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

Dated: 02.05.2023

MINUTES OF THE 50th EXPERT APPRAISAL COMMITTEE (INDUSTRY-3 SECTOR) MEETING HELD ON 19th – 21st APRIL, 2023

Venue: Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110003 through **Video C onferencing (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 47th, 48th & 49th Meetings of the EAC (Industry-3 Sector).

The EAC noted that the final minutes of the above meetings were issued after incorporating the comments offered by the members and approved by the Chairman. The EAC confirmed the MoM with the following modifications (Agenda No. 47.17, 48.7, 49.7, 49.10, 49.16, 49.18 & 49.23), based on the request of the Project Proponents (PPs).

Agenda No. 47.17

Expansion proposal for various resins, esters and monomers within the existing facility of production capacity from 29393.40 TPM to 39006.40 TPM located at 808/E, 305/6 & 7, Survey No. 523, 434, 800, Phase-III, Notified Industrial Area, GIDC Vapi, Dist. Valsad, Gujarat by M/s Huber Group India Private Limited - Consideration of EC

Proposal No. IA/GJ/IND3/415285/2023; File No. IA-J-11011/46/2023-IA-II(I)]

1. The proposal was recommended by the EAC in its 47th Meeting held on 15th-17th February, 2023 and the MoM were published on 26.2.2023. The ToR had been issued by the SEIAA vide letter no. SIA/GJ/99906/2022 dated 2.6.2022. The project/activity is covered under 5(f) – Synthetic Organic Chemicals Industry under Category 'B'. However, since t**he project site is located in a critically polluted area (CEPI – 79.38), the proposal should have been**

submitted to the Ministry due to the applicability of the general conditions. Accordingly, the Ministry sought confirmation from the EAC whether the ToR accorded by the SEIAA is adequate.

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

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

Agenda No. 48.7

Regularization of Existing Thermosetting Moulding Powder Manufacturing Unit of production capacity 1800 MT/Annum located at G1-947, RIICO Industrial Area, Chopanki, Tijara, Alwar, Rajasthan by M/s Laxmi Industries - Consideration of ToR (under violation category)

[Proposal No. IA/RJ/IND3/418042/2023; File No. IA-J-11011/71/2023-IA-II(I)]

1. The proposal was recommended by the EAC in its 48th Meeting held on 9th-10th-13th March, 2023. Subsequently, the PP vide e-mail dated 26.4.2023 requested the following modification in the MoM:

Reference of MOM	As per MOM	Modification Required	Remarks
Point no. 8	The PP reported that the total water requirement is 215 m^3/day of which fresh water requirement of 207 m3/day will be met from GIDC Supply and the balance 8 m^3/day will be met from the treated domestic effluent. Effluent of 120 m^3/day will be treated through Primary ETP and then sent to CETP of M/s. NIA, Nandesari for the final disposal.	**The Total water requirement is 3.2 m^3/day of which fresh water requirement of 3.0 m^3/day will be met from Ground Water.**	Typographical error and factual in nature

Condition no. xxi (page 42	The PP shall develop Greenbelt over an area of 543.2 m^2 (within the plant premises) of the total land area and shall be completed within 1 year, accordingly 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. 164 number of plantations have to be planted considering 80% survival rate and with a spacing of 2 m x 2 m.	**A total of 543.2 sq. m area (40% of total area) will be under Greenbelt development (271.6 sq. m. within the premises + 271.6 sq. m. outside the premises within RIICO industrial area) and shall be completed within 1 year, accordingly plant species selected for greenbelt will have greater ecological value and will 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. 164 numbers of trees (within plant premises and outside the premises within RIICO industrial area) have to be planted considering 80% survival rate and with a spacing of 2 m x 2 m."**	**The PP has committed for the 40% Greenbelt within the plant premises earlier and has now requested it for the both (within the premises and the industrial area)**

2. The EAC deliberated on the above and recommended the same.

Agenda No. 49.7

Proposed Expansion of Existing Manufacturing Facility of Synthetic Organic Chemicals (Dyes and Dyes Intermediates) with Production Capacity from 6 MT/Month to 200 MT/Month along with Addition of New Products located at Plot No. 8101, GIDC Sachin, Taluka–Chorasi, District – Surat, Gujarat by M/s. Panchsheel Intermediates - Consideration of ToR

[Proposal No. IA/GJ/IND3/418035/2023; File No. J-11011/93/2003-IA-II(I)]

1. The proposal was recommended by the EAC in its 49th Meeting held on 3rd, 5th-6th April, 2023. Subsequently, the PP vide e-mail dated 20.4.2023 requested the following modification in the MoM:

Reference of MOM	As per MOM	Modification Required	Remarks
Page 74, Title of Project	Proposed Expansion of Synthetic Organic Chemicals (Plasticizers) Manufacturing Unit of production capacity 75,000 TPA located at T-2/PART, MIDC Taloja, Dist.: Raigad by IG Petrochemicals Limited	**Proposed Expansion of Existing Manufacturing Facility of Synthetic Organic Chemicals (Dyes and Dyes Intermediates) with Production Capacity from 6 MT/Month to 200 MT/Month along with Addition of New Products located at Plot No. 8101, GIDC Sachin, Taluka–Chorasi, District – Surat, Gujarat by M/s. Panchsheel Intermediates**	Tyopographical error
Point no. xiii, Page no. 80	The PP should develop 1978 m^2 area (1038 m^2 area within plant premises and 988 m^2 area outside plant premises in Sachin GIDC) which is 65.9 of the total area. Accordingly, 2500/ha Number of saplings selected for greenbelt should have greater ecological value and should be of great utility value to the local population with emphasis on local and native species and the species which are tolerant to air pollution.	The PP should develop 2026 m^2 area (1038 m^2 area within plant premises and 988 m^2 area outside plant premises in Sachin GIDC) which is 67.5 % of the total area. Accordingly, 2500/ha Number of saplings selected for greenbelt should have greater ecological value and should be of great utility value to the local population with emphasis on local and native species and the species which are tolerant to air pollution.	The PP has submitted details in the amended reply after Post EAC dated 4.4.2023 (Point number-2)

2. The EAC noted that the modifications are factual in nature and recommended the same.

Agenda No. 49.10

Proposed Manufacturing of Oncology, API & API Intermediates of Production Capacity 30 MT/M located at Plot No. E-128, MIDC Tarapur, Taluka: Palghar, District: Palghar, Maharashtra by M/s. Royal Pharmaceuticals Industries Pvt. Ltd. - Consideration of EC

[Proposal No. IA/MH/IND3/417550/2023; File No. IA-J-11011/330/2022-IA-II(I)]

1. The proposal was recommended by the EAC in its 49th Meeting held on 3rd, 5th-6th April, 2023 and the MoM were published on15.4.2023. Subsequently, the PP vide e-mail dated 19.4.2023 requested the following modification in the MoM:

Reference of MOM	As per MOM	Modification Required	Remarks
Page 95 , Point no. 8	Industrial Effluent of 62.88 CMD will be generated. An ETP of 80 CMD comprising of Primary, Secondary and Tertiary system will be provided for Industrial Effluent along with Stripper of 50 CMD, MVR of 70 CMD, ATFD of 20 CMD and R.O. system of 70 CMD respectively. The treated effluent will be reused back within the plot premises. Domestic effluent of 4 CMD will be treated in STP and reused for gardening	Industrial Effluent of **62.88 CMD** will be generated. An ETP of 80 CMD comprising of Primary, Secondary and Tertiary system will be provided for Industrial Effluent along with Stripper of 50 CMD, MVR of 70 CMD, ATFD of 20 CMD and R.O. system of 70 CMD respectively. As a contingency provision membership will be taken with M/s Sadekar Enviro Engineers Pvt. Ltd. High COD Effluent Treatment facility from where the treated effluent will be reused back within the plot premises. The treated effluent will be reused back within the plot premises. Domestic effluent of 4 CMD will be treated in STP and reused for gardening	The PP has submitted the Brief summary before EAC dated 31.3.2023 in that these details were not there but on 5.4.2023, the PP mailed a revised brief summary in which this highlighted portion is mentioned.

2. The EAC noted that the modification is factual in nature and recommended the same.

Agenda No. 49.16

Regularization of Existing Thermosetting Moulding Powder Manufacturing Unit with Production Capacity of 2250 TPM located at G1/1210 C, Rampur Mundana, RIICO Industrial Area, Bhiwadi, Alwar, Rajasthan by M/s Shree Polymer - Consideration of ToR (Under violation category)

[Proposal No. IA/RJ/IND3/421537/2023, File No. IA-J-11011/113/2023-IA-II(I)]

1. The proposal was recommended by the EAC in its 49th Meeting held on 3rd, 5th-6th April, 2023. Subsequently, the PP vide e-mail dated 26.4.2023 requested the following modification in the MoM:

Reference of MOM	As per MOM	Modification Required	Remarks
Title of the project (pg. no 167)	**Regularization of Existing Thermosetting Moulding Powder Manufacturing Unit with Production Capacity of 2250 TPM located at G1/1210 C, Rampur Mundana, RIICO Industrial Area, Bhiwadi, Alwar, Rajasthan by M/s Shree Polymer - Consideration of ToR (Under violation category)**	**Regularization of Existing Thermosetting Moulding Powder Manufacturing Unit of capacity 2250 TPA located at G1/1210 C, Rampur Mundana, RIICO Industrial Area, Bhiwadi, Alwar, Rajasthan. Consideration of ToR (Under violation category)**	The brief summary mailed by the PP mentioned TPM
Pg. 167 (Point No.1**)**	**Existing Thermosetting Moulding Powder Manufacturing Unit of production capacity 2250 TPM located at G1/1210 C, Rampur Mundana, RIICO Industrial Area, Bhiwadi, Alwar,**	**Regularization of Existing Thermosetting Moulding Powder Manufacturing Unit of capacity 2250 TPA located at G1/1210 C, Rampur Mundana, RIICO Industrial**	

	Rajasthan by M/s Shree Polymer.	**Area, Bhiwadi, Alwar, Rajasthan.**	

2. The EAC noted that the above modification is factual in nature and recommended the same. Further, the EAC cautioned the PP/Consultant to ensure that such lapses are not repeated in the future.

Agenda No. 49.18

Regularization of Existing Thermosetting Moulding Powder (Melamine-Formaldehyde (M-F) and Urea-Formaldehyde (U-F)) of Production Capacity 2800 MTA located at RIICO Industrial Area, Chopanki-Bhiwadi, Alwar (Rajasthan) by M/s Vinayak Industries - Consideration of ToR (under violation category)

[Proposal No. IA/RJ/IND3/417408/2023; File No. IA-J-11011/110/2023-IA-II(I)]

1. The proposal was recommended by the EAC in its 49th Meeting held on 3rd, 5th-6th April, 2023. The EAC noted that the following modification is required in the MoM:

Reference of MOM	As per MOM	Modification Required	Remarks
Title of the project (pg. no 176)	**Regularization of Existing Thermosetting Moulding Powder (Melamine-Formaldehyde (M-F) and Urea-Formaldehyde (U-F)) of Production Capacity 2800 MTA located at RIICO Industrial Area, Chopanki-Bhiwadi, Alwar (Rajasthan) by M/s Vinayak Industries - Consideration of ToR (under violation category)**	**Regularization of Existing Thermosetting Moulding Powder (Melamine-Formaldehyde (M-F) and Urea-Formaldehyde (U-F)) of Production Capacity 2400 TPA located at RIICO Industrial Area, Chopanki-Bhiwadi, Alwar (Rajasthan) by M/s Vinayak Industries - Consideration of ToR (under violation category)**	At a couple of places in the PFR, it is mentioned as 2800 MTA.
Pg. 176 (Point No.1**)**	**Regularization of Existing Thermosetting Moulding Powder (Melamine-Formaldehyde (M-F) and Urea-Formaldehyde (U-F)) of**	**Regularization of Existing Thermosetting Moulding Powder (Melamine-Formaldehyde (M-F)**	

	Production Capacity 2800 MTA located at RIICO Industrial Area, Chopanki-Bhiwadi, Alwar (Rajasthan) by M/s Vinayak Industries	**and Urea-Formaldehyde (U-F)) of Production Capacity 2400 TPA located at RIICO Industrial Area, Chopanki-Bhiwadi, Alwar (Rajasthan) by M/s Vinayak Industries**	

2. The EAC noted that the above modification is factual in nature and recommended the same. Further, the EAC cautioned the PP/Consultant to ensure that such lapses are not repeated in the future.

Agenda No. 49.23

Regularization of Existing Production Capacity of Thermosetting Moulding Powder Manufacturing Unit and Expansion from 480 MT/Annum to 3500 MT/Annum located at F-287 B, Phase-1, RIICO Industrial Area, Bhiwadi, Dist.-Alwar, Rajasthan by M/s Ancore Enterprises - Consideration of ToR (under violation category)

[Proposal No. [IA/RJ/IND3/422935/2023; File No. IA-J-11011/126/2023-IA-II(I)]

1.The proposal was recommended by the EAC in its 49th Meeting held on 3rd, 5th-6th April, 2023 and the MoM were published on15.4.2023. Subsequently, the PP vide e-mail dated 26.4.2023 requested the following modification in the MoM:

Reference of MOM	As per MOM	Corrections Required	Remarks
Point no. 11	The PP reported that the project, being in notified industrial area i.e., RIICO Industrial Area, Chopanki, vide Notification No. Va.4 (80)Udhyog/189 dated 6.4.1994 , is exempted from the public hearing as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018.	**The project, being in notified industrial area i.e., RIICO Industrial Area, Bhiwadi, vide Notification No. Va.4 (80)Udhyog/189 dated 6.4.1994 , is exempted from the public hearing as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018.**	Typographical errors and factual in nature

Condition no. xxi (page 248)	The PP should develop Greenbelt over an area of 2025 m^2 (within the industrial area) and shall be completed within 1 year, accordingly 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. 231 number of plant species (121- inside the project site and 110 -outside the project boundary) have to be planted considering 80% survival rate and with a spacing of 2 m x 2 m.	**Greenbelt will be developed over an area of 810 m^2 (40% of the total project area) within the project site and RIICO industrial area; and shall be completed within 1 year, accordingly 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. 231 number of plant species (121- inside the project site and 110 - outside the project boundary) have to be planted considering 80% survival rate and with a spacing of 2 m x 2 m**	Typographical errors and factual in nature

2. The EAC deliberated the issues and noted that these are typographical errors and factual in nature and recommended for appropriate corrections in the minutes, as requested by the PP.

Agenda No. 50.1

Proposed Expansion of the Polymerization Plant within the Existing Facility of production capacity from 60 TPD to 83 TPD located at Survey No: A35, A36 & Behind A33 part, A34 part, PIPDIC Industrial Estate, Mettupalayam Village & Taluk, Puducherry by M/s. Swathi Organics & Specialities Private Limited - Consideration of Amendment in EC.

[Proposal No. IA/PY/IND3/299020/2023; File No. IA-J-11011/504/2022-IA-II(I)]

1. The proposal is for amendment in the **Environmental Clearance** granted by the Ministry vide letter no. IA-J-11011/504/2022-IA-II(I)dated 23.02.2023 for the proposed Polymerization Plant within the Existing Facility of production capacity from 60 TPD to 83 TPD located at Survey No: A35, A36 & Behind A33part, A34 part, PIPDIC Industrial Estate, Mettupalayam, Mettupalayam

Village, Mettupalayam Taluk, Puducherry by M/s. Swathi Organics & Specialities Private Limited.

2. The project proponent has requested for amendment in the EC on the grounds as detailed below:

S. No	Para of EC issued by MoEF&CC	Details as per the EC	To be revised/read as
1	**Specific condition (i) of A**	The PP shall develop Greenbelt over an area of at least 12104 sq.m (wrongly mentioned as 1.2104 m2 in EC) 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 Rs.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	• The PP shall develop Green cover by planting grown up plants of 6 feet height in land area of 3acres. • As submitted by the PP, PP do not own such an extent of land in Puducherry union Territory nor they could find such a large extent of land on long lease for an affordable rent as the Union Territory is a small state with limited vacant land. • Further the cost of purchase of plants of 6 feet for planting in a land area of 3 acres will cost them substantially. • Hence the PP requested to accord permission to develop Green Cover on the land identified by them and earmarked for this purpose within 50 KMs (Kadapakkam) from the unit.
2	**Specific condition (ii) of A**	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-	• Since, their's is a small scale industry running a plant with very little volume of production & conversion charges, they are not in a position to have a separate qualified person with Environmental Science/ Environmental Engineering/ specialization in the project area in their pay roll & full-fledged laboratory facilities to carry out the Environmental Management and Monitoring functions & one safety & health officer as per the qualification given in Factories

		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	Act 1948 as these attract huge cost. • Instead, they would form an Environmental Management Cell & EHS team comprising their Executive Director - Production Manager-Accounts Manager- production lab/team-admin team and the air and water testing will be undertaken with the help of NABET accredited and MoEF&CC accredited Lab at stipulated intervals. • We have ensured EHS conditions of multinationals like Huntsman/Ciba as we manufacture their products mainly.
3	**Specific condition (vi) of A**	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.	• There are no carbon emissions from the process. • The boilers are being operated with High speed diesel and connected to the stack of 17mt height. • As reported by the PP, the carbon emissions will be studied and evaluated by an external NABET accredited and MoEF&CC accredited laboratory and their recommendations, if any, would be implemented.
4	**Specific condition (xii) of A**	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	• As reported by the PP, the non IBR boiler with High speed diesel as fuel and the stack emissions are within the prescribed limits. • Ambient air and stack emissions will be monitored by an external NABET accredited and MoEF&CC accredited laboratory as per the EC condition. • All details will be submitted in Six-monthly Post EC compliance

		the channel/drain carrying effluent within the premises	statement and also uploaded in our website.

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 Greenbelt development plan, Environment Management cell, carbon sequestration, online Monitoring system, amendment conditions and advised the PP to submit the following:

- Detailed Greenbelt development plan
- Environment management cell.
- Revised carbon sequestration
- Revised amendments conditions sought

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 EC, subject to the following additional conditions:

(i) The PP shall develop Greenbelt over an area of at least 2104.365 sq.m by planting 3236 number of trees within a period of six months before monsoon from the grant of EC Amendment. Total 626 nos. of tress shall be planted inside the plant premises, at present 106 trees are available within the plant premises, remaining 520 plants of native species to be planted before the monsoon season i.e., by end of September, 2023. In addition to this PP shall develop the greenbelt area outside the plant premises on the 10 acres of farm land (patta) at a distance of ~44.50km (NNE), located at 102/4, 104/2, 105/1, 115/1A1B, Gengadevakuppam Village, Cheyyar Taluk, Chengalpattu District, Tamil Nadu (12°29'53.25, 79°99'04.84). Already 2500 no of tress available in the farm land, remaining 110 trees to be planted by the end of September, 2023 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 Rs.5 Lakh 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.

(ii) The PP shall deploy one Environmental Engineer as "Full Time Employee" in factory within one month from grant of EC Amendment. For the full-fledged laboratory facilities and set up to carry out the Environmental Management and Monitoring functions PP shall deploy M/s. Hubert Enviro Care Systems Pvt Ltd (HECS), Chennai NABET and

MoEF&CC accredited consultant and laboratory for the lab analysis and post EC Compliance. PP should annually submit the audited statement of amount spent towards the engagement of qualified person in EMC and consultant 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 process VOC emissions shall be treated through proposed Scrubber system. Further, to control VOC from process and DG set, i. The Vent of the reactor to be connected to the condenser to cool the process vapour, ii. The condensed vapour will be sent to process through reflux lines, iii. The escaped VOC, if any, will be passed through scrubbing system, iv. The water used for the scrubbing system will be treated in ETP for reuse.

Agenda No. 50.2

Proposed Expansion of Synthetic Organic Chemicals Manufacturing Unit's capacity from 20 MT/Month to 240.0 MT/Month (with addition of 220 MT/Month) located at Shed No.: C-1-B-461, Road No.82/4, GIDC Sachin, Tal.: Chorasi, Dist.: Surat by M/s. Suman Chemical Industries - Consideration of EC

[Proposal No. IA/GJ/IND3/400746/2022; File No. IA-J-11011/477/2022-IA-II(I)]

1. The proposal is for environmental clearance to the Proposed expansion of synthetic organic chemicals manufacturing unit's capacity from 20 MT/Month to 240.0 MT/Month (with addition of 220 MT/Month) located at Shed No.: C-1-B-461, Road No.82/4, GIDC Sachin, Tal.: Chorasi, Dist.: Surat by M/s. Suman Chemical Industries.

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

3. The PP applied for ToR vide proposal number IA/GJ/IND3/400746/2022 and the standard ToR was issued by the SEIAA, vide letter No SIA/GJ/61704/2022 dated 12.4.2022. **The PP reported that the project, being in notified industrial area i.e., GIDC Sachin vide Notification No. GHU: 2005 (30) GID -2002-2998. Dated 31.8.2005**, is exempted from the public hearing as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018. Thus, in accordance with Clause 7(i) (III) of EIA notification 2006 & OM J-11011/321/2016-IA. II(I) dated 27.04.2018. The PP applied for Environment Clearance on 29.10.2022 in Common application form and submitted EIA/EMP Report and other documents. Due to some shortcomings the proposal was refereed back to PP on 5.11.2022 and reply to the same was submitted by PP on 29.3.3023 The PP reported in Form- that it is an **Expansion EC.** The proposal is now placed in 50th EAC Meeting held on 19th-21st april, 2023, wherein the PP and an accredited Consultant, Ecogreen Enviro Services (NABET Accreditation Certificate No. 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 existing land area of 703.0 m^2 will be used for the proposed expansion and no R& R is involved in the Project. The details of various products are as follows:

Sr. No.	Name Of the Product	CAS no./CI no.	Quantity MT/Month			End Use of The Product*
			Existing	Proposed	Total	
Group A Adhesive & Binders						
Existing: Adhesives						
1	Poly Vinyl Acetate Emulsion	9003-20-7				Adhesive For Paper & Wood Work (House Hold Adhesive/Glue)
2	Poly Vinyl Acrylate Emulsion	9002-89-5				For Painting Emulsion
3	Poly Vinyl Acetate Binder	9003-20-7				Adhesives For Wood, Paper, Cloth
4	Poly Vinyl Acrylate Binder	9002-89-5				Flock Binder in Textile Industries
5	Acrylic Copolymer	977111-13-9				For Paint and Primers
6	Pure Acrylic Copolymer	977111-13-9	15			Ink Binder
7	Pure Acrylic Homopolymer	9003-01-4		105	120	Textile Printing/ Used in Ink Manufacturing
8	PVAC Laminating Adhesives	79-10-7				Packaging And Printing / Laminating Adhesives
9	VAE Membrane Adhesives	24937-78-8				Laminating Adhesives for Footwear & Cloth
Proposed: Adhesives						
10	Synthetic Rubber Adhesives	7085-85-0	-			Footwear Adhesives/ Leather Adhesives
11	Synthetic Resin Adhesives	7722-84-1				For Packaging
Group B Textile & Chemical Auxiliaries						
Existing: Chemical Auxiliaries					120	

12	Fixer	13601-19-9	05			
13	Dispersing Agent (Disp-N)	9084-06-4				
14	Dispersing Agent (Disp-S)	9084-06-4				
15	Dispersing Agent (Disp-TX)	9084-06-4				
16	Disizing agent	230-993-8				
17	Wetting Agent	203-473-3				
18	Peroxide Stabilizer	7722-84-1				
19	Silicone De - Former	68554-65-4				
20	Scouring Agent	68131-39-5				
21	Dye Fixing Agent	55295-98-2		115		Textile Industries and other adhesive Industries
22	Nonionic Soaping agent	26591-12-8				
23	Dye leveling Agent	9002-92-0				
24	Silicone Softener	63148-53-8				
25	Cationic Softener	63148-53-8				
26	Nonionic Softener	63148-53-8				
27	Hydrophilic softener	63148-53-8				
28	Loop Accelerator	120-78-5				
29	Khadi Paste	--				

30	PVA Emulsion	9002-89-5				
31	PE Emulsion	68441-73-6				
32	Cotton khadi	--				
33	Water proofing Compound					
34	Water treatment Chemicals (Water Softener)	31795-24-1				
	Proposed: Chemical Auxiliaries					
35	Softener-OC	91995-81-2	-			Textile Auxiliaries / Textile Industries
36	TRO (Turkey Red Oil)	8002-33-3				
37	Blanket Adhesive	64742-52-5				
38	Mercerizing Wetting Agent	1070-03-7				
39	Anti Creasing Agent	9016-88-0				
40	Anionic Soaping cum washing agent	26591-12-8				
41	Poly Phenol wax Emulsion	68441-17-8				
			20 MT/Month	**220 MT/Month**	**240 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 that the products of the exsiting unit are synthetic organic chemicals. But the PP does not have the environment clearance for existing unit, as it was established before the Year 2006**.** Unit obtained the Consolidated Consent and Authorization (CC&A) Certificate copy vide letter no.: GPCB/NOC/SRT-1675/17727, dated of issue: 14th July, 2006 for manufacturing Adhesives & Chemicals Auxiliaries to the tune of 20 MT/Month prior to the EIA Notification, 2006

7. The PP reported that the Certified Compliance +of existing CTO/ CCA has been obtained from GPCB vide letter no.: GPCB/CCA-SRT-1068(2)/ID-31208/736379 dated:15.03.2023.

No partially complied/non-complied conditions are mentioned in the obtained certified compliance report.

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. Some of the natural and constructed waterbodies are Mithi Khadi (Creek)-0.60 km –NW, Mindhola River- 5.0 km, SE, Sachin INA Water Storage- 0.60 km, N, Gabheni lake- 2.25 km, SE, Bonand Talav- 7.0 km, NE, Overhead water tank- 1.35 km, SE. one Schedule-I species i.e Indian peafowl found are in the study area for which conservation plan has been prepared.

9. The PP reported that **Ambient Air Quality** monitoring was carried out at 8 locations during 1st March 2022 to 31st May 2022 and the baseline data indicates the ranges of concentrations as: PM_{10} (49.20-111.0 µg/m^3), $PM_{2.5}$ (24.96-72.98 µg/m^3), SO_2 (18.22- 36.92 µg/m^3), NOx (20.64 - 44.13 µg/m^3), CO (403-1899 µg/m^3), VOC & HCl-BDL. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.10573 µg/m^3, 0.05294 µg/m^3, 0.27729 µg/m^3, 0.09729 µg/m^3 and 0.00301 µg/m^3 with respect to PM_{10}, $PM_{2.5}$, SO_2, NOx and HCl. The resultant concentrations values of PM_{10} & $PM_{2.5}$ are exceeded at project site during baseline study period which is may be due to project is located in Sachin GIDC. Also, average values of PM_{10} & $PM_{2.5}$ are nearer to NAAQS standards which is due to Sachin GIDC. Other values are within the National Ambient Air Quality Standards (NAAQS). **Noise:** Noise monitoring was carried out at 8 locations during 1st March 2022 to 31st May 2022. The monitored noise level during the day time Leq(day) varied from 51.8 to 72.1 dB(A) and during night time Leq (night) varies from 40.5 to 61.6 dB(A) within the study area. Highest noise value of 72.1 dB(A) during day time was recorded at Shan Textiles Pvt. Ltd. & lowest noise value of 51.8 dB(A) during day time was recorded at MVPS English Academy. Highest noise value of 61.6 dB(A) during night time was recorded at CETP, Sachin & lowest noise value of 40.5 dB(A) during night time was recorded at MVPS English Academy. 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.

10. **Ground Water:** Ground water monitoring was carried out at 8 locations during 1st March 2022 to 31st May 2022 and the baseline data indicates the ranges of concentrations as: pH of ground water samples varied from 7.71 to 8.92. Chloride is found within the acceptable (Desirable) limit of Drinking water standards IS: 10500 – 2012 at Eklera Village (124.4 mg/l) & Saniya kande village (150.5 mg/l) and in other locations it is higher than the acceptable (Desirable) but it is found below permissible limit at all monitoring locations. Calcium hardness is higher than the Permissible limit at Nr. Sadguru Vidyalaya (251.25 mg/l), Gabheni Village (265.59 mg/l), Kansad village (268.27 mg/l) & Dipli village (549.53 mg/l). Sulphate is found higher than the permissible limit at Gabheni Village (516.4 mg/l), Kansad village (426.4 mg/l) & Dipli village (730 mg/l). TDS is found higher than the acceptable (Desirable) limit at all locations and higher than the permissible limit at Gabheni Village (2044.5 mg/l), Kansad village (2081.7 mg/l) & Dipli village (2912.7 mg/l). Ground water is suitable for domestic and agricultural purpose after adequate treatment such as Tertiary treatment and disinfection. **Surface Water:** Surface water monitoring was carried out at 8 locations during 1st March 2022 to 31st May 2022 and the baseline data indicates the ranges of concentrations

as: pH of surface water samples varied from 7.75 to 8.76. Chloride is found higher than the acceptable (Desirable) limit of Drinking water standards IS: 10500 – 2012 at Mithi Khadi (321.5 mg/l) & Gabheni Talav (404.87 mg/l) but it is found below permissible limit at all locations. Sulphate is found higher than the acceptable (Desirable) limit at Gabheni Talav (253.4 mg/l) but well within the acceptable (Desirable) limit at all other locations. Calcium Hardness is found higher than the permissible limit at Mithi Khadi (218.17 mg/l) & Gabheni Talav (264.2 mg/l) but it is found below permissible limit at all other locations. TDS is within the acceptable (Desirable) limit at GIDC lake (260 mg/l), Saniya Kande (371.5 mg/l) and Jiav Lake (258.1 mg/l) and higher at other monitoring locations. It is higher than the permissible limit at Gabheni Talav (2538 mg/l) and well within the permissible limit at other monitoring locations. Thus, surface water can be used after conventional treatment followed by disinfection in only domestic activities.

11. **Soil:** Soil monitoring was carried out at 8 locations during 1st March 2022 to 31st May 2022 and the baseline data indicates the ranges of concentrations as: The soils of the proposed project area are neutral to moderately alkaline in nature. EC of soils at all the sampling locations is good at all locations. Organic carbon content of soils of all locations are high as per ICAR standards. The soils of proposed project area are Fine sand in nature and water holding capacity of soils is found to be good. Nutrient availability of soil samples found better in Nitrogen (N), low in Phosphorus (P) and high in Potassium (K). Sodium value ranges from 37.38 to 207.3 mg/kg. SAR value is high of soil of Project site, Near GIDC lake, Opp. MVPS English School and near Rotary Hospital and at other locations the SAR value is low. Bulk density varied from 1.05 to 1.51 gm/cm^3. In short, the soils of proposed project area are Fine sand, moderately fertile, good water holding capacity and average to moderately alkaline in nature.

12. The PP reported that the total water requirement for existing and proposed project is 44.0 KLD, out of which 4.0+1.0+10.0+15.0+1.0+13.0 are for the Domestic, Gardening, Process, Boiler, washing and Cooling purposes. Boiler Condensate 12.0 KLDwill be recycled in the boiler. Industrial wastewater from Cooling, washing & boiler blow down will be sent to inhouse ETP for treatment + Single effect evaporator after treated water 2.16 KLD will be reused in Plant premises. And domestic wastewater will be sent to Septic tank with filtration system and after that 1.0 KLD will be reused in gardening. Hence, Fresh water requirement will be 28.84 KLD. Hence, Unit will achieve ZLD.

13. The PP reported that total power requirement will be 350 KVA. Power supply shall be taken from Daxin Gujarat VIJ company Ltd. D. G. set capacity of 50 KVA (1 No.) will be provided to fulfill the power requirement and used in case of power cut or failure. DG set will be provided with an effective stack height for proper dispersion of pollutants that will keep the emissions within the permissible limit.

14. Unit has proposed two Natural gas-based Steam Boilers having capacity of 0.25 TPH & 0.5 TPH. And adequate stack 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.

Flue Gas Stack details

Sr. no	Source of emission with capacity	Stack Height (meter)	Type of Fuel	Qty. of Fuel	Type of emissions i.e. Air Pollutants	Air Pollution Control Measures (APCM)
1	Boiler (0.25 TPH) **(Existing)**	30	Natural gas	250.0 SCM/Day	PM<120 mg/Nm^3	Adequate stack height provided
2	Boiler (0.5 TPH) **(Proposed)**	30	Natural Gas	500.0 SCM/Day	SO_2<80 ppm	Adequate stack height provided
3	D.G. Set (50 KVA) (Stand by) **(Proposed)**	11	Diesel	20.0 Lit./Hr.	NO_x<40 ppm	Adequate stack height provided

15. **Details of Process Emissions Generation and its Management**: No any process gas emission from existing and proposed manufacturing process

16. **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	25	0.1 kg/day/person	2.5
		Total	**2.5 kg/day**

Hazardous Waste

Sr. 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/Annum)			Management of HW
				Existing Quantity	Proposed Quantity	Total Quantity	
1	Used Oil	Maintenance	5.1/ SCH.I	--	0.5	0.5	Collection, Storage, Transportation & Disposal reused as lubricant within premises or by selling to Authorized re-

							refiners Through GPS Mounted Vehicles.
2	Discarded containers/ Bags/ Linear	Packing Materials, Storage of Raw material	33.1/ SCH.I	2	150	152	Collection, Storage, Transportation & Reuse/ Sale to Authorized Vendor Through GPS Mounted Vehicles.
3	ETP Sludge	ETP	35.3/ SCH.I	--	11.0	11.0	Collection, Storage, Transportation, disposal at nearest TSDF site Through GPS Mounted Vehicles
4.	Salt	Evaporator	35.3/ SCH.I	-	4.0	4.0	
5.	Organic Waste	From Mfg. Process of **Group: A** Poly Vinyl Acetate Binder	20.3/ SCH.I	--	44.0	44.0	Collection, Storage, Transportation & send to pre/co-processing units (cement industries) OR disposal at nearest CHWIF site Through GPS Mounted Vehicles
6.	Contaminated Cotton Rags or Other Cleaning Materials	Process & Maintenance	33.2/ SCH-1	--	0.5	0.5	Collection, Storage, Transportation, Disposal at nearest CHWIF site Through GPS Mounted Vehicles.

17. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 73.50 Lakhs (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 17.5 Lakhs per Annum. Industry proposes to allocate ₹ 8.5 Lakhs towards CER.

18. The PP reported that about 623.0 Sq. m. area (i.e. 88.5 % of total plot area- 203.0 sq. m. (28.8 %) within the plant premises and 420.0 sq. m. (59.7 %) outside on the GIDC land i.e. along the plant periphery, near Temple & near the Project site) shall be developed as green belt.

19. The PP proposed to set up an Environment Management Cell (EMC) by engaging General manager – office assistant- warehouse incharge- worksmanager- Manager- Operator- unskilled workers for the functioning of EMC.

20. The PP reported the following w.r.t carbon sequestration:

S. N.	Particular	Type of source	QTY.	Total CO_2 emission (Ton/year)		Mitigation measures for carbon sequestration	CO_2 capture / reduce per day (Ton/ day)
				Direct	Indirect		
1	Electrical load demand	Indirect (Purchased electricity)	280 KW (350 KVA)	0.00	372.30	We will proposed power generation through solar energy by solar panels = 12.8 KW + 20 KW in Ghabheni Village	81.41
2	Domestic Waste genaration	Direct (Biodegradable waste generation)	2.5 KL/Day	0.37	0.00	Segregation at source with closed lid bins provision	0.37
3	Transportaion of Goods	Indirect (Mobile source) (Finish goods and RM transportat	1 no. of trucks of Finished Goods and 1 no. three wheel of	0.00	26.92	Transportation of RM & FG by Electric vehicle	8.076

		ion in 50 km and 50 km distance respectively)	Solid Raw material per month				
4	Transportation of employees	Indirect (Mobile source) (25 Employees, in vicinity of 10 km,3 nos. shifts)	25	0.00	11.50	20% Electric vehicle will be proposed	2.30
5	Energy consumption for D.G.set-50 KVA	Direct (stationary) (working hours: 4 & working days: 35)	20 lit/hr	7.43	0.00	Emergency only	7.43
6	Natural gas will be used for boilers	Direct (stationary)	750 SCM/Day	250.94	0.00	Low Nox Burner	225.84
7	Effluent generation & Treatment in ETP	Direct (stationary)	2.2 KL/day	0.24	0.00	Tree Plantation around ETP area (4 Nos. trees)	0.13
8						**Green belt is proposed considering 2m x 2m canopy of tree-59 Nos. of trees + 97 nos. Trees outside plant premises + 100 nos. of Trees in Sachin Village**	**8.06**
Total Carbon footprint				**258.97**	**410.72**	**Total carbon sequestration**	**333.61**
Total carbon Footprint (Direct + Indirect)				**669.69**			

In Nutshell, the PP will save / capture / reduce approx. 333.61 tons per year or 49.8 ~50 % of total carbon dioxide generated during year (considering direct Source of CO_2 emission) through above mitigation measures suggested.

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

22. The estimated project cost is Rs. 411.0 Lakhs**.** Total Employment will be 25 persons as direct & 20 persons on contract after the proposed expansion.

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 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 consent letter for life time green belt development Cost-Benefits analysis, Carbon footprint, compliance to CPA OM dated 31.10.2019 and advised the PP to submit the following:

- Submit consent letter for life time green belt development in common land on both sides of GIDC drainage line near by our project site.
- Submit revalidate Cost-Benefits analysis
- Submit to revalidate Carbon footprint.

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

The EAC deliberated the Onsite and Offsite Emergency plans and also the various mitigation measures proposed during the 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.

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 PP shall comply with the stringent air pollutants standards i.e. 80 % of existing & proposed flue gas & process gas emission standards with APCM and it shall be continously monitored and reported to regulatory authorities.

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

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

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

(v) Natural gas shall be used as a primary fuel.

(vi) The best available technology shall be used.

(vii) The PP shall develop an additional greenbelt over an area of at least 385 $m^{2,}$ 33.5% i.e. 235 sq. m. (71 nos. of trees) inside the premises + 21.3 % i.e. 150 sq. m. (46 nos. of trees considering 80% of survival rate)] outside premises within a year of grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft. The budget earmarked for the plantation shall be kept in a separate account and should be audited annually. The PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate,

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

(viii) The PP shall develop greenbelt near temple of village Kansad & near Project site with Sachin GIDC @ 51 meters SW Direction

(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) Treated effluent from single effect evaporator in washing activity, lime slurry preparation for ETP and cooling tower make up water.

(xi) The domestic wastewater generated (1.0 KLD) shall be treated in Septic tank, followed by filtration and reused in gardening.

(xii) The PP shall install Flow meter & PTZ camera at reuse line and its connectivity shall be connected to CPCB and GPCB server.

(xiii) The PP shall propose 40 KL* 1 nos. capacity of rainwater harvesting tank (u/g) for 3.9 KL rainwater harvesting during raining season.

(xiv) The PP shall install in-house single effect forced type evaporator followed by primary treatment to achieve Zero Liquid Discharge (ZLD). Treated water quality is feasible to reuse in washing, lime slurry preparation and cooling tower make up water.

(xv) Natural gas based Boiler shall be used in expansion project. There shall be no generation of High volume – Low effect wastes i.e fly-ash, slag, redmud, de-inking sludge etc.

(xvi) The PP shall follow Hazardous and Other Wastes (Management and Trans- Boundary Movement) Rules, 2016 for dispose 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.

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

(xviii) An amount of ₹ 8.5 lakhs shall be allocated towards CER for proposed 1 Nos. Rain water recharging system@ Dipali village, Installation of 20.0 KW Roof Top Solar System (1.0 KW/household) for 20.0 household @ Gabheni Village & Plantation around Sachin village

(xix) 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 General manager – office assistant- warehouse incharge- worksmanager- manager- operator- unskilled workers. 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.

(xx) 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 [₹73.50 (Capital cost) and ₹ 17.5 Lakhs per Annum (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.

(xxi) The PP reported that Total Water Requirement for existing and proposed project is 44.0 KLD, out of which 4.0+1.0+10.0+15.0+1.0+13.0 for the Domestic, Gardening, Process, Boiler, washing and Cooling purposes. 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

(xxii) 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.

(xxiii) 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.

(xxiv) 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 444(E), dated 13.6.2011 under the provisions of the Environment (Protection) Rules, 1986.

(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.

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

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

(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.

Agenda No. 50.3

Setting up of Manufacturing Plant for 'Synthetic Organic Chemicals'of capacity 170 TPM located at Plot No. 56/B-2, Phase - I, GIDC Vatva, Ahmedabad, Gujarat by M/s. Laakoona Reactions – Consideration of Amendment in EC

[Proposal No. IA/GJ/IND3/298667/2023; File No. IA-J-11011/170/2023-IA-II(I)]

1. The Proposal is for the amendment in Environmental Clearance granted by the SEIAA vide letter No. SEIAA/GUJ/EC/5(f)/872/2020 dated 07.07.2020 for the project for Manufacturing of Synthetic Organic Chemical at Plot no. 56/B-2 Phase - 1, GIDC Vatva, Ahmedabad- 382445, to M/s. Laakoona Reactions.

2. Application to SEIAA for Transfer of EC in the name of Huechem Global was made *vide* proposal no. SIA/GJ/IND3/294770/2022 dated 1.12.2022. Name change application in the name of "Huechem Global" was made to GIDC dated 16.12.2021. Lease transfer letter of plot No.55/2/B in the name of Huechem Global was allotted by GIDC, *vide* letter No. GIDC/RM/AHM/TRF/FTO/VAT1/499 dated 1.10.2022.

3. The PP reported that the salient features of the project:

Particulars	**Unit**	**Existing as per EC**	**Proposed plot**	**Total after addition of new plot**
Cost of Project	INR Crores	7.12	**0.4769**	7.5969
Total Plot Area	m^2	2636	**3681**	6317
Capacity of Plant	TPM	170	**No change**	170
Green Area	m^2	2527 m^2 (1217 m^2 within premises + 1310 m^2 outside premises)		

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

Sl. No.	**Para of EC issued by SEIAA**	**Details as per the EC**	**To be revised/ read as**	**Justification/ Reasons**

1	Sub: EC letter SEIAA/GUJ/EC/5(f)/872/2020	at Plot No. 56/B-2, Phase-I, GIDC Vatva	at Plot No. 56/B-2 & 55/2/B Phase-I, GIDC Vatva	Addition of plot 55/2/B
2	Condition no. 18	Total water requirement from the project shall not exceed 84.6 KLD. Unit shall reuse/recycle 25.87 KLD effluent within premises. Hence, total fresh water requirement from the project shall not exceed 58. 73 KLD and it shall be met through GIDC water supply only. Prior permission from the concerned authority shall be obtained for withdrawal of water.	Total water requirement from the project shall not exceed 86.6 KLD. Unit shall reuse/recycle 40.61 KLD effluent within premises. Hence, total fresh water requirement from the project shall not exceed 45.99 KLD and it shall be met through GIDC water supply only.	–

3	Condition no. 20	The industrial effluent generation from the project shall not exceed 85.33 KLD.	The industrial effluent generation from the project shall not exceed 87.13 KLD.	● 7.3 KLD Low COD process Wastewater Streams and Washing effluent will be treated in ETP and disposed to CETP as per concerned norms ● 78.83 KLD High COD process Wastewater Streams and Wastewater from R & D will be treated in MVR, 39.41 KLD condensate MVR will be reused in process and 39.42 KLD concentrate will be sent to Common Spray Dryer facility ● After installation of MVR recycle water quantities will get increased to 40.61 KLD
4	Condition no B.2.7 Greenbelt	150 m^2 within	1217 m^2 within	1367 m^2 (1310

		premises (Greenbelt area 900 m^2 outside premises)	premises (Greenbelt area 410 m^2 outside premises)	m^2 outside premises). Total greenbelt will be 42%

5. **Deliberations by the EAC:**

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

The EAC inter-alia, deliberated on the Greenbelt, water balance, fuel Brief summary and advised the PP to submit the following:

- Undertaking on Green Belt Development Programme along with EMP Budget and Fuel Change.
- Water Balance (Existing and Proposed) and revised write up for water management.
- Updated brief summary.

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

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

(i). The PP shall develop 2677 m^2 (42% of total plot area as the greenbelt after addition of the plot) by planting 673 number of trees within a period of one year of the grant of EC. After addition of a plot comprising 22% of total plot area inside the plant premises and 20 % of the total plot area outside the premises shall be developed as the greenbelt.

(ii). Low COD process wastewater streams and washing effluent shall be treated in ETP and disposed to CETP as per the required norms. High COD process wastewater streams and wastewater from R & D shall be treated in MVR, condensate MVR shall be reused in process and concentrate will be sent to Common Spray Dryer facility. After installation of MVR, recycle water quantities shall get increased.

(iii). The PP shall explore the possibility of switching over to cleaner fuels i.e Natural gas / agro briquettes and the status of the same needs to be reported in the six- monthly compliance report.

(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 sources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

Agenda No. 50.4

Setting up a new Unit for Manufacturing of Agrochemicals with a Production Capacity 48290 MTA located at Plot No. D/3/21/2/1 Dahej III, GIDC Industrial Estate, Village Sambheti Vagra, District Bharuch Gujarat by M/s Bharat Rasayan Limited - Consideration of EC

[Proposal No. IA/GJ/IND3/424990/2023; File No. IA-J-11011/25/2023-IA-II(I)]

1. The proposal is for the environmental clearance Setting up a new manufacturing unit for Agrochemicals with a production capacity of 48290 MTA located at Plot No. D/3/21/2/1 Dahej III, GIDC Industrial Estate, Village Sambheti Vagra, District Bharuch Gujarat by M/s Bharat Rasayan Limited.

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

3. The ToR has been issued by the Ministry, vide letter no. IA- J-11011/25/2023-IA-II (I), dated 3.2.2023. The PP applied for Environment Clearance in the Common Application Form and submitted EIA/EMP Report and other documents. The PP in the Form reported that it is a **Fresh EC case.** The proposal is placed in this 50th EAC meeting on 19th -21st April, 2023, wherein the PP along with accredited Consultant, M/s. Siddhi Green Excellence Pvt. Ltd., Ankleshwar [Accreditation number NABET/EIA/2225/RA 0280 valid till 06th October,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 the total land area of 73534.76 m^2. will be used for proposed project and no R& R is involved in the Project. The details of products to be manufactured are as follows:

S.No	Name of Product	CAS No./ HSN code	Proposed Qty. (TPA)	End Use
1.	2,4-D Ethyl Ester	533-23-3	2000	Weedicide
2.	2,4-D Amine Salt	2008-39-1	2000	Herbicide
3.	2,4-D Sodium Salt	2702-72-9	500	Herbicide
4.	Acephate	30560-19-1	600	Insecticide
5.	Acetamiprid Technical	135410-20-7	200	Insecticide
6.	Alpha Cypermethrin Technical	67375-30-8	300	Insecticide
7.	Azoxystrobin Technical	131860-33-8	200	Fungicide
8.	Bifenthrin Technical	82657-04-3	300	Insecticide
9.	Bispyribac sodium Technical	125401-92-5	200	Herbicide

S.No	Name of Product	CAS No./ HSN code	Proposed Qty. (TPA)	End Use
10.	Buprofezin Technical	69327-76-0	300	Insecticide
11.	Butachlor Technical	23184-66-9	500	Herbicide
12.	Cartap Hydrochloride	15263-52-2	300	Insecticide
13.	Chlorimuron Ethyl	90982-32-4	25	Herbicide
14.	Chlormequat Chloride	999-81-5	200	Plant growth regulator
15.	Clodinafop Propargyl	105512-06-9	200	Herbicide
16.	Cymoxanil	57966-95-7	150	Fungicide
17.	Cypermethrin	52315-07-8	500	Insecticide
18.	Deltamethrin	52918-63-5	600	Insecticide
19.	Diafenthiuron	80060-09-9	300	Insecticide
20.	Difenoconazole	119446-68-3	150	Fungicide
21.	Diuron	330-54-1	900	Herbicide
22.	Ethion	563-12-2	300	Insecticide
23.	Fenpropathrin	64257-84-7	150	Insecticide
24.	Fenpyroximate	111812-58-9	25	Insecticide
25.	Fenvalerate	51630-58-1	200	Insecticide
26.	Fipronil	120068-37-3	100	Insecticide
27.	Glufosinate ammonium	77182-82-2	400	Herbicide
28.	Glyphosate	1071-83-6	600	Herbicide
29.	Hexaconazole	79983-71-4	400	Fungicide
30.	Imazethapyr	81335-77-5	100	Herbicide
31.	Imidacloprid	138261-41-3	300	Insecticide
32.	Indoxacarb	173584-44-6	100	Insecticide
33.	Isoprothiolane	50512-35-1	150	Fungicide
34.	Lambda Cyhalothrin	91465-08-6	1200	Insecticide
35.	Metalaxyl	57837-19-1	300	Fungicide
36.	Metribuzin	21087-64-9	1200	Herbicide
37.	Metsulfuron Methyl	74223-64-6	100	Herbicide
38.	Myclobutanil	88671-89-0	20	Fungicide
39.	Novaluron	116714-46-6	50	Insecticide
40.	Paclobutrazole	76738-62-0	100	Plant growth regulator
41.	Pendimethalin	40487-42-1	1000	Herbicide
42.	Penoxsulam	219714-96-2	100	Herbicide
43.	Permethrin	52645-53-1	300	Insecticide
44.	Phenthoate	2597-03-7	300	Insecticide
45.	Pretilachlor	51218-49-6	500	Herbicide
46.	Profenofos	41198-08-7	500	Insecticide
47.	Propargite	2312-35-8	50	Insecticide

S.No	Name of Product	CAS No./ HSN code	Proposed Qty. (TPA)	End Use
48.	Propiconazole	60207-90-1	500	Fungicide
49.	Propineb	12071-83-9	200	Fungicide
50.	Pyrazosulfuron Ethyl	93697-74-6	50	Herbicide
51.	Pyrithiobac Sodium Technical	123343-16-8	50	Herbicide
52.	Sulfosulfuron	141776-32-1	50	Herbicide
53.	Tebuconazole	107534-96-3	600	Fungicide
54.	Temephos	3383-96-8	50	Insecticide
55.	Thiophanate methyl	23564-05-8	200	Fungicide
56.	Thifluzamide	130000-40-7	170	Fungicide
57.	Thiomethoxam	153719-23-4	500	Insecticide
58.	Triazophos	24017-47-8	400	Insecticide
59.	Tricyclazole	41814-78-2	300	Fungicide
60.	Tolfenpyrad	129558-76-5	100	Insecticide
61.	pymetrozine	123312-89-0	200	Insecticide
62.	Thiacloprid	111988-49-9	50	Insecticide
63.	Pyriproxyfen	95737-68-1	100	Insecticide
64.	Fenoxaprop-p-ethyl	71283-80-2	200	Herbicide
65.	Diflubenzuron	35367-38-5	50	Insecticide
66.	Carboxin	5234-68-4	100	Fungicide
67.	Picoxystrobin	117428-22-5	50	Fungicide
68.	Spiromesifen	283594-90-1	50	Insecticide
69.	Quizalofop ethyl	100646-51-3	200	Herbicide
70.	Kresoxim Methyl	143390-89-0	50	Fungicide
71.	Sulfentrazone	122836-35-5	150	Herbicide
72.	Carfentrazone ethyl	128639-02-1	50	Herbicide
73.	Dinotefuran	165252-70-0	100	Insecticide
74.	Prallethrin	23031-36-9	100	Insecticide
75.	Flonicamid	158062-67-0	100	Insecticide
76.	Topramezone	210631-68-8	50	Herbicide
77.	Chlorantraniliprole	500008-45-7	1000	Insecticide
78.	Pyraclostrobin	175013-18-0	50	Fungicide
79.	Cyazofamid	120116-88-3	100	Fungicide
80.	Clothianidin	210880-92-5	100	Insecticide
81.	Clomazone	81777-89-1	50	Herbicide
82.	Tembotrione	335104-84-2	200	Herbicide
83.	Trifloxystrobin	141517-21-7	100	Fungicide
84.	Flubendiamide	272451-65-7	200	Insecticide
85.	Oxyflurofen	42874-03-3	100	Insecticide
86.	Atrazine	1912-24-9	600	Herbicide
87.	Cypermethric Acid Chloride (CMAC)	52314-67-7	300	Intermediate
88.	Halosulfuron Methyl	100784-20-1	50	Herbicide

S.No	Name of Product	CAS No./ HSN code	Proposed Qty. (TPA)	End Use
89.	Imbibenconazole	86598-92-7	50	Fungicide
90.	Zetacypermethrin	1315501-18-8	600	Insecticide
91.	Chloropyrifos Methyl (CPP-M)	5598-13-0	200	Insecticide
92.	Propanil	709-98-8	150	Herbicide
93.	Transfluthrin	118712-89-3	150	Insecticide
94.	Ethiprole	181587-01-9	300	Insecticide
95.	Fluxametamide	928783-29-3	150	Insecticide
96.	Quinoxyfen	124495-18-7	100	Fungicide
97.	Amisulbrom	348635-87-0	100	Fungicide
98.	m-phenoxybenzaldehyde	39515-51-0	1800	Intermediate
99.	m-phenoxybenzylalcohol	13826-35-2	400	Intermediate
100.	4-acetyl-2-methylbenzoic acid (AMBA)	55860-35-0	50	Intermediate
101.	2-Hydroxypropyloxymine hydrochloride (HPOA HCL)	950595-72-9	200	Intermediate
102.	Lambdacyhalothric acid	72748-35-7	1200	Intermediate
103.	Pilot product	--	100	--
104.	4-acetyl-2-methylbenzamide (AMBAD)	1095275-06-1	100	Intermediate
105.	3,5'-Dichloro-2,2,2-triflouroacetophenone (DCAP)	130336-16-2	100	Intermediate
106.	Bromobenzene	108-86-1	500	Intermediate
107.	6-Flouro-2-methyl indole (6-FMI)	40311-13-5	200	Intermediate
108.	m-bromobenzaldehyde	3132-99-8	200	Intermediate
109.	m-phenoxybenzaldehyde Acetal (MPBA)	62373-79-9	500	Intermediate
110.	Lambdacyhalothric acid chloride	76496-71-4	400	Intermediate
111.	1,2,4-Triazinone	33509-43-2	900	Intermediate
112.	Isopropyl bromide	75-26-3	600	Intermediate
113.	1,2,4 triazole	288-88-0	1200	Intermediate
114.	2, 6-Diisopropyl-4-phenoxyphenyl thiourea (DIPPT)	135252-10-7	1000	Intermediate

S.No	Name of Product	CAS No./ HSN code	Proposed Qty. (TPA)	End Use
115.	Oxirane (Tebuconazole)	107534-96-3	1000	Intermediate
116.	Pyrazole (Fipronil)	288-13-1	300	Intermediate
117.	Para chlorophenyl acetic acid (PCPAA)	1878-66-6	250	Intermediate
118.	Phenyl acetic acid.	103-82-2	900	Intermediate
119.	DHPPA [(R)-(+))-2-(4-Hydroxyphenoxy)-Propanoic Acid]	94050-90-5	300	Intermediate
120.	[(Isopropylthio)acetic acid)	22818-59-3	200	Intermediate
121.	2,6-Dibromo-4-(trifluoromethoxy)aniline (TFMDBA)	88149-49-9	200	Intermediate
122.	4-(Trifluoromethoxy) aniline (TFMA)	461-82-5	200	Intermediate
123.	2-Amino-5-chloro-N,3-dimethylbenzamide (CAMA)	890707-28-5	500	Intermediate
124.	Dimethyl Malonate (DMM)	108-59-8	200	Intermediate
125.	Diethyl malonate	105-53-3	200	Intermediate
126.	Diisopropyl malonate	13195-64-7	200	Intermediate
127.	Cyanoacetic acid	372-09-8	600	Intermediate
Total			**42890**	

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

6. The PP reported that there are no national parks, wildlife sanctuaries, biosphere reserves, tiger/elephant reserves, wildlife corridors etc. within 10 km distance from the project site. Narmada river is flowing at a distance of ~9 km towards South direction. There is no forest land involved in the proposed project. Schedule-I species i.e., Peafowl (Pavo cristatus), Bengal Monitor Lizard (Varanus bengalensis) and Indian Flap-Shell Turtle – Lissemys punctata , were observed in the 10 km radius from the proposed project for which Conservation plan has been prepared.

7. The PP reported that **Ambient air quality** monitoring was carried out at 11 locations during December 2021 to February 2022 and the baseline data indicates the ranges of concentrations as PM_{10} (79-90 $\mu g/m^3$), $PM_{2.5}$ (30-36 $\mu g/m^3$), SO_2 (15-20 $\mu g/m^3$) and NOx (25-29 $\mu g/m^3$) (98th

percentile values) respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed new project would be 0.530 μg/m^3, 1.923 μg/m^3 and 1.063 μg/m^3 with respect to PM_{10}, SO_2 and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). **Noise quality:** The ambient noise level measurements were carried out at 12 locations during December 2021 to February 2022 and the baseline data indicates: Measured Leq (Day) from 46 dB(A) to 58 dB(A) and Leq (Night) from 36 dB(A) to 55 dB(A).**Ground Water Quality**: Ground water monitoring was carried out at 10 locations during December 2021 to February 2022 and the baseline data indicates the ranges of concentrations as: pH from 7.562 to 8.471, Total hardness from 110 to 681 mg/L, TDS from 1656 to 4655 mg/L, Chloride from 193 to 1025 mg/L, Fluoride from 1 to 1.6 mg/L. **Surface Water Quality**: The surface water monitoring was carried out at 10 locations during December 2021 to February 2022 and the baseline data indicates the ranges of concentrations as: For pond water pH ranged between 7.018 - 8.493, TDS: 261 - 1037 mg/l, total hardness: 65-194 mg/l as $CaCO_3$, COD: 28 – 100 mg/L, DO: 5.2 - 8.85 mg/L, BOD: 5 – 12 mg/L. **Soil Quality:** The soil quality monitoring was carried out at 11 locations during December 2021 to February 2022 and the baseline data indicates the ranges of concentrations as: pH of 5% leachate @ 25°C: 8.116 – 8.966, Electrical conductivity @ 25°C: 0.346 – 7.46 dS/m, Exchangeable Calcium (Ca): 7.5 – 27 meq/100 gm, Exchangeable Magnesium (Mg): 7 – 20 meq/100 gm, Exchangeable Sodium Percentage (ESP): 5.87 – 45.03 %.

8. The PP reported that the total water requirement will be 3864 m^3/day of which fresh water requirement of 1864 m^3/day will be met from GIDC supply. Industrial Effluent of 700 KLD (450 KLD high COD effluent & 250 KLD RO reject) shall be treated in stripper. 699 KLD effluent from stripper shall be subjected to MEE followed by ATFD. 625 KLD MEE condensate shall be sent to ETP and treated with 1469 KLD low COD effluent. 2254 KLD treated effluent shall be treated in ETP (P+S+T). 310 KLD effluent from ETP shall be sent to CETP, Dahej for further treatment & disposal into deep sea through u/g common effluent conveyance pipeline balance shall be subjected to MBR & RO. 1684 KLD RO permeate shall be recycled and to be used in cooling tower makeup and APCM purpose. Domestic effluent of 120 m^3/day will be treated through Sewage Treatment Plant (STP) & treated water shall be mixed with industrial effluent.

9. Power requirement will be 4000 KW and will be met from M/s. Dakshin Gujarat Vij Company Ltd. (DGVCL). 2 Nos. DG set of 750 KVA capacity each & 2 Nos. DG sets of 1500 KVA of each will be used as standby during power failure for proposed project. Stack (11 m & 15 m Height) will be provided as per CPCB norms to the proposed DG Sets.

10. Multi fuel boilers (1 No. 25 MT/h & 1 No. 18 MT/h standby) and Thermic Fluid Heaters (3 Nos. 4 Lakh kcal/h each - 2 operational + 1 standby) will be installed. Electrostatic precipitator (ESP) shall be provided to Boilers and Multi Cyclone Separator & Bag filter shall be provided to Thermic Fluid Heaters with online CEMS on its stack (30 m height) for continuous monitoring. Natural gas OR LDO/FO (low sulphur) & Coal (low sulphur) shall be used as Fuel for Multi fuel boilers & Thermic Fluid Heaters, HSD shall be used as Fuel for DG Set.

11. **Details of Process Emissions Generation and its Management:** The process emissions from the manufacturing processes shall be HCl, SO_2, Cl_2, NO_x, NH_3, HBr, H_2S, PM, VOC, DMA

from manufacturing processes. Two stage Water Scrubbers & caustic scrubber with coolers shall be provided to respective reaction vessels to control the emissions. Proposed Process gas stacks, emission and control measures:

Stack No.	Stack Attached to	Stack Height (m)	Air Pollution Control Measures (APCM)	Parameter	Permissible limits
1	Process Vent – 1	15	Primary Scrubber Secondary Scrubber Ventury Scrubber with caustic	HCl SO_2 Cl_2	20 mg/Nm^3 40 mg/Nm^3 5 mg/Nm^3
2	Process Vent – 2	15	Primary Scrubber with Hypo Secondary Scrubber with caustic circulation	NOx	25 mg/Nm^3
3	Process Vent – 3	15	Primary Scrubber Secondary Scrubber	NH_3	175 mg/Nm^3
4	Process Vent – 4	15	Primary Scrubber Secondary Scrubber Ventury Scrubber with caustic	HBr H_2S	5 mg/Nm^3 5 mg/Nm^3
5	Process Vent – 5	15	Primary Scrubber Secondary Scrubber Blower with caustic	NaCN	--
6	Process Vent – 6	15	Primary Scrubber Secondary Scrubber Ventury Scrubber with caustic	HCl SO_2 Cl_2	20 mg/Nm^3 40 mg/Nm^3 5 mg/Nm^3
7	Process Vent – 7	15	Primary Scrubber with Hypo Secondary Scrubber with caustic circulation	NOx	25 mg/Nm^3
8	Process Vent – 8	15	Primary Scrubber Secondary Scrubber	NH_3	175 mg/Nm^3
9	Process Vent – 9	15	Primary Scrubber Secondary Scrubber Ventury Scrubber with caustic	HBr H_2S	5 mg/Nm^3 5 mg/Nm^3
10	Process Vent – 10	15	Primary Scrubber Secondary Scrubber Blower with caustic	NaCN	--
11	Process Vent – 11	15	Primary Scrubber Secondary Scrubber	NH_3	175 mg/Nm^3

Stack No.	Stack Attached to	Stack Height (m)	Air Pollution Control Measures (APCM)	Parameter	Permissible limits
12	Process Vent – 12	15	Scrubber	DMA	--
13	Process Vent – 13	15	Primary Scrubber Secondary Scrubber Ventury Scrubber with caustic	HCl SO_2 Cl_2	20 mg/Nm^3 40 mg/Nm^3 5 mg/Nm^3
14	Process Vent – 14	15	Blower with Bag filter	PM	150 mg/Nm^3
15	Process Vent – 15	15	Primary Scrubber Secondary Scrubber Ventury Scrubber with caustic	HCl SO_2 Cl_2	20 mg/Nm^3 40 mg/Nm^3 5 mg/Nm^3
16	Process Vent – 16	15	Primary Scrubber with Hypo Secondary Scrubber with caustic circulation	NOx	25 mg/Nm^3
17	Process Vent – 17	15	Primary Scrubber Secondary Scrubber	NH_3	175 mg/Nm^3
18	Process Vent – 18	15	Primary Scrubber Secondary Scrubber Ventury Scrubber with caustic	HBr H_2S	5 mg/Nm^3 5 mg/Nm^3
19	Process Vent – 19	15	Primary Scrubber Secondary Scrubber Blower with caustic	NaCN	--
20	General Stack – 1	15	Primary Scrubber with Caustic Circulation	VOC	--
21	General Stack – 2	15	Primary Scrubber with Caustic Circulation	VOC	--
22	General Stack – 3	15	Primary Scrubber with Caustic Circulation	VOC	--
23	General Stack – 4	15	Primary Scrubber with Caustic Circulation	VOC	--
24	General Stack – 5	15	Primary Scrubber with Blower	VOC	--
25	General Stack – 6	15	Primary Scrubber with Blower	VOC	--
26	General Stack – 7	15	Primary Scrubber with Caustic Circulation	HCl Cl_2	20 mg/Nm^3 5 mg/Nm^3

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

Solid waste/Hazardous Waste:

S. No.	Name of Hazardous Waste	Source of Generation	Sch.	Category (as per HW rules 2016)	Proposed quantity (MTA)	Facility	Mode of Disposal & Remarks
1.	Used Oil	From Machinery	I	5.1	30	Collection, Storage, Reuse & Transportation	Disposal by selling it to registered re-processors/ reuse as lubricant within premises.
2.	Discarded Containers, barrels, liners contaminated with hazardous waste/ chemicals	From Raw material / Product packing	I	33.1	1825	Collection, Storage, Decontamination, Transportation	Disposal to Approved vendor or reuse within the premises.
3.	ETP Sludge and MEE Sludge	From ETP and MEE	I	35.3	15949.73	Collection, Storage, Transportation	Disposal at TSDF Site
4.	Stripper Solvent	From MEE	--	--	500	Collection, Storage, Transportation	Disposal by co-processing / Incineration at ICHWMF Site
5.	Process Waste / Waste Residue containing Pesticides	From process	I	29.1	5351.22	Collection, Storage, Transportation	Disposal by co-processing / Incineration at ICHWMF Site
6.	Date expired and off-specification on residues	From process	I	29.3	60	Collection, Storage, Transportation	Disposal by co-processing / Incineration at ICHWMF Site

S. No.	Name of Hazardous Waste	Source of Generation	Sch.	Category (as per HW rules 2016)	Proposed quantity (MTA)	Facility	Mode of Disposal & Remarks
7.	Distillation residues from contaminated organic solvents	From process	I	36.1	82.18	Collection, Storage, Transportation	Disposal by co-processing / Incineration at ICHWMF Site
8.	Used Catalyst (Spent Catalyst)	From process	I	29.5	19.34	Collection, Storage	Recycle / reuse within premises
9.	Ammonia Sol (20%-25%)	From process	II	A10	129.18	Collection, Storage, Transportation	Disposal by selling to Actual end users having permission under Rule -9 and after making MoU OR Recycle / reuse within premises
10.	Potassium Chloride Solution	From process	II	B-10	1490.59	Collection, Storage, Transportation	Disposal by selling to Actual end users having permission under Rule -9 and after making MoU
11.	Potassium Chloride Solids	From process	II		49.61		
12.	Aq. Alum (Aqueous Aluminum Chloride Solution)	From process	II		8119.40	Collection, Storage, Transportation	Disposal by selling to Actual end users having permission under Rule -9 and after making MoU
13.	Sodium Bromide Solution	From process	II		2796.15	Collection, Storage, Transportation	Disposal by selling to Actual end users having permission under Rule -9 and after making MoU.

S. No.	Name of Hazardous Waste	Source of Generation	Sch.	Category (as per HW rules 2016)	Proposed quantity (MTA)	Facility	Mode of Disposal & Remarks
14.	Potassium Bromide Solution	From process	II		1552.23	Collection, Storage, Transportation	Disposal by selling to Actual end users having permission under Rule -9 and after making MoU
15.	Potassium bromide (Solid)	From process	II		275.30	Collection, Storage, Transportation	Disposal by selling to Actual end users having permission under Rule -9 and after making MoU.
16.	Hydrobromic Acid	From process	II		1614.10	Collection, Storage, Transportation	Disposal by selling to Actual end users having permission under Rule -9 and after making MoU OR Recycle / reuse within premises
17.	Ammonium chloride (Solid)	From process	II		650.28	Collection, Storage, Transportation	Disposal by selling to Actual end users having permission under Rule -9 and after making MoU OR Recycle / reuse within premises
18.	Cupric chloride	From process	II		3.60	Collection, Storage	Recycle / reuse within premises
19.	Spent acid, Dilute sulfuric Acid	From process	II	B-15	3218.08	Collection, Storage, Transportation	Disposal by selling to Actual end users having permission under Rule -9 and after making MoU.

