lit/hr	30		Stack with adequate height
12	D.G. Set (1000 KVA)- 2 nos.*	Diesel	175 Lit/hr	30		Stack with adequate height
13	Thermo Pack Cap. 2 Lakh	Furnace Oil	766 Lit/hr	16		Stack with adequate height
Note*: IBR Boiler (5 TPH × 2 Nos) and DG Set (1150 KVA × 2 Nos, 1000 KVA x 4 Nos) will be removed						
After proposed expansion:						
1	IBR Boiler (5 TPH)	Natural Gas	700 m^3/hr	30	PM SO_2 NOx	Stack with adequate height
2	Boiler (10 TPH)			30	PM SO_2 NOx	
3	Boiler (15 TPH) (Standby)	Natural Gas	1040 m^3/hr	30	PM SO_2 NOx	Stack with adequate height
4	Boiler (21 TPH)	Loose Biomass / Briquette	110 MT/ Day	35	PM SO_2 NOx	ESP and Water Scrubber System
5	Thermo Pack Cap. 2 Lakh	Natural Gas	30 m^3/hr	16	PM SO_2 NOx	Stack with adequate height
6	D.G. Set (500 KVA) - 2 Nos	Diesel	1000 Lit/hr	11	PM SO_2 NOx	Stack with adequate height
7	D.G. Set (750 KVA)- 1 Nos			11		Stack with adequate height
8	D.G. Set (1010 KVA)- 1 Nos			30		Stack with adequate height

9	D.G. Set (1250 KVA) - 3 Nos			30		Stack with adequate height
10	D.G. Set (1500 KVA)- 1 Nos			30		Stack with adequate height

Note: DG set only for emergency purpose.

Note: Based on the consumption of steam for the production and other purposes, it is proposed to sell surplus steam to the adjacently located ZCL Chemicals Limited after entering into agreement to support them to meet their additional steam requirement and as a measure of conservation of energy sources.

15. Details of Process Emissions Generation and its Management:

Sr. No.	Particulars	Stack/Vent height(m)	Type of Emission	APCM
Existing				
1.	PO-1-Reaction Vessel - HCl	11	HCl	Acid Scrubber
2.	PO-2-Reaction Vessel - NH_3	11	NH3	Ammonia Scrubber
3.	PO-2-Reaction Vessel - HCl	11	HCl	Acid Scrubber
4.	PO-3-Reaction Vessel - HCl	11	HCl	Acid Scrubber
5.	PO-5-Reaction Vessel - HCl	11	HCl	Acid Scrubber
6.	Plant 06	15	HCl Ammonia Br_2 Cl_2 SO_2	Adequate Blower with Water + Alkali Scrubber System
7.	Plant 15 – 2 no	20	HCl Ammonia Br_2 Cl_2 SO_2	Adequate Blower with Water + Alkali Scrubber System
8.	Plant 16	15	HCl Ammonia Br_2 Cl_2 SO_2	Adequate Blower with Water + Alkali Scrubber System
9.	Plant 17	20	HCl Ammonia Br_2 Cl_2	Adequate Blower with Water + Alkali Scrubber System

Sr. No.	Particulars	Stack/Vent height(m)	Type of Emission	APCM
			SO_2	
10.	Acid Store Area	20	General Acid	Caustic Scrubber followed by blower
11.	Gas Cylinder Yard	09	HCl Ammonia Cl_2	Adequate Blower with Water + Alkali Scrubber System
12.	Plant – 18	20	HCl Ammonia Br_2 Cl_2 SO_2	Adequate Blower with Water + Alkali Scrubber System
13.	Plant – 19	20	HCl Ammonia Br_2 Cl_2 SO_2	Adequate Blower with Water + Alkali Scrubber System
Proposed				
1	Plant – 8	20	HCl Ammonia Br_2 Cl_2 SO_2	Adequate Blower with Water + Alkali Scrubber System
2	Plant – 9	20	HCl Ammonia Br_2 Cl_2 SO_2	Adequate Blower with Water + Alkali Scrubber System
3	Plant – 18	20	HCl Ammonia Br_2 Cl_2 SO_2	Adequate Blower with Water + Alkali Scrubber System
4	Plant – 20	20	HCl Ammonia Br_2 Cl_2 SO_2	Adequate Blower with Water + Alkali Scrubber System

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

Sr. No.	Name of Waste	Source of waste	Category	Quantity in MT/Year			Mode of Disposal
				Existing	Proposed	Total	
1	ETP Sludge	ETP	35.3	6001	2400	8401	Collection, storage, transportation & final disposal at common TSDF of BEIL/ SEPPL/ECO care / disposal to co-processing
2	Evaporator salt generated from MEE plant	MEE					
3	Distillation Residue	Distillation unit	20.3	600	180	780	Collection, storage, transportation & final disposal at common TSDF of BEIL/ SEPPL/RSPL/ Disposal to Co – Processing
4	Process Residue & Waste	Manufacturing Process	28.1	720	216	936	Collection, storage, transportation & final disposal by incineration at common TSDF of BEIL/SEPPL/ disposal to co-processing
5	Spent Solvent	Solvent recovery system	28.6	1750	700	2450	Collection, storage, transportation & Disposal at common incineration and sell it to authorized end user having permission under Rule-9 after making MOU
6	Spent Solvent from stripper	Stripper	28.6	1320	528	1848	Collection, storage, transportation & final disposal at common TSDF of BEIL/SEPPL/RSPL/ Disposal to Co – Processing.
7	Spent Carbon	Manufacturing Process	28.2	196	4	200	Collection, storage, transportation and

Sr. No.	Name of Waste	Source of waste	Category	Quantity in MT/Year			Mode of Disposal
				Existing	Proposed	Total	
							final disposal at common TSDF of BEIL/ SEPPL/ RSPL/ Disposal to Co – Processing.
8	Spent Catalyst	Manufacturing Process	28.2	45	0	45	Collection, storage, transportation and sell to Authorized Re-processor / disposal at common TSDF of BEIL / SEPPL / RSPL/Disposal to Co – Processing
9	Spent Acid	Manufacturing Process	Class C2	1,159.2	347.8	1507	Collection, storage, transportation and sale to authorized end users/ Pre-Processor/ Co-processing.
10	Used or spent Oil	Plant Machineries	5.1	3000 Lit/Year	950 Lit/Year	3950 Lit/Year	Collection, storage, transportation and sell to Authorized Re-processor /disposal at common TSDF of BEIL /SEPPL /RSPL /Disposal to Co – Processing.
11	Brick	Raw matrial storage	33.1	15100 Nos/Year	4530 Nos/Year	19630 Nos/Year	Collection, storage, transportation & final disposal at common TSDF of BEIL/ SEPPL/ECO care or authorized scrap dealer or actual end user
12	Used Hand gloves and contaminated cotton waste	R&D section	33.2	50	10	60	Collection, storage, transportation & disposal to

Sr. No.	Name of Waste	Source of waste	Category	Quantity in MT/Year			Mode of Disposal
				Existing	Proposed	Total	
							approved Common Incineration facility or Co-Processing.
13	Wastes or residues containing oil	Plant Machineries	5.2	40	12	52	Collection, storage, transportation & final disposal at common TSDF of BEIL/ SEPPL/ RSPL /Disposal to Co – Processing.
14	Off specification products (RMs/FGs)	-	28.4	20	2	22	Collection, storage, transportation & final disposal at common TSDF of BEIL / SEPPL /RSPL / Disposal to Co – Processing.
15	Date-expired products (RMs/FGs)	-	28.5	20	2	22	Collection, storage, transportation & final disposal at common TSDF of BEIL/ SEPPL/ RSPL / Disposal to Co – Processing.
16	Resin from DM Plant	DM Plant	34.2	12	3	15	Collection, storage, transportation & final disposal at common TSDF of BEIL/ SEPPL /RSPL / Disposal to Co – Processing.
17	Membranes from RO Plant	RO Plant	35.3	12	1	13	Collection, storage, transportation & final disposal at common TSDF of BEIL/SEPPL/RSPL/ Disposal to Co – Processing.
18	Process Residue and	(Aqueous ML from process)	28.1	1560	624	2184	Collection, storage, transportation &

Sr. No.	Name of Waste	Source of waste	Category	Quantity in MT/Year			Mode of Disposal
				Existing	Proposed	Total	
	wastes (Aqueous ML from process)						final disposal at common TSDF of BEIL/ SEPPL/ RSPL/ Disposal to Co – Processing.
19	Plastic Waste	-	-	120	36	156	Collection, storage, transportation & disposal to approved TSDF site or authorized scrap dealer or actual end user
20	Insulation waste	-	S1	80	16	96	Collection, storage, transportation & final disposal at common TSDF of BEIL/ SEPPL/ ECO care / disposal to co-processing
21	E Waste	Admin Office	III- B 1110	00	0.5	0.5	Collection, storage, transportation & sent to authorized vendor.
Non-Hazardous Waste							
22	Fly Ash	Boiler	-	00	726	726	Collection, storage, transportation & disposal by sending to Brick manufacturing /cement industry.

17. The Budget earmarked towards the Environmental Management Plan (EMP) is 350 Lakh (capital) and the Recurring Cost (operation and maintenance) will be about ₹ **37.5** Lakh per Month, Industry proposes to allocate Rs. 363.5 lakhs towards Corporate Social Responsibility

18. The Industry will develop greenbelt in an area of 40 % i.e. **80,712** m^2 out of total area 2,01,780.00 m^2 of the project.

19. The PP proposed to set up an Environment Management Cell (EMC) by engaging Senior Manager EHS- Manager EHS- Assistant Manager EHS- Officer EHS- Executive EHS for the functioning of EMC.

20. The PP reported that the total CO_2 generation would be 68829.25 tonnes/annum.

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

22. The estimated project cost is Rs. **234** crores. Total Employment will be 50 persons as direct & 150 persons as indirect during construction phase and 1050 persons as direct & 1050 persons as indirect during operation phase after proposed project.

23. **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 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 CEPI compliance, Greenbelt development, carbon sequestration, Clarification of the evaporation loss in Washing and advised the PP to submit the following:

- Revised Compliance to OM dated 31.10.2019 for projects falling within CPA.
- Submit the revised Green Belt Development Plan.
- Submit the details for analysis of carbon sequestration as percentage wise in existing and proposed manner.
- Clarification for evaporation loss in washing and quantity of ETP sludge & MEE salt.

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

The EAC deliberated on the Onsite and Offsite Emergency plans and various mitigation measures to be proposed during implementation also of the project and advised the PP to implement the provisions of the Rules and guidelines issued under the Manufacture, Storage

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

The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The expert members of the EAC found the proposal in order and recommended for grant of environmental clearance.

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

24. 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 Unit shall install adequate air pollution control measures i.e. ESP, Alkali scrubber & adequate stack height with proposed flue gas emission stack and adequate two stage scrubber with process emission stacks.

(ii) Adequate stack height as per CPCB/SPCB guidelines shall be provided. Stack emission levels shall be stringent than the existing standards (80 %) in terms of identified critical pollutants.

(iii) The Unit shall install biomass/Briquette fired boiler and commission Continuous Emission Monitoring System-CEMS (as per CPCB guidelines for relevant parameters) which shall be connected with GPCB/CPCB server.

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

(v) The PP shall explore transportation of materials by rail/belt conveyor.

(vi) Natural gas shall be used in existing utilities and shall use briquettes in proposed additional boiler.

(vii) The PP shall adopt BAT (Best Available Technology) like seven recovery system & ANDF (Agitated Nutsche Filter Dryers) for all proposed process.

(viii) The PP shall develop Greenbelt over an area of at least 40% (80,712 m^2) of the proposed project area, by planting approx. 4227 numbers of saplings within a year of grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft. The budget earmarked for the plantation shall be kept in 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.

(ix) The PP shall also develop 5000 m^2 (6.2 %) land area shall be developed as greenbelt outside of the premises.

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

(xi) Treated water of 638.5 KLD shall be reused in utility, process & gardening.

(xii) The Unit shall operate Online TOC meter for reflecting the online monitoring results on the company's server & SPCB/ CPCB server.

(xiii) The PP shall provide provision for rain water harvesting system in surrounding villages (Limbe kotadi, Mahudi Pada, Tejiya Bijiya, Arjune vesta, Dochaki, Handi, Nagin Beriya) with a minimum rain water recharge potential of 2,20,375 KLD.

(xiv) The additional effluent generated from the proposed products shall be treated in ETP and the treated water shall be reused in the plant.

(xv) Domestic effluent (116.5 KLD) will be treated in STP and treated water will be reused in Gardening and plantation within premises after achieving prescribed GPCB norms.

(xvi) The Unit shall dispose the Fly ash as per Fly ash notification, 2009 i.e. for brick manufacturing etc.

(xvii) The Unit shall install the Process Distillation Residue & Residual Waste (After Effluent Treatment), Spent carbon for co-processing after making the MOU who have valid CCA and authorization from the SPCB.

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

(xix) As Committed, the PP shall allocate Rs. 371 lakhs for CER i.e. Education, Employment Generation, Solid waste Management, Infrastructure facility, Environmental, Health & Hygiene.

(xx) 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 Senior Manager EHS- Manager EHS- Assistant Manager EHS- Officer EHS- Executive EHS. 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.

(xxi) 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 ₹ 350 (Capital cost) and ₹ 3.75 Lakh 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.

(xxii) The total water requirement is **1631.5 m^3/Day** of which fresh water requirement shall not exceed **993.0 m^3/Day**, which will be met through the 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.

(xxiii) 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.

(xxiv) 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.

(xxv) 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.

(xxvi) 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.

(xxvii) 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.

(xxviii) 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.

(xxix) 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.

(xxx) 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.

(xxxi) 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.

(xxxii) 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.

