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

Dated: 29.05.2023

MINUTES OF THE 51st EXPERT APPRAISAL COMMITTEE (INDUSTRY-3 SECTOR) MEETING HELD ON 16th –17th MAY, 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 50th EAC Meeting of the EAC (Industry-3 Sector).

The EAC noted that the final minutes of the above meeting were issued after incorporating the comments offered by the members and approved by the Chairman. The EAC confirmed the MoM with the following modifications (50.4, 50.12) based on the request of the Project Proponents (PPs).

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 was recommended by the EAC in its 50th Meeting held on19th - 21st April, 2023 and the MoM were published on 2.5.2023. Subsequently, the PP vide e-mail dated 4.5.2023 requested the following modification in the MoM:

Reference of MOM	As per MOM	Modification Required	Remarks
Pg no. 32 of MoM	Production Capacity is mentioned as 48290 MTA	Production Capacity to be corrected as **42890 MTA**	Typographical error and factual in nature
Pg no. 37 of MoM, Point no. 8	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. 2.	Industrial Effluent of **684 KLD** (450 KLD high COD effluent & **234 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. **2134 KLD** 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. **1580 KLD** RO permeate shall be recycled and to be used in cooling tower makeup purpose. Domestic effluent of 120 m^3/day will be treated through Sewage Treatment Plant (STP) & treated water shall be used for greenbelt development & maintenance purpose	The EAC noted that based on its recommendation, thePP has revised the water balance, which has been incorporated in the specific condition vi on pg 49). The same may be incorporated in point no. 8 in the EC letter.

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

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 was recommended by the EAC in its 50th Meeting held on19th- 21st April, 2023 and the MoM were published on 2.5.2023 Subsequently, the PP vide e-mail dated 4.5.2023 requested the following modification in the MoM:

Reference of MOM	As per MOM	Modification Required	Remarks
Point no 7 of MoM	Indori nala 6 km towards NE directions	No such nala is present in Aadinaths Chemical Industries Baseline study area.	Typographical error and factual in nature
Point no. 14	Project site is located in a notified RIICO industrial area"	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.	Typographical error and factual in nature

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

Agenda No. 51.1

Proposed Phenol Formaldehyde Resin Manufacturing Unit of Production Capacity 300 TPM located at Plot no. G1-628, RIICO Industrial area, Village- Chopanki, Bhiwadi, Tehsil-Tiajra, District- Alwar, Rajasthan by M/s. Veskn Industry Pvt. Ltd. - Reconsideration of EC [Proposal No. IA/RJ/IND3/418452/2023; File No. IA-J-11011/280/2022-IA-II(I)]

1. The proposal is for environmental clearance to the Proposed Phenol Formaldehyde Resin Manufacturing Unit of Production Capacity 300 TPM located at Plot no. G1-628, RIICO Industrial area, Village- Chopanki, Bhiwadi, Tehsil- Tiajra, District- Alwar, Rajasthan by M/s. Veskn Industry Pvt. Ltd.

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/RJ/IND3/418452/2023and the standard ToR was issued by the Minsitry, vide letter No IA-J-11011/280/2022-IA-II(I)dated 5.10.2022. The PP reported that as project site is located in notified **RIICO Industrial Area, RIICO Chopanki and the area is declared as notified industrial area vide Notification No. Pa.4{23} Uo/1/93. Dated 14.9.1994, is exempted from the public hearing** in accordance with Clause 7(i) (III) of the EIA notification 2006 & OM No. J-11011/321/2016-IA. II(I) dated 27.04.2018. The PP applied for Environment Clearance on 16.2.2023 on Common application form and submitted EIA/EMP Report and other documents. Due to some shortcomings the proposal was refereed back to the PP on 3.3.2023, 16.3.2023 and reply to the same was submitted by PP on 15.3.2023,17.3.2023. The PP reported in CAF that it is a **Fresh EC.** The proposal was deferred in the 49th EAC meeting held on 3rd-6th April,2023 for submission of requisite information. The proposal is now placed in the 51st EAC Meeting held on 16th-17th May, 2023, wherein the PP and an accredited Consultant, M/s. Vardan EnviroNet, Gurugram Haryana (NABET Accreditation Certificate No. NABET/EIA/2326/RA0284 dated 04.05.2026] 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 1000 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:

S.No.	Product	CAS No.	Proposed Capacity
1.	Phenol Formaldehyde Resin	9003-35-4	300 TPM

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 the 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. Gondhan PF located at 0.40 km in NW and there is no major water body nearby. No Schedule-I species are found are in the study area for which conservation plan has been prepared.

7. The PP reported that **Ambient air quality** monitoring was carried out at 8 locations during (1st October to 31st December, 2022) and the baseline data indicates the ranges of concentrations as: PM_{10} (54.3 μg/m^3 to 82.7 μg/m^3), $PM_{2.5}$ (28 μg/m^3 to 48.9 μg/m^3 μg/m^3), SO_2 (8.0 μg/m^3 to 21.7 μg/m^3) and NO_2 (15.3 μg/m^3 to 35.1 μg/m^3). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 82.76719 μg/m^3, 48.92672 μg/m^3, 23.12502 μg/m^3 and 35.41265μg/m^3 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). **Noise:** Minimum and maximum noise levels recorded during the day time were from 50.08 dB Leq. (N5) and 71.96 dB Leq. (N1)

respectively and minimum and maximum level of noise during the night time were 40.76 dB Leq. (N5) and 63.67 dB Leq. (N1) respectively.

8. **Surface Water**: The surface water pH varied from 7.65 to 7.84, Total Hardness from 361.22 to 526.34 mg/l, Total Dissolved Solids from 924.0 to 1022.00 mg/l. The Dissolved Oxygen varied from 5.7 to 6.2 (mg/l), BOD from 12.0 to 19.00 (mg/l). Ground water- The ground water pH varies from 7.46 to 7.71. Total Hardness varies from 212.00 to 352.14 mg/l. Total Dissolved Solids from 333.0 to 444.0 mg/l. Fluoride from 0.28 to 0.40 mg/l. The water samples are within permissible limits as per IS 10500:2012. **Ground water**- The ground water pH varied from 7.46 to 7.71, Total Hardness from 212.00 to 352.14 mg/l, Total Dissolved Solids from 333.0 to 444.0 mg/l and Fluoride from 0.28 to 0.40 mg/l. The water samples are within permissible limits as per IS 10500:2012 **Soil-** The soil pH ranged from 7.56 to 7.88 with organic matter 0.24 % to 0.36%. Nitrogen from 120.81 Kg/ha. to 148.11 Kg/ha. Phosphorus from (10.96 Kg/ha. to 15.08 Kg/ha.) and Potassium from 111.54 Kg/ha. to 137.51 Kg/ha.

9. The PP reported that the total Fresh Water requirement of the project **is 4.5 KLD** which will be met from **Ground water.** The abstraction certificate has been obtained from CGWA to withdraw ground water dated 21.05.2022. Effluent (**3.5 KLD)** will be treated through Evaporator and treated water will be reused in Cooling tower. 1.2 KLD of domestic waste water will be generated and for the treatment of domestic water, the Industry will install STP and treated water will be reused for green belt development. The plant will be based on Zero Liquid discharge system.