S. No.	Name of Hazardous Waste	Source of Generation	Sch.	Category (as per HW rules 2016)	Proposed quantity (MTA)	Facility	Mode of Disposal & Remarks
	Hydrochloric Acid (25-30%)	From process	II		8184.23	Collection, Storage, Transportation	Disposal by selling to Actual end users having permission under Rule -9 and after making MoU.
20.	Ammonium Sulphate solution	From process	II		2633.82	Collection, Storage, Transportation	Disposal by selling to Actual end users having permission under Rule -9 and after making MoU OR Recycle / reuse within premises
21.	Sodium Sulfite Solution (20%-25%)	From process	II		11875.71	Collection, Storage, Transportation	Disposal by selling to Actual end users having permission under Rule -9 and after making MoU.
22.	Sodium Sulfite Solids	From process	II		889.17		
23.	Sodium bi sulfide (Sodium Hydrogen Sulfide) Solution	From process	II		416.11	Collection, Storage, Transportation	Disposal by selling to Actual end users having permission under Rule -9 and after making MoU.
24.	Mix solvents	From process	II	B-28	206.40	Collection, Storage, Transportation	Disposal by selling to Actual end users having permission under Rule -9 and after making MoU.

S. No.	Name of Hazardous Waste	Source of Generation	Sch.	Category (as per HW rules 2016)	Proposed quantity (MTA)	Facility	Mode of Disposal & Remarks
25.	Di-methyl amine (DMA) Solution 30-40%	From process	II		86.72	Collection, Storage, Transportation	Disposal by selling to Actual end users having permission under Rule -9 and after making MoU.
26.	Acetic Acid	From process	II		198.37	Collection, Storage, Transportation	Disposal by selling to Actual end users having permission under Rule -9 and after making MoU OR Recycle / reuse within premises
27.	Sodium hypochlorite (NaOCl 10%)	From process	--	--	38.83	Collection, Storage	Recycle / reuse within premises
28.	Ferrous chloride	From process	--	--	152.76	Collection, Storage, Transportation	Disposal by selling to Actual end users having permission under Rule -9 and after making MoU OR Recycle / reuse within premises
29.	Ammonium Hydroxide	From process	--	--	967.20	Collection, Storage, Transportation	Disposal by selling to Actual end users having permission under Rule -9 and after making MoU OR Recycle / reuse within premises

S. No.	Name of Hazardous Waste	Source of Generation	Sch.	Category (as per HW rules 2016)	Proposed quantity (MTA)	Facility	Mode of Disposal & Remarks
30.	Ammonium Bisulfate	From process	--	--	928.54	Collection, Storage, Transportation	Disposal by selling to Actual end users having permission under Rule -9 and after making MoU OR Recycle / reuse within premises

Non- Hazardous Waste:

Sr. no.	Type/ Name of Hazardous waste	Specific Source of generation (Name of the Activity, Product etc.)	Proposed Quantity (MT/A)	Management of Non Hazardous Waste
1.	Coal Ash	From boiler	5840	Collection, Storage in covered area with RCC flooring & Sell to brick manufacturers and/or cement industry

13. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 30 Crore (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 34.45 Crore per annum. Industry proposes to allocate Rs. 5.7 Crore towards Corporate Social Responsibility.

14. Industry will develop greenbelt over an area of ~33.9 % i.e. 24936.79 m^2 out of total area of the project.

15. The PP reported that the Public hearing is exempted as per the Para 7.III. Stage (3) (i) (b) of the EIA Notification, 2006 as the project site is located within Dahej-III GIDC Industrial Estate. Dahej-III GIDC Industrial Estate is covered within PCPIR Region (Petroleum, Chemical & Petrochemical Investment Region) & PCPIR has obtained Environmental Clearance and CRZ Clearance vide File No. 21-49/2010-IA-III dated 14th September, 2017.

16. The PP proposed to set up an Environment Management Cell (EMC) by engaging Head EHS-Head (R&D) for effluent treatment & process development support- senior safety & fire officer – manager (process safety)- – Manager (Environment)- safety & fire officer- shift safety & fire officer for the functioning of EMC.

17. The PP reported that the following w.r.t carbon sequestration:

GHG emissions from-	CO_2 eq. Emissions in tons per MT of product	Remarks
Fuel combustion in utilities	2.00	Fuel – Coal
HSD combustion in D.G set	0.22	(considering 30 days of operation in a year)
Electricity consumption from Grid	0.67	To be supplied by DGVCL
Transportation of goods and passengers to and fro project site	0.06	Includes transport by bus, cars, vans from Ankleshwar, bharuch to dahej and transportation of raw materials and finished goods within 500 km.
TOTAL before reduction	**2.95**	
Reduction in GHG emissions from-		**Remarks**
Roof top solar power plant	0.06	About 354.1KW (calculated from https://solarrooftop.gov.in/rooftop_calculator).
CO_2 sequestered by Greenbelt	0.002	105 tons CO_2 to be sequestered per year
Net Carbon footprint	**2.90**	

The greenbelt trees shall sequester ~ 2090 tons of CO_2 during lifespan of 20 years (~105 tons of CO_2 per year). This amount of sequestration potential is appreciable and shall significantly reduce the carbon footprint of the unit.

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

19. The estimated project cost is Rs. 380 Crore. Total Employment will be 250 Nos. persons as direct & 150 Nos. persons indirect after proposed new project shall become operational.

20. **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 fuel, Greenbelt, water balance, schematic diagram of ETP and advised the PP to submit the following:

- Undertaking of gradually reduction in utilization of coal.
- Undertaking for revised Greenbelt plan including revised period of implementation, tree count and according budget.
- Submit Revised water balance diagram including treated sewage water to be used in greenbelt purpose.
- Submit Revised Schematic diagram of ETP indicating inlet of ATFD and recycle of sludge in Aeration tank.

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

21. 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, 24936.79 m^2 by planting 12000number 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). Along the periphery: in 2 lines i.e. first line should be of shrub/hedge in close spacing and along the road a row of small trees. Second line along the plant boundary with Tall trees with good canopy at a height of 5 m onwards and total height atleast 20 m shall be planted at a spacing of 2.5 m x2.5 m. Along internal roads in 2 lines i.e. first line of only flowering herbs/shrub, second line should be of shrub/hedge in close spacing. At open land area: Small to large trees planted at a spacing of 2.5 m x 2.5 m. The budget earmarked for the plantation shall be kept in separate account and should be audited annually. PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of the expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.

(ii) A separate Environmental Management Cell (having qualified persons with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. PP shall engage Head EHS- Head (R&D) for effluent treatment & process development support- senior safety & fire officer – manager (process safety)- – Manager (Environment). In addition to this one safety & health officer as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during 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 ₹ 30 Crore (Capital cost) and ₹ 34.45 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, Natural gas shall be used as primary fuel, during the unavailability coal shall be used in case of emergency.

(v) The Total water requirement is 3864 m^3/day of which fresh water requirement of 1864 m^3/day shall be met from GIDC 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.

(vi) High COD & High TDS effluent shall be sent to MEE for further treatment. low COD & low TDS effluent shall be sent to own ETP consisting of Primary, Secondary & Tertiary treatment. 120 KLD hall be used for GB development & maintenance purpose. 450 KLD High COD & High TDS plant effluent+ 234 KLD RO reject shall be sent to MEE for further treatment. 2134 KLD Low COD & low TDS effluent shall be sent to own ETP consisting of Primary, Secondary & Tertiary treatment. Treated effluent shall be sent to RO and RO permeate 1580 KLD shall be recycled and used in cooling tower. 310 KLD treated effluent sent to CETP, Dahej and final discharge and disposal into deep sea through u/g common effluent conveyance pipeline.

(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 Pesticide Industry as notified by the Ministry of Environment, Forest and Climate Change, *vide* GSR 446 (E), dated 13.6.2011 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 flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

(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.

Agenda No. 50.5

Proposed Nano-Fertilizer (Nano Urea/Nano DAP) Manufacturing Plant" With Production Capacity of 36500 KL located at L-3, L-2 (a), L-2 (b) & L-2 (c), Industrial Area Jasidih, Deoghar, Jharkhand by Indian Farmers Fertiliser Cooperative Limited (IFFCO) - Consideration of ToR

[Proposal No. IA/JH/IND3/422082/2023; File No. IA-J-11011/116/2023-IA-II(I)]

1. The proposal is for the ToR for preparation of EIA/EMP for Proposed Nano-Fertilizer (Nano Urea/Nano DAP) Manufacturing Plant" With Production Capacity of 36500 KL located at L-3, L-2 (a), L-2 (b) & L-2 (c), Industrial Area Jasidih, Deoghar, Jharkhand by Indian Farmers Fertiliser Cooperative Limited (IFFCO).

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

3. The PP applied for the ToR vide proposal number No. **IA/JH/IND3/422082/2023** dated16.3.2023. The proposal was referred back to the PP on 22.3.2023 and its reply was submitted on 12.4.2023. The proposal is placed in 50th EAC Meeting held on 19th -21st April, 2023, wherein the PP and an accredited Consultant, EQMS India Pvt. Ltd. [Accreditation number NABET/EIA/1922/RA0197; Validity: 3.5.2023] made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

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

S. No.	Product	Unit	Details
1.	Nano-Urea/Nano-DAP	KL per Annum	36500

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

6. The PP reported that proposed land area is 80937 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. Protected Forest is situated at 2.13 km in South-West direction

8. The PP reported that the Total water requirement is 419 KLD of which freshwater requirement of 304 KLD will be met from Ground water. Effluent of 128.4 KLD (Industrial Effluent- 58.4 KLD; Domestic Sewage- 70 KLD). Industrial quantity will be treated in ETP (capacity- 20 KLD), RO (capacity – 65 KLD) and MEE (capacity 20 KLD) and Domestic sewage will be treated in Sewage Treatment Plant of capacity 75 KLD. The plant will be based on Zero Liquid discharge system.

9. The PP reported that the power requirement of the plant will be 5000 kVA which will be met through Jharkhand Bijli Vitran Nigam Limited (JBVNL) and DG sets of capacity 2x750 kVA (with appropriate stack height as per CPCB norms) are proposed as power backup. **1 nos. of boiler (3.5 TPH)** will be installed. 30 m of stack height will be installed for controlling the particulate emissions within the statutory limit of 800 mg/Nm3 for the proposed boiler.

10. The PP reported that the project, being in notified industrial area industrial Area Jasidih, Deoghar,(vide SO PRO 1537 notification no. 2013 dated 22.12.1973 is exempted from the public hearing as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018.

11. Industry will develop greenbelt over an area of 36 % i.e., 29121 m^2 out of total area of the project.

12. The estimated project cost is **Rs 365 crores**. The PP reported that Total Employment will be **320** persons during operation phase.

13. **Deliberations by the EAC:**

The EAC inter-alia, deliberated on the Greenbelt Plan, Contour Plan along with Drainage Map and advised the PP to submit the following:

- Revised greenbelt development plan.
- Revised Contour Plan along with Drainage Map.

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

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

(i) The PP should develop Greenbelt 29121 m^2 out of total area of the project area. The plant species (8737 number of saplings) selected for greenbelt should have greater ecological value and should be of great utility value to the local population with emphasis on local and native species and the species which are tolerant to air pollution.

(ii) The PP shall submit the details of carbon foot print and carbon sequestration study w.r.t. proposed project.

(iii) Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains in constructed reservoirs. The rain water shall not be put into groundwater strata.

Agenda No. 50.6

Proposed Silicone-Based Products Manufacturing Unit with Production Capacity of 210 TPM located at Plot No. C-36/6, Vile Bhagad Industrial Area, Mangaon, Raigad, Maharashtra by Nishka Alliance LLP - Consideration of EC

[Proposal No. IA/MH/IND3/420157/2023; File No. IA-J-11011/161/2022-IA-II(I)]

1. The proposal is for environmental clearance for the Proposed Silicone-Based Products Manufacturing Unit with Production Capacity of 210 TPM located at Plot No. C-36/6, Vile Bhagad Industrial Area, Mangaon, Raigad, Maharashtra by Nishka Alliance LLP.

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).

3. The standard ToR was issued by the Ministry, vide letter no. IA-J-11011/161/2022-IA-II(I) dated 21.5.2022. The PP applied for Environment Clearance in CAF and submitted the EIA/EMP Report and other documents. The PP in the Form-2 reported that it is a **Proposed case.** The proposal is placed in 50th EAC Meeting held on 19th- 21st April, 2023, wherein the Project Proponent and an accredited Consultant, M/s SAGE (Sustainable Approach for Green Environment) LLP. [Accreditation number NABET/EIA/2225/IA 0105 valid till: 22.09.2025], 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 1.2141 Ha and no R& R is involved in the Project. The details of products and by–products are as follows:

S. No.	Unit/Products	Proposed Quantity (MT/Month)	CAS No.	End Use
	Manufacturing Process - Polymerization			
1.	NISH 1 cst	15	107-51-7	Personal Care
2.	NISH 1.5 cst	5	141-62-8	Personal Care
3.	NISH 2 cst	5	141-63-9	Personal Care
4.	NISH 3 cst	10	63148-62-9	Personal Care
5.	NISH 10 cst	8	63148-62-9	Personal Care
6.	NISH 20 cst	5	63148-62-9	Personal Care
7.	NISH 50 cst	5	63148-62-9	Personal Care
8.	NISH 100 cst	5	63148-62-9	Personal Care
9.	NISH 350 cst	25	63148-62-9	Personal Care
10.	NISH 5000 cps	5	63148-62-9	Personal Care
11.	NISH 10000 cps	5	63148-62-9	Personal Care
12.	NISH 12500 cps	5	63148-62-9	Personal Care
13.	NISH 50000 cps	5	63148-62-9	Personal Care
14.	NISH 5 Lakh	5	63148-62-9	Personal Care
15.	Dimethiconol (NISH Gum)	12	31692-79-2	Personal Care

	Manufacturing Process – Blending (Mixing)			
16.	Silicone Blend. (NISH 1015)	15	31692-79-2/ 541-02-6	Personal Care
17.	Silicone Blend. (NISH 1040)	5	31692-79-2/ 63148-62-9	Personal Care
18.	Silicone Blend. (NISH 1004)	15	31692-79-2/ 541-02-6/ 2116-84-9/ 7013169-0	Personal Care
19.	Silicone Emulsion. (NISH 1065)	10	68584-25-8/ 27323-41-7/ 7732-18-5	Personal Care
20.	Silicone Emulsion. (NISH 1035)	5	68554-54-1/ 78330-21-9/ 556-67-2/7732-18-5	Personal Care
21.	Silicone Emulsion. (NISH 1075)	5	9002-9-0/ 56-81-5/ 9002-92-0/ 9005-64-5/ 7732-18-5/ 122-99-6	Personal Care
22.	Silicone Gel (NISH 4015)	5	63148-62-9/ 5343-92-0/ 243137-53-3/ 17955-88-3	Personal Care
	Automotive care			
23.	NISH Wash	15	63148-62-9 /56-81-5/ 9055-67-8/ 1338-41-6/ 7732-18-5	Car Care
24.	Tyre Care	5	2116-84-9/ 63148-62-9/ 9055-67-8/ 1338-41-6/ 7732-18-5	Car Care
25.	Dashboard Care	5	2116-84-9/ 9002-92-0/ 63148-62-9/ 68551-12-1/ 7732-18-5	Car Care
26.	Car Shampoo	5	56-81-5/ 68551-12-1/ 900482-4/ 6178-40-0/ 7732-18-5	Car Care

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 Actt.

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. Tamhini Wildlife Sanctuary ESZ Boundary – 1.9 Km, Western Ghat (Draft Notification) ESZ boundary – 1.5 Km, Kolad River is flowing at a distance of 4.47 Km in North direction. The

PP reported that no forest area is involved in the proposed project and Leopard (Panthera pardus), Indian Vulture (Gyps indicus), Striped hyena (Hyaena hyaena), Indian Peafowl (Pavo cristatus), Malabar pied hornbill (Anthracoceros coronatus), Kondana Soft Furred Rat Schedule-I species exist within 10 km study area of the project for which conservation plan has been prepared and submitted to Deputy conservator of Forest on 1.3.2023.

7. The PP reported that **Ambient air quality** monitoring was carried out at 8 locations during March 2022 to May 2022 and the baseline data indicates the ranges of concentrations as: PM_{10} (42.67-68.14 µg/m^3), $PM_{2.5}$ (17.84-36.21µg/m3), SO_2 (6.13-12.96 µg/m^3) and NO_2 (9.36-27.90 µg/m^3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 29.893 µg/m3, NA µg/m3 and 23.75 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** was carried out at 8 locations during Mach 2022 to May 2022 and baseline data indicates the ranges of: Industrial area Leq (Day) (44.2-49.7 dB), Leq (Night) (31.7-37.9 dB) and Residential area Leq (Day) (43.6-44.1 dB), Leq (Night) (30.7-32.9 dB). Similarly, for Ground Water monitoring was carried out at 8 locations during Mach 2022 to May 2022 and baseline data indicates the ranges of concentrations as: The pH (7.42–7.88), Total Dissolved Solids (TDS) (310 to 420 mg/l), Total Hardness (110 to 192 mg/l) Nitrate (1.08 to 1.25 mg/l), Sulphate (45.8 to 53.2 mg/l). For **Surface Water** was carried out at 14 locations during Mach 2022 to May 2022 and baseline data indicates the ranges of concentrations as: The pH (7.12–7.8), Total Dissolved Solids (TDS) (348 to 384 mg/l), Chemical Oxygen Demand (COD) (37 to 48 mg/l), Total Hardness (260 to 296 mg/l). For **Soil** was carried out at 8 locations during Mach 2022 to May 2022 and baseline data indicates the ranges of concentrations as: The pH (8.13-8.48), The total nitrogen (45.1-58 kg/ha), The total available phosphorus (2.2-2.7 kg/ha), The total available potash (0.005-0.009 %).

8. The PP reported the total water requirement is 4.5 m^3/day of which fresh water requirement of 4.5 m^3/day will be met from MIDC Vile-Bhagad. The project will be operated on the basis of Zero Liquid Discharge System. The wastewater from lab activity and cooling tower blow down will be sent to ETP of 1 KLD capacity. Then it is followed by RO and Single Effect Evaporator (SEE) for further treatment. RO permeable will be used for Gardening and RO reject will be sent to SEE.

9. The PP reported the total power requirement is 280 KW and will be met from Maharashtra State Power Distribution Corporation Limited. New DG sets of 320 KVA capacity, DG sets are used as standby during power failure. Stack (height) of 10 m will be provided as per CPCB norms to the proposed DG sets. Proposed thermopack of capacity 6 Lacs Kcal/hr will be installed. Stack height of 30 m will be provided to control emissions.

10. **Details of Process Emissions Generation and their Management:** The PP reported that it is not applicable.

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

Type / Name Hazardous of Waste	Source of generation of waste	Category & Schedule as per HW Rules	Quantity (MT/Annum)	Management of HW
Used / Spent Oil	Machineries & DG Set	5.1	1.28	Collection, Storage, Transportation, reused as lubricant in plant machinery OR Sale to registered recyclers.
Discarded Barrels / Containers / Liners contaminated with Hazardous Chemicals / Wastes	Rejected Barrel	33.1	191 (No/M)	Sale to Registered recyclers.
Paper Bags	Raw material handling	--	0.1	Sale to Registered recyclers.
Charcoal & Celite Powder	Manufacturing Process	28.3	0.6	Sale to authorized vendor.
Process waste or residues (Sodium Sulphate)	Manufacturing Process	29.1	0.5	
Chemical sludge from waste water treatment	Utility	35.3	0.4 (MT/M)	
Filter Paper, PP Pleated Cartridge, Cartridge Filter, Cotton Waste	Process and Utility	--	0.24, 0.15, 0.15 & 1.2 respectively.	

12. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹- 116.6 Lakhs (capital) and the Recurring cost (operation and maintenance) will be about ₹ 19.80 Lakh per annum. Industry proposes to allocate 0.458 crores towards corporate Environmental responsibility (CER).

13. The PP reported that Industry will develop greenbelt over an area of 33% i.e., 4022.5 m^2 out of total area of the project 12141 m^2.

14. The PP proposed to set up an Environment Management Cell (EMC) to engage EHS manager- ETP incharge- Manager - MEE officer for the functioning of EMC.

15. The PP reported that the project, being in **notified industrial area (Notification dated 20.9.1990), is exempted from the public hearing** as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018.

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

17. The estimated project cost is Rs 22.90 crores including existing investment of Rs 0.00 crores. Total Employment will be 45 persons as direct.

18. **Deliberations by the EAC**:

The EAC inter-alia, deliberated on the the distance of ESZ/ ESA of Western Ghats from the project site boundary and noted that the documents submitted by the PP were lacking specific information of the same. The PP/ Consultant could also not clarify the same.

The EAC also deliberated on the Greenbelt devbelopment plan, fuel, Water balance, and sought the following requisite information/documents:

(i). An authenticated map approved by the Chief Wildlife Warden clearly depicting the distance of project site from the ESA of the Western Ghats and the nearest ESZs of the protected areas.

(ii). Action Plan for green belt development of minimum 33% of the project area (within the site and the industrial estate) @2500 per hectare, in consultation with forest department.

(iii). Revised layout with maximum greenbelt within the project site.

(iv). An Affidavit with respect to use of cleaner/ biofuel.

(v). Revised and detailed water balance.

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

Agenda No. 50.7

Setting up of a Manufacturing Unit of Formaldehyde of Production Capacity 100 TPD located at Plot No. 22/New Survey No. 300 (Old Survey No. 846/Paiki 2), Umiya Industrial Estate. Village: Indrad, Tehsil: Kadi, Dist: Mehsana, Gujarat by M/s DY Pharma - Consideration of EC.

[Proposal No. IA/GJ/IND3/422179/2023; File No. IA-J-11011/100/2022-IA-II(I)]

1. The proposal is for EC for the Setting up of a manufacturing unit of Formaldehyde of production capacity 100 TPD located at Plot No. 22/New Survey No. 300 (Old Survey No. 846/Paiki 2), Umiya Industrial Estate. Village: Indrad, Tehsil: Kadi, Dist: Mehsana, Gujarat by M/s DY Pharma.

2. The project/activity is covered under Category 'A' of item 5 (f)-Synthetic organic chemicals of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) and requires appraisal at Central Level by the Expert Appraisal Committee (EAC) as the project is kocated outside the notified industrial area.

3. The ToR was issued by the Ministry, vide letter no. IA-J-11011/100/2022-IA-II(I) dated 30.4.2022. The PP applied for the Environment Clearance in the Common Application Form and submitted the EIA/EMP Report and other documents. The PP in the CAF reported that it is a **Fresh case.** The proposal is placed in 50th EAC Meeting held on 19th-21st April, 2023, wherein the PP and an accredited Consultant, **M/s. Vardan EnviroNet, Gurugram Haryana (NABET Accrediation No.- NABET/EIA/2023/SA0158 dated 05.05.2023**], 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 0.2102 Ha and no R&R is involved in the Project. The details of products are as follows:

S. No.	Product	CAS No.	Proposed Capacity
1.	Formaldehyde	50-00-0	100 TPM

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.

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. 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.

7. The PP reported that the **Ambient air quality** monitoring was carried out at 8 locations during (1st March to 31st May, 2022) to and the baseline data indicates the ranges of concentrations as: PM10 (57.5 $\mu g/m^3$ to 73.6 $\mu g/m^3$), PM2.5 (26.6 $\mu g/m^3$ to 40.5 $\mu g/m^3$ SO_2 (6.1 $\mu g/m^3$ to 12.8$\mu g/m^3$) and NO_2 (12.2 $\mu g/m^3$ to 21.8 $\mu g/m^3$). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 72.61881 $\mu g/m^3$, 39.30711 $\mu g/m^3$, 11.88618 $\mu g/m3$ and 21.22731 $\mu g/m3$ with respect to $PM_{10,}$ $PM_{2.5}$, SO_2 and NO_2. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

8. **Noise-** Minimum and maximum noise levels recorded during the day time were from **47.58 dB Leq.** (N7) and **65.53 dB Leq.** (N2) respectively and minimum and maximum level of noise during night time were **39.88** dB Leq. (N7) and **61.84** dB Leq. (N2), respectively. The **ground water** pH varies has varied from 7.45 to 7.72. Total Hardness from 510.0 to 596.0 mg/l. Total Dissolved Solids from 657.0 to 899.0 mg/l and Fluoride varies from 0.56 to 1.43 mg/l. The water quality of all samples is found to be within permissible limits as per IS 10500:2012. The surface water pH varied from 7.52 to 7.90, Total Hardness from 411.52 to 756.00 mg/l., Total Dissolved Solids from 1029.00 to 1170.00 mg/l. Dissolved oxygen from 5.8 to 6.7 (mg/l), BOD varies from 12.00 to 17.00 (mg/l). The **soil** pH ranged from 7.57 to 7.73 and the organic matter was found to be 0.30% to 0.52%. The concentration of Nitrogen (118.35 Kg/ha. to 155.94 Kg/ha.) Phosphorus (15.86 Kg/ha. to 25.14 Kg/ha.) and Potassium (110.53 Kg/ha. to 141.84 Kg/ha.).

9. The PP reported that the Total Fresh Water requirement of the project is 92.7 KLD which will be met from Ground water. There will be no effluent generation from the process. RO reject will be treated in evaporator and treated water will be reused in Cooling tower. 1.0 KLD of water from the total 92.7 KLD will be used for domestic purpose. Approx. 0.8 KLD (80% of total domestic water consumption) will be generated as domestic sewage. Domestic wastewater (1.0 KLD) will be send to STP.

10. The PP reported that Power requirement for the project is 175.0 kVA which will be sourced from UGVCL (Uttar Gujarat Vij Company Ltd.). Two DG set of 250 kVA capacity will be installed for the power backup. Unit proposed 600 kg/hr., HSD boiler. Stack of height of 30 m will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm^3 for the proposed boilers.

11. **Details of process emissions generation and its management**: No gaseous emissions will be generated form the manufacturing process of Formaldehyde.

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

Type of Waste	**Cat.**	**Quantity**	**Source of Waste**	**Method of storage**	**Method of Disposal**
Salts from Evaporator	37.3	0.33 TPA	Evaporator	Stored in covered area with platform	Send to TSDF facility.
Empty Barrels/ Containers	33.1	2.0 TPA	Storage godown	Stored in covered area with platform	Send to vendor/ Sell to approved GPCB approved scrap dealer
Used Oils	5.1	792 litre/annum	Utilities	Stored in covered area with platform	Authorized recyclers identified by GPCB

13. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹- 25.0 Lakhs (capital) and the Recurring cost (operation and maintenance) will be about ₹-3.4 Lakhs per annum. The industry proposes to allocate 10 lakhs towards CER

14. The PP reported that Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 17.01.2023 which was presidedd by the District collector and District Magistrate. The main issues raised during the public hearing are related to Air pollution,

Effluent discharge, Employment generation, development of Greenbelt, Women Empowerment and Rain water harvesting.

S. No.	Issue Raised	Response/Commitment from Project proponent	Action Plan with time frame and budget
1.	Opposition of local stake holders for set-up of Chemical Plant in the area due to various probable pollution related issues and damage to crops.	1. For prevention of water pollution PP has committed to maintain Zero liquid discharge. 2. For control of Air emissions boiler will be operated only once in 3-4 months. So, there won't be any significant air emissions.	Rs. 1.0 lakh Has been allocated as capital cost and Rs. 0.2 lakhs have been allocated as recurring cost for Water pollution prevention and control. Rs. 5.0 lakhs Has been allocated as capital cost and Rs. 0.5 lakh has been allocated as recurring cost for Air pollution prevention and control.
2.	Employment Generation	Total 15 nos. of direct employment opportunities will be generated for which local residents will be preferred based on eligibility and various indirect employment opportunities will also be generated.	-
3	Greenbelt development	33% of the total plant area is allocated for Greenbelt development.	For development of greenbelt native plant species will be preffered and a total cost of Rs. 1.6 lakhs have been allocated for development of greenbelt and Rs. 0.3 lakhs Has been allocated for maintenance of the same.
4	Methanol Storage	Storage of methanol will be done through tanks and transferred through a closed system.	For Fire prevention and control Rs. 0.50 lakh has been allocated as capital cost and Rs. 0.1 lakhs has been allocated as recurring cost for maintenance of the same.
5	Rain Water Harvesting	Roof top harvesting will be done in rain water harvesting.	Capital cost of Rs. 1.0 lakhs and Rs. 0.2 Lakhs

			of recurring cost has been proposed for the development and maintenance of RWH.

15. Green belt will be developed over an area of 33% area of the total plant area out of the 0.2102 Ha of the plant area i.e., 0.0694 Ha of the total land. Industry will plant total 174 nos. of trees as per MoEF&CC norms. Total budget of Rs. 1,63,100/-will be for green belt plantation.

16. The PP proposed to set up an Environment Management Cell (EMC) consisting of General Manager- Manager (EHS) – Supervisor- Chemist- worker(safety)- worker (Environment) for the functioning of EMC.

17. The PP reported that carbon sequestration details are as follows -

Parameter	**Quantity**	**Emission Factor**	**Carbon Footprint/day (Ton/day CO_2)**	**Carbon Footprint/ year (T/Annum CO_2)**
			(Aspect Quantity Data*Emission factor)	
Emissions Generated from the Estimated Electricity Consumption				
Electricity	140 kW/day (0.14 MW/ day or 0.0058 MWhr)	0.92 Ton/MWh CO_2	0.0053	1.749
From Indirect Emissions including Transportation and Use of Products				
Fuel (HSD)	100 Ltr/day) (Considering 100 Ltr/hr consumption of fuel and max. 1 Hr/day run of 250 KVA DG set (2 nos.))	0.00268 Ton/Ltr CO_2	0.268	88.44

	200 Lit/Hr (Considering max. 20 hrs. run annually for 0.6 TPH)	0.000112 Ton/Ltr CO_2(Considering 0.00268 Ton/day CO_2)	0.0224 Ton/hr. CO_2	0.448

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

19. The estimated project cost is Rs 5.0 Crores. Total employment will be 15 nos. will be appointed.

20. **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 to the effect that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the 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 and its budget, and advised the PP to submit the revised greenbelt development plan and its budget. The PP submitted the same 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.

21. 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 0.0694 Ha by planting 210 trees within a year of grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft. The budget earmarked for the plantation shall be kept in separate account and should be audited annually. PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(ii) A separate Environmental Management Cell (having qualified persons with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions and shall also engage General Manager- Manager (EHS) – Supervisor-Chemist- worker(safety)- worker (Environment). In addition to this one safety & health officer as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during 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 ₹ 25.0 Lakhs (Capital cost) and ₹ 3.4 Lakhs per annum (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(iv) The Total Fresh Water requirement of the project is 92.7 KLD which will be met from Ground water. The PP should ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawal only after obtaining valid agreement from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year.

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

(vi) The project proponent shall comply with the environment norms for synthetic organic chemical as notified by the Ministry of Environment, Forest and Climate Change, *vide* GSR 608 (E), dated 21. 7.2010 under the provisions of the Environment (Protection) Rules, 1986.

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

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

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

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

(xi) As committed, Zero Liquid Dscharge shall be ensured. RO reject shall be treated in evaporator and treated water shall be reused in Cooling tower. 1.0 KLD of water from the total 92.7 KLD shall be used for domestic purpose. Approx. 0.8 KLD (80% of total domestic water consumption) shall be generated as domestic sewage. Domestic Waste water shall be send to STP (1.0 KLD).

(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. 50.8

Proposed project for Manufacturing of Dyes and Dye Intermediates with Total Capacity: 910 MTPM (Dyes: 220 MTPM + Dye Intermediates: 690 MTPM) located at urvey No. 480 & 361, Village: Neja, Tal: Khambhat, Dist. Anand, Gujarat by M/s Vidhi Hexachem LLP. - Consideration of EC

[Proposal No. IA/GJ/IND3/422015/2023; File No. IA-J-11011/117/2022-IA-II(I)]

1. The proposal is for the environmental clearance for the Proposed project for the manufacturing of Dyes and Dye Intermediates Total Capacity: 910 MTPM (Dyes: 220 MTPM + Dye Intermediates: 690 MTPM) located at urvey No. 480 & 361, Village: Neja, Tal: Khambhat, Dist. Anand, Gujarat by M/s Vidhi Hexachem LLP.

2. The project/activity is covered under Category 'A' of item 5 (f)-Synthetic organic chemicals of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) and requires appraisal at Central Level by the Expert Appraisal Committee (EAC) as the project is located outside the notified industrial area.