(xxxiii) 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. 45.15

Proposed expansion for Synthetic Organic Chemicals (Resin Product) in existing manufacturing unit of production capacity from 5820.1 TPM to 9492.1 TPM located at Plot No. 24, 24/1, GIDC Industrial Estate, Panoli-394 116, Tal: Ankleshwar, Dist: Bharuch, Gujarat by M/s. Merchem Limited - Consideration of ToR

[Proposal No. IA/GJ/IND3/411240/2022; File No. IA-J-11011/6/2023-IA-II(I)]

1. The proposal is for the proposed expansion for Synthetic Organic Chemicals (Resin Product) in existing manufacturing unit of production capacity from 5820.1 TPM to 9492.1 TPM located at Plot No. 24, 24/1, GIDC Industrial Estate, Panoli-394 116, Tal: Ankleshwar, Dist: Bharuch, Gujarat by M/s. Merchem Limited. **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/IND3/411240/2022** dated21.12.2022. The proposal is now placed in 45th EAC Meeting held on 11th -13th January, 2023, wherein the PP and an accredited Consultant, Aqua-Air Environmental Engineers Pvt. Ltd. (NABET Accreditation No.: NABET/EIA/2023/IA0062 (Rev. 03) Valid Up to October 7, 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:

Sr. No.	**Name of the Product**	**CAS No.**	**Quantity MT/Month**			
			As Per Existing EC	**As Per CTO**	**Proposed**	**Total**
I	**CHEMICAL INTERMEDIATE**					
1	NaMBT Intermediate (Sodium Mercapto Benzothiazole)	2492-26-4	560	560	0	560
2	4 - ADPA (P-amino diphenyl amine)- Intermediate	101-54-2	460	0	0	460
	Thiazoles					
3	MBT (2-Mercaptobenzothiazole)	149-30-4	250	167	0	300
4	MBTS (Dibenzothiazole Disulfide)	120-78-5				
5	ZMBT (Zinc-2-mercaptobenzothiazole)	155-04-4				

6	Activated Thiazole	288-47-1	50		0	
II	**CO PRODUCTS**					
	Na_2S/ NaHS	1313-82-2	260	0	0	260
	Benzothiazole	95-16-9	50	50	0	50
III	**SULPHENAMIDES**					
7	CBS (N-Cyclohexyl-2-benzothiazole sulfenamide)	95-33-0	600	400	0	600
8	TBBS (N-Tertiarybutyl-2-Benzothiazole Sulfenamide)	95-31-8				
9	MBS (2-(4morpholinothio)-Benzothiazole)	102-77-2				
10	DCBS (Dicyclo Hexyl Benzo Thiazole Sulphenamides)	4979-32-2				
11	TBSI(N-T-BUTYL-2-benzothiazole sulphenimide)	95-31-8				
12	DBBS(N,N-Dibenzyl-2-benzothiozole Sulpenamide)	--		0		
IV	**SPECIALTY CHEMICALS**					
13	DHTS (Hexamethylene-1,6-Bis (thiosulphate),dehydrate	5719-73-3	500	450	0	500
14	3-hydroxy-N(1-3-dimethylbutylidene)-2 Napthohydrazide	21441 7-91-1				
15	ZDDP (Zinc DialkylDithio Phosphate)	6990-43-8				
16	DBD (2,2-dithio bis -benzanilide)	120-78-5				
17	AHB(Aniline Heptaldehyde Base)	110-62-3				
18	TMBS (N-phenyl - N (Trichloro methyl sulphenyl) - benzene sulphenamide)	--				
19	PBM (N N phenylene Bis maleimide)	3006-93-7				

20	CCMB (1,3- bis (citraconimidomethyl) benzene)	73046-18-1				
21	DBDH (1,6-bis (N, N-dibenzylthiocarbamoyldithio)-hexane	151900-44-6				
22	44PD (N,N' –di-sec-butyl-p-phenylenediamine (C14-H24-N2))	793-24-8				
23	77PD (N,N'-Bis (1,4-Dimethylpentyl)-P-Phenylenediamine)	3081-14-9				
24	DHTQ (Poly (1,2-dihydro-2,2,4-trimethylquinoline)	26780-96-1		0		
25	Hydro quinone Ethoxylated ether	104-37-1				
26	DTDC(N, N' DithioCaprolactum)	23847-08-7				
27	TAIC(Tri-allyl-iso-cyanurate)	--				
28	TAT (2,4, Triallyloxy-1,3,5-Triazine)	101-37-1				
V	**ANTIOXIDANTS**					
29	6PPD(N-(1,3-Dimethyl-Butyl)-N'-Phenyl-p-phenylenediamine) & Similar product	793-24-8	1400	1400	0	1600
30	TDQ (Tri Methyl Dihydro Quinoline) & Similar product	147-47-7				
31	SP (Mixture of Styrenated Phenols)	--	200		0	
32	MB (2 - Mercapto Benzimidazole)	583-39-1				
33	ZMMB (Zinc Salt of 4 &5 , Methyl 2-mercapto Benzimidazole)	61617-00-3				
VI	**DITHIOCARBAMATE**					
34	ZDBC (Zinc Di,N-Butyl DithioCarbamate)	136-23-2	200	150	0	200
35	ZBEC (Zinc Di Benzyl Dithio Carbamate)	14726-36-4				
36	ZDC (Zinc Di Ethyl Dithio Carbamate)	14324-55-1				
37	ZDMC (Zinc Di Methyl Dithio carbamate)	137-30-4				
38	TBzTD (Tetra Benzyl Thiuram Disulphide)	10591				

		-85-2				
39	TMT (Tetra Methyl Thiuram Disulphide)	137-26-8				
40	SDMC (Sodium Di Methyl Di Thio Carbamate)	128-04-1		0		
41	DPTT (DiPenta Methylene Thiuram Tetra Sulphide)	120-54-7				
VII	**FORMULATION CHEMICAL**					
42	Formulation Products/ Repacking	--	500	500	0	500
VII	**R & D PRODUCT/CHEMICALS**					
43	Thiazoles/ Sulphenamides/ Specialty Chemicals/ Antioxidants/ Dithiocarbamate & other	--	20	20	0	20
VIII	**BULK DRUG INTERMEDIATE**					
44	5-Methoxy-2-mercaptobenzimidazole	37052-78-1	605	0	0	605
45	5-Diflouromethoxy-2-mercaptobenzimiazole	97963-62-7				
46	5-Ethoxy-2-mercaptobenzimidazole	55489-15-1				
47	Orthotolylebenzonitrile (OTBN)	157366-46-6				
48	O-Nitro aniline	88-74-4				
49	O-phenylene diamine	95-54-5				
50	N-Methyl orthophelyene diamine	25148-68-9				
51	Citicolin	987-78-0				
52	P-Nitrobenzoic acid	62-23-7				
53	1-(3-Chlorophenyl)-4-(3-chloropropyl) piprazine	52605-52-4				
54	2-chloromethyl-3-methyl-4-[2,2,2triflouroethoxy]pyridine HCL	12733-76-04				
55	Lanso sulfide	10357				

		7-40-8				
56	Bromo orthotolyl benzonitrile	11472-54-2				
57	4-Sulfonamidephenylhydrazine HCL	27918-19-0				
58	4,4,4-triflouro-1-1'-methylphenyl-1,3-butanedione	720-94-5				
59	Cis bromomethylbenzoate	6139-7-56-5				
60	Cis Tosylate	03661-63-0				
61	S-Aminobutanamide Hydrochloride	7682-20-4				
62	2-Chloromethyl-3-methyl-4-methoxypropoxy pyridine HCL	153259-31-5	115	0	0	115
63	6-Chloro-5-(2,3-dichlorophenoxy benzimidazole-2-thiol (Triclathion)	68828-69-3				
64	Dibenzo-[b,f][1,4]Thiazepine-11-one	3159-07-7				
65	1-(3-chloropropyl)-1,3-dihydrobenzimidazole-2- one	62780-89-6	50	0	0	50
66	2-Butyl-4-chloro-5-formyl-1H-imidazole (BCFI)	83857-96-9				
67	2-Chloromethyl-3,5-dimethoxy pyridine HCL	72830-09-2				
68	2-chloromethyl-3,5-dimethyl-4-methoxy pyridine HCL	86604-75-3				
69	R & D Products / Chemicals	--	0.1	0	0	0.1
70	Poly(phenol-co-formaldehyde-co-cardanol) Resin(FINOREX PR-90)	67700-42-9	0	0	250	250
71	Poly(phenol-co-formaldehyde-co-Cardanol)-blend-hexamine-(FINOREX PR-90H)	67700-42-9				
72	Poly(phenol-co-formaldehyde)-compl-(abietic acid)-(FINOREX PR-95)	68648-57-7				
73	Poly(phenol-co-formaldehyde)-compl-	686				

	(abietic acid)-blend-hexamine-(FINOREX PR-95H)	48-57-7				
74	Poly(phenol-co-formaldehyde) Resin-(FINOREX PR-110)	9003-35-4				
75	Poly(nonylphenol-co-formaldehyde-co-phenol)-(FINOREX PN-160)	31605-35-3				
76	Poly(dicyclopentadiene-co-abietic acid) Resin-(FINOREX CCR-120)	69430-35-9				
77	Abietic acid-blend-ethanedioic acid-(COLOFIN NS)	8050-09-7				
78	Poly(4-tert-butylphenol-co-formaldehyde-co-acetaldehyde)-(FINOREX KR-140)	28514-92-3	0	0	500	500
79	4-(1,1,3,3-tetramethylbutyl)phenol-(FINOREX PTOP)	140-66-9				
80	Poly(4-tert-butylphenol-co-formaldehyde)-(FINOREX TR-140)	25085-50-1				
81	Poly(4-tert-octylphenol-co-formaldehyde)-(FINOREX 1068)	26678-93-3				
82	Poly(4-tert-butylphenol-co-formaldehyde) Resole-(FINOREX PB-110)	25085-50-1				
83	Poly(resorcinol-co-formaldehyde) Resin-(FINOREX B18S)	65876-95-1	0	0	250	250
84	Poly(resorcinol-co-formaldehyde) Resin-(FINOREX B19S)	65876-95-1				
85	Poly(resorcinol-co-styrene-co-formaldehyde) Resin-(FINOREX B20S)	65876-95-1				
86	Poly(resorcinol-co-styrene-co-formaldehyde) Resin-FINOREX B21S	65876-95-1				
87	Poly(resorcinol-co-styrene-co-formaldehyde) Resin-FINOREX B22Z	65876-95-1				
88	Poly(nonylphenol-co-formaldehyde-co-	3160				

	phenol-co-cardanol) Resin-FINOREX B25S	5-35-3				
89	Poly(α-methyl styrene) (PAMS)-FINOREX AMS-85	25014-31-7	0	0	585	585
90	Poly(terpene-co-phenol) Resin-FINOREX TP-115	25359-84-6				
91	Polyterpene Resin-FINOREX PT-125	9003-74-1				
92	N2,N2,N4,N4,N6,N6-Hexakis(methoxymethyl)-1,3,5-triazine-2,4,6-triamine-(FINOREX HMMM)	3089-11-0	0	0	500	500
93	Poly(Phenol-co-Formaldehyde-co-n-butyl carbamate)(FINOREX PN-760)	14643-87-9	0	0	167	167
94	poly(Resorcinol-co-styrene-co-Formaldehyde)Resin(FINOREX 3020)	65876-95-1				
95	Hydrogenated Hydrocarbon resin(FINOREX H-HCR)	68132-00-3				
96	Poly(m-cresol-co-formaldehyde) Resin(FINOREX 610)	9016-83-5				
97	Poly(p-t octylphenol-co-cresol-co-Formaldehyde)Resin(FINOREX 620)	26678-93-3				
98	Poly(nonylphenol-co-formaldehyde-co-phenol-co-honeyol)(FINOREX A250)	31605-35-3				
99	Poly(Phenol-co-Resorcinol-co-Formaldehyde)(FINOREX PRF)	25986-71-4				
100	Poly(4-tert-butylphenol-co-formaldehyde-co-acetaldehyde)(FINOREX T421)	28514-92-3				
101	Polymeric Para Tertiary Butyl Phenol Disulfide(FINOREX PBDS)	60303-68-6	0	0	250	250
102	N,N'-dithiobis(hexahydro-2H-azepinone)(FINOREX CLDS)	23847-08-7				
103	Octadecan-1-amine;octadecanoic acid (FINOREX R-2000)	16835-63-5				
104	Hydrazinecarbopthiohydrazide (FINOREX TCH)	2231-57-4				
105	chlorocyclohexane(FINOREX CHC)	542-18-7				
106	1H-Isoindole-1,3(2H)-dione(FINOREX PHTHALIMIDE)	85-41-6				
107	1,2-Dicyclohexyldisulfane(FINOREX DCDS)	2550-40-5				

108	Zinc Dimethacrylate (FINOREX ZDMA)	13189-00-9				
109	3-triethixysilyl-1-propanethiol(FINOREX MPTES)	14814-09-6				
110	Bis[3-(triethoxysilyl) propyl]polysulphide(FINOREX Si-69)	40372-72-3				
111	3-(octanoylthio)-1-propyltriethoxysilane(FINOREX NXT SILANE)	220727-26-4				
112	3-Mercaptopropyl-di(tridecan-1-oxy-13 penta (ethyleneoxide) ethoxysilane (FINOREX Si-363)	New				
113	4-amino-3-methyl-1H-1,2,4-triazole-5-thione(FINOREX TRIAZOL THIONES)	20939-15-5				
114	2-(cyclohexylsulfanyl)-1H-isoindole-1,3(2H)-dione(FINOREX PVI CHTP)	17796-82-6				
115	Poly (α-methyl styrene-co-terpene) (FINOREX AMTR)	64536-06-7				
116	Benzene-1,3-diol (FINOREX RESORCINOL)	108-46-3	0	0	835	835
117	Alpha naphthylamine (ANA)	134-32-7	0	0	100	1000
118	Octylated Phenyl –Alpha- Naphthalene (OPANA)	68259-36-9	0	0	30	30
119	Phenyl –Alpha-naphthyl amine(PANA)	90-30-2	0	0	100	1000
120	Sodium Naphthioate	130-13-2	0	0	100	1000
121	Pilot Plant R & D Products (Resin Base)	--	0	0	5	5
	Total		**5820.1**	**3697**	**3672**	**9492.1**

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

6. The PP reported that the Ministry had issued EC earlier vide letter no. IA-J-11011/70/2020-IA-II (I) dated 7/5/2021 to the existing project for Synthetic Organic Chemicals

manufacturing unit of capacity 5050 MT/Month in favour of M/s. Merchem Limited (in Expansion case/if applicable). SEIAA Gandhinagar has issued EC vide letter no. SEIAA/GUJ/EC/5(f)/2953/2022 dated 17/12/2022 for additional 770.1 MT/Month of Bulk Drug Intermediate.

7. The PP reported that the Existing land area is 89613.97 m^2, no additional land will be used for proposed expansion project.

8. The PP reported that the proposal does not involve Approval/Clearance under Forest (Conservation) Act,1980, Wildlife (Protection) Act,1972 and C.R.Z notification, 2011 as amended. There is no forest, Eco sensitive areas/National Park/Wildlife Sanctuary in 10 km radius of the site. The project doesn't fall within the CRZ boundaries.

9. The PP reported that the total water requirement is 3634 m^3/day of which fresh water requirement of 2203 m^3/day will be met from GIDC Water Supply, rest 1431 m^3/day water will be recycled water. Effluent of 1758 m^3/day quantity will be treated through Primary, Secondary & Tertiary ETP, Solvent Stripper and MEE facility. **STREAM-I:** 724 m3/day Low TDS stream from process along with Boiler, Cooling and Washing Waste Water will be treated in ETP giving primary, Secondary & Tertiary treatment and out of it 200 KL/Day treated effluent will be stored in guard pond for disposing to FETP of M/s. NCTL, Ankleshwar which ultimately lead to deep sea for final disposal through NCTL pipeline and remaining 524 m3/day treated waste water will be reuse in cooling tower. **STREAM-II**: High TDS effluent 913 m3/day will be subjected to ETP followed by Solvent stripper column, MEE and ATFD. Treated effluent 816 m3/day will be reused in the Boiler. Cooling tower and washing purpose. **STREAM-III:** 121 m3/day Domestic wastewaters will be treated in STP & Out of it 91 m3/day will be reuse in Gardening and remaining 30 m3/day will be disposing to FETP of M/s. NCTL, Ankleshwar which ultimately lead to deep sea for final disposal through NCTL pipeline. Unit will reuse 39.37% water of total water requirement.

10. The PP reported that the Power requirement after expansion will be 4000 kVA including existing and proposed will be met from Dakshin Gujarat Vij Company Limited (DGVCL). Existing unit has 2 Nos.of DG sets (750 kVA & 1250 kVA) Capacity, 1 additionally DG set (1250 kVA) will be used as standby during power failure. Stack (height 11 m) will be provided as per CPCB norms to the proposed DG sets.

11. **The PP reported that the project, being in notified industrial area (notified on 10.09.1998), is exempted from the public hearing as per the Ministry's O.M. J-11011/321/2016-IA.II(I) dated 27.04.2018.**

12. Industry has already developed greenbelt in an area of 33 % i.e. 29573 m^2 out of 89613.97 m^2, total area of the project and additional 7% i.e., 6277 m^2 will also be developed as greenbelt within plant premises. Total greenbelt will be 35850 m^2 i.e. 40% of the total project area.

13. The estimated project cost is Rs 292.38 Crores including existing investment of Rs 212.38 crores. The PP reported that the total Employment will be 400 persons as direct & 500 persons as indirect after expansion Industry proposes to allocate Rs. 160 Lakhs towards CER.

14. **Deliberations by the EAC:**

The EAC deliberated on the various environmental aspects such as air emissions and its mitigation measures, water balance, carbon sequestration, Green Belt Development Plan and action plan proposed by the PP being in a critically polluted area. The PP submitted an undertaking for the same.