10. The PP reported that Power requirement for the project is **559.50 kVA** which will be sourced from **JVVNL (Jaipur Vidyut Vitran Nigam Limited).** One DG set of 150 kVA capacity will be installed for the power backup. Unit proposed 2.0 lakh Kilo Calories Per Hour and 8 lakh Kilo Calories Per Hour, Gas fired 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**: Air emissions from utility and management:

S.No.	Source	Capacity	Fuel	Pollutants	Control measures
1	**DG Set**	**150 kVA (1no.)**	**HSD**	**SPM, SO_2, NO_2**	**Acoustic Enclosure with 6 m. stack height**
2	**Boiler**	2.0 lakh Kilo Calories Per Hour and 8 lakh Kilo Calories Per Hour, Gas fired boiler	**Gas Based**	**SPM, SO_2, NO_2**	**30 m stack height**

Air Emissions from Process and their Management

No gaseous emissions will be generated form the manufacturing process of Phenol Formaldehyde Resin.

12. **Details of Solid Waste/ 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	0.2 TPD	MEE	Stored in covered area with platform	Send to TSDF facility.
Empty Barrels/ Containers	33.1	2 nos.	Storage godown	Stored in covered area with platform	Send to vendor/ Sell to approved RSPCB approved scrap dealer
Used Oils	5.1	20 litrs/day	Utilities	Stored in covered area with platform	Authorized recyclers identified by RSPCB

13. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 21.41 Lakhs (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 3.4 Lakhs per Annum. Industry proposes to allocate ₹ 19.50 Lakhs towards CER.

14. The PP reported that the Industry will develop green belt inside the plant in an area of **40** % out of total area as per MoEF&CC norms. 85 nos. of trees will be planted in 260 Sq.m. (26%) area inside the plant premises out of the total area of 1000 Sq.m. and 140 Sq.m. (14%) greenbelt i.e. 46 nos. of trees will be maintained outside the plant premises due to space constraint. Avenue plantation of 1300 trees will be planted as CER activity in front of project premises along both sides of Industrial area Chopanki road. NOC from RIICO in this regard has been obtained from RIICO dated 01.05.2023.

15. The PP proposed to set up an Environment Management Cell (EMC) by engaging Top management – General Manager- Manager (EHS)- supervisior- worker (safety)- chemist- worker for the functioning of EMC.

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

17. The estimated project cost is ₹ 3.10 Crores Total employment will be 25 nos.

18. The proposal was earlier considered in the 49th EAC meeting held on 3rd-6th April, 2023 wherein the EAC deferred the proposal for want of requisite information. Reply to the same was submitted by the PP, which is as follows:

<table>
<tr><th>S. No.</th><th>Queries Raised by EAC</th><th>Reply by PP</th><th>Observation of EAC</th></tr>
<tr><td>1.</td><td>Action plan for green belt development of minimum 40% of the project area (within the site and industrial estate) @2500 per hectare, in consultation with forest department.</td><td>Total Plot Area = 1000 Sq. m.
Area under greenbelt – 40% of the plot area = 400 sq.m.
Tree density to be maintained = 2500 trees/ha.
2m long trees will be planted before the onset of monsoon in big pits of size (1m×1m). Also, for increasing the survival rate of the plants, soil will be treated and prepared by using appropriate methods. Further, growth hormones and organic pesticides will be added to ensure survival and growth of the plants.
<table>
<tr><th>Location</th><th>Area under plantation (Sq. m.)</th><th>No. of trees @2500 per hectare</th><th>Considering survival rate of 70%, additional trees to be planted</th><th>Total no. of trees</th></tr>
<tr><td>Inside plant premises</td><td>260 (26 %)</td><td>65</td><td>20</td><td>85</td></tr>
<tr><td>Outside plant premises</td><td>140 (14 %)</td><td>35</td><td>11</td><td>46</td></tr>
<tr><td>Total</td><td>400 (40 %)</td><td>100</td><td>31</td><td>131</td></tr>
</table>
Species proposed for plantation
<table>
<tr><th>S. No.</th><th>Vernacular Name</th><th>Scientific name</th><th>No. of trees to be planted</th></tr>
<tr><td>1</td><td>Mango</td><td>Mangifera indica</td><td>30</td></tr>
</table></td><td>The EAC found the reply submitted by the PP to be satisfactory.</td></tr>
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<tr><td></td><td></td><td>
<table>
<tr><td>2</td><td>Neem</td><td>Azardirachta indica</td><td>30</td></tr>
<tr><td>3</td><td>Arjun</td><td>Terminalia arjuna</td><td>20</td></tr>
<tr><td>4</td><td>Pilkhan</td><td>Ficus virens</td><td>30</td></tr>
<tr><td>5</td><td>Imli</td><td>Tamarindus indica</td><td>21</td></tr>
<tr><td colspan="3">Total</td><td>131</td></tr>
</table>
</td><td></td></tr>
<tr><td>2.</td><td>Land allotment letter of RIICO for the green belt within the industrial area</td><td>RIICO has given an NOC to M/s Veskn Industry Pvt. Ltd. on 01.05.2023 vide. letter no. U(17)/2023-24/286 for cleaning, plantation & maintenance of plants in front of project premises along both sides road of industrial area chopanki for a period of 3 years</td><td>The EAC found the reply submitted by the PP to be satisfactory.</td></tr>
<tr><td>3.</td><td>Revised layout plan with requisite green belt</td><td>Revised layout plan has been submitted and presented during the EAC meeting.</td><td>The EAC found the reply submitted by the PP to be satisfactory.</td></tr>
<tr><td>4.</td><td>Revised budget for green belt development</td><td>Budget for greenbelt development has been increased from Rs. 0.55 lakhs to Rs. 1.96 lakhs
Budget for avenue plantation under CER has been increased from Rs. 3.15 lakhs to Rs. 19.50 lakhs
Cost per tree has been estimated as Rs. 500 per tree and Rs. 1000 has been estimated as the cost of tree guard, manure, vermicompost, growth hormones, construction of pits, etc.
<table>
<tr><td>S. No.</td><td>Particular</td><td>Cost (Rs,.)</td></tr>
<tr><td colspan="3">A. COST OF GREEN BELT PLANTATION</td></tr>
<tr><td>1</td><td>Within Plant Premises</td><td>1,27,500</td></tr>
</table>
</td><td>The EAC found the reply submitted by the PP to be satisfactory.</td></tr>
</table>

<table>
<tr><td></td><td></td><td>
<table>
<tr><td>2</td><td>Outside Plant premises</td><td>69,000</td></tr>
<tr><td colspan="2">Total</td><td>1,96,500</td></tr>
<tr><td colspan="3">B. CER BUDGET</td></tr>
<tr><td>1</td><td>Avenue Tree Plantation 1300 trees</td><td>19,50,000</td></tr>
</table>
</td><td></td></tr>
<tr><td>5.</td><td>Revised and detailed water balance</td><td>Water balance has been revisited. The fresh water requirement has been reduced to 4.5 KLD and same has been presented during the Presentation.</td><td>The EAC found the reply submitted by the PP to be satisfactory.</td></tr>
<tr><td>6.</td><td>Quantified and specific compliance and action plan for the additional safeguard measures prescribed in the ministry/s OM dated 31.10.2019 for critically and severely polluted area.</td><td>Compliance report of action plan for the additional safeguard measures prescribed in the Ministry/s OM dated 31.10.2019 for critically and severely polluted area has been presented during the Presentation.</td><td>The EAC found the reply submitted by the PP to be satisfactory.</td></tr>
<tr><td>7.</td><td>Detailed justification/ trend w.r.t. the CEPI score of the CPA since declaration of the CPA.</td><td>
<table>
<tr><th>State</th><th>CEPI SCORE IN 2009</th><th>CEPI SCORE IN 2011</th><th>CEPI SCORE IN 2013</th><th>CEPI SCORE IN 2018</th></tr>
<tr><td>Bhiwadi</td><td>82.91</td><td>77.73</td><td>70.63</td><td>79.63</td></tr>
</table>
</td><td>The EAC found the reply submitted by the PP to be satisfactory.</td></tr>
</table>

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

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

The EAC noted that the PP has given an undertaking 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 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 green belt development, water balance, compliance to CPA OM dated 31.10.2019 and advised the PP to submit the following:

- Undertaking for completion of green belt plantation before the onset of monsoon 2023.
- Revised water balance: Water balance has been re-worked and fresh water requirement has been reduced to 2.5 KLD.
- Revised compliance and action plan for the additional safeguard measures prescribed in the Ministry/s OM dated 31.10.2019 for critically and severely polluted area.