3. The standard ToR has been issued by Ministry vide letter no. IA-J-11011/100/2022-IA-II(I) dated 30.4.2022. The PP applied for Environment Clearance in CAF and submitted EIA/EMP Report and other documents. The PP reported in Form that it is a **Fresh EC**. The proposal is now placed in 50th EAC Meeting held on 19th-21st April, 2023, wherein the PP and an accredited consultant, Consultant **San Envirotech Pvt. Ltd., Ahmedabad [Accreditation number NABET/EIA/1922/RA0216_Rev 01, Valid up to 21.6.2024]** 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 total land area of 18276.0 m^2 will be used for the proposed project and no R& R is involved in the Project. The details of products are as follows:

S. No.	Name of the Product	CAS Nos.	Quantity MT/Month	Type of products	End use of Product
1.	Aniline 2:4 DSA (1- Amino Benzene 2,4-Disulfonic Acid)	137-51-9	60	Dye Intermediates	Dyes Manufacturing
2.	Aniline 2:5 DSA (1-Amino Benzene 2,5-Disulfonic Acid)	98-44-2		Dye Intermediates	
3.	PNCBOSA (2-Chloro 5-Nitro Benzene Sulfonic Acid)	946-30-5		Dye Intermediates	
4.	4 Nitro 2 Sulpho Benzoic Acid	5344-48-9		Dye Intermediates	
5.	BDSA (4,4-Benzedine Disulphonic Acid)	831-59-4		Dye Intermediates	
6.	4 NADPSA (4-Nitro, 4' Amino, Diphenylamine, 2-Sulfonic Acid)	91-29-2		Dye Intermediates	
7.	4 ADAPSA	91-30-5		Dye Intermediates	

S. No.	Name of the Product	CAS Nos.	Quantity MT/Month	Type of products	End use of Product
	(4-Aminodiphenylamine-2-Sulfonic Acid)				
8.	NASDA (4-Nitro-4-Aminostilbene-2,2-Disulfonic Acid)	119-72-2		Dye Intermediates	
9.	4 NAPSA (4-Nitro 2-Amino Phenol 6 Sulphonic Acid)	96-67-3		Dye Intermediates	
10.	Bronner's Acid (2-Amino-6-naphthalene sulfonicacid; 2-Amino-6-naphthylsulfonic acid)	93-00-5		Dye Intermediates	
11.	EBAMSA (N-ethyl-N-benzylaniline-3'-sulfonic acid)	101-11-1		Dye Intermediates	
12.	G Salt (2-Naphthol-6, 8-Disulphonic Acid)	118-32-1		Dye Intermediates	
13.	Naptho Sultone (1 Napthol 8 Sulphonic acid Sultone)	83-31-8		Dye Intermediates	
14.	OT5SA (Ortho Toluidine 5-Sulfonic Acid)	98-33-9		Dye Intermediates	
15.	PA3SA (p-Anisidine-3-sulfonic acid)	6470-17-3		Dye Intermediates	
16.	PA2SA (p-anisidine-2-sulfonic acid)	13244-33-2		Dye Intermediates	
17.	R Salt (2-Naphthol -3,6-Disulphonic Acid)	148-75-4		Dye Intermediates	
18.	Sachhefers acid (2 Napthol 6 Sulphonic Acid)	135-76-2		Dye Intermediates	
19.	Sodium Naphthonate	130-13-2		Dye Intermediates	
20.	Sulphanilic Acid	121-57-3		Dye Intermediates	
21.	Sulpho VS (3-Sulphonyl 4-Amino Phenyl Beta Hydroxy Ethyl Sulphone Sulphate Ester)	42986-22-1		Dye Intermediates	

S. No.	Name of the Product	CAS Nos.	Quantity MT/Month	Type of products	End use of Product
22.	Sulpho OAVS (5-Sulphonyl 1-Amino 2-Methoxyl Phenyl Beta Hydroxy Ethyl)	121-88-0		Dye Intermediates	
23.	PICOSA (Para cresidine ortho sulphonic acid)	6471-78-9		Dye Intermediates	
24.	DNSDSA (Di-Nitro Stilbene Di Sulphonic Acid)	128-42-7	150	Dye Intermediates	
25.	PNTOSA (Para Nitro Toluene Ortho Sulphonic Acid)	121-03-09		Dye Intermediates	
26.	ONCBSA (Ortho Nitro Chlorobenzene 4 Sulphonic Acid)	616-84-2		Dye Intermediates	
27.	3 Bromo Benzanthrone	81-96-9	5	Dye Intermediates	
28.	Bromamine Acid	116-81-4		Dye Intermediates	
29.	4 Sulpho Anthranilic Acid	98-43-1	50	Dye Intermediates	
30.	4 Sulpho Hydrazone	118969-29-2		Dye Intermediates	
31.	5 Sulpho Hydrazone	68645-45-4		Dye Intermediates	
32.	MUA (Meta Ureido Aniline)	59690-88-9	35	Dye Intermediates	
33.	Metanilic Acid	121-47-1		Dye Intermediates	
34.	PAPASA (Para Amino Para Azo Salisylic Acid)	6470-98-0	10	Dye Intermediates	
35.	PAABSA (Para-Aminoazobenzene-4-sulfonic acid)	104-23-4		Dye Intermediates	
36.	Peri Acid (1 Aminonapthalene 8 sulphonic Acid)	82-75-7	05	Dye Intermediates	
37.	Phenyl Peri Acid (8-Anilinonaphthalene-1-sulfonic acid)	82-76-8		Dye Intermediates	

S. No.	Name of the Product	CAS Nos.	Quantity MT/Month	Type of products	End use of Product
38.	2 Pyridone	142-08-5	75	Dye Intermediates	
39.	2R Acid (1-Naphthol-3,6-Disulfonic Acid)	90-40-4		Dye Intermediates	
40.	3,3 DCB (3,3-Dichlorobenzidine)	91-94-1		Dye Intermediates	
41.	3,5 DABA (3,5-Diamino Benzoic Acid)	535-87-5		Dye Intermediates	
42.	4 CAB (4 Chloro 3 Amino Benzoic Acid)	2840-28-0			
43.	4 NAP (4- Nitro 2- Amino Phenol)	99-57-0		Dye Intermediates	
44.	5 NAP (5- Nitro 2- Amino Phenol)	121-88-0			
45.	4 CAP (4-Chloro 2-Amino Phenol)	95-85-2		Dye Intermediates	
46.	Carbazole	86-74-8		Dye Intermediates	
47.	Chloranil (Tetrachloro-p-benzoquinone)	118-75-2		Dye Intermediates	
48.	Copper Formazone (Copper Formazone Blue of 4-Sulfo Anthranilic Acid)	77840-01-8		Dye Intermediates	
49.	DTPTSA (Dehydrothio Para Toluidine Sulphonic Acid)	130-17-6		Dye Intermediates	
50.	DMAVS (2:5 Di Methoxy Aniline Vinyl Sulphone)	26672-24-2		Dye Intermediates	
51.	K Acid (B-Naphthyl Amine-3:6:8 Trisulphonic Acid	118-03-6		Dye Intermediates	
52.	MAP (Meta Amino Phenol)	591-27-5		Dye Intermediates	
53.	Di Ethyl MAP (Ethyl Meta Amino Phenol)	91-55-9		Dye Intermediates	
54.	MAMAS (Meta Methoxy 4 Amino Azobenzene 3 Sulphonic Acid)	138-28-3		Dye Intermediates	

S. No.	Name of the Product	CAS Nos.	Quantity MT/Month	Type of products	End use of Product
55.	Mix Cleve Acid (5-Amino-2-naphthalenesulfonic acid)	119-79-9		Dye Intermediates	
56.	Opsamide (2-Amino phenol-4-sulphonamide)	98-32-8		Dye Intermediates	
57.	Methyl Opsamide (2-Amino Phenol-N-Methyl-4-Sulphonamide)	80-23-9			
58.	Anthranilic Opsamide 2-Amino Phenol-4-(2-Carboxy) Sulfonanilide	91-35-0			
59.	PAA (Para Amino Acetanilide)	122-80-5		Dye Intermediates	
60.	PNA (Para Nitro Aniline)	100-01-06		Dye Intermediates	
61.	ONA (Ortho Nitro Aniline)	91-23-6			
62.	H Acid (1-Amino-3,6-Disulfo-8-Naphthol)	90-20-0	100	Dye Intermediates	
63.	V.S. (Vinyl Sulphone)	2494-89-5	200	Dye Intermediates	
64.	Reactive Blue 19	2580-78-1	20	Dyes	Textile Industries
65.	Reactive Blue HEGN Base (Reactive Blue 198)	124448-55-1		Dyes	
66.	Reactive Blue 49 Base	12236-92-9		Dyes	
67.	Reactive Black 5	17095-24-8	200	Dyes	
68.	Reactive Red 278	--		Dyes	
69.	Reactive Orange CD	--		Dyes	
	Total		**910**	--	--

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, and Wildlife Corridors etc. within 10 km distance of the project site. Pond of Neja Village is at a distance of 2.35 km in E direction. There is no forest land involved in the proposed project. No Schedule-I species were observed in the 10 km radius from the proposed project site**.**

7. **Ambient Air Quality**: The PP reported that the Ambient air quality monitoring was carried out at 8 locations during March, 2022 to May, 2022 and the baseline data indicates the ranges of concentration as: PM_{10} (65.5 - 76.8 µg/m^3), $PM_{2.5}$ (35.5 - 45.7 µg/m^3), SO_2 (13.8 - 18.7 µg/m^3), NOx (19.9 - 23.7 µg/m^3). AAQ modeling study for point source emission indicated that the

maximum incremental GLCs after the proposed project would be 5.328 μg/m^3, 3.158 μg/m^3 and 2.660 μg/m^3 with respect to PM, SO_2 and NOx. The resultant concentrations are within the national ambient air quality standards (NAAQS). **Noise**- The monitored noise level in the day time Leq (Ld) varies from 45.2 to 55.4 dB(A) and the night time Leq (Ln) varies from 38.9 to 41.9 dB(A) within the study area. Higher noise value of 55.4 dB(A) was recorded during day time at Primary School Nagra & lower noise value of 38.9 dB(A) was recorded during night time at Village Lunej. **Soil**- In the study area, variations in the pH value ranging from 7.48 to 7.65 which shows that the soil is slightly alkaline in nature. Organic Matter ranges from 1.78 to 3.45 mg/kg in the soil samples. Soil of the studarea is known to be moderate for cultivation because high salinity Generally, soils with low bulk density have favorable physical conditions (porosity and permeability) whereas those with high bulk density exhibit poor physical conditions for agriculture crops. **Ground Water-** The results have been compared with the drinking water quality standards specified in IS: 10500-2012. It is found that, all the samples meet the permissible limit authority (BIS), except TDS, Calcium & Chloride. This is due to sea water ingress because study area is very ingress because study area is very close to coast line.

8. The PP reported that the total water requirement is 447.0 m^3/day; of which fresh water requirement of 230.0 m^3/day will be met from Ground Water Source – Bore well. 217.0 m^3/day will be recycled/treated water. Sources of industrial effluent generation will be from process, scrubber, washing, boiler blow down, cooling bleed off. Total trade effluent generation will be 265 KLD. Effluent streams will be segregated. From process effluent of VS Plant, Spent H_2SO_4 and Acetic Acid will be segregated, which will be partially reused in-house and partially will be sold to actual users under Rule-9 of Haz. Rule, 2016. After segregation, VS Condensate (45.0 KLD) which contain mainly G-Salt will be sent to MEE for G-Salt recovery. MEE Condensate (39.0 KLD) will be reused within premises. Concentrated stream of effluent from Dye Intermediate Plant (25 KLD) will be treated in ETP-2 having primary and tertiary treatment units and evaporated in in-house spray dryer to achieve Zero Liquid Discharge (ZLD). Dilute stream of effluent (195 KLD) from Dyes plant, utilities, scrubber, washing effluent will be treated in ETP-1 having primary and tertiary treatment units. After treatment, it will be passed through RO. RO permeate (150.0 KLD) will be reused. RO reject (45.0 KLD) will be spray dried in in-house spray dryer along with concentrated stream of effluent of Dye Intermediate. Thus, unit proposed to achieve ZLD. Domestic sewage (8.0 KLD) will be treated in STP and treated sewage will be utilized for Greenbelt development.

9. The power requirement will be 900 kVA and will be met from Madhya Gujarat Vij Company Ltd. (MGVCL). Unit proposed to install One D.G. Set (250 kVA) capacity and will be used as standby during power failure. Stack (height 11 meters) will be provided as per CPCB norms to the proposed D.G. Set. In proposed unit, Agro Briquettes/Imported Coal fired 2 Boilers (3 TPH x 2 nos.), Agro Briquettes/Imported Coal fired 2 nos. of Thermic Fluid Heater (2.5 Lakhs Kcal/hr. and x 5.0 Lakhs Kcal/hr.), 2 nos. of Briquettes/Imported Coal fired Hot Air Generator (15 Lakhs Kcal/hr. and x 10 Lakhs Kcal/hr.) will be installed. Multi cyclone separator & Bag Filter with a stack height of 30 m will be installed on Boiler, Cyclone separator & Bag Filter with a stack height of 30 m will be installed on TFHs (Common Stack for both TFHs), HAGs for controlling the particulate emissions within the statutory limit of 150 mg/Nm^3 for the proposed utilities. The details of stacks and APC measures are given below:

Sr. No.	Stack attached to	Fuel Type	Stack Height (m)	APC measures	Probable emission
Flue Gas Stacks					
1.	Steam Boiler-1 (3 TPH)	Agro Briquette - 14 TPD /Imported Coal - 10 TPD	30 (Common stack)	Multi Cyclone separator & Bag Filter	SPM<150 mg/Nm^3 SO_2<100 ppm NO_x<50 ppm
	Steam Boiler-2 (3 TPH)	Agro Briquette - 14 TPD /Imported Coal - 10 TPD		Multi Cyclone separator & Bag Filter	SPM<150 mg/Nm^3 SO_2<100 ppm NO_x<50 ppm
2.	Thermic Fluid Heater-1 (2.5 Lakhs Kcal/hr.)	Agro Briquette - 2.0 TPD /Imported Coal - 1.5 TPD	30 (Common stack)	Cyclone separator & Bag Filter	SPM<150 mg/Nm^3 SO_2<100 ppm NO_x<50 ppm
	Thermic Fluid Heater-2 (5 Lakhs Kcal/hr.)	Agro Briquette – 4.0 TPD /Imported Coal 3.0 TPD			
3.	Hot Air Generator-1 (15 Lakhs Kcal/hr.)	Agro Briquette - 12.0 TPD /Imported Coal 9.0 TPD	30 (Common stack)	Cyclone separator & Bag Filter	SPM<150 mg/Nm^3 SO_2<100 ppm NO_x<50 ppm
	Hot Air Generator-2 (10 Lakhs Kcal/hr.)	Agro Briquette - 8.0 TPD /Imported Coal - 6.0 TPD		Cyclone separator & Bag Filter	SPM<150 mg/Nm^3 SO_2<100 ppm NO_x<50 ppm
4.	D G Set (250 kVA)	HSD - 50 lit/hr.	11	Adequate Stack Height	SPM<150 mg/Nm^3 SO_2<100 ppm NO_x<50 ppm

10. **Details of Proposed Process Emissions Generation and its Management:** Process gas emission will be from vent attached with process vessel of Multipurpose plant 1 (for sulphonation), vent of Multipurpose plant 2 (sulphonation), vent of Multipurpose plant 3 (For Sulphonation & Nitration), vent of H Acid Plant (For Sulphonation), vent of H Acid Plant (For Nitration), vent of V.S. Plant, common vent of 3 nos. of Spin flash dryers, vent of Spray dryer (for product) and vent of Agro Briquettes/Low Sulfur Coal fired Spray dryer (for effluent). Two stage Alkali Scrubber will be installed on process reactors to control process emission and to control particulate emission, in built cyclone & bag filter will be installed on vent of Spin Flash Dryers and Spray Dryer

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

Sr. No.	Types of Waste	Sources	Cat. of Waste as per Haz. Rule,2016	Quantity	Disposal method
1	ETP Sludge	ETP	35.3	1800 MTPA	Collection, storage, transportation & disposal at TSDF site approved by GPCB.
2	Salt from Spray Dryer	Spray Dryer	35.3	1872 MTPA	Collection, storage, transportation & disposal at TSDF site approved by GPCB.
3	Iron sludge	Iron Reduction Process	26.1	5300 MTPA	Collection, storage, transportation & disposal at TSDF site approved by GPCB/cement industry.
4	Gypsum Sludge	Process of H-Acid	26.1	8675 MTPA	Collection, storage, transportation & disposal at TSDF site approved by GPCB/cement industry.
5	Spent Oil	Driving unit & D.G. set	5.1	1.0 Kl/Yr.	Collection, storage, transportation & use within premises as a lubricant/ sell to registered recycler.
6	Discarded containers / barrels/liners	Raw material	33.1	Drums 18000 nos./yr. Liners 24.0 MT/yr.	Being used for packing of ETP sludge; in case of excess, it will be sold to approved recycler or traders.
7	Spent H_2SO_4 (30-35%)	Sulphonation Process	26.3	33072 MTPA	Collection, storage and Captive use for H-Acid & VS plant and other products and balance sold to actual users under Rule-9 of Haz. Rule.
8	Spent HCl (28-30%)	APCM	26.3	2810 MTPA	Collection, storage and captive use in dyes plant.
9	Acetic acid (93-95%)	From Process of VS	26.3	625 MTPA	Collection, storage and captive use in other products
10	SBS (35%)	APCM	26.3	4680 MTPA	Collection, storage and Captive use in other products
11	Glauber Salt	From Process of VS	26.1	1250 MTPA	Collection, storage and captive use in plant and Sold to actual users under Rule 9.
Solid Waste Generation					

1.	Fly Ash	From APCM	--	1400 MTPA	Collection, storage and sold to brick manufacturers.

12. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 2.3 Crore (capital) and the Recurring Cost (operation and maintenance) will be about ₹-5.37 Crores per annum., Industry proposes to allocate ₹-. 24.0 Lakhs towards Corporate Social Responsibility

13. Industry will develop greenbelt over an area of 33.16% i.e. 6060 m^2, out of total area of the project.

14. The PP reported that the Public Hearing for the proposed project has been conducted by the Gujarat Pollution Control Board on 27.12.2022 which was presided by the Resident Add. Collector &Additional District Magistrate. The main issues raised during the public hearing were for local employment, greenbelt development and proper pollution control.

Issue raised	**Response/Commitment from Project Proponent**	**Action Plan**	**Budget Allocation**
• Employment Opportunities.	-- Representative of the project informed that, we have given commitment to give preference to local people for employment and once again giving here.	Unit will give first priority to local people for employment from the construction stage and operational phase. Unit will give first priority to local people for employment from the construction stage and operational phase.	--
• Air pollution control measures, Hazardous waste disposal of proposed project in reference to Environment impacts.	---	Unit will take care for Environmental pollution control from the construction phase and strictly operate APCM at operational phase.	Around Rs. 193.8 Lakhs Allocate for pollution control system including water, air, solid waste disposal and greenbelt.
• Greenbelt development.	• Representative of the project informed that,	Unit will take develop greenbelt	Around Rs. 16.8 Lakhs

	we have given commitment to give preference to local people for employment and once again giving here. • Apart from this, both CSR and CER are social activities proposed by the unit. CER is for environmental conservation and CSR is for social upliftment and for both of activities, adequate efforts will be made by the unit. The fund of CER (Rs. 24 Lakhs) will be utilized before the unit is commissioned and after the unit is commissioned, an annual fund will be raised for social welfare. • Local farmers and forest department will be consulted for proper and enhanced development of greenbelt. • Details of APCM are already covered in Presentation.	with consultation of local farmers for suitable spices selection for greenbelt development. Greenbelt development will be parallel of plant construction.	Allocate for greenbelt development.

15. The PP proposed to set up an Environment Management Cell (EMC) by engaging Senior Manager (EHS)- Manager- Executive- ETP RO, SD incharge- Safety officer- ETP, RO operator- SD operator for the functioning of EMC.

16. The PP reported that Total carbon emission from the proposed project will be 1656Tonnes/Annum. Unit will sequestrate/reduce around 2459.5 Tonnes/Annum or 14.84% of total carbon dioxide generated during year by planting trees in proposed project site and installing

solar PV panel at rooftop of building and surrounding the plant premises where open area available.

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

18. The estimated project cost is Rs. 12.0 Crore. Total employment will be 50 persons as direct.

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 Project Proponent in desired format along with the EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

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

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

The EAC inter-alia, deliberated on the plant layout, Greenbelt plan, water balance, stack emission details, fuel and advised the PP to submit the following:

- Revised Plant Layout with development of greenbelt in periphery.
- Revised greenbelt plan with proposal of 2000 trees and completion of greenbelt within 1 year.
- Revised water balance diagram showing clear demarcation of STP treated water utilization for greenbelt.
- Revised stack details in terms of proposal of common stacks in utility wherever feasible.
- Commitment regarding coal will be used in case of emergency/nonavailability of Agro Briquette only and to eliminate the use of coal during course of time.

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

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

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

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

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

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) The PP shall develop Greenbelt over an area at least 6150 m^2 by planting 2030 trees within a year of grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft. The budget earmarked for the plantation shall be kept in separate account and should be audited annually. PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(ii) A separate Environmental Management Cell (having qualified persons with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions and shall also engage Senior Manager (EHS)- Manager- Executive- ETP RO, SD incharge- Safety officer- ETP, RO operator- SD 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 ₹ 2.3 Crore (Capital cost)

and ₹ 5.37 Crores per annum (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(iv) The total water requirement is 447.0 m^3/day; of which fresh water requirement of 230.0 m^3/day will be met from Ground Water Source. 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) Agro Briquette shall be used as a primary fuel in the boilers & coal shall be used as secondary fuel only in case of emergency.

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

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

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

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

(xii) As committed, Zero Liquid Discharge (ZLD) shall be ensured. Total trade effluent generation shall be 265 KLD. Effluent streams shall be segregated. From process effluent of VS Plant, Spent H_2SO_4 and Acetic Acid shall be segregated, which shall be partially reused in-house and partially shall be sold to actual users under Rule-9 of Haz. Rule, 2016. After segregation, VS Condensate (45.0 KLD) which contain mainly G-Salt shall be sent to MEE for G-Salt recovery.

MEE Condensate (39.0 KLD) shall be reused within premises. Concentrated stream of effluent from Dye Intermediate Plant (25 KLD) shall be treated in ETP-2 having primary and tertiary treatment units and evaporated in in-house spray dryer. Dilute stream of effluent (195 KLD) from Dyes plant, utilities, scrubber, washing effluent will be treated in ETP-1 having primary and tertiary treatment units. After treatment, it shall be passed through RO. RO permeate (150.0 KLD) shall be reused. RO reject (45.0 KLD) shall be spray dried in in-house spray dryer along with concentrated stream of effluent of Dye Intermediate. Domestic sewage (8.0 KLD) shall be treated in STP and treated sewage shall be utilized for Greenbelt development.

(xiii) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB servers. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

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

(xv) The occupational health centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.

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

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

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

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

(xx) The PP shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling

to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.

(xxi) 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. 50.9

Expansion in the Production Capacity of an Existing Unit from 1026.775 MT/Month to 3167.86 MT/Month located at Plot No. 3, GIDC Industrial Estate, Nandesari, Vadodara, Gujarat by M/s. Oriental Aromatics Limited - Consideration of EC

[Proposal No. IA/GJ/IND3/421471/2023; File No IA-J-11011/109/2023-IA-II(I)]

1. The proposal is for environmental clearance for the Expansion in the Production Capacity of an Existing Unit from 1026.775 MT/Month to 3167.86 MT/Month located at Plot No. 3, GIDC Industrial Estate, Nandesari, Vadodara, Gujarat by M/s. Oriental Aromatics Limited.

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

3. The standard ToR was issued by the Ministry, vide letter no. IA-J-11011/100/2022-IA-II(I) dated 30. 4. 2022. The PP applied for Environment Clearance in CAF and submitted the EIA/EMP Report and other documents. The PP in the Form-2 reported that it is **Expansion case**. The proposal is now placed in 50th EAC Meeting held on 19th- 21stApril, 2023, wherein the Project Proponent and an accredited Consultant, s. Bhagwati Enviro Care Pvt. Ltd. [Accreditation number QCI/NABET/ENV/ACO/23/2733, valid up to: 10.07.2023, made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that Existing land area is 162128 m^2 and no additional land will be used proposed expansion and no R& R is involved in the Project. The details of products are as follows:

S. No.	Name of the Products	CAS No.	Quantity MT/Month		
			Existing	Proposed	Total
1	DHMOH	18479-58-8	10	40	50
2	Alpha Pinene Epoxide	1686-14-2	100	67	167
3	Alpha Campholenic Aldehyde (Campholenic Aldehyde)	4501-58-0	50	75	125
4	NOPOL	--	1	-1	0

5	Sandalica/IBCH	3407-42-9	30	12	42
	SandalicaLuxe				
	Sandalica Plus				
6	CAPSOL	--	10	-10	0
7	ASTROLIDE/ASTROMUSK	1222-05-5	350	0	350
	Astromusk (BB)				
	Astromusk (DEP)				
	Astromusk (DPG)				
	Astromusk (S)				
	Astromusk S-80				
	Astromusk (IPM)				
8	KETONES	--	5	2	17
	Amberone	143785-33-5			
	Astrone	53-16-7	10		
9	Astromeran	--	2	6.5	8.5
10	H.B.OIL	--	10	-10	0
11	Chromate Solution /Potassium Dichromate Solution	7789-00-6	58.32	189.54	247.86
12	HYDROCARBONS(PARACYMENE/PARAMETHANE)	--	50	-50	0
13	ALCOHOLS (Sandal Alcohols)		70	0	70
	3-methyl-5-(2,2,3-trimethyl-1-cyclopent-3-enyl)pentan-2-ol (Keralore)	65113-99-7			
	(E)-2-ethyl-4-(2,2,3-trimethyl-1-cyclopent-3-enyl)but-2-en-1-ol (Bacdanol/Chandanol)	28219-61-6			
	BACDANOL (TOCO)/Chandanol (TOCO)	--			
	(E)-2-ethyl-4-(2,2,3-trimethyl-1-cyclopent-3-enyl)but-2-en-1-ol (sanjinol/ChandanolLaevo)	28219-61-6			
	SANJINOL (TOCO)/ChandanolLaevo (TOCO)	--			
14	OTHER ALCOHOLS	--	70	0	70
	Shivanol	--			
	Shaktinol/Namdranol	--			
	Durganol/Niytanol	--			
	Mysornol	--			
	MYSORNOL SUPER	--			
15	ACETYLATION PRODUCTS(TERPINYL ACETATE)	--	30	-30	0
16	Hydro peroxides	--	10	-10	0
17	Macrocyclic Musk	106-02-5	1	0	1
18	Aldehyde Group				
	Aldehyde C -7 DMA	10032-05-0	0.12	0.88	1
	Aldehyde C -10 Nitrile	1975-78-6	0.1	0.9	1
	Aldehyde C -11 Nitrile	2244-07-7	0.1	0.4	0.5

	Aldehyde C -12 Nitrile	2437-25-4	0.1	0	0.1
	Aldehyde C-11 (Undecylenic)	112-45-8	0.12	0.38	0.5
	Aldehyde C-7 Heptanal&Undecylenic acid	111-71-7	1	0	1
19	Allyl Group				
	Allyl Amyl Glycolate	67634-00-8	0.24	9.76	10
	AllylCaproate	123-68-2	12	28	40
	AllylCyclohexyl Propionate (Allyl 3-Cyclohexyl Propionate)	2705-87-5	0.48	8.02	8.5
	Allylheptanoate	142-19-8	7.2	32.8	40
	AllylPhenoxy Acetate	7493-74-5	1.2	8.8	10
20	Amyl Group				
	Alpha Amyl Cinnamic Aldehyde	122-40-7	2.4	23.6	26
	Amyl Acetate	628-63-7	2.4	0.6	3
	Amyl Butyrate	540-18-1	1.44	1.06	2.5
	Amyl Cinnamate	3487-99-8	0.24	0.26	0.5
	Amyl Isovalerinate	25415-62-7	0.24	0.26	0.5
	Amyl Phenyl Acetate	5137-52-0	0.24	0.26	0.5
	Amyl Salicylate	2050-08-0	0.12	0.38	0.5
	Amyl Valerinate	2173-56-0	0.24	0.26	0.5
21	Benzyl Group				
	Benzyl Benzoate	120-51-4	5	0	5
	Benzyl Butyl Ether	588-67-0	0.24	0.26	0.5
	Benzyl Butyrate	103-37-7	2.4	0.1	2.5
	Benzyl Caproate	6938-45-0	0.1	0.4	0.5
	Benzyl Cinnamate	103-41-3	1.2	0.3	1.5
	Benzyl Ethyl Ether	539-30-0	0.24	0.26	0.5
	Benzyl Formate	104-57-4	0.24	0.26	0.5
	Benzyl Hexyl Ether	61103-84-2	0.24	0.26	0.5
	Benzyl Isoamyl Ether	122-73-6	0.48	0.02	0.5
	Benzyl Isobutyrate	103-28-6	0.24	0.26	0.5
	Benzyl isovalerinate	103-38-8	0.24	0.26	0.5
	Benzyl Laurinate	140-25-0	0.12	0.38	0.5
	Benzyl Methyl Ether	538-86-3	0.24	0.26	0.5
	Benzyl Phenyl Acetate	102-16-9	1.2	0.3	1.5
	Benzyl Propionate	122-63-4	0.48	0.52	1
	Benzyl valerinate	10361-39-4	0.24	0.26	0.5
	Benzyl ethanoate (Benzyl acetate)	140-11-4	0	67	67
22	Butyl Group				
	Butyl Acetate	123-86-4	0.12	0.38	0.5
	Butyl Butyrate	109-21-7	0.24	0.26	0.5
	Butyl Phenyl Acetate	122-43-0	0.48	0.02	0.5
	Butyl Salicylate	2052-14-4	0.12	0.38	0.5
23	Cinnamyl Group				
	Cinnamyl Acetate	103-54-8	2.4	0.1	2.5

	Cinnamyl Benzoate	5320-75-2	0.24	0.26	0.5
	Cinnamyl Butyrate	103-61-7	0.48	0.02	0.5
	Cinnamyl Iso Butyrate	103-59-3	0.48	0.02	0.5
	Cinnamyl Isovalerinate	140-27-2	0.48	0.02	0.5
	Cinnamyl Nitrile	1885-38-7	1.2	1.3	2.5
	Cinnamyl Propionate	103-56-0	1.2	0.3	1.5
	3-phenylprop-2-enyl 3-phenylprop-2-enoate (Cinnamylcinnamate)	46348-68-9	0	2.5	2.5
24	Cis 3 Group				
	Cis 3 Hexenyl Acetate	3681-71-8	0.24	0.26	0.5
	Cis 3 Hexenyl Benzoate	25152-85-6	0.12	0.38	0.5
	Cis 3 Hexenyl Butyrate	16491-36-4	0.12	0.38	0.5
	Cis 3 HexenylCaproate	31501-11-8	0.12	0.38	0.5
	Cis 3 HexenylFormate	33467-73-1	0.1	0.4	0.5
	Cis 3 HexenylIsoButyrate	41519-23-7	0.12	0.38	0.5
	Cis 3 Hexenyl Propionate	33467-74-2	0.12	0.38	0.5
25	Citronellyl Group				
	Citronellyl Isobutyrate	97-89-2	1.2	0.3	1.5
	Citronellyl Propionate	141-14-0	1.2	0.3	1.5
	Citronellyl Acetate	105-87-3	4.8	0.2	5
	Citronellyl Benzoate	10482-77-6	0.24	0.26	0.5
	Citronellyl Butyrate	141-16-2	1.2	0.3	1.5
	CitronellylCaproate	10580-25-3	2.4	0.1	2.5
	CitronellylCaprylate	51532-26-4	0.12	0.38	0.5
	CitronellylFormate	105-85-1	1.2	0.8	2
	CitronellylIsoValerinate	68922-10-1	0.24	0.26	0.5
	Citronellyl Phenyl Acetate	139-70-8	0.48	0.02	0.5
	CitronellylValerinate	7540-53-6	0.24	0.26	0.5
	3,7-dimethyloct-6-enenitrile (Citronellyl nitrile)	35931-93-2	0	10	10
26	Cyclohexyl Group				
	Cyclohexyl Acetate	622-45-7	0.24	0.76	1
	Cyclohexyl Butyrate	1551-44-6	0.24	0.76	1
	Cyclohexyl Salicylate	25485-88-5	2.4	0.1	2.5
27	Ethyl Group				
	Ethyl Benzoate	93-89-0	0.48	0.02	0.5
	Ethyl Butyrate	105-54-4	0.24	0.26	0.5
	Ethyl Caprinate	110-38-3	0.48	0.02	0.5
	Ethyl Caproate	123-66-0	0.48	0.52	1
	Ethyl Caprylate	106-32-1	0.48	0.02	0.5
	Ethyl Cinnamate	103-36-6	0.6	-0.1	0.5
	Ethyl Heptoate	106-30-9	0.48	0.02	0.5
	Ethyl IsoValerinate	108-64-5	0.12	0.38	0.5
	Ethyl IsoButyrate	97-62-1	0.24	0.26	0.5
	Ethyl Laurinate	106-33-2	0.48	0.02	0.5

	Ethyl Phenyl Acetate	101-97-3	0.48	0.02	0.5
	Ethyl Propionate	105-37-3	0.24	0.26	0.5
	Ethyl salicylate	118-61-6	0.48	0.02	0.5
28	Geranyl Group				
	Geranyl Butyrate	106-29-6	1.25	0.25	1.5
	GeranylIsoButyrate	2345-26-8	1.25	0.25	1.5
	Geranyl Acetate	105-87-3	7.2	2.8	10
	Geranyl Benzoate	94-48-4	0.24	0.26	0.5
	GeranylFormate	105-86-2	2.4	0.1	2.5
	GeranylIsoValerinate	109-20-6	0.24	0.26	0.5
	Geranyl Nitrile	5146-66-7	1.2	3.8	5
	Geranyl Phenyl Acetate	102-22-7	0.48	0.02	0.5
	Geranyl Propionate	105-90-8	1.2	0.3	1.5
	GeranylValerinate	10402-47-8	0.24	0.26	0.5
29	Hexyl Group				
	Hexyl Acetate	142-92-7	0.12	0.38	0.5
	Hexyl Benzoate	6789-88-4	0.12	0.38	0.5
	Hexyl Butyrate	2639-63-6	0.12	0.38	0.5
	Hexyl Caproate	6378-65-0	0.12	0.38	0.5
	Hexyl Formate	629-33-4	0.24	0.26	0.5
	Hexyl IsoButyrate	2349-07-7	0.12	0.38	0.5
	Hexyl propionate	2445-76-3	0.12	0.38	0.5
	Hexyl Salicylate	6259-76-3	0.48	0.52	1
30	Isoamyl Group				
	Isoamyl Acetate	123-92-2	2.4	0.1	2.5
	Isoamyl Benzoate	94-46-2	0.24	0.26	0.5
	Isoamyl Butyrate	106-27-4	1.44	0.56	2
	IsoamylCaproate	2198-61-0	0.24	0.26	0.5
	IsoamylCaprylate	2035-99-6	0.24	0.26	0.5
	IsoamylIsovalerinate	659-70-1	0.24	0.26	0.5
	IsoamylIsoButyrate	2050-01-3	1.44	0.56	2
	Isoamyl Phenyl Acetate	102-19-2	0.24	0.26	0.5
	Isoamyl Propionate	105-68-0	0.12	0.38	0.5
	IsoamylValerinate	2050-09-1	0.24	0.26	0.5
31	Isobutyl Group				
	Isobutyl Butyrate	539-90-2	0.24	0.26	0.5
	Isobutyl Benzoate	120-50-3	0.24	0.26	0.5
	Iso Butyl Cinnamate	122-67-8	0.12	0.38	0.5
	Isobutyl Isobutyrate	97-85-8	0.24	0.26	0.5
	Iso Butyl Phenyl Acetate	102-13-6	0.48	0.02	0.5
	Iso Butyl Propionate	540-42-1	0.12	0.38	0.5
32	Methyl Group				
	Methyl Abietate	127-25-3	4.8	5.2	10
	Methyl Anisate	121-98-2	0.24	0.26	0.5