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

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

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

(iii) Being in a 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 analyzed the samples.

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

(vii) Industry shall use Natural gas as Primary Fuel for Boiler in the proposed project.

(viii) 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.

(ix) 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.

(x) 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.

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

(xii) 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.

(xiii) 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.

(xiv) The PP should develop Greenbelt over an area of 40.00% (i.e.2953 m^2 + 6277 m^2) of the total land area, accordingly the plant species 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. Approx. 10755 number of plantations have to be planted considering 80% survival rate and with a spacing of 2 m x 2 m.

(xv) 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.

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

(xvii) 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. 45.16

Proposed Synthetic Organic Chemicals production capacity of (100 MT/Month) located at Plot. No. C/1-491, C/1-482, Sachin GIDC Estate, Tal: Choryasi, Dist: Surat, Gujarat by M/S. Karan Industries - Consideration of ToR

[Proposal No. IA/GJ/IND3/408292/2022; File No. IA-J-11011/324/2021-IA-II(I)]

1. The proposal is for the proposed Synthetic Organic Chemicals production capacity of (100 MT/Month) located at Plot. No. C/1-491, C/1-482, Sachin GIDC Estate, Tal: Choryasi, Dist: Surat, Gujarat by M/S. Karan Industries. **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/IND3/408292/2022** dated 3 .12.2022. Due to some shortcomings, the Project.was referred back to the PP on 11.12.2022, 24.11.2022 and the reply for the same has been submitted on 23.12.2022. The proposal is now placed in 45th EAC Meeting held on 11th-13th January, 2023, wherein the PP and an accredited Consultant, Aqua-Air Environmental Engineers Pvt. Ltd. (NABET Accreditation No.: NABET/EIA/2023/IA0062 (Rev. 03) Valid Up to October 7, 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:

SR NO	**NAME OF THE PRODUCT**	**CAS NO**	**QUANTITY (MT/MONTH)**	**QUANTITY (MT/MONTH)**
1	Bronopol	52-51-7	100	5(f)
2	2,2-Dibromo-3-Nitropropionamide	10222-01-2		5(f)
3	N-butyl bromide	109-65-9		5(f)
4	N-propyl bromide	106-94-5		5(f)
5	Ethyl Bromide	76-96-4		5(f)
6	Isopropyl Bromide	75-26-3		5(f)
7	Potassium bromide	7758-02-3		5(f)
8	Sodium Bromide	7647-15-6		5(f)
	TOTAL		100	

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

6. The PP reported that the Total land area is 1406 m^2 and no R& R is involved in the Project.

7. The PP reported that the proposal does not involve Approval/Clearance under Forest (Conservation) Act,1980, Wildlife (Protection) Act,1972 and C.R.Z notification, 2011 as amended. There is no forest, Eco sensitive areas/National Park/Wildlife Sanctuary in 10 km radius of the site. The project doesn't fall within the CRZ boundaries.

8. The PP reported that Total water requirement is 29 m^3/day of which fresh water requirement of 13 m^3/day will be met from GIDC water. Effluent of 12.30 m^3/day quantity will be treated through Primary Treatment and MEE facility and then sent to recycle/reuse within premises. The plant will be based on Zero Liquid discharge system.

9. The PP reported that thePower requirement will be 50 kVA will be met from Dakshin Gujarat Vij Company Limited (DGVCL). unit will not install DG sets; Unit will be install 1 No of Boiler (1 TPH). Adequate Stack Height will be attached with Boiler to control flue gas emission.

10. **The PP reported that the project, being in notified industrial area (notified on 07.09.1993), 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 in an area of 40 % i.e. 563 m^2 out of 1406 m^2, total area of the project.

12. The estimated project cost is Rs 2.21 Crores.The PP reported that the total Employment will be 15 persons as direct & 0 persons indirect. Industry proposes to allocate Rs. 8.84 Lakhs towards CER.

13. **Deliberations by the EAC:**

The EAC deliberated on the various environmental aspects such as air emissions and its mitigation measures, Green Belt Development Plan and action plan proposed by the PP being in a critically polluted area. The PP submitted an undertaking for the same.

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 OMs 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 analyzed the samples.

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

(vii) Industry shall use Natural gas as Primary Fuel for Boiler in the proposed project.

(viii) 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.

(ix) 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.

(x) 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.

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

(xii) 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.

(xiii) 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.

(xiv) The PP should develop Greenbelt over an area of 40.00% (i.e.563 m^2) of the total land area, accordingly the plant species 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. Approx. 170 number of plantations have to be planted considering 80% survival rate and with a spacing of 2 m x 2 m.

(xv) 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.

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

(xvii) 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. 45.17

Expansion of Organic and Specialty Chemicals Manufacturing Unit of production capacity from 874.2 MT/D to 1520.4 MT/D and by product 900.67 MT/D to 1552.99 MT/D located at Plot No. F-104, MIDC Chincholi, Tal.: Mohol, Dist.: Solapur, Maharashtra State by M/s Balaji Amines Limited, Unit IV - Consideration of EC

[Proposal No. IA/MH/IND3/406789/2022 File No. IA-J-11011/189/2018-IA II(I)]

1. The proposal is for environmental clearance for the proposed Expansion of Organic and Specialty Chemicals Manufacturing Unit of production capacity from 874.2 MT/D to 1520.4 MT/D and by product 900.67 MT/D to 1552.99 MT/D located at Plot No. F-104, MIDC Chincholi, Tal.: Mohol, Dist.: Solapur, Maharashtra State by M/s Balaji Amines Limited., Unit IV.

2. The project/activity is covered under Category 'B' of item 5(f) (synthetic organic chemical), of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) But, due to presence of Great Indian Bustard (GIB) sanctuary within 5 Km from Project Site in MIDC, General condition is applicable to project and requires appraisal at Centre. GIB Sanctuary is located about 3.3 Km from project site in Chincholi MIDC. ESZ for GIB is finalized and located at 2.9 Km from project site.

3. The ToR has been issued by the Ministry, vide letter IA-J -11011/189/2018-IA II(I) dated 22.9.2022. The PP submitted that the Unit is located in Notified MIDC Chincholi Industrial Area (**Notification No. IDC. 2187/(10514)-IND. 14 dated 12.05.1988**), and is exempted from the public hearing as per the Ministry's O.M. No. J-111011/321/2016-IA.II(I) dated 27.04.20218. The PP applied for Environment Clearance on 17.11.2022 in Form-2 and submitted EIA/EMP Report and other documents. The PP reported in Form-2 that it is an Expansion EC. Due to some shortcomings, the Project was referred back to the PP on 24.11.2022 and reply to the same was submitted on 23.12.2022. The proposal is placed in 45th EAC Meeting held on 11-13 January, 2023 and an accredited Consultant, M/s. Equinox Environments (I) Pvt. Ltd. [Accreditation number QCI/NABET/ENV/ACO/22/2412 valid till 10.10.2024], made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that Existing land area is 3,59,998.06 M^2. No additional land will be used for proposed expansion. and no R& R is involved in the Project. The details of products are as follows:

S. No.	Name of the Product	CAS No.	Quantity (MT/D)			Uses
			Existing	Expansion	Total	
A	**Products**					
1	Acetonitrile (ACN)	75-05-8	--	50.40	50.40	Solvent
2	Sodium Acetate Solution(SAS)	127-09-3	--	11.4	11.40	Reagent
3	DMAC (Dimethyl acetamide)	127-19-5	--	60	60	Solvent
4	Morpholine (MOR)	110-91-8	--	48	48	Reagent
5	DMF (Dimethyl Formamide)	68-12-2	--	110.40	110.40	Solvent
6	N-Butyl amine / Isobutyl amine	78-81-9	--	48	48	
7	N-Methylmorpholine (NMM)	109-02-4	--	18	18	Reagent
8	Di Methyl Ether	115-10-6	--	300	300	
9	Mono Iso Propyl Amine (MIPA)	99 75-31-0	50	--	50	
10	MIBK	108-10-1	100	--	100	Solvent
11	Di Phynel Amine (DPA)	122-39-4	35	--	35	Reagent
12	N Butyl Thiophosphoric Triamide NBPT	94317-64-3	10	--	10	Solvent
13	Iso Propyl Alcohol (IPA)	67-63-0	165.6	--	165.6	Solvent
14	Di-isopropyl ether	108-20-3	6.6	--	6.6	Solvent
15	Propane	74-98-6	32.2	--	32.2	Solvent
16	Di Methyl Carbonate (DMC)	616-38-6	55.2	--	55.2	Reagent
17	Propylene Carbonate (PC)	108-32-7	14.4	--	14.4	Reagent
18	Propylene Glycol (PG)	57-55-6	55.2	--	55.2	Solvent
19	Methyl Amines (MA)	74-89-5	120	--	120	Reagent
20	Choline Chloride 75 %	67-48-1	70	--	70	Feed additive

S. No.	Name of the Product	CAS No.	Quantity (MT/D)			Uses
			Existing	Expansion	Total	
21	Choline Chloride 60 %	67-48-1	50	--	50	Feed additive
22	Choline Chloride 98 %	67-48-1	10	--	10	Feed additive
23	Ethyl Amines (EA)	75-04-7	100	--	100	Reagent
	Total (A) Products		**874.2**	**646.2**	**1520.4**	
24	CPP - 5 MWH X 2	--	10 MWH	--	--	Power Generation
B	**By-Products**					
1	Hydrogen	--	15	--	15	Reagent
2	Hydrochloric acid	--	6.37	--	6.37	Acidification
3	Spent caustic solution (20%)(SCS)	--	2.4	1.68	4.08	Basification
4	2,6 Dimetyal-4 Heptanone	--	1.2	--	1.2	Reagent
5	Higher Boiler	--	1.5	--	1.5	Reagent
6	Ammonia Solution	--	---	1.8	1.8	Neutralization
7	Higher Amines	--	---	2.4	2.4	Reagents
8	Sulphur	--	--	0.24	0.24	Reagent
	Total (B) By-products		**26.47**	**6.12**	**32.59**	
	Grand Total (A+B)		**900.67**	**652.32**	**1552.99**	

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 Ministry has issued EC earlier vide letter no. J-11011/189/2018-IA-II (I) dated 18.11.2019 for Setting up Organic and Specialty Chemicals Manufacturing Unit of capacity 874.2 TPD at Plot No. F-104, Chincholi MIDC, District Solapur (Maharashtra) by M/s Balaji Amines Ltd. (Unit IV). Certified compliance report was issued by IRO, MoEF&CC, Nagpur vide letter dated 20.12.2022 (based on the site vist dated 26.11.2022), wherein it was reported that the PP has complied with the EC conditions.

7. The PP reported that the GIB Sanctuary is located about 3.3 Km from project site in MIDC. ESZ for GIB is finalized vide notification No. 596 dated 11/02/2020. ESZ is located at 2.9 Km from Plot. River Sina is at a distance of 5 Km on South West from the project site. PP reported that 4 Schedule I species exist within 10 km study area of the project, for which conservation plan has been submitted for Rs. 70 Lakhs to Chief Wildlife Warden.

8. The PP reported that the **Ambient air quality** monitoring was carried out at 8 locations during Oct.- Nov.- Dec.- 2020 and baseline data indicates that ranges of concentrations of PM_{10} (42.4–67.4 µg/M^3), $PM_{2.5}$ (10.4 – 27.8 µg/M^3), SO_2 (10.9 – 25.1 µg/M^3) and NOx (15.5 – 31.9 µg/M^3) . AAQ modeling study for point source emissions indicates that the

maximum incremental GLCs after the proposed project would be 1.54 µg/M^3 for PM_{10} (towards West side), 0.383 µg/m^3 for $PM_{2.5}$ (towards West side), 6.21 µg/m^3 for SO_2 (towards West side) and 1.84 µg/m^3 NO_x (towards West side). The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

9. **Noise-** The PP reported that The baseline noise levels observed in industrial premises (N1) during day time is 63.5 dB whereas during night time, it is 56.0 dB. At Darfal village (N2), noise levels observed during day time and night time are 51.1 dB and 41.1` dB respectively. The noise level observed in Sawaleshwar village (N3) in day time is 52.5 dB and in night time is 41.7 dB. In Chincholikati (N4), 53.4 dB noise level observed during day time whereas 41.5 dB 131 noise level observed during night time. Village Akolekati (N5) is 4.86 km in North-East direction from industrial site. The day time noise level observed in this village is 51.7 dB and night time noise level observed is 40.5 dB. The day time noise levels observed in Pakni (N6), Lamboti (N7), Karamba (N8) are 53.1 dB, 52.6 dB and 51.6 dB respectively. In night time noise levels observed in these three villages are 41.0 dB, 41.5 dB and 40.8 dB respectively. **Surface Water** monitoring was carried out at 7 locations and baseline data indicates that ranges of concentrations of pH (7.53-7.99), TDS (161.12-374.6 mg/lit), Turbidity (0.27– 0.49 NTU), COD (13.89-28.54 mg/lit), BOD (6.04- 11.97 mg/lit), Nitrate (12.80-24.79 mg/lit), Phosphorous (BDL- 1.01 mg/lit), Hardness (104.16 -192.16 mg/lit) and Chlorides (31.64-69.33 mg/lit).

10. **Ground Water** monitoring was carried out at 8 locations and baseline data indicates that ranges of concentrations of pH (7.25-7.95), TDS (288.92-418.88 mg/lit), Turbidity (0.14-0.39 NTU), COD (22.02-35.66 mg/lit), BOD (8.15-14.01 mg/lit), Nitrate (8.63-20.59 mg/lit), Phosphorous (0.05-0.88 mg/lit), Hardness (111.49-195.48 mg/lit) and Chlorides (24.92-75.02 mg/lit). **Soil** monitoring was carried out at 8 locations and baseline data indicates that ranges of concentrations of pH (7.48-8.11), CEC (29.36-68.56 meq/100gm), Nitrogen (68.62- 203.53 Kg/Ha), Phophorous (21.78-93.6 Kg/Ha) and Potassium (90.52-256.3 Kg/Ha).

11. The PP reported that the total water requirement is 3886.18 M^3/Day of which fresh water requirement of 2592.38 M^3/Day will be met from MIDC Water supply scheme from Ujani Dam on Bhima river. Effluent of 1343.21 M^3/Day quantity will be treated through ETP. The plant will be based on Zero Liquid Discharge System.

12. The PP reported that Power requirement after expansion will be 13.7 MW including existing 10 MW and will be met from MSEDCL and own CPP. Existing unit has 5 DG sets of 200 KVA capacity each. Under expansion, 4 DG sets of 2000 KVA each and one D.G set of 1000 capacity will be installed. Stack of height 5.5 M ARL will be provided as per CPCB norms to the proposed DG Sets.

13. Existing unit has one boiler of 32 TPH installed on site which is operated on Coal @ 192 TPD with ESP as a APC equipment preceding the stack height of 50 m. Remaining Capacities of two nos. of 60 TPH, one no. of 28 TPH boilers and two nos. of thermic fluid

heaters of capacity 30 Lakh Kcal/Hr each as per permission approved in earlier EC will be installed under expansion. ESP with stack of 50 M & 95 M will be installed to 28 TPH and 60 TPH boilers respectively. Also, MDC with a stack of height 35 M will be installed for TFH for controlling the particulate emissions within the statutory limit of 115 mg/Nm^3.

14. **Details of Process Emissions Generation and its Management-** There would be process emissions, same would be controlled through installation of Scrubbers. Presently, three scrubbers for ethyl amine plant are installed on site. (For Amines, Ammonia vapours). Under expansion, additional six number of scrubbers for Acetic acid, Ammonia, Dimethyl amine and DEG vapors will be provided.