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 the 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 comply with the stringent stack emission level of 80 mg/nm^3.

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

(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) PNG shall be used as a fuel in the boiler.

(vi) The best available technology shall be used.

(vii) The PP shall develop an additional greenbelt over an area of at least 400 m^2 (85 nos. of trees considering 80% of survival rate) shall be planted inside the plant premises +46 outside premises within a year of the 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 avenue plantation infront of the project premises along both sides of industrial area Chopanki road.

(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) Domestic wastewater of 1.2 KLD shall be treated in STP and treated water shall be used in greenbelt plantation. Industrial wastewater generated from the process shall be reused in the cooling tower.

(xi) Zero Liquid Discharge (ZLD) shall be maintained.

(xii) The PP shall propose a storage tank for storing of approx. 44.06 cubic meter/day water and use the same for green belt plantation. A typical size of about (1) one rectangular collection tank shall be proposed having dimensions of about 5m *5m* 2m, (Length"Width"Depth) to store and utilize the water for green belt plantation.

(xiii) No dumping of any kind of waste shall be practised. Used oil generated shall be send to authorized recyclers. All the Solid and hazardous waste shall be disposed off as per CPCB/MoEF&CC norms.

(xiv) Used oil generated shall be send to authorized recyclers. Hazardous waste shall be strictly disposed off as per Hazardous and Other & Waste (Management Trans-Boundary Movement) Rule, 2016.

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

(xvi) An amount of ₹ 19.50 lakhs shall be allocated towards CER for Avenue Tree Plantation

(xvii) 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 Top management – General Manager- Manager (EHS)- supervisior- worker (safety)- chemist- worker. 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.

(xviii) 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 [₹ 21.41 Lakhs (Capital cost) and ₹ 3.4 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.

(xix) The PP reported that Total Fresh Water Requirement for proposed project shall be 2.5 KLD which shall be met from **Ground water.** The PP should ensure that water supply should not be above the permissible limit and fresh water shall be withdrawn 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

(xx) 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.

(xxi) 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.

(xxii) 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.

(xxiii) 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.

(xxiv) 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.

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

(xxvi) 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.

(xxvii) 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.

(xxviii) 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.

(xxix) 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.

(xxx) 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.

(xxxi) 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.

(xxxii) 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.

(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. 51.2

Proposed Expansion of Specialty Chemical Manufacturing Unit within existing Active Pharmaceutical Ingredient (API) Manufacturing Unit from Production Capacity 130.01 MT/Month to 10,808 MT/Month located at Plot No. 406, GIDC Estate, Panoli, Taluka: Ankleshwar, District: Bharuch, Gujarat by M/s. Omkar Chemical Industries Private Limited - Consideration of EC

[Proposal No. IA/GJ/IND3/418489/2023; File No. IA-J-11011/411/2022-IA-II(I)]

1. The proposal is for the environmental clearance to the Proposed Expansion of Specialty Chemical Manufacturing Unit within existing Active Pharmaceutical Ingredient (API) Manufacturing Unit from Production Capacity 130.01 MT/Month to 10,808 MT/Month located at Plot No. 406, GIDC Estate, Panoli, Taluka: Ankleshwar, District: Bharuch, Gujarat by M/s. Omkar Chemical Industries Private Limited.

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

since the **project site is located within a Critically Polluted Area (CPA),** the project attracts the general condition and considered as Category '**A'** at Centre.

3. The ToR was issued by the Ministry, vide letter no. IA-J-11011/411/2022-IA-II(I) dated 2.1.2023. 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 **Expansion case.** The proposal is placed in this 51st EAC meeting on 16th -17th May, 2023, wherein the PP along with accredited Consultant, M/s. En-vision Enviro Technologies Pvt. Ltd [Accreditation number NABET/EIA/2023/RA/ 0212 dated 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:

4. The PP reported that the Existing land area of 8,574.22 m^2, out of which 1,064 m^2 open space will be utilized for the proposed plant facility and no R& R is involved in the Project. The details of products to be manufactured are as follows:

Sr. No.	Product Details (Complete Name)	CAS No.	Quantity (MT/Month)			Uses
			Existing	Proposed	Total	
	Existing API Products					
1	Atorvastatin Calcium	134523-00-5	130	0	130	API/Dyslipidemia
2	Tetra-butyl 2-((4R,6R)-6-(2-aminoethyl)-2,2-dimethyl-1,3-dioxan-4-yl)acetate	125995-13-3				Atorvastatin Calcium /Cholesterol and fats
3	Tert-butyl 2-((4R,6R)-6-(2-(2-(4-fluorophenyl)-5-isopropyl-3-phenyl-4-(phenylcarbamoyl)-l H-pyrrol-1 -yl)ethyl)-2,2-dimethyl-1,3-dioxan-4-yl)acetate	125971-95-1				Atorvastatin Calcium /Cholesterol and fats
4	Torsemide	56211 - 40-6				API/Heart failure, liver disease, and kidney disease
5	2-aminobenzene sulfonic acid	88-21-1				Torsemide/Heart failure, liver disease, and kidney disease
6	4-chloropyridine-3-sulfonamide	18368 - 64-4				Torsemide/Heart failure, liver disease, and kidney disease
7	4-(m- tolylamino)pyridine-3- sulfonamide	72811 - 73-5				Torsemide/Heart failure, liver disease, and kidney disease

Sr. No.	Product Details (Complete Name)	CAS No.	Quantity (MT/Month)			Uses
			Existing	Proposed	Total	
8	Amisulpiride	53583 -79-2				API/Antipsychotic
9	Bisoprolol Fumarate	66722 -44-9				API/High blood pressure, heart attacks, and kidney problems
10	4-((2-isopropoxyethoxy)methyl)phenol	17703 4-57-0				Bisoprolol Fumarate/High blood pressure, heart attacks, and kidney problems
11	2-((4-((2-isopropoxyethoxy) methyl)phenoxy)methyl) oxirane	66722 -57-4				Bisoprolol Fumarate/High blood pressure, heart attacks, and kidney problems
12	1-(4-((2-isopropoxyethoxy)methyl)phenoxy)-3-(isopropylamino)propan-2-ol	5790-46-5				Bisoprolol Fumarate/High blood pressure, heart attacks, and kidney problems
13	Topiramate	97240 -79-4				API/Control seizures (epilepsy).
14	2,3,4, 5-Bis-O-(1-MethylEthylidene)-B-D-fructopyranose	20880 -92-6				Topiramate /Control seizures (epilepsy
15	Levitiracetam	10276 7-28-2				API / Antiepileptic
16	Azithromycin dihydrate	11777 2-70-0				Azithromycin dihydrate /Skin infections, ear infections, eye infections
17	Irbesartan	13840 2-11-6				API/Antihypertensive
18	4'-(2-Butyl-4-oxo-1,3-diazaspiro[4,4]non-1- ene-3-yl methyl)biphenyl-2-carbonitrile	13840 1 -24-8				Irbesartan /Blood pressure,heart attacks, and kidney problems
19	2-n-butyl-4-spiro cyclopenetrate-1 -((2'-triphenyl methyl tetrazol-5-yl) biphenyl-4-yl methyl)-2-imidazole	12475 1 -00-4				Irbesartan /Blood pressure,heart attacks, and kidney problems
20	Flurbiprofen	5104-49-4				API/Painkiller