	Methyl Benzoate	93-58-3	4.8	0.2	5
	Methyl Beta Naphthyl Ketone	93-08-3	0.5	19.5	20
	Methyl Butyrate	623-42-7	0.24	0.26	0.5
	Methyl Caproate	106-70-7	0.12	0.38	0.5
	Methyl Caprylate	111-11-5	0.12	0.38	0.5
	Methyl Cinnamate	103-26-4	1.2	0.3	1.5
	Methyl Cinnamic Aldehyde	101-39-3	0.24	4.76	5
	Methyl IsoValerinate	556-24-1	0.12	0.38	0.5
	Methyl IsoButyrate	547-63-7	0.24	0.26	0.5
	Methyl Laurinate	111-82-0	0.12	0.38	0.5
	Methyl Phenoxy Acetate	2065-23-8	0.48	0.02	0.5
	Methyl Phenyl Acetate	101-41-7	2.4	0.1	2.5
33	Neryl Group				
	Neryl Acetate	141-12-8	2.4	0.1	2.5
	Neryl Butyrate	999-40-6	0.12	0.38	0.5
	NerylFormate	2142-94-1	0.2	0.3	0.5
	NerylIso Butyrate	2345-24-6	0.12	0.38	0.5
	Neryl Phenyl Acetate	10522-32-4	0.12	0.38	0.5
	Neryl Propionate	105-91-9	0.12	0.88	1
34	Para Cresol Group				
	Para Cresol Methyl Ether	--	0.24	-0.24	0
	Para Cresol	--	0.6	-0.6	0
	Para Cresyl Acetate	--	2.4	-2.4	0
35	Phenoxy Ethyl Group				
	Phenoxy Ethyl Butyrate	23511-70-8	0.12	0.88	1
	Phenoxy Ethyl Isobutyrate	103-60-6	0.12	66.88	67
36	Phenyl Ethyl Group				
	phenyl ethyl heptanoate	5454-11-05	0.24	0.26	0.5
	Phenyl Ethyl Acetate	103-45-7	12	23	35
	Phenyl Ethyl Benzoate	94-47-3	0.48	0.02	0.5
	Phenyl Ethyl Butyrate	103-52-6	0.48	0.02	0.5
	Phenyl Ethyl Caproate	6290-37-5	0.24	0.26	0.5
	Phenyl Ethyl Caprylate	5457-70-5	0.24	0.26	0.5
	Phenyl Ethyl Cinnamate	103-53-7	1.2	0.3	1.5
	Phenyl Ethyl Formate	104-62-1	0.48	0.02	0.5
	Phenyl Ethyl Isovalerinate	140-26-1	0.24	0.26	0.5
	Phenyl Ethyl IsoButyrate	103-48-0	0.48	0.02	0.5
	Phenyl Ethyl Laurinate	6309-54-2	0.24	0.26	0.5
	Phenyl Ethyl Methyl Ether	3558-60-9	0.24	1.26	1.5
	Phenyl Ethyl Phenyl Acetate	102-20-5	2.4	0.1	2.5
	Phenyl Ethyl Propionate	122-70-3	0.48	0.02	0.5
	Phenyl Ethyl Salicylate	87-22-9	0.48	0.02	0.5
	Phenyl Ethyl Valerinate	7460-74-4	0.24	0.26	0.5

37	Amber Capcore/Amber Couer	139504-68-00	1	24	25
38	Anisic Aldehyde	--	1.2	-1.2	0
39	Anisyl Acetate	104-21-2	0.24	0.26	0.5
40	AnisylFormate	122-91-8	0.24	0.26	0.5
41	Arbanol	--	0.12	-0.12	0
42	Aro C - 11 Inter	112-45-8,143-14-6,58296	1.44	3.56	5
43	Benzylidene acetone	122-57-6	0.24	0.76	1
44	Bromostyrol	103-64-0	0.12	1.88	2
45	Cambrettolide	28645-51-4	1.2	3.3	4.5
46	Captaite	80623-07-0,80657-64-3	1	7.5	8.5
47	Cyclocitral	432-25-7	1.2	3.3	4.5
48	Dihydroambrettolide	109-29-5	0.05	1.45	1.5
49	Ethyl Amyl Ketone Oxime	7207-50-3	0.12	0.38	0.5
50	Eugenol	--	0.12	-0.12	0
51	Eugenyl Acetate	93-28-7	0.1	0.4	0.5
52	IsoEugenol	--	0.4	-0.4	0
53	Isoeugenyl acetate	93-29-8	0.1	0.4	0.5
54	Iso Propyl Cinnamate	7780-06-5	0.6	0.9	1.5
55	Limofine Limofine PPL Limofine STW	7492-66-2	1.44	1.06	2.5
56	NerolineBromilia	93-18-5	4.8	3.7	8.5
57	Phenoxy Ethanol	--	1.2	-1.2	0
58	Rosanile/Rosenitrile	10461-98-0	0.515	39.485	40
59	Safranal Safranal LUXE Safranal EXTRA	116-26-7	1.5	0.5	2
60	Meracene	3608-11-05	0.01	0.49	0.5
61	2-methoxy-4-(4-methyl-1,3-dioxolan-2-yl)phenol (Vanillin propyl glycol acetal)	68527-74-2	0	0.5	0.5
62	Orange Oil 5 fold	8028-48-6	0	0.5	0.5
63	Orange oil 10 fold	8028-48-6	0	0.5	0.5
64	Orange oil 40 fold	8028-48-6	0	0.5	0.5
65	1-(1,1,2,6-tetramethyl-3-propan-2-yl-2,3-dihydroinden-5-yl)ethanone (Traseolide)	68140-48-7	0	3.5	3.5
66	1,1,2,3,3-pentamethyl-2H-indene (Penta methyl indane)	1203-17-4	0	245	245
67	8-methyl-1,5-benzodioxepin-3-one (Sealone)	35783-05-2	0	7	7

68	4-methylpent-4-en-2-yl 2-methylpropanoate (Chammomileiso butyrate)	80118-06-5	0	2	2
69	2-[2-(4-methyl-1-cyclohex-3-enyl)propyl]cyclopentan-1-one (Nectanone)	95962-14-4	0	8.5	8.5
70	4-methyl-1-propan-2-ylbicyclo[2.2.2]oct-2-ene-8-carboxylate (Sajagonate)	68966-86-9	0	2	2
71	3-(4-tert-butylphenyl)propanal (Convanal)	18127-01-0	0	5	5
72	(2-tert-butylcyclohexyl) acetate (OTBCHA)	20298-69-5	0	167	167
73	(4-tert-butylcyclohexyl) acetate (PTBCHA)	32210-23-4	0	167	167
74	3-methyldodecanonitrile (Frescone)	85351-07-1	0	0.5	0.5
75	1-phenylethyl acetate (Styrallyl acetate)	93-92-5	0	83.5	83.5
76	Hexahydrotetramethylspirodioxolanemethanonaphthalene (Ambertal K)	154171-77-4	0	2	2
77	2-butan-2-ylcyclohexan-1-one (frescamenth)	14765-30-1	0	4.5	4.5
78	2- ethoxy-4-methyl phenol (Vivavanillin)	2563-07-7	0	0.5	0.5
79	(2-methyl-4-oxopyran-3-yl) butanoate (Maltyl butyrate)	67860-01-9	0	0.5	0.5
80	3,7-dimethylocta-1,6-dien-3-yl propanoate (linalyl propionate)	144-39-8	0	1.5	1.5
81	2-(5-methyl-5-vinyltetrahydro-2-furanyl)-2-propanol (Linalool oxide)	68780-91-6	0	1.5	1.5
82	3,7- dimethyl-1,6-octadien-3-ol acid-isomerized (limeox)	73018-51-6	0	1.5	1.5
83	3-ethoxy-1,1,5-trimethylcyclohexane (Herbacyclohexane)	67583-77-1	0	2	2
84	Ethyl methylphenylglycidate (Aldehyde C-16)	77-83-8	0	17	17
85	2-methyl-3-(4-propan-2-ylphenyl)propanal (Cyclahyde)	103-95-7	0	50	50
86	2,2-dimethyl-3-(3-methylphenyl)propan-1-ol (Florantol)	103694-68-4	0	1.5	1.5
87	2,4-dimethyl-4-phenyloxolane (Rhuboran)	99343-91-6	0	1.5	1.5
88	1-(2,2,6-trimethylcyclohexyl)hexan-3-ol (Timbanol)	70788-30-6	0	2.5	2.5
89	2-ethoxy-4-(methoxymethyl)phenol (Dianthol)	5595-79-9	0	0.5	0.5
90	4-(octahydro-4,7-methano-5H-inden-5-ylidene)butanal (Dupinal)	30168-23-1	0	0.5	0.5
91	(E)-1-(2,6,6-trimethyl-1-cyclohexa-1,3-dienyl)but-2-en-1-one (Damascenone)	23696-85-7	0	1.5	1.5
92	2-(3-methylbutoxy)ethylbenzene (Anthone)	93951-34-9	0	2	2
93	ethyl 2,6,6-trimethylcyclohexa-1,3-diene-1-carboxylate (Ethyl damascinate)	35044-57-6	0	2	2
94	2,6,10-trimethylundec-9-enal (Farexal)	141-13-9	0	2	2
95	1-(2,6,6-trimethyl-1-cyclohex-3-enyl)but-2-en-1-one (Delta damascone)	57378-68-4	0	21	21

96	(E)-1-(2,6,6-trimethyl-1-cyclohex-2-enyl)but-2-en-1-one (Alpha Damascone)	24720-09-0	0	8.5	8.5
97	methyl 2,4-dihydroxy-3,6-dimethylbenzoate (Evermoss)	4707-47-5	0	42	42
98	(4R,4aS,6R)-4,4a-dimethyl-6-prop-1-en-2-yl-3,4,5,6,7,8-hexahydronaphthalen-2-one (Grapone)	4674-50-4	0	2	2
99	3-(ortho(or para)-ethyl phenyl)-2,2-dimethyl propionaldehyde (Florozonal)	67634-15-5	0	2	2
100	(1'S,4'R,6'R)-2,2,4',7',7'-pentamethylspiro[1,3-dioxane-5,5'-bicyclo[4.1.0]heptane] (Amberspirane)	121251-68-1	0	0.5	0.5
101	4-(4-hydroxyphenyl)butan-2-one (Frambitone)	5471-51-2	0	17	17
102	4-methyl-2-(2-methylprop-1-enyl)oxane (Rose oxide)	16409-43-1	0	4	4
103	(E)-4-methyldec-3-en-5-ol (Violavertol)	81782-77-6	0	25	25
104	2-methylpropyl 2-phenylacetate (Iso butyl phenyl methyl ether)	102-13-6	0	2	2
105	2,6-dimethylheptan-2-ol (Frassiatol)	13254-34-7	0	2	2
106	ethoxymethoxycyclododecane (Timberene forte)	58567-11-6	0	8.5	8.5
107	4-(2,6,6-trimethylcyclohexen-1-yl)but-3-en-2-one (Ionone)	79-77-6	0	2	2
108	N-(5-methylheptan-3-ylidene)hydroxylamine (Veromone)	22457-23-4	0	4.5	4.5
109	2-phenylpropanal (Hydrotropic aldehyde)	93-53-8	0	1	1
110	Alpha Acetyl Ketone	123-54-6	0	4.5	4.5
111	Delta Ketone	7353-76-6.	0	40	40
112	Methyl dimethyl octadionate	2565-82-4	0	4.5	4.5
113	Ethyl dimethyl octadionate	3385-34-0	0	21	21
114	2,6- dimethyl hept-5-en-1-al (Melofrutal)	106-72-9	0	17	17
115	Methyl Heptine Carbonate	111-12-6	0	1.5	1.5
116	Resorcinol dioxydiacetate	108-46-3	0	21	21
117	Methyl Octine Carbonate	111-80-8	0	1.5	1.5
118	3a,4,5,6,7,7a-hexahydro-4,7-methanoinden-6-yl acetate (Verdyl acetate)	5413-60-5	0	100	100
119	Turpentine oil	8006-64-2	0	21	21
120	Phosporic acid Solution (80%)	7664-38-2	0	49	49
121	1-(2,2,6-trimethylcyclohexyl)hexan-3-ol (Nortimbanol)	70788-30-6	0	1	1
122	1-(2,2,6-trimethylcyclohexyl)hexan-3-ol (Kartimbanol)	70788-30-6	0	1	1
123	(E)-1-(2,6,6-trimethyl-1-cyclohexa-1,3-dienyl)but-2-en-1-one (Damascenone Total)	23696-85-7	0	0.08	0.08
124	(E)-1-(2,6,6-trimethyl-1-cyclohexenyl)but-2-en-1-one (Beta damascone)	23726-91-2	0	4.15	4.15

125	Orange terpenes generated from Orange Oil 5 fold, Orange Oil 10 fold, Orange Oil 40 fold	8028-48-6	0	22.67	22.67
126	Lithium Bromide	7550-35-8	0	1.5	1.5
127	IsoTridecyl Acetate	69103-23-7	0	1	1
128	Tetra Hydro Geranyl Acetate	20780-49-8	0	1	1
129	AllylCinnamate	1866-31-5	0	1	1
130	Amberide	9002-23-7	0	4.5	4.5
131	Seanone	151-21-3	0	2	2
132	Vional	108-05-4	0	0.5	0.5
133	Velvetolide	--	0	25	25
134	Amphorol	--	0	34	34
135	Roseoxylate	95-92-1	0	0.5	0.5
136	Dihydromyrcene	53219-21-9	0	100	100
137	Isopentylveratrole	91-16-7	0	4.5	4.5
138	Distilled Turpentine	--	210	976.48	1186.48
139	Pine oil comm.	--	5	45	50
140	AlCl3 Solution	--	1691	601.845	2292.845
141	Sodium Acetate solution	--	484.97	79.2	564.17
142	Sodium Formate (by Product)	--	6.1	17.47	23.57
143	Isolongifolene	--	10	-10	0
144	CAPOLENE	--	25	-25	0
TOTAL			**3458.845**	**3826.08**	**7284.925**
*The manufacturer is removing by products **(Distilled Turpentine-210 MT/M, Sodium Acetate Solution-484.97 MT/M, AlCl3 Solution-1691 MT/M, Capolene-25 MT/M, Pine Oil Comm-5 MT/M, Isolongifolene-10 MT/M, Sodium Formate-6.1 MT/M)** from product table of obtained Environment Clearance vide letter no. SEIAA/GUJ/EC/5(f)/457/2017, dated: 29.04.2017 and add these by products in Hazardous Waste Generation & Its Management table.*					
TOTAL			**1026.775**	**2141.085**	**3167.86**

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 the SEIAA, Gujarat had issued EC earlier vide letter no. SEIAA/GUJ/EC/5(f)/457/2017, dated: 27.04.2017 to the existing project of synthetic organic chemical (Fine chemical) in favor of M/s. Oriental Aromatics Limited. Certified Compliance Report obtained from MoEF&CC vide letter no. J-11/27-2022-IROGNR, dated: 30.07.2022As per EC-CCR out of 120 conditions, it may be seen that 70 are complied, 11 are partly complied, 25 are agree to comply by project proponent, 3 are noted by unit, whereas 11 conditions can't be ascertained. The PP has submitted action plan of partly complied and agreed to comply with conditions.

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.

Mahi River is at a distance of 2.56 km in direction WSW direction and Peafowl or Indian peafowl Schedule- I species exist within the 10 km study area for which conservation plan has been prepared.

8. **Ambient Air Quality:** The PP reported that Ambient air quality monitoring was carried out at 08 locations during October to December 2021 and the baseline the ranges of concentration as: PM_{10} (66-86.92 µg/m^3), $PM_{2.5}$ (28.68-43.45 µg/m^3), SO_2 (8.98-40.29 µg/m^3), NOx (8.93-34.9 µg/m^3), HCl (<1-2.20 µg/m^3), Cl_2 (<0.5-0.79 µg/m^3), Br_2 (<0.1-0.4 µg/m^3). The AAQ modeling study for point source emission indicated that the maximum incremental GLCs after the proposed expansion project would be 1.20076 µg/m^3, 0.26337 µg/m^3, 0.61025 µg/m^3, 0.54286 µg/m^3, 0.00966 µg/m^3, 0.01792 µg/m^3, 0.03042 µg/m^3 with respect to PM_{10}, $PM_{2.5}$, SO_2, NOx, HCl, Cl_2, Br_2. The resultant concentrations are within the national ambient air quality standards (NAAQS). **Ground Water Quality** monitoring was carried out at 08 locations during October to November 2021 and the baseline the ranges of concentration as: pH (7.1-7.9), TDS (410-1082 mg/l), Total Hardness (95-297 mg/l), Chlorides (78-369.2 mg/l), Fluorides (0.12-0.87 mg/l) & Copper (<0.001). **Surface Water Quality** monitoring was carried out at 03 location during October to November 2021 and the baseline the ranges of concentration as: pH (7.8-8.1), Dissolved Oxygen (3.3-3.6 mg/l), COD (12.4-24.9 mg/l), BOD (<2). **Soil** quality monitoring was carried out at 08 location during October to November 2021 and the baseline the ranges of concentration as: pH (7.6-7.9), Nitrogen (386.4-422.8 mg/kg), Phosphorus (3.79-4.75 mg/kg), Potassium (42-52 mg/kg), Electric Conductivity (663-738 µmho/cm). **Noise level** monitoring was carried out at 08 location during October to November 2021 and the baseline the ranges of concentration as: Industrial location Leq (Day) (40-65 dB (A)) and Leq (Night) (40-51 dB (A)). Residential Location Leq (Day) (44-54 dB (A)) and Leq (Night) (38-44 dB (A)). Commercial Location Leq (Day) (44-58 dB (A)) and Leq (Night) (40-51 dB (A)).

9. The PP reported that the total water requirement is 1375 m^3/day of which fresh water requirement 904.6 m^3/day will be met from GIDC Nandesari water supply. Total Effluent is 727 KLPD from that, High Concentrated effluent from Process: 40 KL/Day will be treated in ETP-3 Consisting of Primary Treatment & will be sent to Common Spray Dryer at Chhatral Environment Management System Pvt. Ltd., Dhanot for Spray Drying by tanker having GPS facility. High Concentrated effluent from Process: 20 KL/Day will be sent to in-house Incinerator. Remaining Effluent from Process: 384 KL/Day fed to Stripper, from where 25 KL/Day of DT (Distilled Turpentine) will be recovered & will be sold to Actual User. Remaining 359 KL/Day will be sent to MEE/MVR Process (In-House) for Further Treatment. Low Concentrated effluent from Boiler Blow down, Cooling Blow down & Washing: 283 KL/Day will be treated in ETP-2 having Primary Treatment followed by RO Treatment Plant-2. RO-2 Permeate 240 KL/Day will be reuse in Process within Premises & RO-2 Reject @ 43 KL/Day will be fed to MEE for Further Treatment. Total Effluent fed to MEE will be 402 KL/Day (359 KL/Day from Stripper & 43 KL/Day from RO Plant-2). MEE Condensate 362 KL/Day will be further treated in ETP-1 consisting of Primary, Secondary followed by RO Treatment Plant-1. RO-1 Permeate 194 KL/Day will be reuse again in Process within Plant & RO-1 Reject 168 KL/Day will be discharged to CETP, Nandesari. Remaining Quantity from MEE 40 KL/Day will be sent to ATFD for Further Treatment & Generated Sludge 5 MT/Day will be disposed to TSDF site.

10. The PP reported the Power requirement after expansion will be 3300 KVA including existing 1500 KVA and will be met from MGVCL (Madhya Gujarat Vij Co. Ltd). Existing unit has installed 03 DG sets of 1000 KVA (2 Nos.) & 2000 KVA (1 Nos.) capacity as standby during power failure. Stack (height 9.5 & 30m) will be provided as per CPCB norms to the existing DG sets. Additionally, unit will install 03 DG sets of 900 KVA capacity (each) as standby during power failure. Stack (height 9m) will be provided. Existing unit has steam boiler (10 TPH), steam boiler (4 PTH), Thermic Fluid Heater (6 Lac k cal/hr)-2 Nos., Thermic Fluid Heater (15 Lac k cal/hr). Additionally, steam boiler (30 TPH) (Co gen), Thermic Fluid Heater (15 Lac k cal/hr) & Incinerator (1000 kg/hr) will be installed. Cyclone Separator & Bag Filter, Water Scrubber with ESP, Two Stage Water Scrubber, Cyclone Separator & Bag Filter with adequate stack height 40m (4 Nos.), 30m (2 Nos.) will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm3 for the proposed boilers.

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

S. No.	Specific Source of emission	Type of Emission	Stack/Vent Height (meter)	Air Pollution Control Measures (APCM)
1	Reaction Vessel-1 (Astromusk Plant)	SOx	24	Two Stage Alkali Scrubber
2	Reaction Vessel-2 (SCD Plant)	SOx	24	Two Stage Alkali Scrubber
3	Reaction Vessel-3 SCD Plant)	SOx	12	Two Stage Alkali Scrubber
4	Reaction Vessel-4	Chlorine	24	Two Stage Alkali Scrubber
5	Reaction Vessel-5	Chlorine	12	Two Stage Alkali Scrubber
6	Reaction Vessel-6	SOx	12	Two Stage Water Scrubber
7	Reaction Vessel-7	SOx	12	Two Stage Water Scrubber
8	Reaction Vessel-8	HCl	24	Alkali + Water Scrubber
9	Reaction Vessel-9	Br2	12	Two Stage Alkali Scrubber
10	Reaction Vessel-10	HCl	24	Two Stage Alkali Scrubber
11	Reaction Vessel-11	HCl	24	Two Stage Alkali Scrubber

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

Sr.	Type of Hazardous waste		Category and	Quantity (MT/Annum)	Management of HW

no.		Specific Source of generation (Name of the Activity, Product etc.)	Schedule as per HW Rules.	Existing	Proposed	Total	
1.	Pitch Residue/ Process Residue	From Process	20.3	1950 MT/Year	7979.17 MT/Year	9929.17 MT/Year	Collection, Storage, Transportation and Disposal by Incineration / Consent Holder
2.	Acid sludge	From Process	D -2	Whatever Generated	--	Whatever Generated	Collection, storage, Transportation, and Disposal at TSDF
3.	Discarded container	From Plant & Manufacturing Activity	33.3	19300 No/Year	10000 Nos/Year	29300 No/Year	Collection, Storage and Decontamination , used for packing of waste or sell to authorized vendors
4.	Used oil	From Plant & Machinery	5.1	5.65 KL/Year	1 KL/Year	6.65 KL/Year	Collection, storage, Transportation and disposal by sell to registered refiners
5.	ETP sludge	From Waste Water Treatment	35.3	313.5 MT/Year	131 MT/Year	444 MT/Year	Collection, Storage, Transportation and Disposal at TSDF
6.	Evaporator residue/MEE Sludge	From MEE	34.3	1353.6 MT /Yr	446.4 Mt/Yr	1800 MT /Yr	Collection, Storage, Transportation and Disposal at TSDF
7.	Spent catalyst	From Process	35.2	5.057 MT/Year	59.44 MT/Year	64.49 MT/Year	Collection, Storage, Transportation and Disposal to

							authorized industries. Return to supplier for regeneration & reused
8.	Spent solvent	From Distillation Process	20.2	40 MT/Month	2749 MT/Month	2789 MT/Month	Distilled Recovery & reused in Process.
9.	Spent Sulphuric Acid	From Process	D-2	940 MT/Year	1350.28 MT/Year	2290.28 MT/Year	Collection, Storage, Transportation and disposal by sell to approved Parties. Also used in ETP for neutralization.
10.	Spent phosphoric acid	From Process	D-2	496 MT/Year	--	496 MT/Year	Collection, Storage, Transportation and disposal by sell to approved Parties. Partly to be reused in new processes.
11.	Carbon Waste	From Process	1.1	1.8 MT/Year	22.90 MT/Year	24.7 MT/Year	Collection, Storage, Transportation and send to co processing facility.
12.	Oily/Contaminated cotton waste or other cleaning materials	From Plant & Machinery	33.2	--	5 MT/Year	5 MT/Year	Collection, Storage, Transportation and Disposal by sending to approved authorized for co – processing / recycling or authorized TSDF having valid CCA of SPCB for

							incinerators / Landfilling.
13.	Insulation Material/Glass Wool Waste	From Plant	-	--	10 MT/Year	10 MT/Year	Collection, Storage, Transportation and Disposal by sending to approved authorized for co – processing / recycling or authorized TSDF having valid CCA of SPCB for incinerators / Landfilling.
14.	Incinerator Ash	From Incinerator	37.2	-	360 MT/Year	360 MT/Year	Collection, Storage, Transportation and Disposal at TSDF site.
15.	Other Miscellaneous waste	From Plant & Process	--	--	10 MT/Year	10 MT/Year	Collection, Storage, Transportation and Disposal by sending to approved authorized for co – processing / recycling or authorized TSDF having valid CCA of SPCB for incinerators / Land filling.
16	Distilled Turpentine	From stripper	--	--	7500 MT/Year	7500 MT/Year	Collection, storage, transportation and sell to authorized user.

13. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 600 Lakhs (capital) and the Recurring cost (operation and maintenance) will be about 2890 Lakhs per annum. Industry proposes to allocate ₹ 180 Lakh towards CER.

14. 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.

15. The PP reported that Industry has already developed greenbelt over an area of 53670 m^2 which is 33% of total plot area and additionally industry will develop greenbelt in an area of 7% i.e. 11350 m^2 out of total plot area.

16. The PP proposed to set up an Environment Management Cell (EMC) to engage Director- EHS manager- Executive EHS- Supervisior & operators for the functioning of EMC.

17. The PP reported the Total CO_2 Generated from different source 7496.7 Ton per annum.

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

19. The estimated project cost is Rs 335.38 Crore including existing investment of Rs. 215.38 Crores. Total employment will be (325) - 300 persons as direct & 25 persons indirect after expansion.

20. **Deliberations by the EAC**:

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

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

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

The EAC inter-alia, deliberated on the greenbelt development plan, layout, fuel, noise monitoring result, domestic wastewater generation and its treatment, ETP diagram, detail of effluent treatment and its final mode of discharge, Compliance to OM dated 31.10.2019 for projects falling within CPA, and advised the PP to submit the following:

- Undertaking for tree plantation, complete additional tree plantation within one-year period.
- Revised Layout with details of tree plantation at the boundary of the unit.
- Undertaking for fuel with given first priority to Agro Briquettes of Agro Waste as a fuel.
- Correction in presentation slide i.e. correct Noise monitoring analysis result table.
- Revised detail of domestic wastewater generation and its treatment.
- Revised Water Balance Diagram.
- Stream wise effluent treatment shown in ETP diagram.
- The detail of effluent treatment and its final mode of discharge.

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.

21. 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.

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

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

iv) As committed by the PP, Industry shall transport material by truck or tempo with all safety precaution. Transportation of materials by rail/conveyor belt, wherever feasible, shall be explored.

v) Agro Briquettes shall be proposed as a primary fuel, during the unavailability of agro briquette imported coal shall be used in case of emergency

vi) The best available technology shall be used.

vii) The PP shall develop greenbelt over an area of at least *53670 m^2* (*33% of the total plot area), and additionally 11350 m^2area (7% of the total plot area) within one year of grant of EC*. The saplings (3410 number of trees) selected for the plantation should be of sufficient height, preferably 6-ft. The budget earmarked for the plantation shall be kept in a separate account and should be audited annually. The PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

viii) The PP shall also develop avenue plantation in the nearby areas.

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) 470.4 KLD treated water shall be reused within premises.

xi) Continuous monitoring system for effluent quality/ quantity shall be connected to CPCB server.

xii) Dedicated storm water management system shall be maintained.

xiii) Low concentrated effluent (168 KLPD) shall be sent to CETP Nandesari. MEE Residue 40KLPD goes to in - House ATFD. Low Concentrated wastewater 238 KLPD (generated from Washing, Boiler & Cooling) shall be treated in ETP-2 (having primary treatment unit) followed by RO-2. From that, RO2 Permeate 240 KLPD reuse within premises and RO-2 Rejected 43 KLPD goes to further treatment. High concentrated effluent (40 KLPD) (from process) shall be sent to common spray drying facility by tanker having GPS facility which is approved by GPCB & (20 KLPD) incinerate in in -House incineration. Other treated effluent (40 KLPD) will go to in-House RO followed by MEE and ATFD. Generated wastewater 384 KLPD from process will be sent to Stripper from where, 25 KL/Day Distilled Turpentine shall be recovered and sell to actual users and remaining 359 KLPD send to in House MEE/MVR. Treated water 402 KLPD (generated from 359 KLPD-Stripper & 43 KLPD-RO-2 Rejected) will be sent to MEE. From that, MEE Condensate 362 KLPD sent to ETP-1 for further treatment & MEE Residue 40 KLPD will be sent to in house ATFD

xiv) Domestic Wastewater (30 KLPD) shall be treated in STP from that, 29.4 KLPD treated water shall be reused in greenbelt within premises & remaining 0.6 KLPD goes to sludge drying beds from that, 0.51 KL moisture evaporate and 0.09 MTPD sludge shall be used as manure within premises

xv) The PP shall dispose the waste at TSDF and common hazardous waste disposal facilities approved by the SPCB.

xvi) The hazardous waste generated should be preferably utilized in co-processing.

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

xviii) As proposed, an amount of ₹ 180 Lakhs shall be allocated towards CER for social development programs under CER activities for the next 5 years.

xix) 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- EHS manager- Executive EHS- Supervisior & 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.

xx) 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 ₹ 600 Lakhs (Capital cost) and ₹ 2890 Lakhs per annum (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

xxi) The Total water requirement is 1375 m^3/day of which fresh water requirement 911.6 m^3/day will be met from GIDC Nandesari 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.

xxii) Total water requirement is 1375 m^3/day of which fresh water requirement 904.6 m^3/day shall be met from GIDC Nandesari water supply. Total Effluent is 727 KLPD from that, High Concentrated effluent from Process: 40 KL/Day will be treated in ETP-3 Consisting of Primary

Treatment & will be sent to Common Spray Dryer at Chhatral Environment Management System Pvt. Ltd., Dhanot for Spray Drying by tanker having GPS facility. High Concentrated effluent from Process: 20 KL/Day will be sent to in-house Incinerator. Remaining Effluent from Process: 384 KL/Day fed to Stripper, from where 25 KL/Day of DT (Distilled Turpentine) shall =be recovered & will be sold to Actual User. Remaining 359 KL/Day will be sent to MEE/MVR Process (In-House) for Further Treatment. Low Concentrated effluent from Boiler Blow down, Cooling Blow down & Washing: 283 KL/Day will be treated in ETP-2 having Primary Treatment followed by RO Treatment Plant-2. RO-2 Permeate 240 KL/Day will be reuse in Process within Premises & RO-2 Reject @ 43 KL/Day will be fed to MEE for Further Treatment. Total Effluent fed to MEE will be 402 KL/Day (359 KL/Day from Stripper & 43 KL/Day from RO Plant-2). MEE Condensate 362 KL/Day will be further treated in ETP-1 consisting of Primary, Secondary followed by RO Treatment Plant-1. RO-1 Permeate 194 KL/Day will be reuse again in Process within Plant & RO-1 Reject 168 KL/Day will be discharged to CETP, Nandesari. Remaining Quantity from MEE 40 KL/Day will be sent to ATFD for Further Treatment & Generated Sludge 5 MT/Day will be disposed to TSDF site

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 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.

xxv) 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 446(E), dated 13.6.2011 under the provisions of the Environment (Protection) Rules, 1986.