Details of Scrubber

No.	Plant	Process Emissions	Control Equipment	Packing material	Scrubber Media	Dia. of Absorber (mm)	Height of Absorber (M)	Disposal
Existing								
1	Methylamines Plant	Ammonia & Amines	Absorber / Scrubber	POL Ring	Dil. HCl	600	10	Reuse
2	Ethylamine Plant (3 Nos.)	Ammonia & Amines	Absorber / Scrubber	POL Ring	Dil. HCl	600	10	
3	MIPA	Ammonia	Absorber / Scrubber	POL Ring	Dil. HCl	600	10	
4	NBPT	Ammonia	Absorber / Scrubber	POL Ring	Dil. HCl	600	10	
5	Loading point	--	Absorber / Scrubber	POL Ring	Dil. HCl	600	10	
6	Unloading point	--	Absorber / Scrubber	POL Ring	Caustic Lye	600	10	
Proposed Expansion								
1	Acetonitrile Plant	Acetic acid/Ammonia	Absorber Scrubber	POL Ring	Water	600	10	Reuse
2	DMAC Plant- 2 Nos.	Acetic Acid/ DMA	Absorber Scrubber	POL Ring	Water	600	10	Reuse
3	Morpholine Plant	DEG & Ammonia	Absorber Scrubber	POL Ring	Water	600	10	Reuse

4	N- Butyl Amine/Isobutyl amine – 2 Nos.	Ammonia	Absorber Scrubber	POL Ring	Water	600	10.	Reuse

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

Details of Solid Waste Generation & its Management

No.	Type of waste	Quantity			Disposal
		Existing	Expansion	Tot. Aft. Exp.	
1	Wood Pallets	6 MT/Y	2 MT/Y	8 MT/Y	By Sale to Authorized recycler.
2	Scrap Material	0.13 MT/D	16.0 MT/D	16.13 MT/D	
3	Carboys Plastic	2000 Nos./Y.	650 Nos./Y.	2650 Nos/Y	
4	Office Paper waste	2 MT/Y.	0.65 MT/Y	2.65 MT/Y	
5	Woven Sack Bag (HDPE)	2MT/Y	0.07 MT/Y	2.07 MT/Y	
6	Drums	3000 Nos./Y.	1100 Nos./Y	4100 Nos./Y	
7	Coal Ash	95 MT/D	0.12 MT/D	95.12 MT/D	Sold to brick manufacturers for secondary use
8	Corn Cob Waste	28 MT/D	--	28 MT/D	Sale to briquettes Manufactures
9	Plastic Waste	500 Nos./Y	191 Nos./Y	691 Nos./Y	Sale to Authorized recycler.
10	E-waste	--	0.2 MT/Yr	0.2 MT/Yr	
11	Battery - waste	--	0.2 MT/Yr	0.2 MT/Yr	

Details of Hazardous Waste Generation & its Management

No.	Description	Cat.	Quantity			Disposal
			Existing	Expansion	Tot. Aft. Exp.	
1	ETP Sludge	35.3	4 MT/M	6 MT/M	10 MT/M	CHWTSDF
2	Chemical sludge from waste water treatment	35.3	6 MT/M	4.5 MT/M	10.5 MT/M	

No.	Description	Cat.	Quantity			Disposal
			Existing	Expansion	Tot. Aft. Exp.	
3	Drums cleaning, Chemical containing residue from decontamination &disposal	33.1	1 MT/M	0.5 MT/M	1.5 MT/M	
4	Distillation Residue	20.3	0.5 MT/D	1.56 MT/D	2.06 MT/D	CHWTSDF/ Incineration in Factory/ Authorized co-processor
5	Filters &filter material which have organic liquids in them	36.2	0.9 MT/Y	0.29 MT/Y	1.19 MT/Y	CHWTSDF
6	Spent Catalyst/resins	26.5	108 MT/Y	66.48 MT/Y	174.48 MT/Y	Sale to authorized party or CHWTSDF
7	Spent Carbon	28.3	1.5 MT/Y	0.50 MT/Y	2.0 MT/Y	CHWTSDF
8	Sodium Formate	28.1	--	0.072 MT/D	0.072 MT/D	CHWTSDF

16. The Budget earmarked towards Environmental Management Plan (EMP) is ₹ 48.80 Crore (capital) and the Recurring cost will be about ₹ 6.85 Crore per annum. The project proponent is committed towards the CER i.e. (₹ 3.7 Crore)

17. The PP reported that Industry has already developed greenbelt in an area of 82,800 m^2 (23% out of total plot area). Moreover, additional Green Belt area of 36,000 m^2 (10% out of total plot area) will be developed under expansion. After expansion of project, the total Green Belt area would be 1,18,800 m^2 which accounts for 33% of total plot area.

18. The PP proposed to set up an Environment Management Cell (EMC) by engaging 10 Members, Qualifications: M.E. (Env.), M.Sc. (Env. Sc.), B.Sc. (Chem.), PGDISHE for the functioning of EMC.

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

20. The PP reported that Emissions reduction due to carbon sequestration & avoided emissions (solar plant & rain water harvesting) is 8,109.0856 t CO_2 eq. / year. Net Emissions = Gross Emissions – (Carbon Sequestration + Avoided Emissions) Net Emissions = 27,29,447.505-8,109.0856 = 27,21,338.4194 t CO_2 eq. / year The Net emissions of Balaji Amines Ltd. are 27,21,338.4194 t CO_2 eq. / year.

21. The estimated project cost is Rs. 750 Crores including existing investment of Rs. 400 Crores. Total employment will be 800 persons as direct & indirect after expansion.

22. **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, Greenbelt development plan, fuel, carbon footprint, water balance, emission results, clarification on Hcl and advised the PP to submit the following:

- Revised Greenbelt Augmenttaion and Development.
- Change of existing and proposed Fuel pattern from coal to other fuels.
- Plan for reduction of present carbon footprints of the industry
- Water balance fow chart.
- Monitoring result for emissions from stacks and scrubber.
- Clarification on Hcl shown as by –product.

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

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

(i) The PP shall develop Greenbelt over an area at least 1,18,800 m^2 by planting 18,180 trees (after considering 80% survival rate) in 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 engage10 Members, Qualifications: M.E. (Env.), M.Sc. (Env. Sc.), B.Sc. (Chem.), PGDISHE. In addition to this one safety & health officer as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(iii) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. The budget propose under EMP is ₹ 48.80 Crore (Capital cost) and ₹ 6.85 crore 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) Total Water Requirement is 3886.18 M^3/Day of which fresh water requirement of 2592.38 M^3/Day will be met from MIDC Water supply scheme from Ujani Dam on Bhima river. 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) As committed, the PP shall not use coal in the remaining 60 TPH boiler.

(vi) 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.

(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) As committed, Zero Liquid Dscharge shall be ensured. Effluent of 1343.21 M^3/Day quantity shall be treated through ETP.

(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.

Agenda No. 45.18

Expansion of Antibiotic Bulk Drugs (API) Manufacturing Unit of production capacity from 742.50 TPA & 363.05 TPA of By-Product to the total capacity 990 TPA & By-products: 435.66 TPA located at Village Joniawas, Tehsil & district-Rewari, Haryana by M/s Penam Laboratories Ltd. - Consideration of EC

[Proposal No. IA/HR/IND3/248488/2021 File No IA-J-11011/5/2023-IA-II(I)]

The PP vide email dated 12.1.2022 informed that due to unavoidable circumstances of technical team, they would be unable to attend the meeting and requested to consider in the next meeting. The proposal was accordingly, **not appraised.**

Agenda No. 45.19

Proposed project of Bulk Drugs & Specialty Chemicals of production capacity 100.0 TPM located at Plot No. C1B-7001, G.I.D.C. Industrial Estate, Ankleshwar, Tal: Ankleshwar, Dist: Bharuch, Gujarat by M/s. Shiv Chemtech Private Limited- Consideration of ToR

[Proposal No. IA/GJ/IND3/412135/2022 File No IA-J-11011/318/2022-IA-II(I)]

1. The proposal is for the ToR for preparation of EIA/EMP for the proposed project of Bulk Drugs & Specialty Chemicals of production capacity 100.0 TPM located at Plot No. C1B-7001, G.I.D.C. Industrial Estate, Ankleshwar, Tal: Ankleshwar, Dist: Bharuch, Gujarat by M/s. Shiv Chemtech Private Limited. **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/IND3/412135/2022** dated 27.12.2022. The proposal is now placed in 45th EAC Meeting held on 11th – 13th January, 2023, wherein the PP made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

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

S.N	Name of product	CAS No.	Quantity MT/month	End Use
	Group-1 OR			
1.	Ammonium Acetate	631-61-8	100	Used as food additive as an acidity regulator
2.	Potassium Acetate	127-08-2		Used as potassium supplement used to prevent and to treat low potassium
3.	Calcium Acetate	62-54-4		Used to prevent high blood phosphate levels in patients who are on dialysis due to severe kidney disease
4.	Copper Acetate	142-71-2		Used as catalyst to make other chemicals and pigments

5.	Sodium acetate	127-09-3		Used in Pharmaceuticals & Dyes
6.	Calcium Stearate	1592-23-0		Used in pharmaceuticals and cosmetics
7.	Magnesium Stearate	557-04-0		Used as anticaking, lubricant, release, and antifoaming agent.
8.	Zinc Stearate	557-05-1		Used in the polymers industry as a heat stabilizer component
9.	Sodium Stearate	822-16-2		Major component of many soaps, cosmetics and food additives
	Group-2			
10.	Benzyl Bromide	100-39-0	30	Useful in organic synthesis as a benzyl protecting group for alcohols and carboxylic acids
11.	N Butyl Bromide	109-65-9		Used in Pharmaceuticals
12.	Phenyl Bromide	108-86-1		Used in organic synthesis to prepare the corresponding Grignard reagents
13.	N Propyl Bromide	106-94-5		Used in Pharmaceuticals
14.	Iso Propyl Bromide	75-26-3		Used in Pharmaceuticals
15.	Meta Nitro Benzyl Bromide	3958-57-4		Used in Pharmaceuticals
16.	Meta Bromo Nitro Benzene	585-79-5		Used in Pharmaceuticals
17.	Meta Bromo Anisole	2398-37-0		Used in Pharmaceuticals
18.	Tetra Methyl Ammonium Chloride	75-57-0		Phase Transfer Catalyst
19.	Tetra Butyl Ammonium Bromide	1643-19-2		Phase Transfer Catalyst

20.	N-Bromo Succinimide	128-08-5		Brominating and oxidizing agent
21.	Sulphanilic Acid	121-57-3		Use as an intermediate in the production of dyes & pharmaceuticals
22.	Bromo Acetic Acid	79-08-3		Used in Pharmaceuticals
23.	Para Bromo Benzyl Alcohol	873-75-6		Used as building blocks in organic synthesis, for example in pharmaceuticals
24.	Para Bromo Benzyl Bromide	589-15-1		Used as pharmaceutical intermediates
	TOTAL		**100.0**	

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

6. The PP reported that the proposed land area is 805.0 m^2 and no R&R is involved in the Project.

7. The PP reported that the proposal does not involve Approval/Clearance under Forest (Conservation) Act,1980, Wildlife (Protection) Act,1972 and CRZ Notification, 2011 as amended. There is no forest, Eco sensitive areas/National Park/Wildlife Sanctuary in 10 km radius of the site. The project doesn't fall within the CRZ boundaries. Amravati River, Dadhal is flowing at a distance of 3.25 km in NE direction

8. The PP reported that the total Total water requirement is 9.2 m3/day of which fresh water requirement of 9.2 m3/day will be met from GIDC Supply. Effluent of 5.6 m3/day quantity will be treated through Primary ETP and then sent to Common MEE of M/s. DIPL, Ankleshwar for the final disposal. The plant will be based on Zero Liquid discharge system

9. The PP reported that Power requirement after expansion will be 100 kVA and will be met from Dakshin Gujarat Vij Company Limited (DGVCL). Unit will have 1 Nos.of DG sets (80 kVA) capacity, as standby during power failure. Stack (height 11 m) will be provided as per CPCB norms to the proposed DG sets.

10. **The PP reported that the project, being in notified industrial area (Notification No.GHU-78-20-GID-1977-660-CH dated 01.02.1978), 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 Industry will develop greenbelt in an area of 40 % i.e.322.0 m^2 out of 805 m^2, total area of the project within premises and additional 300 m^2 of the project outside premises.

12. The estimated project cost is Rs 3.0 Crores. The PP reported that Total Employment will be 5 persons as direct & 7 persons indirect. Industry proposes to allocate Rs.0.12 Crores towards CER.

13. **Deliberations by the EAC:**

The EAC inter-alia, deliberated on the various environmental aspects such as water balance, greenbelt development plan, budget for EMP and the action plan proposed by the PP being in a critically polluted area and 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 analyzed the samples.

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

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

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

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

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

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

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

(xiii) The PP should develop Greenbelt over an area of 40.00% (i.e. 322.0 m^2) of the total land area, accordingly the plant species 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. Number of plantations have to be planted considering 80% survival rate and with a spacing of 2 m x 2 m.

(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. 45.20

Proposed Expansion of Pesticide Technical & Pesticide Specific Intermediates Products of production capacity from 983.75 to 1883.75 TPM (Pesticide Intermediates-593.75 TPM, Insectides-1190 TPM and Fungicides & Herbicides-100 TPM) and by-products from 6030 TPM to 8399 TPM located at Plot No. A3/1, A3/1C, A4/1,2,4&5, SIPCOT Industrial Complex, Pachayankuppam Village, Cuddalore Taluk & District, Tamil Nadu by M/s. Tagros Chemicals India Private Limited - Consideration of EC

[Proposal No. IA/TN/IND3/401342/2022; File No. IA-J-11011/453/2008-IA II(I)]

1. The proposal is for environmental clearance to the Proposed Expansion of Pesticide Technical & Pesticide Specific Intermediates Products of production capacity from 983.75 to 1883.75 TPM (Pesticide Intermediates-593.75 TPM, Insectides-1190 TPM and Fungicides & Herbicides-100 TPM) and by products from 6030 TPM to 8399 TPM located at Plot No. A3/1, A3/1C, A4/1,2,4&5, SIPCOT Industrial Complex, Pachayankuppam Village, Cuddalore Taluk & District, Tamil Nadu by M/s. Tagros Chemicals India Private Limited.