Sr. No.	Product Details (Complete Name)	CAS No.	Quantity (MT/Month)			Uses
			Existing	Proposed	Total	
21	Cloxacillin Sodium	7081-44-9				API/Antibiotic
22	Terbinafine Hydrochloride	78628 - 80-5				API/Antifungal
23	Terbinafine	91161 - 71-6				Terbinafine Hydrochloride/ Antifungal
24	Azithromycin	83905 - 01-5				API/Antibiotic
25	Roxithromycin	80214 - 83-1				API/Antibiotic
26	Tramadol Hydrochloride	36282 - 47-0				API/Painkiller
27	Ornidazole	16773 - 42-5				API/Antiprotozoal
28	Des Loratadine	10064 3-71-8				API/Anti-Allergic
29	Fexofenadine Hydrochloride	15343 9-40-8				API /Anti-Allergic
30	4-(4-(hydroxydiphenylmethyl) piperidin-1 -yl)-1 -(4-(2-methyl-3-oxobutan-2-yl)phenyl)butan)-1 -one	15343 9-40-8				Fexofenadine Hydrochloride/reliev e allergy symptoms such as watery eyes, runny nose, itching eyes/nose, sneezing, hives, and itching
31	Sertraline Hydrochloride	79559 - 97-0				API/Antidepressant
32	(4-(3,4-dicholoro- phenyl)-1,2,3,4- tetrahydro-naphthalen-1 - ylidene)-methyl-amine	11980 84-29-5				Sertraline Hydrochloride /Antidepressant
33	Sertraline	79617 - 96-2				Sertraline Hydrochloride /Antidepressant
34	Clarithromycin	81103 - 11-9				API/Antibiotic
35	Lisinopril	83915 - 83-7				API/Antihypertensiv e
36	Artesunate	88495 - 63-0				Artesunate /Antimalerial

Sr. No.	Product Details (Complete Name)	CAS No.	Quantity (MT/Month)			Uses
			Existing	Proposed	Total	
37	2-chloro-1 -(2,7-dichloro-9H-fluoren-4-yl)ethane-1-ol	131023-37-5				Lumefantrine /treat non-severe malaria. This medication is used only to treat malaria
38	2-chloro-1-(2,7-dichloro-9H-fluoren-4-yl)ethane- 1-ol	131023-37-5				Lumefantrine /treat non-severe malaria. This medication is used only to treat malaria
39	2-(dibutylamino)-1-(2,7-dichloro-9H-fluoren-4-yl)ethane-1-ol	69759 - 61-1				Lumefantrine /treat non-severe malaria. This medication is used only to treat malaria
40	Tinidazole	19387 - 91-8				API/Antibiotic
41	2-((2-(2-methyl-5-nitro-1H-imidazol-1-yl)ehyl(thio)ethan-1-ol	16156 - 94-8				Tinidazole /Antibiotic
42	Carvedilol Phosphate	610309-89-2				API/ Antihypertensive
43	Carvedilol	72956 - 09-3				Carvedilol Phosphate /Blood pressure and heart failure
44	Omeprazole Sodium	95510 - 70-6				API /Antiulerative
45	5-Methoxy-2(-4-methoxy-3-5-dimethyl- pyridin-2-ylmethylsulfanyl)-1H-benzoimidazole	73590 - 85-9				Omeprazole Sodium/ Antiulerative
46	Fluconazole	86386 - 73-4				API/Antifungal
47	Arteether	75887 - 54-6				API/Antimalerial
48	Gabapentin	60142 - 96-3				API/ Antidepressant
49	(1-aminomethyl-cyclohexyl)-acetic acid	60142 - 95-2				Gabapentin /Gelieve nerve pain following shingles in adults
50	Hydrochlorothiazide	58-93-5				API /Antihypertensive
51	Atenolol	29122 - 68-7				API/Antihypertensiv e
52	Domperidone	57808 - 66-9				API /Antiemetic

Sr. No.	Product Details (Complete Name)	CAS No.	Quantity (MT/Month)			Uses
			Existing	Proposed	Total	
53	Dabigatran	211915-06-9				API /prevent blood clots
54	(4-Cyano-phenylamino)acetic acid	42288 - 26-6				Dabigatran /prevent blood clots
55	3-({2-[(4-cyano-phenylamino)-methyl]-1 - methyl-1H-benzoimidazole-5-carbonyl}-pyridine-2-yl-amino)-propionic acid ethyl ester methane sulfoate	211915-84-3				Dabigatran /prevent blood clots
56	3-({2-[(4-carbamimidoyl-phenylamino)-methyl]-1 - methyMH-benzoimidazole-5-carbonyl}-pyridine-2-yl-amino)-propionic acid ethyl ester hydrogen chloride	7647-01-0				Dabigatran /prevent blood clots
57	3-[(2-{[4-(Hexyloxycarbonylamino - imino-methyl)-phenylamino)-methyl}-1 - methyl-1H-benzoimidazole-5-carbonyl)-pyridine-2-yl-aminoj-propionic acid ethyl ester	211915-06-9				Dabigatran /prevent blood clots
58	Strontium Renelate	135459-90-4				API /Osteoporosis
59	Diethyl 3-oxopentanedioate	105-50-0				Strontium Renelate /postmenopausal women with osteoporosis
60	Ethyl 5-amino-4-cyano- 3-(2-ethoxy-2-oxoethyl)thiophene-2-carboxylate	58168 - 20-0				Strontium Renelate/postmenopausal women with osteoporosis
61	Diethyl 2,2'-((3-cyano-4-(2-ethoxy-2-oxoethyl)-5-(ethoxycarbonyl)thiophe n-2-yl)azanediyl)diacetate	58194 - 26-6				Strontium Renelate /postmenopausal women with osteoporosis

Sr. No.	Product Details (Complete Name)	CAS No.	Quantity (MT/Month)			Uses
			Existing	Proposed	Total	
62	Phenylepherine HCI	61-76-7				API /stuffy nose, sinus, and ear symptoms
63	3-acetylphenyl acetate	2454-35-5				PhenylepherineHCI /stuffy nose, sinus, and ear symptoms
64	3-(2-bromoacetyl)phenyl acetate & 2-(benzyl(methyl)amino- 1-(3- hydroxyphenyl)ethane-1-one	38396 - 89-3 & 71786 - 67-9				PhenylepherineHCI /stuffy nose, sinus, and ear symptoms
65	3-(1-hydroxy-2-(methylamino)ethyl)phenol	532-38-7				PhenylepherineHCI /stuffy nose, sinus, and ear symptoms
66	Azilsartan Kamedoxomil	86303 1-21-4				API /high blood pressure
67	Methyl(E)-2-ethoxy-1-«2'-(N'-((ethoxycarbonyl)oxy)carbamimidoyl-[1,1-biphenyl]- 4-yl)methyl) - 1 H-benzo[d]imidazole- 7-carboxylate	-				AzilsartanKamedoxomil /high blood pressure
68	Methyl 2-ethoxy-1 -((2-(5-oxo-4,5-dihydro- 1,2,4-oxadiazol-3-yl)- [1,1-biphenyl]-4- yl)methyl)-1H- benzo[d]imidazole-7-carboxylate	147403-52-9				AzilsartanKamedoxomil /high blood pressure
69	Methyl 2-ethoxy-1 -((2- (5-oxo-4,5-d i hyd ro- 1,2,4-oxadiazol-3-yl)- [1,1-biphenyl]-4- yl)methyl)-1H- benzo[d]imidazole-7-carboxylic acid	147403-52-9				AzilsartanKamedoxomil /high blood pressure
70	(5-methyl-2-oxo-1,3-dioxol-4-yl)methyl 2-ethoxy-1-((2'-(5-oxo-4,5-dihydro-1,2,4-oxadiazol-3-yl)-[1,1-biphenyl]-4-yl)methyl)-1H-benzo[d]imidazole-7-carboxylate	86303 1-21-4				AzilsartanKamedoxomil /high blood pressure