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

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. 50.10

Proposed Amalgamation and Expansion of Pesticide Manufacturing Unit of production capacity from 12345 MT/Year to 19300 MT/Year within the premises located at Plot No: 3204/A, 3204/B, 3205/A, & proposed 3205/B GIDC Estate, Ankleshwar, Dist.: Bharuch, Gujarat by M/s. Coromandel International Limited - Consideration of ToR

[Proposal No. IA/GJ/IND3/417857/2023; File No. J-11011/70/99-IA-II(I)]

1. The proposal is for the issue of ToR for preparation of EIA/EMP for Proposed Amalgamation and Expansion of Pesticide Manufacturing Unit of production capacity from 12345 MT/Year to 19300 MT/Year within the premises located at Plot No: 3204/A, 3204/B, 3205/A, & proposed 3205/B GIDC Estate, Ankleshwar, Dist.: Bharuch, Gujarat by M/s. Coromandel International 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/IND3/417857/2023**. The proposal is considered in the 50 th EAC meeting held on 19th-21st April, 2023 wherein the PP and accredited consultant (M**/s.** Shree Green Consultants, (NABET Accreditation Number:

NABET/EIA/2124/IA0072 valid till 24th February, 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 the product details are as follows:

Product list as per Existing EC & Existing CCA

Sr.no	Product list	Production Capacity (MT/Year)	
		Quantity as per EC issued vide letter No. J. 11011/70/99-IA II. dated 17th July, 2000	**Existing CCA No.AWH-114552 dated:26/10/2021**
Group-1			
1	Malathion	6060	4404
2	Dinotefuran	00	
Group 2			
3	Profenofos	360	3924
Group 3			
4	Cyproconazole	00	516
5	N – Acetyl Thiazolidine – 4 Carboxylic Acid (ATCA)	00	
6	Boscalid	00	
Group 4			
7	Pyrazosulphuran Ethyl	00	120
8	Chlorpyrifos	00	
9	Propiconazole	00	
10	Tebuconazole	00	
Group 5			
11	Phenthoate	00	1500
Group 6			
12	Picoxystrobin	00	350
13	Cymoxanil	00	
14	Prochloraz	00	
Group 7			
15	Pymetrozine	00	396
16	Difenoconazole	00	
17	Thiamethaxom	00	
18	Dazomet	00	
19	Primifos Methyl	00	
Group 8			
20	Pyraclostrobin	00	120
21	Hexaconazole	450	

Sr.no	Product list	Production Capacity (MT/Year)	
		Quantity as per EC issued vide letter No. J. 11011/70/99-IA II. dated 17th July, 2000	Existing CCA No.AWH-114552 dated:26/10/2021
22	Prothioconazole	00	
23	Fipronil	00	
24	Buprofezin	00	
Group 9			
25	Temephos	50	300
26	Hexythiozox	00	
27	Tolfenpyrad	00	
Group 10			
28	Azoxystrobin	00	396
29	Kresoxym-methyl	00	
30	Acephate	00	
Group 11			
31	Diafenthiuron	00	319
32	Tricyclazole	00	
33	Diflubenzuron	00	
34	Lufenuron	00	
35	Phorate	1350	00
36	Quinophos	630	00
37	Ethion	360	00
38	Terbufos	15	00
	Total	**9275 MT/Year**	**12345 MT/Year**

After Proposed Expansion - List of Products

Sr. No	Name of Product	CAS No.	Production Capacity (MT/Year)
Group-1 Insecticides and Intermediates			
1	Malathion	121-75-5	14500
2	Dinotefuran	165252-70-0	
3	Phenthoate	330-54-1	
4	Profenofos	41198-08-7	
5	Acephate	30560-19-1	
6	Lufenuron	103055-07-8	
7	Diflubenzuron	35367-38-5	
8	Diafenthiuron	80060-09-9	
9	Tolfenpyrad	129558-76-5	
10	Temephos	3383-96-8	
11	Chlorantraniliprole	500008-45-7	
Group-2 Insecticides and Intermediates			
1	Buprofezin	953030-84-7	1000
2	Thiamethaxom	153719-23-4	

3	Pymetrozine	123312-89-0	
4	Primifos Methyl	29232-93-7	
5	Chlorpyrifos	002921-88-2	
6	Fipronil	120068-37-3	
Group-3 Herbicides and Intermediates			
1	Pyrazosulphuran Ethyl	93697-74-6	800
2	Penoxsulam	219714-96-2	
3	Tembotrione	335104-84-2	
4	Mesotrione	104206-82-8	
5	Pinoxaden	243973-20-8	
6	Sulfentrazone	122836-35-5	
7	Pretilachlor	51218-49-6	
8	Bentazone	25057-89-0	
9	Bispyribac Sodium	125401-92-5	
Group- 4 Fungicides and Intermediates			
1	Dazomet	533-74-4	3000
2	Boscalid	188425-85-6	
3	Propiconazole	60207-90-1	
4	Picoxystrobin	117428-22-5	
5	Azoxystrobin	131860-33-8	
6	Cymoxanil	2140803-92-3	
7	Procloraz	67747-09-5	
8	Kresoxymmethyl	143390-89-0	
9	Tebuconazole	107534-96-3	
10	Difenoconazole	119446-68-3	
11	Cyproconazole	94361-06-5	
12	Fluxapyroxad	907204-31-3	
13	Mandipropamid	374726-62-2	
14	Trifloxystrobin	141517-21-7	
15	Hexaconazole	79983-71-4	
16	Prothioconazole	178928-70-6	
17	Tricyclazole	41814-78-2	
18	Pyraclostrobin	533-74-4	
19	N – Acetyl Thiazolidine – 4 Carboxylic Acid (ATCA)	188425-85-6	
20	Hexythiozox	60207-90-1	
		Total	**19300 MT/Year**

List of Formulation Products along with Production Capacity					
Sr. No.	**Products**	**CAS No.**	**Production Capacity**		
			Existing	**Proposed**	**Total**
Group-1. Liquid Formulation Product					
1	Bifenthrin 10 % EC	82657-04-3	10000 KL/Year	--	10000 KL/Year
2	Chlorpyrifos 20 % EC	2921-88-2			

3	Chlorpyrifos 40.8% EC	2921-88-2			
4	Chlorpyrifos 48% EC	2921-88-2			
5	Chlorpyrifos 10 % SL	2921-88-2			
6	Fipronil 5% SC	120068-37-3			
7	Hexaconazole 5 % EC	79983-71-4			
8	Hexaconazole 5 % SC	79983-71-4			
9	Hexythiozox 5% EC	79983-71-4			
10	Imidacloprid 17.8% SL	138261-41-3			
11	Imidacloprid 30.5 % SC	138261-41-3			
12	Imidacloprid 48% EC	138261-41-3			
13	Malathion 50 % EC	121-75-5			
14	Malathion 57 % EC	121-75-5			
15	Malathion 84 % EC	121-75-5			
16	Malathion 96% ULV	121-75-5			
17	Phenthoate 50 % EC	2597-03-7			
18	Profenofos 43% EC	41198-08-7			
19	Profenofos 50% EC	41198-08-7			
20	Profenofos 72% EC	41198-08-7			
21	Tebuconazole 25 % EC	107534-96-3			
22	Temephos 50% EC	3383-96-8			
Group-2. Solid Formulation Products					
1	Fipronil 03% Granules	120068-37-3	10000 MT/Year	--	10000 MT/Year
2	Malathion 25 % WDP	121-75-5			
3	Malathion 50 % WDP	121-75-5			
4	Temephos 1 % Granules	3383-96-8			
5	Terbufos 5% Granules	13071-79-9			
6	Terbufos 10% Granules	13071-79-9			
7	Terbufos 15% Granules	13071-79-9			
8	Imidacloprid 70% WS	138261-41-3			
9	Pymetrozine 50% WDG	123312-89-0			

5. The PP reported that the Existing land area 54312.68 m^2 and additional land area of 4175.32 m^2 adjacent plot. Thus, the total land area now available is 58488 m^2 land will be used for proposed expansion.

6. The PP reported that Ministry had issued EC earlier vide letter no. F. No. J-11011/70/99-IA II dated 17th July,2000 to the Manufacture of Pesticide unit at Ankleshwar Industrial Area Bharuch, Gujarat, in favor of **M/s. FICOM Organics.** The company's name changed from M/s. Ficom Organics to the M/s. Coromandel Fertilisers Limited and also obtained the CCA from the SPCB. Further, the company's name changed from M/s. Coromandel Fertilisers Limited to the M/s. Coromandel International Limited (vide the name change order issued vide letter no. GPCB/BRCH/CCA-146(6)/ID-15092/76132 dated 29/03/2011 from the SPCB). This EC got transferred in the name of M/s. Coromandel International Limited vide File No. J-11011/70/99-IA-II(I) dated 28th November, 2022 from the MOEF&CC. M/s Coromandel International Limited obtained has alid CCA amendment No: AWH- 119940 issue vide Letter No: GPCB/ANK/CCA-146(19)/ID-15092/678855 dated 25/07/2022 for manufacturing of Pesticide from the state pollution control board.

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. River/ water body Narmada River is flowing at a distance of 7.7 km in North direction.

8. The PP reported that the total water requirement is **1011 m^3/day** of which fresh water requirement of **522 m^3/day** will be met from Ankleshwar GIDC water Supply System. Effluent of 560 m^3/day quantity will be treated through proposed in house ETP, MEE, & STP.
   - Total waste water will be 560 KLD (Industrial 539 KLD + Domestic 21 KLD).
   - Process & washing waste water will be segregated into two streams i.e., HTDS & LTDS.
   - Total 200 KLD of HTDS waste water (Process & washing effluent 155 KLD + RO reject 25 KLD+ Scrubbing 20 KLD) will be treated in MEE & ATFD.
   - MEE condensate 180 KLD will be sent it to ETP for further treatment and disposal.
   - In case of non-operation of in-house MEE or during maintenance / scaling of in-house MEE, High TDS/COD stream of effluent from process (180 KLD) will be sent to common MEE (after obtaining membership) for further treatment and disposal.
   - Total LTDS 534 KLD (Process & washing 252 KLD + Cooling 58 KLD +Boiler 40 KLD+ DM Water 4 KLD + MEE Condensate 180 KLD) will be treated in ETP.
   - Treated waste water (279 KLD out of 478 KLD) will be sent to CETP for further treatment and final disposal into dep sea. And remaining treated waste water 199 KLD will be sent to RO.
   - RO permeate (174 KLD) will be reused in Cooling & Scrubbing and RO Reject (25 KLD) will be sent to MEE.
   - Domestic Effluent will be treated into STP and treated water will be reused in gardening purpose.

9. The power requirement after expansion will be 4000 KVA and will be met from Dakshin Gujarat Vij Company Limited (DGVCL) Power Supply. Three D.G set of 1000 KVA x 2 Nos. and 2500 KVA x 1 No. will be used as standby during power failure. Stack height of 11 meter will be provided as per CPCB norms to the proposed DG sets.

10. The existing unit has 6 TPH & 10 TPH steam boilers and D.G Set (1000 KVA x 2), Additionally, one Boiler capacity of 18 TPH steam boiler and a D G Set (2500 KVA x 1) will be installed. Water scrubber, and Caustic scrubber with a stack of height of 25 m will be

installed for controlling the particulate emissions within the statutory limit for the proposed Stacks.

11. The PP reported that the project, being in notified industrial area i.e., GIDC estate Ankhleshwar vide Notification No. GHU-78-20-GID-1977-660-CH dated 1.2.1978 is exempted from the public hearing as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018.

12. A total of 58488 m² land area is available at site; out of this, 11482.13 m² (i.e., 19.6 % of total area) has already been developed as a greenbelt inside the premises. In addition, approximately 15600 m² (i.e., 26.67 % of total area) green belt development is being done outside premises, within the GIDC area in collaboration with Ankleshwar Industries association & Notified Area. So total greenbelt cover in an area of 46.27 % is already being developed.

13. The estimated project cost is Rs. 400.61 crores. The PP reported that Total Employment will be (610 persons) 320 persons as direct & 290 persons indirect after proposed expansion.

14. **Deliberations by the EAC:**

The EAC inter-alia, deliberated on the plant layout with additional greenbelt, water balance and advised the PP to submit the following.

- Submit the revised plant layout with proposed greenbelt.
- Submit the revised water balance with sludge generation details.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(xiii) The PP should develop Greenbelt over a minimum area of 40% of the total land area i.e Accordingly, 3410 Number of saplings within the premises selected for greenbelt should have greater ecological value and should be of great utility value to the local population with emphasis on local and native species and the species which are tolerant to air pollution.

(xiv) The PP shall utilize oxygen separated in the Nitrogen plant for sale or use in ETP.

(xv) Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains in constructed reservoirs. The rain water shall not be put into groundwater strata.

(xvi) 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.

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

(xviii) 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. 50.11

Proposed Synthetic Organic Chemical Manufacturing Unit of Production Capacity 57.6 TPM located at Plot No. N-46/3, Tarapur MIDC, Tal. & Dist. Palghar, Maharashtra by M/s. Neumedix Pharmachem LLP - Consideration of ToR

[Proposal No. IA/MH/IND3/424120/2023; File No. A-J-11011/153/2023-IA-II(I)]

1. The proposal is for the issue of ToR for preparation of EIA/EMP for Proposed Synthetic Organic Chemical Manufacturing Unit of Production Capacity 57.6 TPM located at Plot No. N-46/3, Tarapur MIDC, Tal. & Dist. Palghar, Maharashtra by M/s. Neumedix Pharmachem LLP. **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/MH/IND3/424120/2023**. The proposal is considered in the 50 th EAC meeting held on 19th-21st April, 2023 wherein the PP and the accredited Consultant M/s. Green Circle Inc. having NABET Accreditation vide letter No. NABET/EIA/2124/RA 0219 Valid till 26.01.2024made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

S. No.	Product Details	CAS No.	Proposed Quantity MT/M	Uses
1	Phenyl hydrazine HCL	59-88-1	20	Used in Pharmaceutical Industry.
2	Piroxicam	36322-90-4	1	Used in Pharmaceutical Industry.
3	Meloxicam	71125-38-7	1	Used in Pharmaceutical Industry.
4	Isoxsuprine HCL	579-56-6	1	Used in Pharmaceutical Industry.
5	Azithromycin	83905-01-5	2	Used in Pharmaceutical Industry.

6	Artemether	71963-77-4	3	Used in Pharmaceutical Industry.
7	Lumefantrine	82186-77-4	5	Used in Pharmaceutical Industry.
8	Erythromycin stearate	643-22-1	1	Used in Pharmaceutical Industry.
9	Erythromycin Estolate	3521-62-8	1	Used in Pharmaceutical Industry.
10	Erythromycin base	114-07-8	1	Used in Pharmaceutical Industry.
11	Loperamide	53179-11-6	0.5	Used in Pharmaceutical Industry.
12	Omeprazole	73590-58-6	0.5	Used in Pharmaceutical Industry.
13	Rosuvastatin calcium	287714-41-4	0.3	Used in Pharmaceutical Industry.
14	Ferric Pyro Phosphate	10058-44-3	5	Used in Pharmaceutical Industry.
15	Dorzalamide	130693-82-2	1	Used in Pharmaceutical Industry.
16	Glicalzide	21187-98-4	1	Used in Pharmaceutical Industry.
17	Losartan Potassium	124750-99-8	2	Used in Pharmaceutical Industry.
18	Telmisartan	144701-48-4	1	Used in Pharmaceutical Industry.
19	Amlodipine besylate	88150-42-9	2	Used in Pharmaceutical Industry.
20	Terbutaline sulphate	23031-32-5	0.5	Used in Pharmaceutical Industry.
21	Salbutamol sulphate	51022-70-9	0.5	Used in Pharmaceutical Industry.
22	Vecuronium bromide	50700-72-6	0.3	Used in Pharmaceutical Industry.
23	Valsartan	137862-53-4	1	Used in Pharmaceutical Industry.
24	Lidocaine	137-58-6	1	Used in Pharmaceutical Industry.
25	Celecoxib	169590-42-5	1	Used in Pharmaceutical Industry.
26	Irbesartan	138402-11-6	1	Used in Pharmaceutical Industry.
27	Bupropion hydrochloride	31677-93-7	2	Used in Pharmaceutical Industry.

28	Phosphentoin sodium	92134-98-0	0.2	Used in Pharmaceutical Industry.
29	Zoledronic acid	118072-93-8	0.2	Used in Pharmaceutical Industry.
30	Gemcitabine hydrochloride	95058-81-4	0.2	Used in Pharmaceutical Industry.
31	Methotrexate	59-05-2	0.2	Used in Pharmaceutical Industry.
32	Etoposide	33419-42-0	0.2	Used in Pharmaceutical Industry.
Total			**57.6**	

4. The PP reported that the Existing land area of the project is **2062.00** m^2

5. 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 viz. Banganga River is flowing at a distance of 2 km in direction South East.

6. The PP reported that the total water requirement is 85.5 m^3/day, of which fresh water requirement of 72 m^3/day is will be met from Maharashtra Industrial Development Corporation (MIDC). Effluent of 12 KLD quantity will be treated through ETP of capacity 15 KLD followed by Stripper & Evaporator. The plant will be based on Zero Liquid discharge system.

7. The total Power requirement is 250 kW and will be met from Maharashtra State Electricity Distribution Corporation Limited (MSEDCL). 1 no. of DG set of capacity 75 kVA is proposed as standby during power failure. Stack of 8 m above ground will be provided as per CPCB norms to the proposed DG set.

8. The PP reported that the project, being in notified industrial area i.e., MIDC- Tarapur vide Notification No. IDC-2180/102842/2385/UDHYOG-14 dated 2.7.1980 is exempted from the public hearing as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018.

9. Industry will develop greenbelt in an area of 40 % i.e., 825 m^2 out of total area of the project.

10. The estimated project cost is Rs. 9.84 crores. The PP reported that total Employment will be 40 persons.

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

The EAC inter-alia, deliberated on the plant layout with additional greenbelt, Capacity of STP and advised the PP to submit the following.

- Revised layout plan incorpoarting greenbelt along the periphery of the plot boundary.
- Revised details of tree planttaion excluding shrubs.
- Revised capacity of STP to 2 KLD

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

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

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

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

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

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

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

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

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

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

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

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

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

economically feasible shall be included. The PP shall make necessary provisions for continuous monitoring of the effluent quality/quantity.

(xii) Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains in constructed reservoirs. The rain water shall not be put into groundwater strata.

(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 % of the total land area i.e 825 m^2 Accordingly, 300 Number of saplings selected for greenbelt should have greater ecological value and should be of great utility value to the local population with emphasis on local and native species and the species which are tolerant to air pollution.

(xv) The PP shall utilize oxygen separated in the Nitrogen plant for sale or use in ETP.

(xvi) 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.

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

(xviii) 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. 50.12

Regularisation of the Existing Synthetic Organic Chemical Manufacturing of Capacity 6.5 MT/M and its Expansion to 24 MT/M located at Plot No-E-113, Tarapur MIDC, Taluka & District – Palghar, Maharashtra by M/s. Aadinath Chemical Industries - Consideration of ToR (under violation category)

[Proposal No. IA/MH/IND3/415702/2023; File No. IA-J-11011/160/2023-IA-II(I))]

1. The proposal is for the ToR for preparation of EIA/EMP for Regularisation of the Existing Synthetic Organic Chemical Manufacturing of Capacity 6.5 MT/M and its Expansion to 24 MT/M located at Plot No-E-113, Tarapur MIDC, Taluka & District – Palghar, Maharashtra by M/s. Aadinath Chemical Industries.

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 within critically polluted area. Therefore, the project requires appraisal at Central Level.

3. The PP applied for the ToR vide proposal number No. **IA/MH/IND3/415702/2023.**The proposal is now placed in 50th EAC Meeting held on19th-21st April, 2023 wherein the PP made an accredited Consultant, M/s. Sadekar Enviro Engineers Pvt. Ltd. [Accreditation number – NABET/EIA/2023/RA 0192 (Rev.02), Valid up to NABET/EIA/2124/SA0146 Valid till 16.6.2023] a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

4. The PP reported the product details as follows:

Sr. No.	Therapeutic Category	Product Name	CAS No.	Quantity in MT/M
EC Product (Synthetic Organic Chemicals)				
1.	Growth Promoter, to control Coccidiosis in poultry	Roxarsone (3 – Nitro 4- hydroxyl Phenyl – Arsenic Acid)	121-19-7	24
	Total			**24**
No- EC Product				
2.	--	Wood Preservative C.C.A./C.C.B.	--	5.0
3.	--	Celloulose powder	--	2.0
	Total			**7.0**

5. The PP reported that the project is for regularization and expansion of the manufacturing activity of M/s Aadinath Chemical Industries, located at Plot No. E-113, MIDC Tarapur, Taluka & District – PalgharAadinath Chemical Industries, located at Plot No. E-113, MIDC Tarapur, Taluka & District – Palghar, MH. PP has obtained CTE from MPCB in the year 2010. As per EIA Notification 2006 & subsequent amendments, manufacturing of product Roxarsone (3-Nitro 4-hydroxyl Phenyl –Arsonic Acid) requires Prior Environmental Clearance and as Prior EC was not obtained by the company, therefore it attracts violation of EIA Notification 2006.

6. The PP reported that the existing land area is 1445 m^2, no additional land will be used for the 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. Indori Nala 6.0 km towards NE. Upper Banganga river is flowing at a distance of 1.53 km in northwest direction.

8. The PP reported that the total water requirement is 34.56 m^3/day of which fresh water requirement of 6.54 m^3/day will be met from Tarapur MIDC. Effluent of 27.04 CMD quanity will be treated through MVR followed by ATFD and full-fledged ETP comprising of primary, secondary and tertiary treatment. The plant will be based on Zero Liquid discharge system. In case of breakdown/Maintenance of MVR & ATFD, Entire effluent will be sent to Common HCOD/HTDS Reduction facility of M/s. Sadekar Enviro Engineers Pvt Ltd, O-23 Part(I) E-133, MIDC Tarapur, Maharashtra. 1.08 CMD domestic Sewage will be treated in separate STP of 3 CMD Capacity.

9. The PP reported that the power requirement after expansion will be 151 KW including existing 119 KW and will be met from Maharashtra State Electricity Distribution Company limited (MSEDCL). Existing unit has D.G. sets of 125 KVA capacity, additionally No D.G. sets are used as standby during power failure. Stack height of 0 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 vide notification no**. IDC 2109/23023 IND.1 dated 27.5.1989**, is exempted from the public hearing as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018.

11. Industry has already developed greenbelt in an area of **34.22 %** i.e., **494.44 m^2** out of total area of the project. Industry will develop greenbelt in an area of **41.52%** i.e., **600 m^2** out of total area of the project.

12. The estimated project cost is Rs 3.1428 Crores including existing investment of Rs 1.5428 crores. Total Employment will be 30 persons as direct 30 & 0 persons indirect after expansion.

13. **Deliberations by the EAC:**

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

- Revised Greenbelt development plan.
- Revised plant layout.

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

14. The Committee, after detailed deliberations, **recommended** for issuing **Standard ToR [Annexure-II] without Public Hearing** as the project site is located in a notified RIICO industrial area and the following **additional ToR**, as per the provisions of the EIA Notification, 2006 (as amended) and SOP dated 07.07.2021:

(i). The PP shall follow the Standard Operating Procedure (SoP) issued by the Ministry on 07.07.2021 for handling of violation cases under EIA Notification, 2006.

(ii). The PP shall complete the impact assessment studies & submit Environmental Impact Assessment (EIA) report & Environmental Management Plan (EMP) (Damage Assessment, Remedial Plan and Community Augmentation Plan) in a time bound manner.

(iii). Assessment of ecological damage with respect to air, water, land and other environmental attributes. The collection and analysis of data shall be done by an environmental laboratory duly notified under the Environment (Protection) Act, 1986, or an environmental laboratory accredited by NABL, or a laboratory of a Council of Scientific and Industrial Research (CSIR).

(iv). The EMP shall comprise of remediation plan and natural and community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation.

(v). The remediation plan and the natural and community resource augmentation plan shall be prepared as an independent chapter (13) in the EIA report by the accredited consultants.

(vi). The budget for the remediation plan and natural and community resource augmentation plan corresponding to the ecological damage shall be adequate and shall be used for completing the plans within three years.

(vii). The project proponent shall be required to submit a bank guarantee equivalent to the amount of remediation plan and natural and community resource augmentation plan with the SPCB prior to the grant of EC. The quantum shall be recommended by the EAC and finalized by the regulatory authority. The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the EAC and approval of the regulatory authority.

(viii). The penalty amount shall be calculated as per provision of SOP dated 07.07.2021 (i.e. 1% of the total project cost incurred up to the date of filing of application along with EIA/EMP report PLUS 0.25% of the total turnover during the period of violation) with supporting documents. In addition to this, actual production vis-a-vis CTO capacity financial year wise in a tabular format with supporting documents.

(ix). The State Government/SPCB shall 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

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

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

(xii). Being in a Critically Polluted Area (CPA), the PP need to submit alternative site analysis and Environmental Cost Benefit analysis in the EIA report.

(xiii). 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.

(xiv). 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.

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

(xvi). 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.

(xvii). 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.

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

(xix). 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.

(xx). Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains in constructed reservoirs. The rain water shall not be put into groundwater strata.

(xxi). 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.

(xxii). The PP should develop Greenbelt over an area of 600 m^2 (41.52%) and that shall be completed within 1 year, accordinglyplant 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. 22 inside the plot premises+ 150 outside the premises number of plantations have to be planted considering 80% survival rate and with a spacing of 2 m x 2 m.

(xxiii). 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.

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

(xxv). 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.

(xxvi). The action plan for utilization of modern technologies for capturing carbon emitted and developing carbon sink/carbon sequestration resources.

(xxvii). Detailed description of micro flora and fauna (terrestrial and aquatic) existing in the study area with special reference to rare, endemic and endangered species.

(xxviii). The PP shall prepare a detailed rain water harvesting plan so as to ensure that unit will become water positive i.e. able to recharge the quantity equivalent to fresh water requirement of the plant or use only re-charged/restored water as a fresh water requirement.

(xxix). Detailed solvent recovery/solvent management plan.

(xxx). Detailed Volatile Organic Compounds (VOCs)/Fugitive emissions control plan.

Agenda No. 50.13

Regularisation of Existing Thermosetting Moulding Powder (Melamine Formaldehyde powder and Urea Formaldehyde Powder) of production capacity of 360 MT/annum and expansion to 1960 MT/annum located at Plot No. H-548, RIICO Industrial Area, Tehsil: Bhiwadi, District: Alwar (Rajasthan) by M/s Shree Balaji Enterprises - Consideration of ToR (violation category)

[Proposal No. IA/RJ/IND3/422973/2023; File No. IA-J-11011/161/2023-IA-II(I)]

1. The proposal is for the issue of ToR for preparation of EIA/EMP for Regularisation of Existing Thermosetting Moulding Powder (Melamine Formaldehyde powder and Urea Formaldehyde Powder) of production capacity of 360 MT/annum and expansion to 1960 MT/annum located at Plot No. H-548, RIICO Industrial Area, Tehsil: Bhiwadi, District: Alwar (Rajasthan) by M/s Shree Balaji Enterprises. **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/RJ/IND3/422973/2023.** The proposal

was earlier listed in the 50 th EAC meeting held on 19th-21st April, 2023 wherein the PP and the accredited Consultant M/s. Gaurang Environmental Solutions Private Limited. having NABET Accreditation vide letter No. **ET/EIA/2023/RA 0192 (Rev.02)** Valid till **07.12.2023)** made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

S. No.	Product	Existing	Proposed	Total
1.	Thermosetting Moulding Powder Melamine-formaldehyde (M-F) Urea-formaldehyde (U-F)	360 MTA 180 MTA 180 MTA	1600 MTA 800 MTA 800 MTA	1960 MTA 980 MTA 980A

4. The PP reported that the total land area of the existing unit is 731.00 sq. m. proposed expansion is coming up within the same premises and no R&R is involved in the Project.

5. The PP reported that in the matter of O.A. 298/2021, Vineet Nagar vs. CGWA & Ors., Hon‟ble NGT vide its order passed on 21.12.2021 directed that all the units manufacturing formaldehyde and its different resins (including melamine formaldehyde, urea formaldehyde & phenol formaldehyde) without requisite Environmental Clearance (EC) as per EIA Notification dated 14.09.2006 will be governed by the requirement of such EC. Therefore, we understand that the project is in violation of EIA Notification, 2006.

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 viz. Indori Nala 4.6 km towards NE

7. The PP reported that the total water requirement will be 5.5 m^3/day out of which fresh water requirement will be 3.8 m^3/day will be met from ground water. The Domestic Effluent 0.8 KLD (after expansion) will be treated into Modular STP based on Automatic Control Airlift Cross flow MBR Technology (1 KLD). The plant will be based on Zero Liquid discharge system.

8. The total Power requirement will be 260 KW (after expansion) and will be met from State Power Distribution Corporation limited (JVVNL). One DG set of 125 kVA is being/will be used as standby during power failure. Stack (3.5 m height) has been provided as per CPCB norms to the D.G set.

9. The PP reported that the project, being in notified industrial area i.e., RIICO Bhiwadi vide Notification No. Va.4 (80) udhyog/189 Date 16.04.1991 is exempted from the public hearing as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018.

10. Industry will develop greenbelt in an area of 292 sq. m area (40%; 20% within plant premises and 20% outside plant premises) (The plant has been established in the Year 2018 & the plant/machinery already covers the plant premises. Therefore, greenbelt will be provided within the project site and within the industrial area.

11. The total project cost after expansion will be Rs. 119.6 lakhs (existing: Rs. 69.6 lakhs + proposed: Rs. 50.0 lakhs). Total Employment will be 15 persons after expansion (during operation phase 10 persons existing; 5 persons proposed).

12. **Deliberations by the EAC:**

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

- Revised Plant layout.
- Revised Greenbelt development plant layout with Action plan

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

13. 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 PP shall follow the Standard Operating Procedure (SoP) issued by the Ministry on 07.07.2021 for handling of violation cases under EIA Notification, 2006.

(ii). The PP shall complete the impact assessment studies & submit Environmental Impact Assessment (EIA) report & Environmental Management Plan (EMP) (Damage Assessment, Remedial Plan and Community Augmentation Plan) in a time bound manner.

(iii). Assessment of ecological damage with respect to air, water, land and other environmental attributes. The collection and analysis of data shall be done by an environmental laboratory duly notified under the Environment (Protection) Act, 1986, or an environmental laboratory accredited by NABL, or a laboratory of a Council of Scientific and Industrial Research (CSIR).

(iv). The EMP shall comprise of remediation plan and natural and community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation.

(v). The remediation plan and the natural and community resource augmentation plan shall be prepared as an independent chapter (13) in the EIA report by the accredited consultants.

(vi). The budget for the remediation plan and natural and community resource augmentation plan corresponding to the ecological damage shall be adequate and shall be used for completing the plans within three years.

(vii). The project proponent shall be required to submit a bank guarantee equivalent to the amount of remediation plan and natural and community resource augmentation plan with the SPCB

prior to the grant of EC. The quantum shall be recommended by the EAC and finalized by the regulatory authority. The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the EAC and approval of the regulatory authority.

(viii). The penalty amount shall be calculated as per provision of SOP dated 07.07.2021 (i.e. 1% of the total project cost incurred up to the date of filing of application along with EIA/EMP report PLUS 0.25% of the total turnover during the period of violation) with supporting documents. In addition to this, actual production vis-a-vis CTO capacity financial year wise in a tabular format with supporting documents.

(ix). The State Government/SPCB shall 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

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

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

(xii). Being in a Critically Polluted Area (CPA), the PP need to submit alternative site analysis and Environmental Cost Benefit analysis in the EIA report.

(xiii). 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.

(xiv). 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.

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

(xvi). 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.

(xvii). 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 should also be submitted.

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

(xix). 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.

(xx). 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.

(xxi). The PP should develop Greenbelt over an area of 292 m^2 (40%) (146 m^2 – inside the project boundary + 146 m^2 outside the project boundary RIICO industrial area) and that shall be completed within 1 year, accordingly 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. 37 inside the plot premises+ 37 outside the project boundary number of plantations have to be planted considering 80% survival rate and with a spacing of 2 m x 2 m.

(xxii). 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.

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

(xxiv). 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.

(xxv). The action plan for utilization of modern technologies for capturing carbon emitted and developing carbon sink/carbon sequestration resources.

(xxvi). Detailed description of micro flora and fauna (terrestrial and aquatic) existing in the study area with special reference to rare, endemic and endangered species.

(xxvii). Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains in constructed reservoirs. The rain water shall not be put into groundwater strata.

(xxviii). Detailed solvent recovery/solvent management plan should be prepared and submitted.

(xxix). Detailed Volatile Organic Compounds (VOCs)/Fugitive emissions control plan should be prepared and submitted.

Agenda No. 50.14

Expansion of the Existing Formaldehyde and Resin and Proposed API Manufacturing Unit [Total Production Capacity after Expansion: - 12670.25 MT/Month] located at Survey No. 219 Paiky-2, 220 & 223 paiky-1, Village: Juna Sadulka, Opp. Dadashrinagar, Taluka: Morbi, Dist: Morbi, Gujarat by M/s Aatmajyot Chem Private limited - Consideration of EC

[Proposal No. IA/GJ/IND3/421162/2023 File No. J-11011/72/2014-IA-II(I))]

1. The proposal is for the environmental clearance for the Expansion of the Existing Formaldehyde and Resin and Proposed API Manufacturing Unit [Total Production Capacity after Expansion: - 12670.25 MT/Month] located at Survey No. 219 Paiky-2, 220 & 223 paiky-1, Village: Juna Sadulka, Opp. Dadashrinagar, Taluka: Morbi, Dist: Morbi, Gujarat by M/s Aatmajyot Chem Private limited

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

3. The standard ToR for the preparation of EIA/EMP Report was issued vide letter **J-11011/72/2014-IA II (I)** dated 7.4.2022. The PP applied for Environment Clearance in Common Application Form and submitted EIA/EMP Report and other documents. The PP reported that it is an **Expansion EC.** The proposal is placed in 50th EAC Meeting held on 19th-21st April, 2023 wherein the Project Proponent and an accredited Consultant, T. R. Associates [Accreditation number NABET/EIA/1922/SA 0153 (Rev. 01) valid till 15.7.2023], made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that the Total land area is **25607 m^2; no** additional land will be used for expansion **project**. The details of products are as follows:

Sr. No.	Name of Product	Production Capacity Existing MT/M	Production Capacity After expansion MT/M	CAS No.
	Plant-1 (Formaldehyde& Resin Unit)			
1.	Formaldehyde	3000	9000	50-00-0
2.	Hexamine	150	150	100-97-0
3.	Phenol Formaldehyde Resin	250	1500	9003-35-4
4.	Melamine Formaldehyde Resin	250	1000	9003-08-1
5.	Urea Formaldehyde	250	1000	9011-05-6
Plant-2 (Active Pharmaceutical Ingredients Unit)				
6.	Fluconazole	--	20	86386-73-4
7.	Pregabalin	--		148553-50-8

8.	Metformin HCl	--		1115-70-4
9.	Atorvastatin Calcium	--		134523-00-5
10.	Rosuvastatine Calcium	--		147098-20-2
11.	Omeprazole	--		73590-58-6
12.	Gabapentin	--		60142-96-3
13.	Ritonavir	--		155213-67-5
14.	Aspirin	--		50-78-2
15.	Valsartan	--		137862-53-4
16.	Lisinopril	--		83915-83-7
17.	Amoldipine Besylate	--		88150-42-9
	R&D	--	0.25	
	Total	**3900**	**12670.25**	

5. The PP reported that there is no violation case as per the Notification No. S.O.804(E) dated 14.03.2017 and GPCB has issued Closure order effective immediate to our unit. We paid Environment damage compensation and applied for temporary revocation and the same was granted to our unit for three months. And after three months we have now applied for permanent revocation to GPCB, which is in process.

6. The PP reported that the Ministry had issued EC earlier vide letter no. No. J-11011/72/2014-IA II (I) dated 3rd July 2015 to the existing project for Formaldehyde, Hexamine and Resin unit in favor of M/s. Aatmajyot Chem Pvt. Ltd.