2. The project/activity is covered under Category 'A' of item 5(b) Pesticide Industry and pesticide specific intermediates (excluding formulations) of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) and requires appraisal at Centre. **The PP also reported that the project is located in a severely polluted area.**

3. The PP applied for ToR vide proposal number IA/TN/IND3/236666/2021 dated 8.12.2021 and the ToR has been issued by the Ministry, vide letter No. J-11011/453/2008-IA-II(I) dated 15.12.2021. The PP submitted that the proposed project being located in SIPCOT Industrial Complex (**G.O. Ms. No. 1730 dated 24.07.1974**), Public Hearing is exempted under the provisions as per para 7 III stage (3) (b) of the EIA notification, 2006 and also as per, MoEF&CC O.M dated 27th April, 2018. The PP applied for Environment Clearance on 6.10.2022 in Common application form and submitted EIA/EMP Report and other documents. The PP reported in Form- that it is a Expansion EC. Due to the shortcoming the Proposal was referred back to PP on 27.10.2022 and reply for the same has been submitted on 27.12.2022 The proposal is now placed in 45th EAC Meeting held on 11th - 13th January, 2023, wherein the Project Proponent and an accredited Consultant, M/s. Hubert Enviro Care Systems (P) Ltd, Chennai [Accreditation number NABET/EIA/1922/RA 0172 valid up to 20.3.2023], made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that the Existing land Area is 33668.15 m^2, additional 22257.53 m^2 land will be used for proposed expansion. The total area of the project 55925.68 m^2 and no R& R is involved in the Project. The details of products are as follows:

Sl. No.	Details (Complete name)	CAS NO.	Existing Mt/Month	Proposed Mt/Month	Total Quantity Mt/Month	Uses
Products						
1	DVAcid Chloride	52314-67-7	280	70	350	Intermediates
2	Oxyclozanide	2277-92-1	2	0	2	Intermediates
3	Quinapyramine Sulfate	23609-66-7	1.75	0	1.75	Intermediates
4	Metaphenoxy Benzyl Alcohol	13826-35-2	40	0	40	Intermediates
5	3, 5-Dichlorobenzoyl Chloride	2905-62-6	0	200	200*	Intermediates

Sl. No.	Details (Complete name)	CAS NO.	Existing Mt/Month	Proposed Mt/Month	Total Quantity Mt/Month	Uses
6	(3-Endo)-9-Benzyl-9-Azabicyclo[3,3,1]Nonan-3-Ol	70243-51-5				Intermediates
7	1-[3-Fluoro-2-(2-Hydroxypropan-2-Yl) Phenoxy]Propan-2-One	-				Intermediates
8	2-Amino-3,4-Difluorobenzaldehyde	1602097-79-9				Intermediates
9	2-Amino-5,7-Dimethoxy[1,2,4]Triazolo[1,5-A]Pyridine	13223-43-3				Intermediates
10	4-Bromo-3-Fluorobenzotrifluoride	40161-54-4				Intermediates
11	5-Fluoro-4-Hydrazino-2-Methoxypyrimidine	166524-64-7				Intermediates
12	Alpha Cypermethrin	67375-30-8	400	200	600**	Insecticides
13	Cypermethrin	52315-07-8				Insecticides
14	Permethrin	52645-53-1				Insecticides
15	Betacyper	65731-84-2				Insecticides
16	Deltamethrin	52918-63-5	35	5	40	Insecticides
17	Tefluthrin	79538-32-2	15	30	45***	Insecticides
18	Dimefluthrin	271241-14-6				Insecticides
19	Transfluthrin	118712-89-3				Insecticides
20	Meperfluthrin	915288-13-0				Insecticides
21	Fipronil	120068-37-3	55	0	55	Insecticides
22	Piperonylbutoxide	51-03-6	35	115	150	Insecticides
23	Pyriproxyfen	95737-68-1	20	30	50	Insecticides
24	3-Bromo-1-(3-Chloropyridin-2-Yl)-N-[4-Cyano-2-Methyl-6-(Methylcarbamoyl) Phenyl]-1h-Pyrazole-5-Carboxamide	736994-63-1	0	200	200****	Insecticides
25	3-Bromo-N-[4-Chloro-2-	500008-45-7				Insecticides

Sl. No.	Details (Complete name)	CAS NO.	Existing Mt/Month	Proposed Mt/Month	Total Quantity Mt/Month	Uses
	Methyl-6-(Methylcarbamoyl) Phenyl]-1-(3-Chloropyridin-2-Yl)-1h-Pyrazole-5-Carboxamide					
26	N'-(Tert-Butyl)-N'-(3,5-Dimethylbenzoyl)-3-Methoxy-2-Methylbenzohydrazide	161050-58-4				Insecticides
27	Clothianidin	210880-92-5	0	50	50	Insecticides
28	Hexaconazole	79983-71-4	100	0	100*#*	Fungicides
29	Propiconazole	60207-90-1				Fungicides
30	Tricyclazole	41814-78-2				Fungicides
31	Difenoconozole	119446-68-3				Fungicides
32	Dicamba	1918-00-9				Herbicide
Total			**983.75**	**900**	**1883.75**	
Byproducts						
1	Ammonium Chloride	12125-02-9	616	154	770	Byproducts
2	HCl Solution (30%)	7647-01-0	627	648	1275	Byproducts
3	Sodium Sulphite Solution	7757-83-7	2473	798	3271	Byproducts
4	$AlCl_3$ Soln	7446-70-0	219	32	251	Byproducts
5	Mixture of Ortho and Para Bromobenzene	108-86-1	189	28	217	Byproducts
6	Spent Iso Propyl Alcohol and EDC	67-63-0 107-06-2	52	8	60	Byproducts
7	2,2,2 – Trichloroethyl 3,3 Dimethyl-4-ChloroCyclo butanone	68697-08-5	87	21	108	Byproducts
8	Spent Solvents	67-56-1	10	20	30	Byproducts
9	Cupric Chloride solution	7447-39-4	141	35	176	Byproducts
10	Sodium Sulphate solution	7757-82-6	622	499	1121	Byproducts
11	Spent Sulphuric acid	7664-93-9	824	0	824	Byproducts
12	Deltamethrin second crop	52918-63-5	26	4	30	Byproducts

Sl. No.	Details (Complete name)	CAS NO.	Existing Mt/Month	Proposed Mt/Month	Total Quantity Mt/Month	Uses
13	Potassium Chloride	7447-40-7	144	14	158	Byproducts
14	Cuprous Iodide	7681-65-4	0	108	108	Byproducts
Total			**6030**	**2369**	**8399**	

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

6. The PP reported that Ministry had issued the latest EC vide letter no. J-11011/453/2008-IA-II(I) dated 28.05.2020 to the existing project, Expansion of Pesticide Technicals & Pesticide specific Intermediates manufacturing unit in favour of M/s. Tagros Chemicals India Private Limited.

7. The PP reported that Certified compliance report of earlier ECs was provided by IRO, MoEF&CC vide letter no. EP/12.1/2020-21/31/TN/1255 dated on 23.11.2022 based on the site visit conducted on 11.11.2022. It was reported that most of the conditions were complied with a few as, being complied/agreed to comply/justified as complied and one condition as details not provided.

8. The PP reported that there are no National Parks, Wildlife Sanctuaries, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance of the project site.River/ water body such as Uppanar R, is at a distance of 0.80 km in ESE direction, Bay of Bengal is at a distance of 1.86km in the Eastern Direction, Capper Hills Lake, is at a distance of 2.67 km in NNW direction ,Gadilam R is 4.51 km in the Northern Direction, Ponnaiyar/Thenpennai R is 8.07 km in the NNE Direction, Perumal Eri is 10.20 km in the SW Direction, Bahur Lake is 12.85km in the Northern Direction, Pillaiyarkuppam Lake is 13.08 km in the Northern Direction, Buckingham Canal is 14.66 km in the SSW Direction, Bangara Vaykkal is 14.93 km in the NNW Direction.

9. The PP reported that **Ambient air quality** monitoring was carried out at 8 locations during August to October 2019 and the baseline data indicates the ranges of concentrations as: PM_{10} (50.44 – 63.26 µg/m³), $PM_{2.5}$ (27.16 – 33.61 µg/m³), SO_2 (8.39 –12.85 µg/m³), NO_2 (18.77 – 27.67 µg/m³), NH_3 (6.12 – 7.60 µg/m³), O_3 (8.37 -11.82 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.23 µg/m^3, 4.49 µg/m^3, 2.32 µg/m^3, 78.76µg/m^3, 1.88 µg/m^3, 0.58 µg/m^3 and 0.58 µg/m^3 with respect to PM_{10}, SO_2, NO_X, CO, HCl, HBr and Chlorine. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). **Noise** monitoring was carried out at 8 locations during August 2019 to October 2019 and the baseline data indicates the ranges as: In Industrial area day time noise levels was about 68.1dB(A) and 59.9 dB(A) during night time, which is within prescribed limit by CPCB (75 dB(A) Day time & 70 dB(A) Night time). In Residential area day time noise levels varied from 52.6 dB(A) to 54.8 dB(A) and night time noise levels varied from 42.7

dB(A) to 44.3 dB(A) across the sampling stations. The field observations during the study period indicate that the ambient noise levels in Residential area noise are within the limit prescribed by CPCB (55 dB(A) Day time & 45 dB(A) Night time).

10. **Ground water** monitoring was carried out at 8 locations during August 2019 to October 2019 and the baseline data indicates the ranges as: pH (6.92-8.02), TDS (305 mg/l-1307 mg/l), Total Hardness (156 mg/l -710 mg/l), Chlorides (61.36 mg/l -386.26 mg/l) and Fluoride (0.23 mg/l -0.52 mg/l) Surface water monitoring was carried out at 8 locations during August 2019 to October 2019 and the baseline data indicates the ranges as: pH (6.86-7.99), TDS (1180 mg/l -15826 mg/l), TSS (5 mg/l -150 mg/l), Total Hardness (319.70 mg/l -3040.1 mg/l), Chlorides 367.34 mg/l -8439 mg/l), Fluoride(0.47 mg/l -1.29 mg/l), BOD (2 mg/l -10.9 mg/l), COD(13.2 mg/l -67.8 mg/l) and DO (5.51 mg/l -6.3 mg/l). Marine sample near Sattikuppam values are pH (7.62), TDS (37750 mg/l), TSS (9 mg/l), Total Hardness (8503.4 mg/l), Chloride (21081.9 mg/l), Fluoride (1.32 mg/l), BOD (4 mg/l), COD (12 mg/l) and DO (5.7 mg/l). **Soil** monitoring was carried out at 8 locations during August 2019 to October 2019 and the baseline data indicates the ranges as: Nitrogen (220.3 mg/kg -680.6 mg/kg), Phosphorus (31.04 mg/kg -180.07 mg/kg) and Potassium (16.74 mg/kg -30.1 mg/kg).

11. The PP reported that the total water requirement is **1748 m^3/day** (Existing 1290 m^3/day & Proposed 458 m^3/day) of which fresh water requirement of **1075 m^3/day** (Existing 794 m^3/day & Proposed 281 m^3/day) will be met from SIPCOT. Effluent of **815 m^3/day** (Existing 612 m^3/day & Proposed 203 m^3/day) quantity will be treated through ETP capacity of **850 m^3/day** and followed by FO (200 m^3/day), RO (550 m^3/day), HPRO (100 m^3/day) and MEE (500 m^3/day). Sewage of **68 m^3/day** (Existing 64 m^3/day & Proposed 4 m^3/day) quantity will be treated through STP capacity of **75 m^3/day**.

12. The PP reported that Power requirement after expansion will be **7475 KVA (7.475MW)** including existing **6725KVA (6.725 MW)** and will be met from **TANGEDCO.** Existing unit has DG sets of **2x1500 kVA, 1x2000 kVA and 1x3000 kVA**. Stack height of **12.5 m** for 2x1500 kVA, **12.5 m** for 1x2000 kVA and **13 m** for 1x3000 kVA is provided as per CPCB norms and additionally **no** DG sets are proposed.

13. Existing unit has **1x10TPH capacity Coal fired Boiler, 1x12TPH capacity Coal fired Boiler and 1x25TPH capacity Coal fired Boiler**. Additionally, **no boiler will be installed.** Multiple Cyclone Separator with a stack of height of **30 m** for 1x10TPH Boiler**,** Twin Cyclone Separator with a stack of height of **30 m** for 1x12TPH Boiler and Acoustic enclosures with a stack of height of **42 m** for 1x25TPH Boiler for controlling the particulate emissions within the statutory limit of 115 mg/Nm^3 for the proposed boilers.

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

Stac	**Source**	**No. of**	**Stack Details**	**Emission per stack (g/s) (after scrubbing)**	**APC**

k No.		Source	No of Stack	Height (m) AGL	Dia (m)	Temp (° C)	Exit Velocity (m/s)	SO_2	HCl	HBr	Chlorine	VOC	
Existing as per latest EC													
1	CMAC	5	1	15	0.15	32	8	0.0032	0.0016	-	-	-	Two stage water scrubbers followed by alkali Scrubber (Activated carbon absorbent)
	Permethrin	1											
2	Deltamethrin	2	1	15	0.15	32	8	0.0032	0.0016	-	-	-	
	Oxyclozanide												
	Hexaconazole												
	Tefluthrin												
	Meperfluthrin												
	Fipronil												
3	Deltamethrin	1	1	15	0.15	32	8	-	-	0.0005	-	-	Water Scrubber connected with stack (Activated carbon absorbent)
	Propiconazole	1											
	Difenoconazole												
4	Fipronil	2	1	15	0.15	32	8	-	-	-	0.0005	-	Two stage water scrubber followed by alkali Scrubber (Activated carbon absorbent)
	Deltamethrin												
5	Process Vent – I		1	15	0.15	32	8	-	-	-	-	0.00001	Voc Scrubber connected to activated carbon
6	Process Vent - II		1	15	0.15	32	8	-	-	-	-	0.00001	

													absorbent system
Additional													
1	Multipurpose plant vents	6	1	15	0.15	32	8	0.0032	0.0016	0.0005	0.0005	-	Two stage water scrubber followed by alkali Scrubber (Activated carbon absorbent)
Total Emission (g/s)								**0.0096**	**0.0048**	**0.001**	**0.001**	**0.00002**	

15. **Details of solid waste/ hazardous waste generation and its management**:

S. No	Waste	Existing-913	Prop.Add-220 nos	Total after Expansion-	Method of disposal
1	Organic	164.34	38	202.34	Converted into bio Manure by OWC
2	Inorganic	246.51	61	307.51	Disposing to cement industry for co processing
Construction Phase(75 Nos): 45 kg/day (Disposed through local bins)					

Other solid waste generation

Type	Existing Quantity (MT/Month)	Additional Quantity (MT/Month)	Total after expansion (MT/Month)	Disposal method
Ash	160	20	180	Disposed through Brick Manufacturers

Hazardous Waste Generation and its Management

Name of Waste	Waste Category	Existing Qty	Proposed Qty	Total After Expansion Qty	Mode of disposal

Used/spent oil (KL/Annum)	5.1	3.38	1.83	5.21	Collection, Storage, recycle reused in factory premises or Transportation & Disposal by sale to TNPCB authorized Recyclers
Spent solvents (KL/Annum)	20.2	200	75	275	Collection, Storage, recycle reused in factory premises or Transportation & Disposal by sale to TNPCB authorized Recyclers
Distillation residues (MT/Annum)	20.3	179	152	331	Generation, Collection, Storage and sent to authorized recycler (for recycling)/to preprocessor- 1.M/s.GEPIL,VLR 2.M/s. Sandhiya Enviro tech System (Utilizable)
Process wastes/ residues (MT/Annum)	29.1	745	652	1397	Generation, Collection, Storage and disposal to M/s. TNWML, Gummidipoondi for incineration (incinerable)
Chemical-containing Residue arising from decontamination (KL/Annum)	34.1	133.66	35.34	169	Generation, Collection, Storage and disposal by treating in the ETP provided in the unit
Empty barrels/ container/ liners contaminated with hazardous chemicals / wastes (MT/Annum)	33.1	200	90	290	Collection, Storage, recycle reused in factory premises or Transportation & Disposal by sale to TNPCB authorized Recyclers
Chemical sludge from waste water treatment/ MEE	35.3	20440	8360	28800	Generation, Collection, Storage and disposal to M/s. TNWML, Gummidipoondi for landfilling.

Salt (MT/ Annum)					
Spent carbon or filter medium (MT/Annum)	36.2	0	2	2	Collection, Storage, Transportation, Disposal Common Landfill-TSDF, Gummidipoondi, Co Processing in Cement Kilns, Pre-Processors-GEPIL, Ranipet.

Authorization letter to handle hazardous waste was obtained from TNPCB Vide no. T6/TNPCB/F.0148CUD/HWA/RL/CUD/2022 dated 04.02.2022 which is valid upto 31.03.2026. Agreement between Tagros Chemicals and TNWML/GEPIL / Suprem Petro Products/Danial Barrels/ Ultratech Cement Ltd (Co-Processing for Non-Hazardous waste)/Keerthiga Chemicalsfor the safe disposal of Hazardous Waste is obtained

16. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 37.48 Crores (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 26.986 Crores per annum. Industry proposes to allocate ₹ 53.67 Lakhs towards CER.