Sr. No.	Product Details (Complete Name)	CAS No.	Quantity (MT/Month)			Uses
			Existing	Proposed	Total	
71	Dapoxetine	129938-20-1				API/ Antidepressant
72	3-chloro-1-phenyl propan-1-ol	18776 - 12-0				Dapoxetine/marketed as Priligy, is a medication used for the treatment of premature ejaculation (PE) in men 18-64 years old
73	Hydroxyl Naphthyl Ether	-				Dapoxetine/marketed as Priligy, is a medication used for the treatment of premature ejaculation (PE) in men 18-64 years old
74	Rosuvastatin Calcium	147098-20-2				API/ Lowers "bad"cholesterol
75	N-[5-(bromo methyl)-4- (4-fluoro phenyl)-6- isopropyl pyrimidin-2-yl]- N-methyl methane sulfonamide.TPP salt	799842-07-2				Rosuvastatin Calcium/ Lowers "bad" cholesterol
76	Tert-butyl2-((4R,6S)-6-((E)-2-(4-(4-flurophenyl)-6-isopropyl-2-(N-methylmethylsulfonamido) pyrimidin-5-yl)vinyl)-2,2-dimethyl-1,3-dioxan-4-yl)acetate	289042-12-2				Rosuvastatin Calcium/ Lowers "bad" cholesterol
77	Monomethylamine salt of rosuvastatin	-				Rosuvastatin Calcium/ Lowers "bad" cholesterol
78	Clopidogrel Bisulphate	120202-66-6				API /prevent blood clots if you have chest pain
79	(+) Thiophene Gtycine ester HCI	-				ClopidogrelBisulphat e /prevent blood clots if you have chest pain
80	Cetrizine Dihydrochloride	83881 - 52-1				API /Relieve allergy symptoms such as watery eyes, runny nose, itching eyes/nose, sneezing, hives, and itching

Sr. No.	Product Details (Complete Name)	CAS No.	Quantity (MT/Month)			Uses
			Existing	Proposed	Total	
81	4-chloro benzhydrylpiperazine ethanol	10980 6-71-5				CetrizineDihydrochlo ride /Relieve allergy symptoms such as watery eyes, runny nose, itching eyes/nose, sneezing, hives, and itching
82	Itopride Hydrochloride	12289 2-31-3				API/Gastrointestinal symptoms of functional, nonulcer dyspepsia (chronic gastritis)
83	Rabeprazole Sodium	11797 6-90-6				API/Gastroesophag eal reflux disease (GERD)
84	2-[4-(3-methoxy-propoxy)-3-methyl-pyridin-2-yimethanesulfinyl]-1 H-benzomidazole	-				Rabeprazole Sodium/gastroesoph ageal reflux disease (GERD), duodenal ulcers
85	Lansoprazole	10357 7-45-3				API/ certain stomach and esophagus problems
86	2[4-(2,2,2-tri fluoroethoxy)-3-methyl pyridinenyl]methyl thio]-1H-benzimidazole	-				Lansoprazole/ certain stomach and esophagus problems
87	Amoxicillin Trihydrate	61336 - 70-7				API /Antibiotic
88	Venlafaxine Hydrochloride	99300 - 78-4				API/Antidepressant
89	Donepezil Hydrochloride	12001 1-70-3				API/Antidepressant
90	Celecoxib	16959 0-42-5				API /pain or inflammation
91	4,4,4-trifluoro-1-(4- methyl phenyl) butano- 1,3-diono	720-94-5				Celecoxib/pain or inflammation
92	Pantoprazole Sodium	13878 6-67-1				API/stomach and esophagus problems
93	5-Difluoromethoxy-2-(3,4-dimethoxy-pyridin- 2-yimethylsulfanyl)-1H-benzoimidazole	10262 5-64-9				Pantoprazole Sodium /stomach and esophagus problems

Sr. No.	Product Details (Complete Name)	CAS No.	Quantity (MT/Month)			Uses
			Existing	Proposed	Total	
94	Artemether	71963 - 77-4				API/Antimalerial
95	Valsartan	13786 2-53-4				API/High blood pressure
96	Methyl N-valeryl-N-[(2-cyanobiphenyl-4-yl)methyl]-l-valinate	13786 3-90-2				Valsartan /high blood pressure
97	Ampicillin Trihydrate	7177-48-2				API/Antibiotic
98	(2S, 5R, 6R)-6-[(R)-2-Amino-2-phenylacetamido]-3, 3-dimethyl-7-oxo-4-thia- l-azabicyclo	20448-79-7				Ampicillin Trihydrate /Antibiotic
99	Linezolid	16580 0-03-3				API/bacterial infectio ns
100	Levosulpiride	23672 - 07-3				API/symptoms of schizophrenia, anxiety disorders, and dysthymia
101	2-methoxybenzoic acid	579-75-9				Levosulpiride /symptoms of schizophrenia, anxiety disorders, and dysthymia
102	2-methoxy-5-sulfamoylbenzoic acid	22117 - 85-7				Levosulpiride /symptoms of schizophrenia, anxiety disorders, and dysthymia
103	Methyl 1,2-methoxy-5-sulfamoylbenzolate	33045 - 52-2				Levosulpiride /symptoms of schizophrenia, anxiety disorders, and dysthymia
104	S-1 -Ethyl-2-aminomethyl pyrolindine	22795 - 99-9				Levosulpiride /symptoms of schizophrenia, anxiety disorders, and dysthymia
105	Telmisartan	14470 1-48-4				API/high blood pressure

Sr. No.	Product Details (Complete Name)	CAS No.	Quantity (MT/Month)			Uses
			Existing	Proposed	Total	
106	Methyl 4-butyramido-3-methyl-5-nitrobenzoate	152628-01-8				Telmisartan /high blood pressure
107	Methyl 7-methyl-2- propyl-1H- benzo[d]imidazole-5-carboxylate	152628-00-7				Telmisartan /high blood pressure
108	Pregabaline	148553-50-8				API/ Antiepileptic
109	(3s)-3-cyano-2-(ethoxycarbonyl)-5-methylhexanoic acid	181289-37-2				Pregabaline/ Antiepileptic
110	Moxifloxacin	186826-86-8				API/ Antibiotic
111	5,8-dihydronaphthalen-1-yl acetate	51927 - 56-1				Moxifloxacin/ Antibiotic
112	Glimepiride	93479 - 97-1				API / to control high blood sugar
113	3-ethyl-4-methyl-2-oxo-2,5-dihydro pyrrole-1-carboxylic acid phenethyl amide	-				Glimepiride/ to control high blood sugar
114	3-ethyl-4-methyl-2-oxo-2,5-dihydro pyrrole-1-carboxylic acid[2-4(-sulfamoyl phenyl) ethyl] amide	119018-29-0				Glimepiride/ to control high blood sugar
115	Losartan Potassium	114798-26-4				API /high blood pressure
116	Losartan	-				Losartan Potassium/ high blood pressure
117	Quitiapine Hemifumarate	111974-69-7				API /schizophrenia, bipolar disorder
118	2-nitro thio phenol	4875-10-9				Quitiapine Hemifumarate /schizophrenia, bipolar disorder
119	Phenyl-2-(phenylthio) amine	1134-94-7				Quitiapine Hemifumarate /schizophrenia, bipolar disorder
120	Phenyl-2-(phenylthio)-phenyl carbonate	-				Quitiapine Hemifumarate /schizophrenia, bipolar disorder