7. Certified compliance report has been obtained by the IRO Gandhinagar vide letter J-11/35-2022/IROGNR dated 22.7.2022. Out of total 35 conditions, it may be seen that 27 are complied, 3 are partly complied and 3 are agreed to comply, 1 is being complied by the project proponent whereas 1 condition can't be ascertained. Action taken report has been submitted to IRO Gandhinagar, vide e mail dated 21.4.2023.

8. The PP reported that there is no National Parks, Wildlife sanctuary, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Macchhu River is 4.93 km in Wmest Direction from Project Site and Khet Talavadi 0.69 km in NW direction from project site. Rampara wild life sanctuary is 47.53 km in South direction. Schedule I species Indian Peafowl, Pallid Harrier and Shikra exist within 10 km study area of the project, for which conservation plan is submitted to PCCF/ chief wildlife warden dated 6.6.2022.

9. The PP reported that the **Ambient air quality** monitoring was carried out at 8 locations during December 2020 to February 2021. The baseline data indicates the ranges of concentrations as: PM_{10} (56.31 µg/m^3 to 86.6 µg/m^3), $PM_{2.5}$ (27.14 µg/m^3 to 51.42 µg/m^3), SO_2 (6.22 µg/m^3 to 22.93 µg/m^3), NO_2 (15.51 µg/m^3 to 40.5 µg/m^3), NH_3 HCl, CO and VOC are found Below detectable limit. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the expansion project would be 0.38 µg/m^3, 0.8 µg/m^3, 0.00113 µg/m^3, 1.7 µg/m^3

and 0.00015 µg/m^3 with respect to PM_{10}, SO_2, NO_2, NH_3 and HCl. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). **Noise**: The maximum noise level measured in the study area was 72.6 dB (A) in day time and 68.6 dB (A) in night time at project site, which is below the stipulated standards in day time as well as in night time. Also, the Leq value of the same is within stipulated norms. The noise levels (Leq) of the residential area within the impact zone varied from 32.6-54.9 dB (A) in the day time and 37.2-44.8 dB (A) in the night time. **Ground Water:** pH is found between within 8.08 to 8.4 and it is within permissible and acceptable limit at all locations. Chloride ranges from 81 mg/L to 537 mg/L is found higher than the acceptable limit but below the permissible limit at Dadshrinagar (304 mg/L), Ravapar Nadi (537 mg/L), Bhaktinagar (264 mg/L), Vaghpar (314 mg/L and Nava Sadulka (360 mg/L). Total hardness is found between 134 mg/L to 640 mg/L. It is higher than the acceptable limit at all locations except Ravapar Nadi 640 mg/L which is above permissible limit. Calcium is found between 40.1 mg/L to 152.3 mg/L and it well within permissible limit at all locations and higher than the acceptable limit at Ravapar Nadi and Nava sadulka. Magnesium ranged from 3.4 mg/L to 75.3 mg/L and it well within permissible limit at all locations and higher than the acceptable limit at Ravapar Nadi and Vaghpar. The higher concentration in salts may be due to geological formation found in area is Basalt. TDS ranges from 656 mg/L to 4000 mg/L. It is found higher than the acceptable limit at all the locations and higher than the permissible limit at Project site (4000 mg/L), Ravapar Nadi (2280 mg/L), Vaghpar (3712 mg/L). Total Coliform and Fecal Coliform is not observed at any locations. Ground water is suitable for domestic and agricultural purpose after adequate treatment such as primary treatment and disinfection. **Surface water:** pH is found between 7.69 to 9.17. It is higher than the acceptable limit at Bhaktinagar pond, Nava sadulka pond and Rangpar pond. It may be due to the domestic activities such as washing of cloths, utensils etc. Chloride ranges from 20 mg/L to 177 mg/L and it is within the acceptable limit at all the locations. Total hardness is found between 95 mg/L to 284 mg/L and it is on lower side and within acceptable limit at all locations. Magnesium ranges from 14 mg/L to 38.1 mg/L and it is found well within accepted limit at all locations except Dadashrinagar pond (33.4 mg/L) and Nava sadulka pond (38.1 mg/L) but within permissible limit. Calcium ranges from 11.8 mg/L to 53.4 mg/L which is well within acceptable limit at all locations. TDS ranges from 260 mg/L to 2528 mg/L and it is found higher than the permissible limit at Nava sadulka pond (2528 mg/L). It may be due to sewage, urban and agricultural run-off. Dissolved oxygen is observed lowest 3 mg/L at vaghpar pond and highest 5.5 mg/L at dadashrinagar pond. Fecal coliform was not found, but total coliform was present at all locations. It may be due to the cattle washing, presence of algae, use of water for domestic activities, which may impact on health of persons who will use this water. COD values are found within the range of 49 mg/L – 90 mg/L. BOD values are found within the range of 14.7 mg/L – 26.9 mg/L. The COD and BOD value found may be due to animal bathing activities as per primary data collection Thus, surface water can be used for agricultural purpose after adequate primary treatment. **Soil:** Results of soil analysis reveal that soils of project area are neutral in reaction, have a normal EC and have medium to high organic carbon content. A possible explanation for medium to high organic carbon content of the soil may be that the farmers would have buried the crop residues after harvest of the crops and used organic manure. Soils of project area are mostly sandy clay loam (medium black soil) and water holding capacity of soils is good. The CEC values of soil samples are high (25-40). Generally, soils with high CEC values are more fertile with more clay content. Medium to high organic matter, fertilization and irrigation would be responsible to high CEC value. Nutrient availability of soil samples reveals that soils are low

to medium in N, low in P_2O_5 and high in K_2O. SAR values found to be low to medium. Sodium values ranged from 2.18 to 3.28 mg/g. Bulk density shows the compactness of soil. A compact soil has higher value of Bulk density. Bulk density values ranged from 1.46 to 2.47 g/m3. All the soil samples have more than critical levels of Ca and Mg salts (critical limit – 300 ppm for Ca and 120 ppm for Mg).

10. The PP reported that the Total water requirement after Expansion project will be **764.56 m^3/day (Fresh – 561 m^3/day + reuse – 203.56 m^3/day)** which will be met from **GWIL.** Effluent of **205.8** m^3/day quantity will be treated through Effluent Treatment Plant. The plant will be based on Zero Liquid Discharge System

11. The PP reported that Power requirement for Total after Expansion project will be **985 kVA [585 kVA Existing + 400 kVA Proposed]** and will be procured from **PGVCL.** (300 KVA X 2) D. G. Sets [Fuel: Diesel (35 Lit./hr.)] shall be provided and used only in case of power failure. Stack (6 meter and 20 meter) and Retrofit shall provide as per CPCB norms to the DG set.

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

Sr. No.	Stack attached to	Height of the stack (m)	Expected Pollutant	APC System	GPCB Limit
(Unit-1)					
1	Final scrubber attached to assembly of formaldehyde plant	11	Traces of Formaldehyde and CO	Activated Carbon Column	As per GPCB Norms
2	Final scrubber attached to assembly of formaldehyde plant	11	Traces of Formaldehyde and CO	Activated Carbon Column	As per GPCB Norms
3	Hexamine Reactor	11	Ammonia	Dual stage Scrubber system	As per GPCB Norms
(Unit-2)					
4	Process Reactor (3 nos.)	20	HCl & VOCs	Dual condenser system on each reactor (water + brine) followed by common Dual scrubbing system (water + Alkali)	As per GPCB norms

				followed by activated carbon column	
5	Process Reactor (4 nos.)		NH_3 & VOCs	Dual condenser system on each reactor (water + brine) followed by common Dual stage scrubbing system (water + Acidic) followed by activated carbon column	As per GPCB norms
6	Dryer	12	VOCs	Activated carbon column	B.D.L

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

Sr. No.	Waste generation	Source	Quantity MT per Annum			Category	Mode of disposal
			Existing	Proposed	Total after expansion		
Unit 1+ Unit 2 (Formaldehyde+ Resin + Hexamine + API)							
1.	ETP Sludge	ETP	33.3	316.80	350.1	35.3	Collection, storage and Disposal at TSDF Site
2.	MEE Residue	MEE	-	276	276	35.3	Collection, storage and Disposal at TSDF Site
3.	Used Oil	Plant / Machineries	0.6	0.6	1.2	5.1	Collection, storage and Use within premises as a lubricant/ sell to registered recycler
4.	Discarded Containers	RM store	13.98	217.62	231.6	33.1	Collection, storage and decontamination or Reuse within premises/ sell to approved re-processors.
5.	Spent Mother liquor	From Manufacturing process	126	--	126	--	Collection, storage and reuse in manufacturing process

Sr. No.	Waste generation	Source	Quantity MT per Annum			Category	Mode of disposal
			Existing	Proposed	Total after expansion		
Unit-1 (Formaldehyde+ Resin + Hexamine)							
6.	Resin Residue	From Manufacturing process	-	16.50	16.50	23.1	Collection, storage and disposal at approved CHWIF site
Unit-2 (API Unit)							
7.	Distillation Residue	solvent recovery	-	1235.04	1235.04	20.3	Collection, storage and disposal at CHWIF site
8.	Process Residue	From Manufacturing process	-	58.56	58.56	28.1	Collection, storage and disposal at CHWIF site
9.	Spent Carbon	ctivated carbon column	-	721.90	721.90	28.3	Collection, storage and disposal at CHWIF site
10	Spent catalyst	From Manufacturing process	-	108	108	28.3	Collection, storage and disposal at CHWIF site
11	Spent Solvent	solvent recovery	-	47064	47064	28.6	Collection, storage & reuse with in process
12	Date Expired Product	from Manufacturing process	-	0.5	0.5	28.5	Collection, storage and disposal at CHWIF site
13	Off-Specification Product	from MFG process	-	0.5	0.5	28.4	Collection, storage and disposal at CHWIF site
14	Bleed liquor (20 % NH_3)	Scrubber	-	1095	1095	35.1	Collection, storage and reuse in process.
15	Bleed liquor (20 % HCl)	Scrubber	-	13.5	13.5	35.1	Collection, storage and reuse in process.

14. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 324.25 lakhs (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 828.52 lakhs per annum. Industry proposes to allocate 20.48 Lakhs towards CER.

15. The PP reported that Industry will develop greenbelt in an area of **33.00 %** i.e, **8747.35 m^2** out of total area **(25,607m^2)** of the project.

16. The PP reported that Public Hearing (PH) for the expansion project was conducted by the Gujarat Pollution Control Board on 27.12.2022 which was presided by the District Collector& District Magistrate. The main issues raised during the public hearing and their reply/commitment by the PP is as follows:

Issue raised	Response/Commitment from Project Proponent	Action plan with time frame and budget
Precautionary measures for workers	The industry is maintaining Health records of workers of Form-32 and Form-33 as well as unit will maintain after expansion also. Unit will provide Occupational Health and safety for workers like PPE Kits (safety helmet, safety glasses, gloves, safety shoes, protective jacket) and first aid kit etc. The industry will provide drinking facilities, toilet & primary health care facilities to all the workers.	Capital cost of Occupational Health and safety for workers will be **5.55 Lakh**, whereas **0.55 lakhs per annum** will be the recurring cost for maintaining records and health.
Cowshed / Greenbelt	There is chances of negative impact on cows from existing formaldehyde plant and upcoming API plant. So, we will relocate cowshed from industry premises to remote area. Out of total plant area of 26507 m^2 Unit have to develop greenbelt area of 8747.35 m^2 (33% of the total area. Unit has tried to develop 33% greenbelt area including shrubs in existing unit but due to the climatic condition, greenbelt area remained is approx. 21% of the total area. Here total green belt area is 8747.35 $m^{2,}$ now considering 2500 trees per 10,000 sq. mt., total 2187 no. of trees needs to be planted, but 1420 trees are already planted so remaining 767 no. of trees need to be planted after expansion. Further considering 80 % survival rate, additionally 20 % plants i.e., 154 no. of plants needs to be planted. Therefore, total 921 no. of trees will be planted after expansion.	**Capital cost would include development of green belt within the project premises- 27.27 Lakhs.** **Recurring cost would include maintenance charges and manpower salary- Rs. 5.89 Lakhs per annum.**
Pollution caused by this unit in	The unit have prepared Environment management plan to treat all the pollutants i.e.	Recurring cost for air water & hazardous waste

surrounding villages	liquid effluent, air emissions and hazardous waste with adoption of adequate and efficient technology and to comply with all the norms and standards stipulated by GPCB/CPCB. The industry will monitor the air monitoring (stack, ambient, work zone & fugitive emission), water monitoring & solid/hazardous waste monitoring regularly.	monitoring will be **20.47 Lakhs per annum**.
Related to product	The industry will manufacture the proposed products that will be purchased by the nearby industries for their products manufacturing.	Capital cost of the project after expansion will be **26.24 crores**.
Impact of Pollution	In this expansion unit, flue gas emission will take place from stack attached to Steam Boiler (1TPH) & thermic fluid heater (1 Lakh Kcal/Hr.) in which Briquettes and Indonesian coal will be utilized as fuel. The common stack of 30 m attached to Steam Boiler & TFH. The common stack of 30 m attached to Steam Boiler (2*2TPH) in which briquettes and Indonesian coal will be used as fuel. For API manufacturing unit dedicated steam boiler (2 TPH) will be used. The stack attached to it will be of 30 m height. Time to time ambient as well as source monitoring will be done to maintain the pollution level well within the prescribed limit. The industry will provide all the necessary environment pollution control measures for air, water & solid / hazardous waste within premises.	Capital cost for APCM will be **75 Lakhs** and recurring cost for APCM will be **6 Lakhs Rs. Per Annum.** Capital cost for water pollution control measures will be **146 Lakhs** and recurring cost will be **401.7 Lakhs Rs. Per Annum**. Capital cost for solid / hazardous waste management will be **1.5 Lakhs** and recurring cost will be **378.86 Lakhs Rs. Per Annum**

17. The PP proposed to set up an Environment Management Cell (EMC) by engaging Partner- Enviornment Engineer- Chemist- Safety and health officer for the functioning of EMC.

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

19. The PP reported that that the carbon sequestration are as follows-

Activities help to reduce carbon emission	Capacity of renewable energy installation	CO_2 to be sequestrated/reduced from Renewable source of energy and plantation	Percentage of CO_2 to be sequestrate/ reduce from Renewable source of energy and plantation
1st step towards carbon reduction/sequestration after the Plant Commencement			
Renewable source of energy	Solar Panel (350 kW) on the rooftop of industrial shed and inside the premises within 5 years	353.92 MT CO_2 emission reduction per year (1,28,000 units year per annum generated.)	9.31
CER activity for renewable source of energy	CER activity for renewable source of energy (45 kW solar panel)	45.50 MT CO_2 emission reduction per year (1,28,000 units year per annum generated.)	1.19
Rain water harvesting system to reduction of fresh water consumption from ground water	Details of Rain water harvesting is given in EIA report.	0.41 MT CO_2 emission reduction per year (192 units year per annum reduced from total electricity generation)	0.010
Greenbelt (within Premises)	Total 2245 no. of trees will be planted within the premises (1900 already planted, 345 proposed)	374.1 MT CO_2 per year sequestrate	9.84
Tree plantation for conservation of Schedule-I Species	750 no. of trees tress will be planted for conservation of Schdeule-1 species (Indian Peafowl, Pallid Harrier and Shikra) in nearby villages	125 MT CO_2 per year sequestrate (after 5 years when tree will be matured)	3.28
Social Forestry	3000 no. of trees will be will be planted within the premises	500 MT CO_2 per year sequestrate (after 5 years when tree will be matured)	13.16
Total Carbon Sequestration (tCO_2/ year)		139.93	**36.79**

20. The estimated project cost total after expansion is **Rs 2624.25 lakhs** Total Employment will be **45** persons as direct after expansion.

21. **Deliberations by the EAC:**

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

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

The 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 action taken report of the non-compliances, fuel, stack height, PH action plan, Greenbelt development plan, Carbon sequestration and advised the PP to submit the following:

- Action plan for non-complied agreed to comply conditions.
- Undertaking for fuel
- Detials of the Increased the stack height attached with existing DG set.
- Revised PH action plan and relocate the cowshed from the industry premises to remote area.
- Revised number of trees from 2000 to 3000 in social forestry and revise Carbon sequestration
- Revised Greenbelt Development plan.

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

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

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

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

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

(i) The PP shall develop Greenbelt over an area of at least 8747.35 m^2 (Internal: 12,609.86 m^2 + Proposed: 28,000 m^2), by planting 921 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 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 Partner- Environment Engineer- 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 ₹ 324.25 lakhs (Capital cost) and ₹ 828.52 Lakhs per annum (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(iv) Total water requirement after Expansion project will be **764.56 m^3/day (Fresh – 561 m^3/day + reuse – 203.56 m^3/day)** which will be met from **GWIL. .** 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) Effluent of **205.8** m^3/day quantity shall be treated through Effluent Treatment Plant. The plant shall be based on Zero Liquid Discharge System.

(vi) PP shall use Agro- Briquette in boiler and TFH during the unavailability of Agro- Briquette Indonesian coal shall be used as a fuel in boiler and TFH.

(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 '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.

(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) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB servers. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

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

(xv) The occupational health centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.

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

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

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

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

(xx) The PP shall undertake waste minimization measures as below: (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes; (c) Use of automated filling to minimize spillage; (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapor recovery system; and (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.

(xxi) 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. 50.15

Expansion for (Phenol Formaldehyde Resin, Urea Formaldehyde Resin and Melamine Formaldehyde Resin- Total 875 MT/month) located at S. No. 245 to 250, Plot No. 55 Sub Plot

No. 55/1 and S. No. 257 to 259, 260/2 Plot No. 49 to 67, Village: Pipalana, Taluka: Kotda sangani District: Rajkot, Gujarat by M/s Snap Décor - Consideration of EC

[Proposal No. [IA IA/GJ/IND3/406867/2022 File No. IA-J-11011/153/2021-IA-II(I)]

1. The proposal is for the environmental clearance for the Expansion for (Phenol Formaldehyde Resin, Urea Formaldehyde Resin and Melamine Formaldehyde Resin- Total 875 MT/month) located at S. No. 245 to 250, Plot No. 55 Sub Plot No. 55/1 and S. No. 257 to 259, 260/2 Plot No. 49 to 67, Village: Pipalana, Taluka: Kotda sangani District: Rajkot, Gujarat by M/s Snap Décor.

2. The project/activity is covered under Category 'A' of item 5 (f)-Synthetic organic chemicals of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) and requires appraisal at Central Level by the Expert Appraisal Committee (EAC) as the project is located outside the notified industrial area.

3. The standard ToR for the preparation of EIA/EMP Report was issued vide letter **IA-J-11011/153/2021-IA-II(I)** dated 4.5.2021. The PP applied for Environment Clearance in Common application form and submitted EIA/EMP Report and other documents. The PP reported that it is an **Expansion EC.** The proposal is placed in 50th EAC Meeting held on 19th-21st April, 2023 wherein the Project Proponent and an accredited Consultant, T. R. Associates [Accreditation number NABET/EIA/1922/SA 0153 (Rev. 01) valid till 15.7.2023], made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that the Total land area is 9886 m^2; no additional land will be used for expansion project. The details of products are as follows:

Sr. No.	Name of Product	Proposed Resin Production Capacity	CAS No.
1	Phenol Formaldehyde Resin	500 MT/Month	9003-35-4
2	Urea Formaldehyde Resin	200 MT/Month	9011-05-6
3	Melamine Formaldehyde Resin	175 MT/Month	9003-08-1
	TOTAL	**875 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 that the earlier EC was not applicable as existing product (laminated Sheet) does not attract EIA notification 2006 its subsequent amendments Currently, unit is involved in construction of laminate sheet plant for manufacturing laminate sheet in tune of 3, 00,000 Nos. /Month.

7. The PP reported that there is no National Parks, Wildlife sanctuary, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site.

Piplana Pond 0.67 km in South direction. Schedule I species Indian Peafowl exist within 10 km study area of the project, for which conservation plan is submitted to PCCF/ chief wildlife warden dated 13.9.2021.

8. The PP reported that the **Ambient air quality monitoring** was carried out at 8 locations during March 2021 to May 2021. The baseline data indicates the ranges of concentrations as: PM_{10} (59.11 µg/m^3 to 87.9 µg/m^3), $PM_{2.5}$ (27.84 µg/m^3 to 52.69 µg/m^3), SO_2 (6.44 µg/m^3 to 23.88 µg/m^3) and NO_2 (19.32 µg/m^3 to 43.49 µg/m^3). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.5 µg/m^3, 1 µg/m^3 and 0.004 µg/m^3 with respect to PM_{10}, SO_2 and NO_2.The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). **Noise:** The maximum noise level measured in the study area was 72.6 dB (A) in day time and 63.4 dB (A) in night time at project site, which is below the stipulated standards in day time as well as in night time. Also, the Leq value of the same is within stipulated norms. The noise levels (Leq) of the residential area within the impact zone varied from 38.7 – 54.7 dB (A) in the day time and 34.9 – 49.2 dB (A) in the night time. **Ground Water:** pH is found between 7.8 to 8.72 and it is within the acceptable limit at all locations except Bhayasar but within permissible limit. Chloride ranges from 106 mg/L to 349 mg/L and it is found higher than the acceptable limit at Bhayasar (349 mg/L) and sar village (281 mg/L) but within permissible limit at all locations. Total hardness is found between 134 mg/L to 550 mg/L and it is higher than the acceptable limit at all the location except Rajpara village. Magnesium ranges from 5.8 mg/L to 58.3 mg/L and it is found higher then acceptable limit at Piplana, Bhayasar, Sar and Anandpar. Similarly, Calcium ranges from 44.1 mg/L to 124.2 mg/L and it is found higher than the acceptable limit at Project site, Lothada, Bhayasar and Sar. All the values are well within permissible limit and possible reason for that is formation due to sedimentary rock and calcium bearing minerals. TDS is found between 564 mg/L to 1312 mg/L and it higher then acceptable limit at all the locations, but within permissible limit. Dissolved oxygen ranges lowest at 2.3 mg/L at Kathrota and highest at 3.5 mg/L at Project site among 8 locations. Total Coliform and Fecal Coliform is not observed at any locations. Water of these locations is suitable for domestic and agriculture activities after suitable treatment. **Ground Water:** pH is found between 7.8 to 8.72 and it is within the acceptable limit at all locations except Bhayasar but within permissible limit. Chloride ranges from 106 mg/L to 349 mg/L and it is found higher than the acceptable limit at Bhayasar (349 mg/L) and sar village (281 mg/L) but within permissible limit at all locations. Total hardness is found between 134 mg/L to 550 mg/L and it is higher than the acceptable limit at all the location except Rajpara village. Magnesium ranges from 5.8 mg/L to 58.3 mg/L and it is found higher then acceptable limit at Piplana, Bhayasar, Sar and Anandpar. Similarly, Calcium ranges from 44.1 mg/L to 124.2 mg/L and it is found higher than the acceptable limit at Project site, Lothada, Bhayasar and Sar. All the values are well within permissible limit and possible reason for that is formation due to sedimentary rock and calcium bearing minerals. TDS is found between 564 mg/L to 1312 mg/L and it higher then acceptable limit at all the locations, but within permissible limit. Dissolved oxygen ranges lowest at 2.3 mg/L at Kathrota and highest at 3.5 mg/L at Project site among 8 locations. Total Coliform and Fecal Coliform is not observed at any locations. Water of these locations is suitable for domestic and agriculture activities after suitable treatment.

9. The PP reported that the total water requirement for project will be 51.37 m^3/day (Fresh – 39.67 m^3/day + reuse – 11.7 m^3/day) which will be met from Bore well. Effluent of 10.04 m^3/day

quantity will be treated through Effluent Treatment Plant. the plant will be based on Zero Liquid Discharge System

10. The PP reported that the power requirement for proposed project will be 500 KVA and has met from PGVCL. (350 KVA X 1) [Fuel: Diesel (84 Lit./hr.)] shall be provided and used only in case of power failure. Stack (11 meter) and Retrofit shall provide as per CPCB norms to the DG set. Industry will provide one Steam Boiler (5 TPH) and TFH (1500000 kcal/hr) [Fuel: Briquettes/Agro waste 6.87 Ton/Month) or Indonesian Coal (5 Ton/Month)]. Multicyclone separator followed by bag filter followed by alkaline scrubber with stack height of 30 m will be installed with Boiler as an APCM for controlling the particulate emissions within the statutory limit.

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

S. No.	Stack attached to	Height of the stack (m)	Expected Pollutant	APC System	GPCB Limit
1	Impregnator Phenolic Dryer	11	Activated Carbon Column	Methanol	As per GPCB Norms
2	Impregnator Melamine Dryer	11	----	----	----
3	Sanding Machine	Closed System	Dust Collector/Bag filter	SPM	As per GPCB Norms
4	Cutting Machine	Closed System	Dust Collector/Bag filter	SPM	As per GPCB Norms

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

Sr. No.	Description	Category	Quantity (MT/Annum)	Mode of Disposal
1.	ETP Sludge / Evaporation Residue	35.3	60.24	Collection, storage and disposal at approved TSDF site
2.	Used Oil	5.1	0.05	Collection, storage and used within premises as a lubricant / sold to registered recycler
3.	Discarded Plastic Bags /Barrels	33.1	4.24	Collection, storage & sold to authorized vendor
4.	Spent Carbon	35.1	192	Collection, storage and disposal at approved CHWIF site

5.	Resin Residue	23.1	5.25	Collection, storage and disposal at approved CHWIF site

13. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 78.2 lakhs (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 93.63 lakhs per annum. Industry proposes to allocate 1.60 Lakhs towards CER.

14. The PP reported that Industry will develop greenbelt in an area of 33.19 % i.e, 3282 m^2 out of total area (9886 m^2) of the project.

15. The PP reported that Public Hearing (PH) Proposed project has been conducted by the State Pollution Control Board at the project site on **21/04/2022**, which was presided by the Additional District collector. The main issues raised during the public hearing and their reply/commitment by the PP is as follows:

Issue raised	Response/Commitment from Project Proponent	Action plan with time frame and budget
Solid waste Management	Unit will establish adequate solid waste\ management system for collection, handling storage and transportation for effective management. Furthermore, Unit has already applied for provisional membership of GPCB approved TSDF site for land filling, M/s. DETOX India Ltd. & CHWIF site for incineration of wastes, M/s. SEPPL. The unit will apply for obtaining final license of TSDF & CHWIF site after production starts.	Capital Cost for SHW – 0.48 lakhs Recurring cost for SHW – 31.96 lakhs per annum
Health of the workers	Unit will provide all personal protective equipment's to all the workers working in chemical handling area. The unit will also maintain health register (Form-32,33) of all the workers as well as the unit will do pre and post health check-up of workers. Furthermore, the unit will give chemical handling training to respective workers by trained person. The unit will also provide Occupational health centre in premises.	Occupational health & safety capital cost – 1.50 lakhs. Recurring cost – 0.8 lakhs per annum
Plantation	Out of total plant area of 9886 m Unit will develop greenbelt in 3282 m2 (33.19 %) rea. Unit will plant 985 numbers of local tree species like Neem, Desi Badam, Gulmohar, Karo Sirish, Kesudo & Asopalav in their green belt area in first year after getting EC from concern authority and from second year the unit will maintain them	Capital cost of Green belt development – 5.66 lakhs. Recurring cost – 2.01 lakhs per annum

16. The PP proposed to set up an Environment Management Cell (EMC) by engaging Environment Engineer- Chemist- safety and Health officer for the functioning of EMC.

17. The PP submitted the Disaster Management Plan and Onsite and Offsite Emergency Plans in the EIA report.

18. The PP reported that that the carbon sequestration are as follows-

Activities help to reduce carbon emission	**Capacity of renewable energy installation**	**CO_2 to be sequestrate/reduce from Renewable source of energy and plantation**	**Percentage of CO_2 to be sequestrate/ reduce from Renewable source of energy and plantation**
1st step towards carbon reduction/sequestration after the Plant Commencement			
Renewable source of energy	Solar Panel 100 kW at rooftop of industrial shed inside the premises within 5 years	**101.12 MT CO_2 emiss reduction per y** (1,28,000 units year annum generated.)	**9.37 %**
CER activity for renewable source of energy (3.5 kW solar panel)	Solar panel (3.5 kW) in Gram-panchayat of Piplana village.	**3.53 MT CO2 emiss reduction per year (12,800 units year annum generated)**	**0.327 %**
Greenbelt (within Premises) according greenbelt plan	985 no. of trees will be planted in 3282 m^2 area within the premises.	164.16 MT CO2 per year sequestrate (after 5 years when tree will be matured)	**15.21%**
Tree plantation for conservation of Schedule-I Species	Approx. 1000 nos. of tress will be planted for conservation of Schdeule-1 species (Indian peafowl) in nearby villages.	166.66 MT CO2 per year sequestrate (after 5 years when tree will be matured)	**15.44 %**
Total CO_2 to be sequestrate by plantation and reduce from Renewable source of energy 435.47 MT CO_2 per year 40.35 %			

19. The estimated project cost total after expansion is Rs 677.6 lakhs Total Employment will be 50 persons as direct.

20. **Deliberations by the EAC:**

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

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

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

The EAC inter-alia, deliberated on the plant layout with adequate greenbelt, fuel and advised the PP to submit the following:

- Revised Plant layout with adequate greenbelt area all around the periphery of the premises.
- Undertaking regarding the fuel.

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.

21. 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 36.69 % i.e. 3547.68 m^2, by planting 1064 trees in within a year of grant of EC. The PP shall also develop 920 m^2 greenbelt in the roadside periphery of the project site. The saplings selected for the plantation should be of sufficient height, preferably 6-ft. The budget earmarked for the plantation shall be kept in separate account and should be audited annually. PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(ii) A separate Environmental Management Cell (having qualified persons with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions and shall also engage Environment Engineer- Chemist- safety and Health officer. 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 ₹ 78.20 Lakhs (Capital cost) and ₹ 93.63 Lakhs per annum (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(iv) The Total water requirement for project shall be 51.37 m^3/day (Fresh – 39.67 m^3/day + reuse – 11.7 m^3/day) which will be met from 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) Effluent of 10.04 m^3/day quantity will be treated through Effluent Treatment Plant. Total domestic wastewater generated shall be and disposed of through soak pit via septic tank. The plant shall be based on Zero Liquid Discharge System

(vi) The PP shall use Agro- Briquette in boiler during the unavailability of Agro- Briquette Indonesian coal shall be used as a fuel in boiler.

(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 '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.

(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) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB servers. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

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

(xv) The occupational health centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.

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

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

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

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

(xx) The PP shall undertake waste minimization measures as below: (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes; (c) Use of automated filling to minimize spillage; (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapor recovery system; and (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.

(xxi) 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. 50.16

Setting up of a Synthetic Organic Chemicals-Resin Manufacturing Unit with production capacity of 4500 TPM located at Survey No. 27 P1/P1, Village: Bhutkotda, Taluka: Tankara, District: Morbi, Gujarat by M/s. Shivansh Industries LLP - Consideration of EC

[Proposal No. IA/GJ/IND3/422336/2023, File No. IA-J-11011/256/2022-IA-II(I)]

1. The proposal is for the environmental clearance for the Setting up of a Synthetic Organic Chemicals-Resin Manufacturing Unit with production capacity of 4500 TPM located at Survey No. 27 P1/P1, Village: Bhutkotda, Taluka: Tankara, District: Morbi, Gujarat by M/s. Shivansh Industries LLP.

2. The project/activity is covered under Category 'A' of item 5 (f)-Synthetic organic chemicals of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) and requires appraisal at Central Level by the Expert Appraisal Committee (EAC) as the project is located outside the notifuied industrial area.

3. The standard ToR for the preparation of EIA/EMP Report was issued vide letter IA-J-11011/153/2021-IA-II(I) dated 4.5.2021. The PP applied for Environment Clearance in Common application form and submitted EIA/EMP Report and other documents. The PP reported that it is an **fresh EC.** The proposal is placed in 50th EAC Meeting held on 19th-21st April, 2023 wherein the Project Proponent and an accredited Consultant, T. R. Associates [Accreditation number NABET/EIA/1922/SA 0153 (Rev. 01) valid till 15.7.2023], made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that the total land area is **3785.56 m^2;** no additional land will be used for proposed project. The details of products are as follows:

Sr. No.	Product Name	Quantity (MT/Month)	CAS No.	End Use
1.	Melamine Formaldehyde Resin	100	82115-62-6	Particle Board Production
2.	Urea Formaldehyde Resin	1500	9011-05-6	Particle Board Production
3.	Melamine Urea Formaldehyde Resin	1500	Not Available	Particle Board Production
4.	Unsaturated Polyester Resin	400	Not Available	FRP, Fiber Glass Industry, Encapsulating Electrical Components, Concrete Coating, Synthetic Marble
5.	Adhesive	1000	Not Available	Used for Joining Surfaces Together In Any Industry
	Total	**4500 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 that there is no National Parks, Wildlife sanctuary, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Stream from Bangavadi reservoir is at 0.86 km in NE direction. Schedule I species Indian Peafowl exist within 10 km study area of the project, for which conservation plan is submitted to PCCF/ chief wildlife warden dated 19.10.2022.