17. The PP reported that the Industry has already developed greenbelt in an area of 8493.5 m^2 i.e., 15.187 % out of total area of the project 55925.68 m^2. Industry will develop greenbelt in an area of 11274.25 m^2 i.e., 20.159 % out of total area of the project 55925.68 m^2. Total Greenbelt after expansion within the site will be 19767.75 m^2 i.e., 35.35%. Since it is located within Cuddalore SIPCOT which is coming under SPA (62.56), so 40% greenbelt area is mandatory. In order to maintain 40% greenbelt, Tagros Chemicals implemented 3 Acres of OSR Land for the purpose of greenbelt development from SIPCOT as vide letter: Po/CuD/Greenbelt/2017 dated: 30.08.2018.Total Greenbelt after expansion will be 31907.75 m^2 i.e., 57.05%.

18. Thre PP reported that

Existing		**After Expansion**		**CO_2 reduction due to the Consumption of by implementing the VFDs above 75HP load for the proposed plant /day**		**Total Reduction in CO_2 emission**
Power Consumption/Day kW	CO2 GenerationMT/ Annum	Power Consumption/DaykW	CO2 Generation (A) MT/ Annum	Power Consumption/DaykW	CO2 Reduction MT/ Annum	
84000	26061	120000	37230	5000	1551	1551

19. The PP proposed to set up an Environment Management Cell (EMC) by engaging GM EHS-DM(Enviornment) – Executive 1- Chemist -5 – operators the functioning of EMC.

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

21. The estimated project cost is Rs 373.49Crores (Proposed project cost is Rs. 53.67 Crores) including existing investment of Rs 319.82Crores. Total Employment will be **663 persons** as direct & **470 persons** indirect after expansion.

22. **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 Products, fuel, Greenbelt development plan, CEPI compliance, carbon sequestration, CER cost, fate of chemicals in the environment or its residual effects of use of manufactured pesticides (LCA) and advised the PP to submit the following:

- Revised Product List.
- Commitment for the greenfuel change from the coal to be done.
- Usage of HSD to be eliminated in CEPI region and the greenfuel has to be allotted accordingly
- Submit the revised Green Belt Development Plan
- Revised Compliance to OM dated 31.10.2019 for projects falling within CPA.
- Submit the details for analysis of carbon sequestration and the action plan for the carbon reduction to be provided.
- Revised CER cost

- Revised **LCA** in consideration of half life, cumulative assessment, quantitative manner along with the recommendation from cradle to grave

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

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

The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The expert members of the EAC found the proposal in order and recommended for grant of environmental clearance.

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

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

(i) Adequate stack height as per CPCB/SPCB guidelines shall be provided. Stack emission levels shall be stringent than the existing standards in terms of the identified critical pollutants.

(ii) The Unit shall install Continuous Emission Monitoring System (CEMS) (as per CPCB guidelines for relevant parameters) which shall be connected with SPCB/CPCB server.

(iii) Effective fugitive emission control measures shall be adopted in the process, transportation, packing etc. Further, mobile fugitive scrubber shall be incorporated in all the hazardous process.

(iv) Coal shall be transported through closed conveyor system. Further, the PP shall explore transportation of all other materials by rail/belt conveyer.

(v) The PP shall use solid Bio fuel as fuel for boilers and on non-availability of Bio fuel, shall use imported Indonesian coal of high calorific value low on ash and sulphur Content. Further, the PP shall explore the use of natural gas as a fuel.

(vi) The PP shall adopt sectoral Best Available Technology.

(vii) The PP shall develop/maintain green belt in 55% of the total area. 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. 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 PP shall also develop 11735 m^2 land area as greenbelt outside the premises.

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

(x) The treated effluent shall be reused in boiler & cooling tower and ZLD shall be maintained.

(xi) Continuous monitoring of effluent quality/quantity shall be done. The CEMS shall be connected to SPCB/CPCB server as well, to comply with the norms.

(xii) The Unit shall install/maintain rain water harvesting structures to recharge the ground water.

(xiii) Domestic effluent shall be treated in STP and the treated sewage shall be used for Greenbelt.

(xiv) The Unit shall handle and dispose fly-ash and bottom ash as per the prevailing guidelines. Separate storage area shall be provided for fly ash within the plant premises.

(xv) The ETP Salt shall be disposed to authorized land fill facility and the process/distillation residue shall be utilized in co-processing.

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

(xvii) As Committed, the PP shall allocate Rs. 53.67 lakhs for CER i.e. desiliting of lakes, drinking water supply to the village peoples, Overhead water tank construction for the nearby village people, tree plantation of additional 2.9 acres greenbelt development in SIPCOT area.

(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. The PP shall engage GM EHS, DM(Enviornment), Executive, Chemist and 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.

(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 ₹ 37.48 Crore (Capital cost) and ₹ 26.986 Crores (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 is **1748 m^3/day** (Existing 1290 m^3/day & Proposed 458 m^3/day) of which fresh water requirement shall not exceed **1075 m^3/day** (Existing 794 m^3/day & Proposed 281 m^3/day) will be met from SIPCOT. The PP should ensure that the 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.

(xii) Effluent of **815 m^3/day** (Existing 612 m^3/day & Proposed 203 m^3/day) quantity shall be treated through ETP of **850 m^3/day** capacity followed by FO (200 m^3/day), RO (550 m^3/day), HPRO (100 m^3/day) and MEE (500 m^3/day). The treated effluent shall be reused in boiler & cooling tower. Sewage of **68 m^3/day** (Existing 64 m^3/day & Proposed 4 m^3/day) quantity shall be treated through STP of **75 m^3/day** capacity and the treated sewage shall be used for green belt. ZLD shall be maintained.

(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 comply with the environment norms for 'Pesticide Industry' as notified by the Ministry of Environment, Forest and Climate Change, vide GSR 446 (E), dated 13th June, 2011 under the provisions of the Environment (Protection) Rules, 1986.

(xxiii) 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.

(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 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.

(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. 45.21

Establishment of Synthetic organic chemicals (Resin) manufacturing unit of production capacity from 300 TPM to 10 TPD and melamine formaldehyde Resin from 550 TPM to 18.33 TPD located at Plot. No. s: 143, 143aa/143a3, 143/U, 143/E, 143/Ru, 144/A2, 149, 149/A, 149/Ru, 149/Ruu, 149lu Mothighanpur Village, Balanagar Mandal, Mahabubnagar District, Telangana, by M/s Divya Sai Lam Private Limited - Consideration of EC.

Proposal No. IA/TG/IND3/400244/2022 File No. IA-J-11011/391/2018-IA-II(I)]

1. The proposal is for environmental clearance for the proposed Establishment of Synthetic organic chemicals (Resin) manufacturing unit of production capacity from 300 TPM to 10 TPD and melamine formaldehyde Resin from 550 TPM to 18.33 TPD located at Plot. No. s: 143, 143aa/143a3, 143/U, 143/E, 143/Ru, 144/A2, 149, 149/A, 149/Ru, 149/Ruu, 149lu Mothighanpur Village, Balanagar Mandal, Mahabubnagar District, Telangana, Mahbubnagar, Telangana by M/s Divya Sai Lam Private Limited.

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) as the project is located outside the notified industrial area. Therefore, the project requires appraisal at Central Level.

3. The standard ToR was issued by the Ministry, vide letter no. IA-J-11011/391/2018-IA II (I) dated 31.12.2018. The PP submitted that Public Public Hearing for the proposed project has been conducted by the Telangana State Pollution Control Board on 18.09.2019 at 11.00 AM at within Mothighanpur Grampanchayt office. The main issues raised during the public hearing are related to employment, surrounding villages development and implementation of pollution control measures. which was presided by In-charge Joint Collector. The PP applied for Environment Clearance on 29.10.2022 in Form-2 and submitted the EIA/EMP Report and other documents. The PP in the Form-2 reported that it is a **Fresh case.** Due to some shortcomings, the Project was referred back to the PP on 9.11.2022 and reply to the same was submitted on 28.12.2022 respectively. The proposal is now placed in 45th EAC Meeting held on 11th to 13th January, 2023, wherein the Project Proponent and an accredited Consultant, **TEAM LABS AND CONSULTANTS**. [Accreditation number ***NABET/EIA/2124/RA 0242*** valid up to 09.01.2023], 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 0.3574 Ha and no R& R is involved in the Project. The details of products and by–products are as follows:

S. No.	Name of Product	CAS No.	Capacity	
			TPM	TPD
Group I				
1	Phenol Formaldehyde Resin	9003-35-4	300	10
2	Urea Formaldehyde Resin	9011-05-6	200	6.66
Total – I: Worst Case any one Product on campaign basis			**300**	**10**
Group II				
3	Melamine Formaldehyde Resin	9003-08-1	250	8.33
Total (Group I + Group II)			**550**	**18.33**

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 issued under E (P) Act/Air Act/Water Act.

6. The PP reported that CTO for Paper Based Decorative Laminates and Pre-Lamination of MDF Particle Boards vide order no. 752-MHB/TSPCB/ZOH/ CFO/TS-iPASS/2019-541 dated 18.11.2019 valid till 31.10.2024, which does not attract environmental clearance vide S.O. 1533(E) dated 14.09.2006 compliance report of conditions stipulated in CTO dated 18.11.2019 is obtained from TSPCB vide letter no. 1298/Gen/TSPCB/ROH/ MHB/2022-330 dated 06.08.2022.

7. The PP reported that there are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger /Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Medigadda tanda chervu is at a distance of 0.8 km. Suraram a seasonal stream is at a distance of 1.4 km in southwest direction. The PP reported that no forest area is involved in the proposed project and no Schedule-I species exist within 10 km study area of the project.

8. The PP reported that Ambient air quality monitoring was carried out at eight locations during May 2022 and submitted baseline data indicates that ranges of concentrations of PM_{10} (47-55 $\mu g/m^3$), $PM_{2.5}$ (12-23 $\mu g/m^3$), SO_2 (5-9 $\mu g/m^3$) and NO_2 (8-15 $\mu g/m^3$) respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLC_S after the proposed project would be 0.021 $\mu g/m^3$, 0.084 $\mu g/m^3$, and 0.095 $\mu g/m^3$ with respect to PM_{10}, SO_X and NO_X. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

9. The PP reported that Ambient noise levels are observed from 44 dB (A) to 53 dB (A) during day time and 39 dB (A) to 43 dB (A) during night time. The values are within the prescribed limits.

10. The PP reported that Surface water Quality: pH ranges from 7.89 to 8.16, total dissolved solids (TDS) ranges from 391 to 505 mg/l, BOD varies from 5.9 to .3 mg/l, COD varies from 18 to 22 mg/l and total hardness varies from 165 to 190 mg/l. Ground water Quality: pH ranges from 7.16 to 7.95, total dissolved solids (TDS) ranges from 354 to 895 mg/l, chlorides varies from 55 to 132 mg/l and total hardness varies from 120 to 553 mg/l.

11. The PP reported the total water requirement is after inclusion of proposed resin manufacturing unit is 28.5 KLD out of which 20 KLD will be fresh water and 8.5 KLD is recycled. Water requirement will be met from ground water. The unit obtained permission to abstract ground water of 20 KLD from State Ground water department. Total effluent of 8.6 m3/day will be treated through "Zero Liquid Discharge" based effluent treatment system. The treated wastewater is reused for cooling towers make-up.

12. The PP reported the Power requirement will be met by Transco. DG sets of capacity 1 x 500 kVA proposed to cater to the energy requirement during load shut down by Transco. Stack (height 5 m) will be provided as per CPCB norms to the proposed DG sets which will be used as standby during power failure.

13. It is proposed to establish briquette/coal fired hot water generation unit of 1 x 25 Lakh K.cal capacity in place of consented 1 x 4 TPH coal fired boiler and 1 x 15 Lakh K. Cal briquette/coal fired thermic fluid heater proposed in addition to consented 1 x 15 lakh k. cal thermic fluid

heater to meet the process heating requirement. Stack height of 30 m for 1 x 15 lak k.cal hot water generation unit and 30m for 1 x 15 lakh k.cal thermic fluid heater will be provided and multicone cyclone separators filters will be installed for controlling the Particulate emissions (within statutory limit of 115 mg/Nm3).

14. Details of Process emissions generation and its management. No emissions are anticipated from resin manufacturing process.

15. Details of solid waste/Hazardous waste generation and its management. No process residue is generated. Ash from thermic fluid heaters and hot water generation unit is sold to brick manufacturers. Other wastes like used oil and used batteries shall be sent to authorized recyclers. The other solid wastes expected from the unit are containers, empty drums which will be used for packing product, and or returned to the product seller or sold to authorized buyers after detoxification, while the sludge from treatment plant shall be sent to TSDF.

16. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 80.1 Lakhs (capital) and the Recurring cost (operation and maintenance) will be about ₹ 32.8 Lakh per annum. Industry proposes to allocate i.e., Rs. 12.4 lakhs capital cost towards Corporate Environment Responsibility

17. The PP reported that Industry will develop greenbelt in an area of 34.5% i.e., 11331.2 sq.mts out of 32779.5 sq.mts (of area of the project site.

18. The PP proposed to set up an Environment Management Cell (EMC) to engage Enviornment Engineer – maintenance engineer- SHW supervisior- operator chemist- for the functioning of EMC.

19. The PP submitted that Public Hearing for the proposed project has been conducted by the Telangana State Pollution Control Board on 18.09.2019 at 11.00 AM at within Mothighanpur Grampanchayt office. The main issues raised during the public hearing are related to employment, surrounding villages development and implementation of pollution control measures. which was presided by Joint collector.

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

21. The estimated project cost is Rs 6.2 crores. Total Employment will be 90 persons as direct and 30 persons indirect.

22. **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 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, road layout and advised the PP to submit the following:

- Revised greenbelt development plan.
- Commitment to provide CC road within the site in place of Kacha road within one month and also provide a dry vacuum cleaner instead of manual sweeping. This will reduce the dust raise within the site.

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

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

The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The expert members of the EAC found the proposal in order and recommended for grant of environmental clearance.

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

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

(i) The PP shall develop Greenbelt over an area of at least, 1.133 ha by planting 3014 number of trees within a period of one year of grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft (about 2 m). The budget Rs 10 Lakh 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 Enviornment Engineer – maintenance engineer- SHW supervisior- operator chemist. In addition to this one safety & health officer as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(iii) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. The budget propose under EMP is ₹ 80.1 Lakhs (Capital cost) and ₹ 32.8Lakh 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 after inclusion of proposed resin manufacturing unit is 28.5 KLD will be met from ground water. The PP should ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawn only after obtaining valid agreement from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year.

(v) Total effluent of 8.6 m3/day shall be be treated through "Zero Liquid Discharge" based effluent treatment system.

(vi) As committed by the PP, PP shall provide CC road within the site in place of Kacha road within one month. Industry shall also provide a dry vacuum cleaner instead of manual sweeping.

(vii) 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.

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

(ix) 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.

(x) 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.

(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 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.

(xiii) 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.

(xiv) 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.

(xv) 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.

(xvi) 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.

(xvii) 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.