Sr. No.	Product Details (Complete Name)	CAS No.	Quantity (MT/Month)			Uses
			Existing	Proposed	Total	
121	Dibenzo[b,f]thiazepin-1,1(10H)-one	3159-07-7				Quitiapine Hemifumarate /schizophrenia, bipolar disorder
122	Clotrimazole	23593 - 75-1				API /Antifungal
123	Levofloxacin	100986-85-4				API /Antibiotic
124	Ciprofloxacine	85721 - 33-1				API /Antibiotic
125	Ofloxacin	82419 - 36-1				API /Antibiotic
126	Hydroxychloroquine	118-42-3				API /treat rheumatoid arthritis
127	4, 7-Dichloroquinoline	86-98-6				hydroxychloroquine /treat rheumatoid arthritis
128	R & D	--	0.01	0	0.01	--
Sub Total (A)			**130.01**	**0**	**130.01**	
	Proposed Specialty Products					
	Group 1: Ethylene Oxide [EO] / Propylene Oxide Condensate					
129	Castor Oil/ Hydrogenated Castor Oil Ethoxylate And Or Propoxylate	72986-44-8/ 61790-96-3				Use as additive in manufacturing of textile and Agro Ind.
130	Fatty Alcohol Ethoxylates And/ Or Propoxylate	68439-50-9/ 68409-59-6.				Cosmetic Industries, Textile & Paint Industries
131	Alkyl phenol Ethoxylate And/ Or Propoxylate	26027-38-3/ 68891-11-2.	0	1500	1500	Oil refinery, Paint, Pigment and Textile, Industries & Use as additive in manufacturing of textile and Agro Ind.
132	Sorbitan Esters Ethoxylates And/ Or Propoxylate	9005-67-81/ 1338-41-6.				Oil refinery and Textile Industries
133	Fatty Acid Ethoxylate And/ Or Propoxylate	61791-29-5/ 74499-34-6.				Cosmetic and Textile Industries

Sr. No.	Product Details (Complete Name)	CAS No.	Quantity (MT/Month)			Uses
			Existing	Proposed	Total	
134	Fatty Amine Ethoxylates And/ Or Propoxylate	68213-26-3/ 68213-26-3				Agro and Leather Industries
135	Glycol Ethoxylate And/ Or Propoxylate/ PEG	31694-55-0/ 9082-00-2				Cosmetic and Plastic Industries
136	Glycerole Ethoxylate And/Or Propoxylate	68551-14-4/ 51258-15-2				Printing ink Industries and Metal Work
137	Vegetable Oil Ethoxylate And/ Or Propoxylate	61791-23-9/ 106168-35-8				Use as additive in manufacturing of textile and Agro Ind.
138	Ethoxylate And/ Or Propoxylates of Phenol Or Phenol Derivatives	9004-78-8				Textile Industries
139	Alkyl phenol formaldehyde Ethoxylate / Propoxylate	NA/ NA				Oil field Industries
140	EO-PO Block Co-Polymer	9003-11-6				Textile & Agro Industries
141	Synthetic Alcohol Ethoxylate And/Or Propoxylate	68439-50-9/ 70955-07-6				Paper, Plastic and Detergent industries, Cosmetic and Agro Industries, Plastic and Detergent industries
142	Iso Propanol Ethoxylate And/Or Propoxylate	78330-20-8/ 67-63-0				Cosmetic and Oil Field Industries
143	Di Ethyl Amino ethanol Ethoxylate And/Or Propoxylate	100-37-8/ 100-37-8				Metal Industries
144	Hydroxyl Ethyl Piperdine Ethoxylate And/Or Propoxylate	3554-74-3/ 103331-86-8				Intermediate for pharmaceutical
145	Hydroxyl Ethyl Morpholine Ethoxylate And/Or Propoxylate	53404-03-8/ 61788-44-1				Textile & Paint Industries

Sr. No.	Product Details (Complete Name)	CAS No.	Quantity (MT/Month)			Uses
			Existing	Proposed	Total	
146	Hydroxyl Ethyl Pyrolidine Ethoxylate And/Or Propoxylate	2955-88-6				Intermediate for pharmaceutical
147	Mono Iso Propanol Amine Ethoxylate And/Or Propoxylate	78-96-6				Construction and Agro Industries
148	Di Iso Propanol Amine Ethoxylate And/Or Propoxylate	110-97-4				Construction and Agro Industries
149	Tri Iso Propanol Amine Ethoxylate And/Or Propoxylate	122-20-3				Construction and Agro Industries
150	Diethanol amines Ethoxylate And/Or Propoxylate	111-42-2				Paper, paint and Metal Industries
151	Triethanol amines Ethoxylate And/Or Propoxylate	68213-26-3				Paper, Oil Refinery, paint and Metal Industries
152	Di Methyl Amino ethanol Ethoxylate And/Or Or Propoxylate	108-01-0				Metal Industries
153	Methyl diethanol amine Ethoxylate And/Or Propoxylate	105-59-9				Metal and Construction Industries
154	Methyl Mono ethanol amine Ethoxylate And/Or Propoxylate	141-43-5				Metal and Construction Industries
	Group 2: Anionic Surfactants					
155	CABS	26264-06-2	0	3000	3000	As specially chemicals
156	Phosphate Esters	68909-65-9				Metal work industries
157	Sulphate Esters	--				Use as additive in manufacturing of textile and Agro Ind.
	Group 3: Cationic Surfactants					
158	Cationic Surfactants	8001-54-5	0	83	83	Use as additive in manufacturing of textile and Agro Ind.
	Group 4: Blended Surfactants (Using Intermediates)					
	4.1: Emulsifier for General Application (Formulation/Blending Process Only)					
159	Emulsifier for emulsifiable concentrate	108-98-5	0	800	800	Agriculture industries

Sr. No.	Product Details (Complete Name)	CAS No.	Quantity (MT/Month)			Uses
			Existing	Proposed	Total	
160	Adjuvants, wetting & dispersing agents	--				
161	Wetting & Binding agents	--				
162	Miscellaneous Emulsifiers	--				
	4.2: Oil Field Chemicals (Through Formulation/Blending Process Only)					
163	Demulsifier	--	0	800	800	Oil Field/Petrolium Industries
164	Corrosion Inhibitors	--				
165	Surfactants	--				
166	Deoiler	7784-13-6				
167	Non-Emulsifiers	--				
168	Acid Emulsifiers	--				
169	Wax Dispersants	8002-74-2				
170	Other Misc. Application	--				
171	Water Soluble Demulsifier	64742-88-7				
	4.3: Surfactants For Other Industries					
172	Surfactants For Other Industries	--	0	800	800	Textile, Paint, Cosmetic, Rubber, Fibber, Pigments, Plastic & etc. Industries
	Group 5: Powder Surfactants					
173	Powder Surfactants	--	0	158	158	Agriculture Industries
	Group 6: Miscellaneous Surfactants					
174	Cocoamido Propyl Betaine	61789-40-0	0	1000	1000	Cosmetic & Agro Industries
175	Fatty Amine oxide	1643-20-5				Cosmetic Industries
176	Epoxidised Soybean oil	8013-07-8				Agriculture Industries
177	Coco Mono Ethanol Amide (CMEA)	68140-00-1				
178	Coco Di Ethanol Amide (CDEA)	68603-42-9				
	Group 7: Esters					
179	Sorbitan Mono Stearate Esters	1338-41-6	0	1800	1800	Intermediate for Ethylene Oxide and Propylene Oxide Condensate
180	Sorbitan Mono Oleate Esters	1338-43-8				
181	Sorbitan Mono Palmitate Esters	26266-57-9				