7. The PP reported that the **Ambient air quality** monitoring was carried out at 8 locations during March 2022 to May 2022. The baseline data indicates the ranges of concentrations as: PM_{10} (58.22 $\mu g/m^3$ to 83.30 $\mu g/m^3$), $PM_{2.5}$ (30.24 $\mu g/m^3$ to 52.35 $\mu g/m^3$), SO_2 (B.D.L. (DL=5) to 18.61

μg/m^3) and NO_2 (18.3 μg/m^3 to 39.86 μg/m^3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.06 μg/m^3, 0.74 μg/m^3 and 0.005 μg/m^3 with respect to PM_{10}, SO_2 and NO_2 in case of Briquettes and would be 0.07 μg/m^3, 0.75 μg/m^3 and 0.005 μg/m^3 with respect to PM_{10}, SO_2 and NO_2 in case of Indonesian coal. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). **Noise Monitoring**: The maximum noise level measured in the study area was 73.7 dB (A) in day time and 63.1 dB (A) in night time at Project site, which is below the stipulated standards in day time as well as in Night time also the Leq value of the same is within stipulated norms. The noise levels (Leq) of the residential area within the impact zone varied from 37.2 – 54.8 dB (A) in the day time and 30.7 – 44.3 dB (A) in the night time. **Ground water Monitorin**g: During groundwater baseline monitoring concentration of TDS, Chloride, total hardness is found higher than permissible limit, pH is found between 7.5 to 9.12, which is higher than acceptable limit at Project site (9.12), Jivapar (8.79), Arnitimba (8.7), Tankara (8.5) and within acceptable limit at Harbatiyali (7.5), Mitana (8.1), Jabalpur (8.2), Amrapar (8.4). Chloride is found in range of 235 mg/L to 373 mg/L and it is higher than acceptable limit at all location except Harbatiyali (235 mg/L), it may be due to the geological formation. But all the results are well within permissible limits. Total hardness is found higher than the acceptable limit at all locations but within permissible limit ranging from 450 mg/L (Project site) to 770 mg/L (Tankara). Magnesium is found higher than acceptable limit at all the locations but within permissible limit ranging from 58.3 mg/L (Project site) to 76.9 mg/L (Jivapar). Calcium is found higher than acceptable limit at all the locations and ranges between 84.2 mg/L (Project site) to 196.4 mg/L (Tankara). It may be due to geological formation (Basalt Formation) as, seepage and runoff from soil and from salts of Calcium & magnesium. TDS is found higher than acceptable limit at all the locations ranging from (1012 mg/L) at Mitana to (2588 mg/L) at Amrapar and higher than permissible limit at Jabalpur (2044 mg/L), Tankara (2644 mg/L) and Amrapar (2588 mg/L). It may be due to the inherent salinity due to sand stone rock formation. COD is observed lowest 28 mg/l at mitana and highest 56.6 mg/l at Tankara. Also, BOD is found lowest 9.5 mg/l at harbatayali and highest 19.5 mg/l at Jivapar. It was observed during site visit that most of the wells are Open Dug well type. In dug wells, dry leaves and Algae formation also observed at the core and inside wall of the well which can be a reason for the above COD and BOD values. Ground water is suitable for domestic and agricultural purpose after primary treatment and disinfection. **Surface water Monitoring**: pH is found between 7.1 to 10.7. It is higher than acceptable limit at Jivapar river (10.7), Arnitimba pond (10.7), Tnakara stream (9.7), Jabalpur pond (8.9) and Harbatiyali pond (9.1). It may be due to detergents/soaps and washing activities. Chloride ranges from 116 (Mitana canal) mg/L to 594 mg/L (Amrapar stream) and is found higher than acceptable limit at Jivapar river, Arnitimba pond, Amrapar stream, Tnakara stream and Harbatiyali pond. Total hardness ranges from (182 mg/L) at Mitana dam-I to (536 mg/L) at Arnitimba pond is found higher then acceptable limit at all locations except Mitana dam-I also within Permissible limit. It may be due to the presence of alkaline earths such as calcium and magnesium. Magnesium is found in range of (15.5 mg/L) at Mitana dam-I to (77.8 mg/L) at Tankara stream. It is found higher than acceptable limit at all the location except mitana canal and Mitana dam-I. Calcium is found in range of (47.4 mg/L) at Mitana dam-I to (102 mg/L) at Amrapar stream. It is found higher than the acceptable limit at all locations except harbatiyali pond, Mitana canal and Mitana dam-I. TDS is found between (457 mg/L) at Mitana dam-I to (2992 mg/L) at Amrapar stream. It is found higher than acceptable limit at all the locations except mitana canal and mitana dam-I and higher than permissible limit at (2992 mg/L) at Amrapar

stream. It may be due to sewage, urban and agricultural run-off. Dissolved oxygen is observed lowest i.e. 3.9 mg/l at Harbatiyali pond and highest 4.9 mg/l at Mitana Dam-I. low D.O. may be due to stagnant water & vegetation growth.COD is observed lowest i.e. 11.9 mg/l at Mitana canal and highset 43.6 mg/l at Arnitimba pond, Similary, BOD is observed lowest i.e 3.7 mg/l at mitana canal and highest 15.8 mg/l at harbatiyali pond. The COD and BOD value found may be due to animal bathing activities as per primary data collection. Total coliform was found in arnitimba pond (44 MPN) Jabalpur pond (38 MPN) and mitana canal (58 MPN). And it may be due to the cattle washing, presence of algae, and use of water for domestic activites, which may impact on health of persons who will use this water. Thus, surface water can be used for domestic and agricultural purpose after primary treatment as well as after disinfection. **Soil Monitoring:** Soil pH ranges from 6.61 to 7.54 and it indicates that soils of Project site, Bhutkotda, Harbatiyali and Jivapar are neutral in nature while soils of Jabalpur, Prabhunagar, Mitana and Valasan are slightly alkaline in nature. Soil of all the sampling locations are having normal EC ranging from 138 µS/cm to 228 µS/cm. Nutrient availability of soil samples reveals that soil are medium in N ranging from 15.37% to 22.65%, low in P_2O_5 ranging from below detectable limit to 1.39 mg/kg and high in K_2O ranging from below detectable limit to 1.50 mg/g. Organic carbon content of soil sampling locations has low to medium ranging from 0.37 % to 0.57%. A possible explanation of medium organic carbon content may be that the farmers would have organic manures and grown pulse crops in the previous season. Based on CEC value, soils of most of the sampling locations have lower fertility except soils of Bhutkotda and Harbatiyali are with high fertility with more clay content. As the soils of project area are sandy clay loam, Water holding capacity is more and good. SAR values found from low to medium and sodium value from 1.82 to 3.12 mg/gm. ESP found to be medium to high. This shows that Soils of project area is saline in nature. Ca and Mg content of all soil samples have more than critical levels. Ca ranging from 2.18 to 3.07 and Mg ranging from 1.6 to 3.27. Ca>300 PPM and Mg>120 ppm. Bulk density value ranges from 1.17to 1.41 To Sum up soils of project are sandy clay loam with low to high fertility level, good moisture holding capacity and slightly alkaline in nature.

8. The PP reported that the Total water requirement for proposed project will be 63.26 m^3/day (Fresh – 52.63 m^3/day + reuse – 10.63 m^3/day) which will be met from Bore Well. Effluent of 11.97 m^3/day quantity will be treated through Effluent Treatment Plant. the plant will be based on Zero Liquid Discharge System.

9. The PP reported that Power requirement for proposed project will be 300 KVA and has met from PGVCL. 150 KVA D. G. Set [Fuel: Diesel (30 Lit./hr.)] shall be provided and used only in case of power failure. Stack (12 meter) shall provide as per CPCB norms to the DG set. Industry will provide one steam boiler of 3 TPH [Fuel: Briquettes (10.31 Ton/day) / Indonesian coal (7.5 Ton/day)], one TFH of 4 lakh Kcal/hr [Fuel: Briquettes (2 Ton/day) / Indonesian coal (1.46 Ton/day)]. Multicyclone separator followed by bag filter followed by alkali scrubber with stack height of 30 m will be installed with boiler and TFH of 4 Lakh Kcal/Hr. Additionally, one TFH of 10 lakh Kcal/hr [Fuel : Briquettes (5 Ton/day) / Indonesian coal (3.64 Ton/day)] will be installed. Multicyclone separator followed by bag filter followed by water scrubber with stack height of 30 m will be installed with TFH of 10 lakh Kcal/hr for controlling the particulate emissions within the statutory limit.

10. **Details of Process Emissions Generation and its Management**: There will be process emission of VOCs from manufacturing activity. To control the VOC emission, activated carbon column will be provided with process reactor of unsaturated polyester resin.

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

Sr. No..	Description	Category	Quantity (MT/Annum)	Mode of Disposal
1.	ETP Sludge and Evaporator residue	35.3	71.83	Collection, storage and disposal at Approved TSDF site
2.	Process Residue	23.1	27	Collection, storage and disposal at Approved CHWIF site
3.	Vinyl Acetate Monomer Spillage neutralization	33.2	6.0	Collection, storage and disposal at Approved CHWIF site
4.	Styrene Monomer spillage neutralization	33.2	6.0	Collection, storage and disposal at Approved CHWIF site
5.	Spent Carbon	35.1	17.80	Collection, storage and disposal at Approved CHWIF site
6.	Used Oil	5.1	0.5	Collection, storage and used within premises as a lubricant / sold to registered recycler.
7.	Discarded Plastic Bags / Barrels	33.1	85.37	Collection, storage & sold to authorized vendor.

12. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹- 92.58 lakhs (capital) and the Recurring Cost (operation and maintenance) will be about ₹- 85.02 lakhs per annum. Industry proposes to allocate ₹ 5.68 Lakhs towards CER.

13. The PP reported that Out of total plant area 3785.56 m^2, unit will develop thick greenbelt in 1252.90 m^2 (33.09 %)area.

14. The PP reported that Public Hearing (PH) Proposed project has been conducted by the Gujarat Pollution Control Board at the project site on **24.1.2023,** which was presided by the Sub divisional Magistrate The main issues raised during the public hearing and their reply/commitment by the PP is as follows:

Issue raised	Response/Commitment from Project Proponent	Action plan with time frame and budget
Benefit of this industry to the surrounding villagers	The unit will provide employment to a total of 15 skilled, semi-skilled and unskilled people from nearby villages. Also 2.0% of the total capital investment i.e. 5.68 lakhs will be spent on CER activities such as provision of Bala Rasayan in nearby villages and Installation of	**CER cost - 5.68 lakhs** Unskilled labour for that 500 Rs per head per day Skilled Labour 800 Rs. Per head per day

	solar panels in Gram-panchayat and school of nearby villages	And for Production Plant and Admin according to qualification. Basic pay with HRA and DA Would be 26000 Rs. per Month.
CER	The unit will provide employment to a total of 15 skilled, semi-skilled and unskilled people from nearby villages. Also 2.0% of the total capital investment i.e. 5.68 lakhs will be spent on CER activities such as provision of Bala Rasayan in nearby villages and Installation of solar panels in Gram-panchayat and school of nearby villages. Also, the transportation opportunities will be given to local people.	**CER cost - 5.68 lakhs** **Unskilled labour for that 500 Rs per head per day** **Skilled Labour 800 Rs. Per head per day** **And for Production Plant and Admin according to qualification. Basic pay with HRA and DA Would be 26000 Rs. per Month.**
Solid waste	Separate area having pucca flooring and roof will be provided for storage of solid hazardous waste. ETP Sludge and Evaporation Residue will be disposed in approved TSDF Site. Process Residue, Vinyl Acetate Monomer Spillage Neutralization, Styrene Monomer Spillage Neutralization and Spent Carbon will be disposed of at an approved CHWIF Site. For that unit will obtain membership of approved TSDF and CHWIF site. For that unit has already started procedure. Also obtained provisional membership certificate of CHWIF. Used oil will be reused as lubricant or sold to an approved recycler, waste bags and drums will be reused or sold to an approved recycler. Hence, solid waste will not have any adverse effect on the environment	Capital Cost of storage area 50,000 Rs. And Cost of membership charges 50,000 Rs. Recurring Cost of treatment of solid waste - 11.09 lakhs per annum
water Issues	The project area falls in safe zone and permission for ground water abstraction has been obtained from CGWA to construct a borewell. ETP will be provided to prevent water pollution also quality will be monitored regularly and zero discharge will be maintained.	Cost of Borewell will be around 10 Lakh which is included in total Project cost. Abstraction charges of ground water – 1 Rs/ 1 KL

	Unit will regularly monitor Ambient air quality, stack emission, water quality, soil quality, solid waste management, noise quality as well as health monitoring of workers as per prescribed rules.	Capital cost of ETP – 15.8 lakhs Recurring cost – 38.71 lakhs/ Annum Environmental Monitoring Programme-Recurring cost 11.34 lakhs per annum
Monitoring plan	Unit will regularly submit EC compliance to the concern authority. EIA report has submitted to concern authorities.	Environmental Monitoring Programme-Recurring cost 11.34 lakhs per annum
Categorisation of Industry	The project area falls in safe zone and permission for ground water abstraction is obtained from CGWA. Further to mitigate air pollution as multicyclone dust collector followed by bag filter followed by scrubber and then 30 m high chimney height as air pollution control equipment will be provided. Regular stack monitoring will be done. ETP and STP will be provided to prevent water pollution also quality will be monitored regularly and zero discharge will be maintained. Solid waste will be disposed of at sites designated by the government authority. Permission from authority will also be obtained. Provisional membership from CHWIF site is already obtained.	Capital Cost of air pollution – 33 lakhs Recurring cost of air pollution – 4 lakhs/ Annum Capital cost of water pollution – 15.8 lakhs Recurring cost for water pollution – 38.71 lakhs / Annum Capital cost for Hazardous / Solid Waste Management – 1 lakh Recurring cost for Hazardous / Solid Waste Management – 11.10 lakh/ Annum.
Drinking water	RO will be installed for safe drinking water for workers.	RO Cost will be around 30,000 Rs. (included total Project cost)

Air pollution	To mitigate air pollution as multicyclone dust collector followed by bag filter followed by scrubber and then 30 m high chimney height as air pollution control equipment will be provided. Regular stack monitoring will be done.	Capital Cost of air pollution – 33 lakhs Recurring cost of air pollution – 4 lakhs/ Annum
Fuel	Unit will use briquettes as fuel for Boiler and TFH. In unavailability of Briquettes, Indonesian coal will be used. Adequate APCM will be provided to Boiler and TFH to reduce adverse impact on surrounding environment.	Capital Cost of air pollution – 33 lakhs Recurring cost of air pollution – 4 lakhs/ Annum
Damage to crops	To mitigate air pollution as multicyclone dust collector followed by bag filter followed by scrubber and then 30 m high chimney height as air pollution control equipment will be provided. Regular stack monitoring will be done. The unit will provide all the said Environment Management System facilities for air, water & SHW after completion of all construction facilities to control pollution. Also, the project proponent gave assurance that if there is any damage on the agriculture of the surrounding area dur to our unit, the unit will be committed to pay the fine as decided by the government.	During operation phase

15. The PP proposed to set up an Environment Management Cell (EMC) by engaging Environment Engineer- Chemist- safety and Health officer for the functioning of EMC.

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

17. The PP reported that that the carbon sequestration are as follows-

Activities help to reduce carbon emission	**Capacity of renewable energy installation**	**CO_2 to be sequestrate/reduce from Renewable source of energy and plantation**	**Percentage of CO_2 to be sequestrate/ reduce from Renewable source of**

			energy and plantation
1st step towards carbon reduction/sequestration after the Plant Commencement			
Renewable source of energy	Solar Panel 100 kW at rooftop of industrial shed inside the premises within 5 years	**101.12 MT CO_2 emission reduction per year** (1,28,000 units year per annum generated.)	**9.37 %**
CER activity for renewable source of energy (18 kW solar panel)	Solar panel (10 kW) in Bhutkotada and Haripar villages within 2 years.	**10.11 MT CO_2 emission reduction per year** (12,800 units year per annum generated)	**0.94 %**
Rain water harvesting system to reduction of fresh water consumption from ground water	Details of Rain water harvesting is given in EIA report.	**0.37 MT CO_2 emission reduction per year** (471 units year per annum reduced from total electricity generation)	**0.034 %**
Greenbelt (within Premises) according greenbelt plan	377 no. of trees will be planted in 1252.90 m^2 area within the premises.	**63 MT CO_2 per year sequestrate** (after 5 years when tree will be matured)	**5.84 %**
Tree plantation for conservation of Schedule-I Species	Approx. 400 nos. of tress will be planted for conservation of Schdeule-1 species (Indian peafowl) in nearby villages.	**83.3 MT CO_2 per year sequestrate** (after 5 years when tree will be matured)	**7.72 %**
Total CO_2 to be sequestrate by plantation and reduce from Renewable source of energy		**257.9 MT CO_2 per year**	**23.9 %**

18. The estimated project cost is **Rs 290.02 lakhs** Total Employment will be **15** persons as direct.

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

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

The EAC inter-alia, deliberated on the fuel, Plant layout, CER activities and advised the PP to submit the following:

- Undertaking regarding the fuel.
- Revised Plant layout
- Revised CER activities

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). The PP shall develop Greenbelt over an area of at least 33 %, by planting 377 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 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 Environment Engineer- 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 ₹ 92.58 lakhs (Capital cost) and ₹ 85.02 lakhs per annum (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(iv). The Total water requirement for proposed project will be 63.26 m^3/day (Fresh – 52.63 m^3/day + reuse – 10.63 m^3/day) which will be met from 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). Effluent of 11.97 m^3/day quantity shall be treated through Effluent Treatment Plant. The total domestic wastewater shall be treated in STP and shall be reused in Gardening purpose.The the plant shall be based on Zero Liquid Discharge System.

(vi). The PP shall use Agro- Briquette in boiler & TFH during the unavailability of Agro-Briquette Indonesian coal shall be used as a fuel in boiler& TFH.

(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 '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.

(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). Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB servers. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

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

(xv). The occupational health centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.

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

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

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

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

(xx). The PP shall undertake waste minimization measures as below: (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes; (c) Use of automated filling to minimize spillage; (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapor recovery system; and (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.

(xxi). 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. 50.17

Proposed Manufacturing unit of Unsaturated Polyester Resins (7000 TPM), Saturated Polyester Resins (1500 TPM), Polyster Polyol (2000 TPM), Adhesives (1000 TPM) and Pigment Paste (250 TPM) located at Plot No. SP3-256, Industrial Area Ghiloth, Tehsil & District Alwar, Rajasthan by M/s Revex Plasticisers Pvt. Ltd. - Consideration of EC

[Proposal No. IA/RJ/IND3/423944/2023; File No. IA-J-11011/22/2023-IA-II(I)]

1. The proposal is for the environmental clearance for the Proposed Manufacturing unit of Unsaturated Polyester Resins (7000 TPM), Saturated Polyester Resins (1500 TPM), Polyster Polyol (2000 TPM), Adhesives (1000 TPM) and Pigment Paste (250 TPM) located at Plot No. SP3-256, Industrial Area Ghiloth, Tehsil & District Alwar, Rajasthan by M/s Revex Plasticisers Pvt. Ltd.

2. The project/activity is covered under Category 'B' of item 5 (f)-Synthetic organic chemicals of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) and

requires appraisal at Central Level by the Expert Appraisal Committee (EAC) due to the presence of interstate boundary of Haryana-Rajasthan at 4.98 km from the project site in North West direction makes the general condition applicable on the project.

3. The standard ToR for the preparation of EIA/EMP Report was issued vide letter **IA-J-11011/22/2023-IA-II(I)** dated **23.01.2023**. The PP applied for Environment Clearance in Common application form and submitted EIA/EMP Report and other documents. The PP reported that it is a Fresh EC. The proposal is placed in 50th EAC Meeting held on 19th-21st April, 2023 wherein the Project Proponent and an accredited Consultant, M/s. Vardan EnviroNet, Gurugram Haryana (NABET Accreditation No.- NABET/EIA/2023/SA0158 dated 05.05.2023], made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that the total land area is **30706.00 m^2;** no additional land will be used for proposed project. The details of products are as follows:

Proposed Products	**CAS NO.**	**Capacity (TPM)**	**Uses**
Unsaturated Polyester Resins	25068-38-6	7000	Wood paints, Sheet mouldig compounds, Colouring pastes, fillers, stucco, putties and chemical anchorings, Self-extinguishing composite materials, Quartz, Marble and artificial cement,
Saturated Polyester Resins	61926-16-7	1500	Major use in production of Coil Coating
Polyster Polyol	9082-00-2	2000	Foam Industries including mattresses, Adhesives, sealants and top coats
PU Adhesives	108-05-4	1000	Shoes industries, Furniture industries and automotive industry
Pigment Paste	28553-12-0	250	Colourants for various resin and adhesives systems
Total		**11750**	

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 is no National Parks, Wildlife sanctuary, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Nimrana PF located at 2.98 km in south and there is no major water body nearby. No Schedule I species Indian Peafowl exist within 10 km study area of the project.

7. The PP reported that the **Ambient Air Quality** monitoring was carried out at 8 locations during (1st October to 31st December, 2022) to and the baseline data indicates the ranges of

concentrations as: PM_{10} (49.3 µg/m^3 to 74.6 µg/m^3), $PM_{2.5}$ (27.6 µg/m^3 to 54.7 µg/m^3), SO_2 (8.0 µg/m^3 to 15.7 µg/m^3) and NO_2 (18.1 µg/m^3 and 38.7 µg/m^3). AQ modelling study when HSD will be used as a fuel for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 74.6670 µg/m^3, 54.72896 µg/m^3, 15.9411 µg/m^3 and 38.8207 µg/m^3 with respect to PM_{10}, $PM_{2.5}$, SO_2 and NO_2. AAQ modelling study when PNG/LPG used as a fuel for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 74.6061 µg/m^3, 54.7028 µg/m^3, 15.723 µg/m^3 and 38.7119 µg/m^3 with respect to PM_{10}, $PM_{2.5}$, SO_2 and NO_2. For **Ground Water** pH has varied from 7.59 to 7.93. Total Hardness from 251.33 to 322.57 mg/l., Total Dissolved Solids from 591.0 to 880.0 mg/l. and Fluoride varies from 0.41 to 0.62 mg/l. The water quality of samples is within permissible limits as per IS 10500:2012. The **Surface Water** pH has varied from 7.53 to 7.96, Total Hardness from 306.22 to 352.61 mg/l., Total Dissolved Solids from 1044.0 to 1164.00 mg/l. Dissolved oxygen varies from 5.6 to 5.9 (mg/l), BOD varies from 26.00 to 42.00 (mg/l). The soil pH value ranges from 7.68 to 7.84 with organic matter 0.33% to 0.41%. The concentration of Nitrogen (147.82 Kg/ha. to 168.96 Kg/ha.) Phosphorus (12.54 Kg/ha. to 14.82 Kg/ha.) and Potassium (125.76 Kg/ha. to 137.81 Kg/ha.). **Noise**- Minimum and maximum noise levels recorded during the day time were from 50.96 dB Leq. (N4) and 59.77 dB Leq. (N1) respectively and minimum and maximum level of noise during night time were 40.37 dB Leq. (N4) and 48.66 dB Leq. (N1) respectively.

8. The PP reported that the total fresh water requirement of the project is 80.0 KLD which will be met from Ground water. **Domestic waste water**- Approx. 8.0 KLD Domestic waste water will be treated in STP and treated water will be reused in green belt. **Industrial waste water**- 7.0 KLD of waste water will be generated from Process and Cooling tower blow down. Multi Effect Evaporator will be installed to treat waste water and treated water will be reused in the cooling tower. The plant will be based on Zero Liquid discharge system

9. The PP reported that power requirement for the project is 1846 kVA which will be sourced from JVVNL (Jaipur Vidyut Vitran Nigam Limited). 4 DG set of 1000 kVA, 400 kVA, 125 kVA and 62.5 kVA capacities will be installed for the power failure. Stack 6 m will be provided as per CPCB norms to the proposed DG sets. Unit proposed 20.0 lakh Kilo Calories per Hour (2nos.), 15.0 Lakh Kilo Calories per Hour (2 nos.), 10.0 Lakh Kilo Calories per Hour (2 nos.), and 4.0 Lakh Kilo Calories per Hour (2 nos.), PNG/LPG/Diesel Thermopack. Stack of height of 30 m will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm3 for the proposed Thermopacks.

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

S.No.	Source	Capacity	Fuel	Pollutants	Control measures
1	**DG Set**	• **400 kVA (1no.)** • **125 kVA (1no.)** • **62.5 kVA (1no.)** • **1000 kVA (1no.)**	PNG/LPG /Diesel	**SPM, SO_2, NO_2**	**Acoustic Enclosure with 6 m. stack height**

2	**Thermopack**	• 20.0 Lakh Kilo Calories per Hour (2 nos.) • 15.0 Lakh Kilo Calories per Hour (2 nos.) • 10.0 Lakh Kilo Calories per Hour (2 nos.) • 4.0 Lakh Kilo Calories per Hour (2 nos.)	PNG/LPG /Diesel	**SPM, SO_2, NO_2**	**30 m stack height**

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

Type of Waste	Cat.	Source of Waste	Quantity	Method of storage	Method of Disposal
Hazardous waste generation					
Salts from Multi Effect Evaporator	37.3	MEE	0.5 TPD	Stored in covered area with platform	Send to TSDF facility.
Empty Barrels/ Containers	33.1	Storage godown	2 nos.	Stored in covered area with platform	Send to vendor/ Sell to approved RSPCB approved scrap dealer
Used Oils	5.1	DG Sets	35 Liters /Hr.	Stored in covered area with platform	Authorized recyclers identified by RSPCB
Solid Waste generation					
Sludge from STP	-	STP	0.2 TPD	Stored in covered area with platform	TSDF Facility

12. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 165.95 Lakhs (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 23.9 Lakhs /annum. Industry proposes to allocate ₹ 10.0 Lakhs towards CER.

13. The PP reported that Industry will develop green belt over 33.04 % area of the total plant area out of the 30706.0 Sq.m. of the plant area i.e., 10145.08 Sq. m of the total land will be under green belt plantation. The PP will plant total 2538 nos. of trees as per MoEF&CC norms. Total budget of Rs. 13,95,900/-will be under green belt plantation.

14. The PP reported that project site is located in the notified Industrial Area Ghiloth, Alwar, Rajasthan. Hence, Public Hearing is not required for the proposed project as per MoEF&CC O.M. dated 27.04.2018. EC for Industrial Area Ghiloth, Alwar has been obtained vide letter dated 06.03.2013.

15. The PP proposed to set up an Environment Management Cell (EMC) by engaging General Manager- manager (EHS)- Supervisor- worker safety for the functioning of EMC.

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

17. The PP reported that that the as per carbon sequestration analysis, the total CO_2 emissions will be 567.04 Tonnes/Annum from fuel and transportation of raw materials and finished products, employee travel. To sequestrate the carbon emissions green belt plantation, scrubber will be provided. Total 2538 trees will be planted at project site from which total 51,20,438.88 tonnes CO2 will be sequestrated

18. The estimated project cost is Rs 50.38 Crores. Total employment will be 169 nos. will be appointed.

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

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

The EAC inter-alia, deliberated on the Greenbelt development plan and its budget and advised the PP to submit the revised greenbelt development plan and its budget. The PP submitted the same 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). The PP shall develop Greenbelt over an area of at least 33.04 % i.e., 10145.08 m^2, by planting 3046 trees (within premises) in within a year of grant of EC. In addition to this Avenue plantation shall be done at two locations over an area of 6000 m^2 by planting 1800 number of saplings. The saplings selected for the plantation should be of sufficient height, preferably 6-ft. The budget earmarked for the plantation shall be kept in separate account and should be audited annually. PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(ii). A separate Environmental Management Cell (having qualified persons with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions and shall also engage General Manager- manager (EHS)- Supervisor. 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 ₹ 165.95 Lakhs lakhs (Capital cost) and ₹ 23.9 lakhs per annum (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as

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

(iv). The total fresh water requirement of the project is 80.0 KLD which shall be met from Ground water. The PP should ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawal only after obtaining valid agreement from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year.

(v). 8.0 KLD Domestic waste water shall be treated in STP and treated water shall be reused in green belt. 7.0 KLD of waste water shall be generated from Process and Cooling tower blow down. Multi Effect Evaporator shall be installed to treat waste water and treated water shall be reused in the cooling tower. The plant will be based on Zero Liquid Discharge system.

(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 '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.

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

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

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

(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; and (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.

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.

***

ANNEXURE-II

STANDARD TERMS OF REFERENCE

A. GENERIC TERMS OF REFERENCE

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

3) **Project Description**
   i. Cost of project and time of completion.
   ii. Products with capacities for the proposed project.
   iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
   iv. Details of existing products and production, if any, along with present product/production details in tabular format, to verify the compliance of the EIA Notifications.
   v. Details of existing products and production, if any, along with present product/production details in tabular format, to verify the compliance of the EIA Notifications.
   vi. List of raw materials required and their source along with mode of transportation.
   vii. Other chemicals and materials required with quantities and storage capacities
   viii. Details of Emission, effluents, hazardous waste generation and their management.
   ix. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)
   x. Details of boiler/gensets (including stacks/exhausts) and fuels to be use
   xi. Details of boiler/gensets (including stacks/exhausts) and fuels to be used
   xii. Process description along with major equipment's and machineries, process flow sheet (quantitative) from raw materials to products to be provided
   xiii. Hazard identification and details of proposed safety systems.
   xiv. Expansion/modernization proposals:
      a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Integrated Regional Office of the Ministry of Environment, Forest and Climate Change as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, copy of the latest CTO and status of compliance of Consent to Operate for the ongoing/existing operation of the project from SPCB shall be attached with the EIA-EMP report.
      b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior

to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.

4) Site Details

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

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

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

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

6) Environmental Status

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

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

7) Environment Impact and Environment Management Plan

i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be assessed.

Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.

ii. Water Quality Modelling – in case of discharge in water body

iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.

iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules 1986.

v. Details of stack emission and action plan for control of emissions to meet standards.

vi. Measures for fugitive emission control

vii. Details of hazardous waste generation and their storage, utilization and management. Copies of MOU regarding utilization of solid and hazardous waste in cement plant shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.

viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.

ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.

x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.

xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.

xii. Action plan for post-project environmental monitoring shall be submitted.

xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.

8) Occupational health

i. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers

ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre-placement and periodical examinations give the details of the same. Details regarding last month analyzed data of above mentioned parameters as per age, sex, duration of exposure and department wise.

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

9) Corporate Environment Policy

i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
iv. Does the company have system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report
v. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.

10) Corporate Environmental Responsibility (CER)

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

11) Additional studies/Measures to be considered

(i) Provide latest and ecofriendly technology for product manufacturing.
(ii) Emphasize on Green chemistry/Clean Manufacturing
(iii) Provide CAS No. of products along with product list.
(iv) Provide details of amount of carbon sequestered in their unit through greenbelt/other modes, in case of expansion project.
(v) Life structure and sustainability for carbon and water foot print.
(vi) Detailed pollution Load estimation.
(vii) Transportation of Hazardous substance, effluents etc shall be carriedout through authorized and GPS enable vehicles/Trucks only.
(viii) Category of Hazardous Wastes shall be mentioned in the EIA/EMP report and in presentation.
(ix) Details of greenhouse gases and emissions shall be provided.

(x) Greenbelt shall be developed in the first year of the project and wind breaks shall be erected.
(xi) Study area map shall be overlapped with all the associated features.
(xii) Emphasize on green fuels.
(xiii) The project from NCR shall not use Coal as fuel. Further, PP shall avoid use of Coal in the CPAs and elsewhere also if alternatives are available.
(xiv) Provide the Cost-Benefit analysis with respect to the environment due to the project.

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

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

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

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

C. SPECIFIC TERMS OF REFERENCE FOR EIA STUDIES FOR 5(b) CATEGORY -

PESTICIDES INDUSTRY AND PESTICIDE SPECIFIC INTERMEDIATES (EXCLUDING FORMULATIONS)

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

D. SPECIFIC TERMS OF REFERENCE FOR EIA STUDIES FOR 5(a) CATEGORY - CHEMICAL FERTILIZERS

1. Details on requirement of energy and water along with its source and authorization from the concerned department.
2. Energy conservation in ammonia synthesis for urea production and comparison with best technology.
3. Details of ammonia storage and risk assessment thereof.
4. Measures for control of urea dust emissions from prilling tower.
5. Measures for reduction of fresh water requirement.
6. Details of proposed source-specific pollution control schemes and equipments to meet the national standards for fertilizer.
7. Details of fluorine recovery system in case of phosphoric acid plants and SSP to recover fluorine as hydrofluorosilicicacid (H_2SiF_6) and its uses.
8. Management plan for solid/hazardous waste including storage, utilization and disposal of bye products viz., chalk, spent catalyst, hydro fluoro silicic acid and phosphor gypsum, sulphur muck, *etc*.
9. Details on existing ambient air quality for PM10, PM2.5, Urea dust*, NH_3*, SO_2*, NOx*,HF*,F*,Hydrocarbon (Methane and Non-Methane) *etc*., and expected, stack and

fugitive emissions and evaluation of the adequacy of the proposed pollution control devices to meet standards for point sources and to meet AAQ standards.(*as applicable)

10. Details on water quality parameters in and around study area such as pH, Total Kjeldhal Nitrogen, Free Ammonical Nitrogen, free ammonia, Cyanide, Vanadium, Arsenic, Suspended Solids, Oil and Grease, *Cr as Cr^{+6}, *Total Chromium, Fluoride, etc.

****

Annexure-III

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

S. No.	Name of Member	Designation
1.	**Prof. (Dr.) A.B. Pandit** Vice Chancellor, Institute of Chemical Technology, Mumbai, Sir JC Bose Fellow, Government of India Email: ab.pandit@ictmumbai.edu.in	Chairman
2.	**Dr. Ashok Kumar Saxena, IFS** Bunglow No. 38, Sector-8A, Gandhinagar, Gujarat – 382008 E-mail: ashoksaxena1159@gmail.com	Member
3.	**Prof. (Dr.) S. N. Upadhyay** Research Professor (Hon.), Department of Chemical Engineering & Technology, Indian Institute of Technology (Banaras Hindu University), Varanasi E-mail: snupadhyay.che@iitbhu.ac.in	Member
5.	**Shri Santosh Gondhalkar** 'Shree' Apartment, Flat 401, Plot No. 22, Tukaram Society, Santnagar, Pune- 411009 E-mail: santoshgo@gmail.com	Member
6.	**Dr. Suresh Panwar** House No.4, Gayateri Green Society, NH 58 Bypass,Kankerkhera, Meerut, Uttar Pradesh Email-spcppri@gmail.com	Member
7.	**Shri Tukaram M Karne** "SHREYAS ORNATE" F-1, 95-Tulasibagwale Colony, Sahakarnagar-2, PUNE: 411 009, Maharashtra E-mail: tmkarne@gmail.com	Member
8.	**Shri Sanjay Bisht** Scientist 'E', Room No. 517, Office of the Director General of Meteorology, Indian Meteorological Department, Musam Bhawan, Lodhi Road, New Delhi -110003 E-mail: sanjay.bist@imd.gov.in	Member
9.	**Shri Dinabandhu Gouda** Additional Director, DH IPC-I, Room No. 309A, Third Floor, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi – 110032 E-mail: dinabandhu.cpcb@nic.in	Member

10.	**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

***