(xviii) 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. 45.22

Proposed Expansion of synthetic organic chemical upto production capacity of 100 TPM and total Inorganic Chemical Products (Non EC product) from 600 TPM to 350 TPM located at Plot No. 155/3 & 4, GIDC Nandesari, Dist. Vadodara, Gujarat by M/s. Shakti Ammonia Supply Co. - Consideration of ToR

[Proposal No. IA/GJ/IND3/407002/2022 File No. IA-J-11011/520/2022-IA-II(I)]

1. The proposal is for the ToR for preparation of EIA/EMP for the Proposed Expansion of synthetic organic chemical upto production capacity of 100 TPM and total Inorganic Chemical Products (Non EC product) from 600 TPM to 350 TPM located at Plot No. 155/3 & 4, GIDC Nandesari, Dist. Vadodara Gujarat by M/s. Shakti Ammonia Supply Co. **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/IND3/407002/2022** dated 5.12.2022. Due to the shortcomimng the proposal was referred back to PP on 11.12.2022 and reply for the same has been submitted to PP on 28.12.2022. The proposal is now placed in 45th

EAC Meeting held on 11th – 13th January, 2023, wherein the PP made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

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

Sr. No.	Name of the Product	CAS No.	Quantity (MT/Month)			End-use of Products
			Existing	Proposed	Total	
1	1 Phenyl 3- Methyl 5-Pyrazolone (PMP)	89-25-8	NIL	100	100	Used in Dyes and Dyes intermediate
2	Para Tolyl 3- Methyl 5-Pyrazolone (PTPMP)	86-92-0				Used in Dyes and Dyes intermediate
3	1 -(M-Chloro Phenyl) 3-Methyl 5- Pyrazolone (MCPMP)	90-31-3				Used in Dyes and Dyes intermediate
4	1 –(O-Chloro Phenyl 3-Methyl 5 -Pyrazolone (OCPMP)	14580-22-4				Used in Dyes and Dyes intermediate
5	1-(3-Sulpho Amido) Phenyl 3- Methyl 5-Pyrazolone (1:3 SAPMP)	59-29-2				Used in Dyes and Dyes intermediate
6	1-(4-Sulpho Amido) Phenyl 3- Methyl 5-Pyrazolone (1:4 SAPMP)	13269-73-3				Used in Dyes and Dyes intermediate
7	1-(2,5 Dichloro 4 Sulpho) Phenyl 3- Methyl 5-Pyrazolone (DCSPMP)	84-57-1				Used in Dyes and Dyes intermediate
8	1-(2 Methyl 4-Sulpho) Phenyl 3- Methyl 5-Pyrazolone	118-07-0				Used in Dyes and Dyes intermediate
9	1 (3 Sulpho Phenyl) 3 Methyl 5 Pyrazolone (1:3 SPMP)	119-17-5				Used in Dyes and Dyes intermediate
10	Vinyl Sulpho Phenyl 3-Methyl 5-Pyrazolone (V.S. SPMP)	21951-34-8				Used in Dyes and Dyes intermediate
11	1-(2-Chloro 5 Sulpho) Phenyl 3- Methyl 5-Pyrazolone (OCSPMP)	88-76-6				Used in Dyes and Dyes intermediate
Total Proposed Organic Chemical Products (EC Applicable Products)			**NIL**	**100**	**100**	--
12	Liquor Ammonia	7664-41-7	100	NIL	100	Used in Pharmaceutical,

13	Filling of Ammonia gas in cylinders	7664-41-7	100	NIL	100	dye and dye intermediate, textiles
14	Nickel Sulphate	10101-97-0	25	-25	NIL	Dyes and dye intermediate, electroplating industry
15	Cobalt Sulphate	10026-24-1	25	-25	NIL	Electroplating industry, drying agent
16	Copper Sulphate	7758-99-8	50	-50	NIL	Electroplating industry, drying industry
17	Zinc Sulphate	7733-02-0	100	-100	NIL	Pharmaceutical industry
18	Magnesium Sulphate	7487-88-9	50	NIL	50	Pharmaceutical industry
19	Ferrous Sulphate	7720-78-7	50	-50	NIL	Pharmaceutical Industry, waste water treatment
20	Purification of G-Salt	842-18-2	50	NIL	50	Dye intermediate
21	Ammonia Sulphate	7783-20-2	50	NIL	50	Agricultural use
Total Existing Inorganic Chemical Products (Non EC Products)			**600**	**-250**	**350**	--

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

6. The PP reported that Existing land area is 1855 m^2, No additional land will be used for proposed expansion.

7. The PP reported that the proposal does not involve Approval/Clearance under Forest (Conservation) Act,1980, Wildlife (Protection) Act,1972 and CRZ Notification, 2011 as amended. There is no forest, Eco sensitive areas/National Park/Wildlife Sanctuary in 10 km radius of the site. The project doesn't fall within the CRZ boundaries. River/ water body Mahi River is flowing at a distance of 2.50 km in West direction

8. The PP reported that Total water requirement is 109.8 m3/day of which fresh water requirement of 63.8 m^3/day will be met from GIDC Water Supply, and 46 KLD of recycled water will be used within plant activities. Effluent of 85.5 quantity will be treated through ETP, from that 30 KLD of treated effluent will be sent to CETP, Nandesari & 55.2 KLD will be treated in MEE from which 46 KLD wastewater will be recycled and reuse within plant.

9. The PP reported that Power requirement after expansion will be 100 kVA (no additional power is required) including existing 100 kVA and will be met from Madhya Gujarat Vij Company Limited (MGVCL). Existing unit hasDG set of 250 KVA capacity, DG set are used as standby during power failure. Stack (height) will be provided as per CPCB norms to the existing DG sets.

10. The PP reported that the project, being in **notified industrial area (Notification No.GHU/75/36/GID 1974/4084 (I) 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. Industry has already developed/will develop greenbelt in an area of 40 % i.e., 750 m^2 out of total area of the project.

12. The estimated project cost is Rs 4.27 Cr. Total Employment will be 26 persons as direct & 16 persons indirect after expansion. Industry proposes to allocate Rs 35 lakhs towards CER.

13. **Deliberations by the EAC:**

The EAC inter-alia, deliberated on the Greenbelt development plan, action plan and mitigation measures proposed being a project located in CPA, and sought the following requisite information/documents:

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

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

(iii). Detailed justification/trend w.r.t the CEPI score of the CPA since the declaration as CPA.

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

Agenda No. 45.23

Proposed Project for the manufacturing of fungicides (134 TPM), technical, insecticides (29 TPM), technical, herbicides (134 TPM) & intermediates (218 TPM), located at Plot No. 76/A/1, J-Type, Phase-I, GIDC Vapi, Taluka Pardi, Dist. Valsad Gujarat by M/s Cropnosys (India) Private Limited - Consideration of ToR

[Proposal No. IA/GJ/IND3/406463/2022; File No. IA-J-11011/521/2022-IA-II(I))]

1. The proposal is for the ToR for preparation of EIA/EMP for Proposed Project for the manufacturing of fungicides (134 TPM), technical, insecticides (29 TPM), technical,

herbicides (134 TPM) & intermediates (218 TPM), located at Plot No. 76/A/1, J-Type, Phase-I, GIDC Vapi, Tal: Pardi, Dist- Valsad Gujarat. - by M/s Cropnosys (India) Private Limited. **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(b), Pesticide 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/IND3/406463/2022** dated 6.12.2022. Due to the shortcomimng the proposal was referred back to PP on 11.12.2022 and reply for the same has been submitted to PP on 29.12.2022. The proposal is now placed in 45th EAC Meeting held on 11th – 13th January, 2023, wherein the PP made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

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

Sr. No.	Product	Capacity, TPM	CAS Number	End use of the product
GROUP-A : FUNGICIDE				
1	Fluazinam (FATM)	50.0	79622-59-6	To control sclerotinia on peanuts & turf, Botrytis on grapes & beans, clubroot in brassicas & late blight (P. infestans) in potato
2	Cyazofamid (CYZ)	25.0	120116-88-3	To control Oomycete & plasmodiophora diseases on potatoes and tomatoes.
3	Dithianon (DTH)	34.0	3347-22-6	To control scab, downy mildew, rust, & leaf spot in the grapes & other fruit, citrus, coffee & vegetables. It has a role as an antifungal agrochemical.
4	Prothioconazole	84.0	178928-70-6	Fungi susceptible to prothioconazole include Early leaf spot (Mycosphaerella arachidis), eyespot, Fusarium spp., powdery mildew, net blotch, phoma leaf spot, Rhynchosporium secalis, Sclerotinia sclerotiorum, Sclerotium rolfsii, Septoria tritici, Septoria nodorum, rust and tan spot. Used on barley, durum wheat, oats, oilseed rape (winter), rye (winter) & wheat.
5	Bixafen	17.0	581809-46-3	A fungicide for use in cereals for key stem and leaf disease control

				including strobilurin-resistant septoria
6	Fluxapyroxad	17.0	907204-31-3	Used on a wide range of crops(Cereal grains, legume Vegetables, oil seed crops, peanuts, pome fruit, stone fruit, root & tuber vegetable, fruiting vegetables & cotton.
7	Mandipropamide	9.0	374726-62-2	To control of foliar oomycete pathogens in a range of crops including plasmopara viticola in grapes, Phytophthora infestans in potatoes & tomatoes & Pseudoperonospora cubensis in cucurbits. Also on leafy vegetables to control downy mildew (Bremia lactucae) & blue mold (Peronospora effuse).
8	Isopyrazam	9.0	881685-58-1	To control black sigatoka, a leaf spot disease in banana production.
9	Sedaxane	9.0	874967-67-6	Sedaxane is a pyrazole carboxamide fungicide for use as a seed treatment in canola, cereal grains, and soybean and to conteol seed-born and soil- born diseases, including Rhizoctonia sp.
10	Metconazole	9.0	125116-23-6	To control a range of fungal infections including alternaria, rusts, fusarium& septoria diseases. Also to control Black Sigatoka disease (Mycosphaerella fijiensis) on bananas. Used onuse on cereals, soybeans and sugar beets to control or to suppress certain foliar fungal diseases.
11	Boscalid	5.0	188425-85-6	Used against a broad range of fungal pathogens including Botrytis spp., Alternaria spp. and Sclerotinia spp. for use on a wide range of crops including fruit, vegetables and ornamentals.
12	Isofetamid	17.0	875915-78-9	To control various fungal diseases on a variety of crops including salads and turf, Various diseases related to Ascomycetes (i.e. Sclerotinia spp.) and

				Deuteromycetes (i.e. Botrytis spp.) including Powdery mildew, Grey mould on Grapes; Salad crops including head and leaf lettuce, cucumber; Rapeseed; Almonds; Kidney beans; Low growing berry crops; Turf.
13	Pyriofenone (FUNGICIDE)	17.0	688046-61-9	To control powdery mildew on Wheat; Barley; Grape vines; Curcubits.
Note: At a time maximum two products will be manufactured.				
	Total : (Group-A)	**134**		
GROUP-B : HERBICIDE				
14	Flufenacet (FFC)	50.0	142459-58-3	To control grasses and some broad-leaved weeds certain annual grasses including black-grass, Broad-leaved weeds including velvet leaf, morning glory and common cocklebur. Used on Corn; Soybeans; Winter wheat; Winter barley; Potatoes; Sunflowers; Asparagus; Cotton; Chilli; Tobacco
15	Dicamba (DCMBA)	17.0	1918-00-9	To control annual and perennial broad-leaved weeds and brush species, pest such as Bedstraw; Buttercup; Carpetwed; Cocklebur; Lambsquarters; Mallow; Goosefoot; Pigweed; Sowthistle; Velvetleaf; Knapweed; Teasel; Plantains; Bindweed; Thistles. Used on Cotton; Sugarcane; Soybeans; Sorghum; Asparagus; Grass seed crops; Non-cropland; Cereals including wheat, triticale, oats, maize, rye
16	Bispyribac –Sodium (BPS)	5.0	125401-92-5	To control grasses, sedges and broad-leaved weeds in paddy rice and other crops/situations. Used on pest like alligatorweed, Duckweed, Mosquito ferm, Water fern, Water hyacinth, Water pennywort, Parrot feather; Annual bluegrass; Creeping bent grass. Applied on Aquatic situation such as drainage ditches, lakes, marshes; Golf courses, turf grass & sod farms

17	Fluridone (FDN)	10.0	59756-60-4	To control submerged & emerged aquatic weeds as well as on land. Applied on Surface water; Cotton; Fruit including avocado, citrus; Cucurbits; Grain crops; Vegetable root crops
18	Metamitron	50.0	41394-05-2	Effective used against grass & broad-leaved weeds in beet crops. Applied on Sugarbeet; Fodder beet; Mangels; Red beet
19	Picolinafen	9.0	137641-05-5	To control broad-leaved weeds including cleavers, chickweeds, field speedwell, field pansy and shepherd's purse in some cereals. Applied on Winter wheat; Winter barley; Winter rye; Triticale
20	Tolpyralate	17.0	1101132-67-5	To control grass and broad-leaved weeds. Applied on Field corn; Seed corn; Popcorn; Sweetcorn
21	Tiafenacil	17.0	1220411-29-9	To control common weeds such as Annual grasses; Broad-leaved weeds. Applied on Soya; Brassicas
22	Dimethenamid-P (DMPTA-P)	84.0	163515-14-8	To control of annual grasses, certain annual broadleaf weeds and sedges especially in field of corn, seed corn, popcorn and soyabeans. Supplemental labeling also allows use on sweet corn, grain sorghum, dry beans, and peanuts.
23	Propaquizafop	10.0	111479-05-1	It is a synthetic compound of the chemical family the Aryloxyphenoxypropionate. Propaquizafop acts as a systemic herbicide of annual and perennial grasses. It is applied as a foliar spray and, being quickly absorbed through the leaves and translocated to the meristematic growing regions of the plants, where it inhibits cell growth and division through the inhibition of ACCase inhibition. Propaquizafop can be used on a wide range of broad-leaved crops, including sugarbeet, oilseed rape, soybeans, sunflower, other field crops, vegetables, fruit

				trees, vineyards and forestry.
	Note: At a time maximum two products will be manufactured.			
	Total: (Group-B)	**134**		
GROUP-C : INSECTICIDE				
24	Flonicamid(FLN)	20.0	158062-67-0	To control aphids, thrips & whitefly in a range of situations including glasshouses.Used against Aphids,Thrips, Whiteflies; Caterpillars.Appllied on Fruit including apples, peaches; Wheat; Potatoes; Various vegetables including brassicas, turnip greens, cucurbits, fruiting vegetables, and legumes
25	Tau-fluvalinate(TFF)	9.0	102851-06-9	To control a broad range of foliar pests & Varroa mite in beehives.Applied against Moths; Aphids: Thrips; Leafhoppers; Leaf rollers; Spiders; Varroa mite. Potatoes; Cereals including wheat; Turf; Cotton; Fruit trees including cherries, peaches, plums, nectarines, Tamarillos, avocados; Beehives
26	Chlorantraniliprole	9.0	500008-45-7	To control pests on a range of crops including potatoes & cotton.Used against Cabbage loopers; Corn borers; Armyworms; Cutworms.Applied on Potatoes; Grapes; Cotton; Vegetables including artichoke, asparagus, bulb vegetables, corn, herbs, legumes, roots and tubers

27	Cyantraniliprole	9.0	736994-63-1	Used against key chewing and sucking pests such as Whitefly;Thrips; Aphids; Fruitflies; Psyllids; Fruit worms. Applied on Onions; Potatoes; Field tomatoes; vegetables incuding brassica, cucurbit, fruiting, and leafy vegetables, as well as greenhouse-grown eggplant, pepper, and tomato
	Note: At a time maximum two products will be manufactured.			
	Total : (Group-C)	**29**		
GROUP-D : INTERMEDIATES				
28	4-Chloro-5-(4-methylphenyl)-1H-imidazole-2-carbonitrile (CCMPI)	25.0	120118-14-1	Cyazofamid
29	N,N-Dimethyl Sulfamoyl Chloride (DMSC)	13.0	13360-57-1	Cyazofamid
30	Sodium Cyano Dithioformate (SCDTF)	150.0	33498-03-2	Dithianon
31	Dichlone	67.0	117-80-6	Dithianon
32	3,4,5-Trifluoro Bromo Benzene	5.0	138526-69-9	Fluxapyroxad
33	(3,4,5-Trifluorophenyl)-Boronic Acid	10.0	143418-49-9	Fluxapyroxad
34	3',4',5'-Trifluorobiphenyl-2-ylamine	12.0	915416-45-4	Fluxapyroxad
35	3,4- Dichlorophenyl Boronic Acid	5.0	151169-75-4	Bixafen
36	2-(3,4-Dichlorophenyl)-4-fluoroaniline	12.0	877179-04-9	Bixafen
37	2-Bromo- 4-Fluoro Aniline	5.0	1003-98-1	Bixafen
38	(4-Chlorophenyl)-Hydroxy Acetic Acid	5.0	76496-63-4	Mandipropamide
39	2-(4-Hydroxy-3-methoxyphenyl) ethylamine	5.0	554-52-9	Mandipropamide
40	2-Chlorobenzyl	45.0	2856-63-5	Prothioconazole

	Cyanide			
41	Isopropyl-1-chlorocyclopropane Carboxylate	48.0	2061933-80-8	Prothioconazole
42	4-Fluoro-N-Isopropyl Aniline(FIA)	25.0	70441-63-3	Flufenacet
43	N-(4-Fluorophenyl-2-Hydroxy-N-Isopropyl)-Acetamide(FIPH)	30.0	54041-17-7	Flufenacet
44	2,6-Dihydroxy Benzoic Acid(DHBA)	3.0	303-07-1	Bispyribac -Sodium
45	3-Trifluoromethyl Phenol	5.0	98-17-9	Picolinafen
46	2-Amino acetonitrile Hydrochloride(AAN-HCl)	21.0	6011-14-9	Flonicamid
47	Meta Phenoxy Benzaldehyde Cyanohydrin (MPBCH)	5.0	52315 - 06 - 7	Tau-Fluvalinate
48	Ethyl Phenyl Glyoxalate (EPGO)	68.0	1603-79-8	Metamitron
	Note: At a time maximum two products will be manufactured.			
	Total: (Group-D)	**218**		
Total : (Group-A + B + C + D)		**515**		

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

6. The PP reported that 9774.00 m^2 land will be used for proposed project activity.

7. The PP reported that the proposal does not involve Approval/Clearance under Forest (Conservation) Act,1980, Wildlife (Protection) Act,1972 and CRZ Notification, 2011 as amended. There is no forest, Eco sensitive areas/National Park/Wildlife Sanctuary in 10 km radius of the site. The project doesn't fall within the CRZ boundaries. River/ water body Mahi River Damanganga is flowing at a distance of 2.18 km in SSW direction

8. The PP reported that Total water requirement is 489.2 KLD of which fresh water requirement of 279.2 KLD will be met from GIDC water supply department, Vapi. Effluent (Industrial) of 150.4 KLD which will be treated through Primary ETP, Solvent Stripper, MVR and Common Spray Dryer of M/s VGEL Vapi etc. type wastewater treatment units. Domestic waste water (15.00 KLD) will be treated in STP and treated waste water will be utilized for gardening.