Sr. No.	Product Details (Complete Name)	CAS No.	Quantity (MT/Month)			Uses
			Existing	Proposed	Total	
182	Sorbitan Mono laureate Esters	1338-41-6				
183	Sorbitan Tri-oleate	26266-58-0				
184	Fatty Acid Esters of Butanol	71-36-3				
185	Fatty Acid Esters of Octanol	284-863-0				
186	Fatty Acid Esters of Glycol / Glycerol	84988-75-0/ 68990-53-4				
187	Fatty Acid Esters of Methanol	61788-61-2				
188	DPGDB (Di Propylene Glycol Di Benzoate)	27138-31-4				
189	Glycerol Mono Stearate (GMS)	31566-31-1				
190	Ethylene Glycol Mono Stearate (EGMS)	111-60-4				
191	Ethylene Glycol Di Stearate (EGDS)	627-83-8				
	Group 8: Styerenated phenol					
192	Styerenated phenol	61788-44-1	0	200	200	Intermediate for Ethylene Oxide and Propylene Oxide Condensate
	Group 9: Condensation reaction					
193	Triazine	290-87-9	0	667	667	Oil Field / Petroleum Industries
194	N Methyl-Morpholine N oxide (NMMO)	7529-22-8				Textile and Cosmetic Industries
195	Alkyl phenol formaldehyde	9003-35-4				Intermediate for Resin Ethoxylate / Propoxylate
Sub Total (B)			**0**	**10,808**	**10,808**	
Total (A+B)			**130.01**	**10,808**	**10,938.01**	

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

6. The PP reported that Unit has obtained Environment Clearance for API unit from SEIAA, Gujarat vide EC letter no. SEIAA/GUJ/EC/5(f)/1999/2021, dated 20.12.2021 under category

B2. Certified EC compliance Report obtained dated 13/04/2023. All the conditions are complied.

7. The PP reported that there are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wild life Corridors etc. within 10 km distance from the project site. River/ water body Narmada River is flowing at a distance of 11.9 km in North direction. There is no forest land involved in the proposed project. Schedule-I species i.e., Peafowl (Pavo cristatus), were observed in the 10 km radius from the proposed project for which Conservation plan has been prepared and submitted to Deputy conservator of Forests on 23.1.2023.

8. The **Ambient air quality** monitoring was carried out at 8 locations during 01 October 2021 to 31/12/2021 and the baseline data indicates the range of concentrations as: PM_{10} (47 – 99 $\mu g/m^3$), $PM_{2.5}$ (30 – 60 $\mu g/m^3$), SO_2 (12.60 – 37.70 $\mu g/m^3$) and NO_2 (19.30 – 58.90 $\mu g/m^3$). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 2.80 $\mu g/m^3$, 4.99 $\mu g/m^3$ and 2.87 $\mu g/m^3$ with respect to PM_{10}, SO_X and NO_X. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). Similarly, for Ground Water, Surface Water, Soil and Noise. **Noise quality:** Noise level is measured at 8 locations. The noise level is higher at Project site, Ankleshwar railway station road, Nr. primary school of Kharod, Ankleshwar bus depot and residential area of Ankleshwar in day time as Major source of noise generation is transportation. At project site noise Level on the higher side due to industrial activity in the existing unit and surroundings. At Ankleshwar stations road high vehicular load in morning. Due to pandemic in night time there is reduction in trains which has lead to reduction in traffic & hence in night time noise is less. Primary school of Karod is located on the road connecting NH-8 to Panoli & Sanjali industrial area. There are many industries in Sanjali also construction of bridge on Panoli railway line is ongoing hence vehicular activity is high. Ankleshwar CTF ONGC is surrounded by open land hence noise level is on lower side. Noise monitoring location of Umarwada is surrounded by open area. And it is internal village with low vehicular activity. Ankleshwar bus depot has high vehicular load. Due to pandemic in night time there is reduction in nos. of buses which has lead to reduction in traffic & hence in night time noise is less. Residential area of Ankleshwar is very near to industries hence noise level is on the higher side due to high vehicular activity. Noise was monitored near gate of the Gujarat Guardian Limited which is on road connecting NH-8. Industrial noise was not observed as thick greenbelt is developed between industry and boundary wall. Hence noise level is due to vehicular activity. **Surface Water Quality**: The pH results varied from 6.5-8.5, Turbidity results from 1.5-12.0 NTU, Total Dissolved Solids from 210-1560 mg/L, Conductivity from 298.2 -2199.6 µS/cm, Total Alkalinity from 82.9-320.2 mg/L, chloride from 55.9-496.0 mg/L and the sulphate from 15.6-279.0 mg/L. Higher values of turbidity, TDS, conductivity, chloride, alkanity & suplhates are observed at Amla khadi as Treated water of STP-Ankleshwar is disposed just before the sampling point, while in the downstream of sampling point, treated wastewater of FETP Ankleshwar is disposed.Taste & odor is also disagreeable & objectionable. Ammonical nitrogen is present in Amla Khadi. The results indicate that the nutrient values in the form of nitrate were found at Amla Khadi. The value for DO varied from 0.7-5.3 mg/L. High values of BOD & COD (80 & 24 mg/L) have lead to reduction in DO in the Amla Khadi. The levels of heavy metals viz. Copper, Lead, Manganese and Zinc were found to be BDL. Coliform bacteria were measured as Total Coliform, Faecal Coliform and E.

coli; these bacteria are present in all the samples. Amala Khadi is classified under Class E hence can be utilized for Irrigation, Industrial Cooling and Controlled Waste disposal. Ukai canal & Panoli GIDC reservoir fall under Class A hence can be utilized for Drinking Water Source without conventional treatment but after dis-infection. Rest of the locations fall under Class B hence can be utilized for outdoor bathing. **Ground water**- pH varied in the range of 6.90-7.60, which shows that water is nearly neutral at all the locations. pH was found within the permissible limit. Total suspended solid was found in the range of 4.5-6.1. Total hardness varied in the range of 170.2-250.3 mg/l except Alonj & Umarwada total hardness is found to be higher than desirable limit but within permissible limit while in rest it is within desirable limit. TDS varied in the range of 220-400 mg/L, the desirable limit at all locations. Hence, hardness level reduction to desirable limit is necessary to use water for drinking purpose. Total Alkalinity varied in range 77.0-122.0mg/L while Chloride varied in the range of 66.0-110.0 mg/L which shows alkalinity & chloride are within the desirable limits at all locations. Fluoride is absent at all the locations. Coliform bacteria were measured as Total Coliform, and E. coli, which are absent in at all the sampling locations. Heavy metals are well below the permissible limits. On the pverall basis the ~~m~~quality of ground water shows that it can be used for drinking purpose after proper treatment i.e. filtration. **Soil Quality :** Soil in the project areas is Clay to Silty Clay Loam. pH at all the locations is found to be moderately alkaline, ranging from 7.1 to 7.7. Soil class based on salt concentration is saline-alkaline at all the locations. Organic Carbon is found to be low at Piludra, Ankleshwar GIDC, Gujarat Guardina Limited and Near Amla Khadi while at rest of the location it is medium. Available Nitrogen is found low at all places except Umarwada, where it is medium. Available Pottasium low at Ankleshwar GIDC, high at Gujarat Guardina Limited while at all other places it is medium. Available Phosphorus is low at Ankleshwar GIDC and Diva, high at Nr. Amla Khadi while at all other places it is medium.