9. The PP reported that Power requirement will be 2000 kVA and will be met from Dakshin Gujarat Vij Co. Ltd. (DGVCL). Unit has proposed 02 No. of D. G. set capacity of 1000 kVA. D. G. sets will be kept as standby and used during power failure. Stack (height 11.00 m) will be provided as per CPCB norms to the proposed DG sets.

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. Industry will develop greenbelt in an area of 40.92% i.e., 4000.00 m^2 out of total area of the project

12. The estimated project cost is Rs. 193 Crores including CER cost. Total Employment will be 230 persons as direct & 15 persons indirect due to proposed project activity. Industry proposes to allocate Rs. 772 Lakhs (due to project site is located in the CEPI area) towards of CER.

13. **Deliberations by the EAC:**

The EAC inter-alia, deliberated on the various environmental aspects, water balance, revised greenbelt development and the action plan proposed by the PP being in a critically polluted area and 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 analyzed the samples.

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

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

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

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

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

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

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

(xiii) The PP should develop Greenbelt over an area of 40.00% , 19.55 m^2 will be developed within the periphery, and 2600 m^2 greenbelt will be developed and maintain jointly with Green society of VIA, accordingly the plant species 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. 590 Number of trees and 390 number of shrubs have to be planted considering 80% survival rate and with a spacing of 2 m x 2 m.

(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. 45.24

Proposed Expansion for the manufacturing Existing: 410 MT/Month + 300 MT/Month (Pesticide Formulation) Production after Proposed Expansion:1450 MT/Month + 300 MT/Month (Pesticide Formulation) located at Plot No. 72 & 73, Phase-I, GIDC Vapi, Tal: Pardi, Dist- Valsad, Gujarat by M/s R3 Crop Care Pvt. Ltd.- Consideration of ToR

[Proposal No. IA/GJ/IND3/289547/2022; File No. J-11011/356//2006-IA-II(I)]

1. The proposal is for the ToR for preparation of EIA/EMP for Proposed Expansion for the manufacturing Existing: 410 MT/Month + 300 MT/Month (Pesticide Formulation) Production after Proposed Expansion:1450 MT/Month + 300 MT/Month (Pesticide Formulation) located at Plot No. 72 & 73, Phase-I, GIDC Vapi, Tal: Pardi, Dist- Valsad, Gujarat by M/s R3 Crop Care 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 item5(b) Pesticide Industry and pesticide specific intermediates (excluding formulations). 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/IND3/289547/2022 dated 20.8.2022. Due to the shortcoming the proposal was referred back to PP on 31.8.2022 and reply for the same has been submitted to PP on 29.12.2022. The proposal is now placed in 45th EAC Meeting held on 11th – 13th January, 2023, wherein the PP made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

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

Existing:

Sr. No.	Products	Cas No.	Capacity, TPM	LD50
GROUP: A PESTICIDE TECHNICAL				
1	Chlorpyrifos	2921-88-2	270	95-270
2	Profenofos	41198-08-7		358
3	Triclopyr	55335-06-3		>2000
4	Metalaxyl	57837-19-1		669
5	Oxyfluorfen	42874-03-3		5000
6	Fluroxypyr	69377-81-7		>2000
7	Pendimethalin	40487-42-1		1050
8	Lambdacyhalothrin	91465-08-6		> 5000
9	Betacypermethrin	91465-08-6		> 5000
10	Carbendazim	10605-21-7		> 5000
11	Bromadiolone	28772-56-7		1

12	Propiconazole	60207-90-1		>1500
13	Hexaconazole	79983-71-4		>2180
14	Imidacloprid	138261-41-3		450
15	Azoxy Strobin	131860-33-8		>5000
16	Fipronil	120068-37-3		97
17	Dicamba	1918-00-9		2000
18	Difenoconazole	119446-68-3		>1450
19	Thiamethoxam	153719-23-4		>1563
20	Acetamiprid	135410-20-7		330
21	Cypermethrin	52315-07-8		57.5
22	Hexazinone	52315-07-8		1690
23	Metribuzin	21087-64-9		1100
GROUP: B PESTICIDES INTERMEDIATES				
24	PMIDA (Phosphono Methyl Imino Di acetic Acid)	21087-64-9	140	>5000
25	TCAC (Tri Chloro Acetyl Chloride)	76-02-8		> 2000
26	NaTCP (Sodium Tri Chloro Pyridinol)	37439-34-2		7500
27	CBEA (Chloro Butoxy Ethyl Acetate)	5330-17-6		--
28	MPBAL (Meta Phenoxy Benzyl alcohol)	13826-35-2		1496
29	Difethiuron (1-Tert-butyl-3-(2,6-di-isopropyl-4-phenoxyphenyl)thio urea)	80060-09-9		>2000
	Total :(GROUP A +B)		**410**	
PESTICIDE FORMULATION PRODUCTS				
1.	Pesticide formulation	--	300	--

List of Product -Total Proposed After Expansion:

Sr. No.	Products	Cas No.	Capacity, TPM	LD50 (mg/kg)
GROUP: A PESTICIDE TECHNICAL				
1	Chlorpyrifos	2921-88-2	650	95-270
2	Profenofos	41198-08-7		358
3	Betacypermethrin	91465-08-6		> 5000
4	Fipronil	120068-37-3		97
5	Thiamethoxam	153719-23-4		>1563

6	Acetamiprid	135410-20-7		330
7	Cypermethrin	52315-07-8		57.5
8	Difenthiuron	80060-09-9		>2000
9	Imidachloprid	138261-41-3		450
10	LambdaCyhlothrin	91465-08-6		> 5000
11	Bifenthrin	82657-04-3		2000
12	Chlorantraniliprole	500008-45-7		>5000
13	Alphacypermethrin	67375-30-8		383
GROUP: B HERBICIDES TECHNICAL				
14	Triclopyr	55335-06-3	100	>2000
15	Oxyfluorfen	42874-03-3		5000
16	Fluroxypyr	69377-81-7		>2000
17	Pendimethalin	40487-42-1		1050
18	Dicamba	1918-00-9		2000
19	Hexazinone	51235-04-2		1690
20	Metribuzin	21087-64-9		1100
21	Clomazone	81777-89-1		>2000
GROUP: C FUNGICIDES TECHNICAL				
22	Metalaxyl	57837-19-1	400	669
23	Carbendazim	10605-21-7		>10000
24	Propiconazole	60207-90-1		>1500
25	Hexaconazole	79983-71-4		>2180
26	AzoxyStrobin	131860-33-8		>5000
27	Difenoconazole	119446-68-3		>1450
28	Prothioconazole	178928-70-6		>6000
29	Chlorthalonil	1897-45-6		>5000
30	Thifluzamide	130000-40-7		>5000
31	*Tebuconazole*	*107534-96-3*		>3000
32	Picoxystrobin	117428-22-5		>5000
33	Dithianon	3347-22-6		>20,000
GROUP: D PESTICIDES INTERMEDIATES				
34	NaTCP (Sodium Tri Chloro Pyridinol)	37439-34-2	300	7500

35	CBEA (Chloro Butoxy Ethyl Acetate)	5330-17-6		--
36	MPBAL (Meta Phenoxy Benzyl alcohol)	13826-35-2		1496
37	MPBD (Metaphenoxy Benzaldehyde)	39515-51-0		>1220
38	Lambda Acid	91465-08-6		171
39	2-Chloro 5-Chloro Methyl Pyridine(CCMP)	70258-18-3		N.A
	Total :(GROUP A +B+ C +D)		**1450**	
PESTICIDE FORMULATION PRODUCTS				
1.	**Pesticide formulation**	**--**	**300**	**--**

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

6. The PP reported that Existing land area is 15898 m^2. additional 0 m^2 land will be used for proposed expansion.

7. The PP reported that the proposal does not involve Approval/Clearance under Forest (Conservation) Act,1980, Wildlife (Protection) Act,1972 and CRZ Notification, 2011 as amended. There is no forest, Eco sensitive areas/National Park/Wildlife Sanctuary in 10 km radius of the site. The project doesn't fall within the CRZ boundaries. River Damanganga is flowing at a distance of 2.5 km in SW direction.

8. The PP reported that Total water requirement is **534.29 KLD** of which fresh water requirement of 272.59 KLD will be met from GIDC water supply department, Vapi.Effluent (Industrial) of 303.21 KLD out of which **127.67 KLD** of process effluent having high COD & TDS will be mixed with 25.53 KLD NaOCl solution as primary treatment and sent to solvent stripper after than forwarded to in-house MEE. 0.7 MT/day solvent residue sent for co-processing.92.2 KLD MEE Condensate will be treated into RO.72.2 KLD RO permeate will be recycled into cooling & 20 KLD RO reject will be sent to primary secondary & Tertiary ETP with normal effluent. MEE concentrated 60.3 KLD effluent will be filtered by ANF in which 49.5 KLD will be sent to CSD-VGEL/Detox for further treatment & 10.8 MT salt sent to TSDF site. Balanced **91.83** KLD (75.83 KLD from product washing & scrubber, 13 KLD from floor/Container Washing,3 KLD from secondary scrubber effluent) normal effluent & 20.0 KLD RO reject will be treated in primary, secondary and tertiary ETP and after than total 111.83 KLD will be discharge into underground effluent drainage line to CETP Vapi. Domestic waste water (13.5 KLD) will be treated through Septic tank followed by STP. STP treated water will be utilized for gardening within plant premises.

9. The PP reported that Power requirement after expansion will be 2000 kVA including existing 900 kVA and will be met from Dakshin Gujarat Vij Co. Ltd. (DGVCL). Existing unit has two nos. of stand by D. G set with capacity of 250 kVA which will be discontinued after expansion.

Unit has proposed one no. of stand by D. G set with capacity of 500 kVA & one No. of stand by D. G set with capacity of 910 kVA which will be used in case of power failure. Stack (height 11.0 m) will be provided as per CPCB norms to the proposed DG sets.

10. Industry has already developed 2771 m^2 (17.43 %) greenbelt inside plan premises and will be develop greenbelt [2476 m^2 (15.57%) inside plant premises + 1113 m^2 (7.0 %) outside of plant premises] in an area of 40.0 % i.e., 6360 m^2 out of total area: 15898 m^2 of the project.

11. 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.

12. The estimated project cost is Rs. 78.037 Crores including existing investment of Rs.46.210 Crores. Total Employment will be 245 persons as direct & 50 persons indirect after expansion. Industry proposes to allocate Rs. 63.66 Lakhs @ of 2 % towards of CER.

13. **Deliberations by the EAC:**

The EAC inter-alia, deliberated on the various environmental aspects, modified solvent management plan, and the existing and proposed compliance to the O.M. dated 31.10.2019 (reg. projects in CPA/SPA) and found it to be satisfactory.

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.

(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 analyzed the samples.

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

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

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

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

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

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

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

(xiii) The PP should develop Greenbelt over an area of 2476 m^2(15.57%) inside plant premises + 1113 m2 (7.0 %) outside of plant premises] in an area of 40.0 % i.e., 6360 m^2 of the total land area, accordingly the plant species 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. 500 Number of trees and 400 number of shrubs have to be planted considering 80% survival rate and with a spacing of 2 m x 2 m.

(xiv) As committed by the PP, PP shall have modified solvent management plan by following method and shall achieved recovery of solvent around 95 - 98 % within three months

(xv) 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.

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

(xvii) 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 (10 km 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(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.

C. 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 NH_3*,chlorine*,HCl*,HBr*,H_2S*,HF*,*etc*.,(*-as applicable)
4. Work zone monitoring arrangements for hazardous chemicals.
5. Detailed effluent treatment scheme including segregation of effluent streams for units adopting 'Zero' liquid discharge.
6. Action plan for odour control to be submitted.
7. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they co-process organic solid/hazardous waste generated.
8. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
9. Action plan for utilization of MEE/dryers salts.
10. Material Safety Data Sheet for all the Chemicals are being used/will be used.
11. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
12. Details of incinerator if to be installed.
13. Risk assessment for storage and handling of hazardous chemicals/solvents. Action plan for handling & safety system to be incorporated.
14. Arrangements for ensuring health and safety of workers engaged in handling of toxic materials.

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Annexure-III

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

S. No.	Name of Members	Designation
1.	**Prof. (Dr.) A.B. Pandit** Vice Chancellor, Institute of Chemical Technology, Mumbai, Sir JC Bose Fellow, Government of India Email: ab.pandit@ictmumbai.edu.in	Chairman
2.	**Dr. Ashok Kumar Saxena, IFS** Bunglow No. 38, Sector-8A, Gandhinagar, Gujarat – 382008 E-mail: ashoksaxena1159@gmail.com	Member
3.	**Prof. (Dr.) S. N. Upadhyay** Research Professor (Hon.), Department of Chemical Engineering & Technology, Indian Institute of Technology (Banaras Hindu University), Varanasi E-mail: snupadhyay.che@iitbhu.ac.in	Member
4.	**Prof. (Dr.) Suneet Dwivedi,** Professor in K Banerjee Centre of Atmospheric and Ocean Studies, University of Allahabad, Allahabad - 02 Uttar Pradesh E-mail:dwivedisuneet@rediffmail.com /suneetdwivedi@gmail.com	Member
5.	**Dr. Suresh Panwar** House No.4, Gayateri GreenSociety, 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.	**Shri Santosh Gondhalkar** 'Shree' Apartment, Flat 401, Plot No. 22, Tukaram Society, Santnagar, Pune- 411009 E-mail: santoshgo@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	Member

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

MOM approved by

(Prof. Aniruddha B. Pandit)
Chairman

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