9. The PP reported that the total water requirement is 395.8 m^3/day of which fresh water requirement of 296.3 m^3/day and 99.5 m^3/day recycle water, (fresh water requirement will be met from GIDC water supply). Effluent of 288.38 KL/day quantity will be treated through ETP consisting of primary treatment followed by common MEE. The plant will be based on Zero Liquid Discharge system.

10. The Power requirement after expansion will be 400 kVA including existing 150 kVA and will be met from Dakshin Gujarat Vij Company Ltd. Total capacity of DG sets after expansion will be 525 kVA (Existing 125 kVA + Proposed 400 kVA) capacity, additionally DG sets of 400 kVA are required. DG sets are used as standby during power failure. Stack (height) will be provided as per CPCB norms to the proposed DG sets.

11. The existing unit has 1 no. of 2 TPH natural gas fired boiler, 1 no. of 8 Lac kCal/hr and 1 no. of 4 Lac kCal/hr natural gas fired thermic fluid heater. Additionally, 1 no. of 3 TPH agro-briquette fired boiler, 1 no. of 10 Lac kCal/hr natural gas fired thermic fluid heater and 1 no. of 10 Lac kCal/hr agro-briquette fired thermic fluid heater will be installed. Multi cyclone separator/ bag filter/ water scrubber with a stack of height of 30 m will be installed for controlling the particulate emissions within the statutory limit of 120 mg/Nm^3 (As per CEPI mechanism) for the proposed boilers/TFHs.

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

S. No.	Stack Attached to	Stack Height (m)	Air Pollution Control Measure	Type of Emission
Existing				
1	Reaction Vessel-1 **(Chlorination)** 2-choloro-1-(2,7-dichloro-9Hfluoren-4-yl)ethan-1-one	18	Two Stage Alkali Scrubber	HCl
2	Reaction Vessel-2 **(Nitration)** Telmisartan	18	Two Stage Alkali Scrubber	NOx
3	Reaction Vessel-3 **(Bromination)** 3-(2-bromoacetyl)phenyl acetate or 2-(benzyl(methyl)amino-1-(3-hydroxyphenyl)ethane-1-one	18	Two Stage Alkali/Water Scrubber	HBr
4	Reaction Vessel-4 **(sulfonation)** 3-(3-Amino-4-methylaminobenzoyl)-pyridine-2-yl-amino)-propionic acid ethyl ester	18	Two Stage Alkali Scrubber	SO_2
5	Reaction Vessel-5 **(Amination)** Carithromycin	18	Two Stage water Scrubber	NH_3
Proposed				
1	Reaction Vessel (Group 1, 2 & 3)	18	Two Stage Alkali Scrubber	VOC
2	Solvent Recovery Plant	18	**Condensor** and Two Stage Alkali Scrubber	VOC

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

		Name of Waste	Source of Waste	Quantity (MT/Annum)	Mode of Disposal

S. No.	Category & Schedule			Existing	Proposed	Total	
Hazardous Waste							
1	5.1/SCH-I	Used/Spent oil	Utilities & DG Set	0.24	0.4	0.64	Collection, Storage, Transportation & Reuse as lubricant & Disposal by selling To Authorized Re-Refiners
2	33.1/ SCH-I	Discarded Containers/ Bags/Liners	Raw Material Supplier	130	1,040	1,170	Collection, Storage, Transportation; Decontamination and Reuse or Sale to Authorized Vendor.
3	35.3/ SCH-I	ETP Sludge	ETP	115.10	100	215.10	Collection, Storage, Transportation, disposal at nearest TSDF site.
4	28.1/ SCH-I	Process Waste (Inorganic)	Mfg. Process 4-(3,4-dicholoro-phenyl)-1,2,3,4-tetrahydro-naphthalen-1-ylidene)-methyl-amine	3,292	--	3,292	
5	28.6/ SCH-I	Spent Solvent	Mfg. Process Lisinopri CABS and CAPB	10,484	2,892	13,376	Collection, Storage, Handling & subjected to distillation assembly to recover the solvent

							& Reuse within premise.
6	28.1/ SCH-I	Process Waste (Organic)	Mfg. Process (Carithromycin)	1,158	--	1,158	Collection, Storage, Transportation & send to pre/co processing unit (Cement Industries) OR send to CHWIF.
7	28.1/ SCH-I	Process Waste (Organic)	Group 2 (Anionic Surfactants) (Product No. 27)	0	108	108	
8	28.3/ SCH-I	Spent Carbon	Mfg. Process Desloratadine	66.5	--	66.5	
9	28.2/ SCH-I	Spent catalyst	Mfg. Process	273	--	273	
10	SCH-I/ 36.1	Distillation Residue	Mfg. Process Lisinopril CABS and CAPB	220	85	305	
11	28.1/SCH-I	Scrubbing Solution 25-30% NaCl	From Scrubber 2-choloro-1-(2,7-dichloro-9H-fluoren-4-yl)ethan-1- one	438	--	438	Collection, Storage & treated in ETP
12	28.1/SCH-I	Scrubbing Solution 10-15% $NaNO_2$	From Scrubber (Telmistertan)	292	--	292	
13	28.1/SCH-I	Scrubbing Solution 25-30% Liq. Ammonia	From Scrubber (Carithromycin)	365	--	365	Collection, Storage & Reuse within premises.
14	28.1/ SCH-I	Scrubbing Solution 25-30% HBr/NaBr	From Scrubber 3- (2-bromoacetyl)phenyl acetate or 2-(benzyl(methyl) amino-1-(3-hydroxyphenyl) ethane-1-one	365	--	365	Collection, Storage, Transportation & Sell to End Users having permission under Rule-9.
15	28.1/SCH-I	Scrubbing Solution 18-20% Na_2SO_3	From Scrubber 3- (3-Amino-4-methylamino-benzoyl)-	365	--	365	

			pyridine-2-yl-amino)-propionic acid ethyl ester				
16	28.4/S CH-I	Off Specification	Mfg. Process (Batch Failure)	1	--	1	Collection, Storage, Transportation & send to pre/co processing unit (Cement Industries) OR send to CHWIF.
17	36.1/S CH-I	Any process or distillation residue from Purification process for organic compounds/solvents	From Stripper	550	440	990	Collection, storage, transportation and disposal to CHWIF for Incineration
Solid Waste							
18	-	STP Sludge	From STP	0.2	0.3	0.5	Collection, storage and utilized as manure within the premises.
19	-	Fly Ash	From Boiler and TFH	0	7,020	7,020	Collection, storage and transportation and selling to bricks/ cement manufacturers.

13. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 6.52 Crore (Existing – Rs. 3.144 crores + Proposed - Rs. 3.376 crores) (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 28.784 crores/annum (Existing - Rs. 14.392

crores/annum + Proposed - Rs. 14.392 crores/annum) Industry proposes to allocate Rs. 22 Lakhs towards Corporate Social Responsibility.

14. Industry will develop greenbelt over an area of 33% i.e. 2,829.5 m^2 out of total area of the project, as project is under construction phase. Additional 600.2 m^2 area (i.e. 7% of project premises) outside project premises within the GIDC is developed as greenbelt to comply CEPI mechanism.

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 GIDC Estate.Panoli which is declarted as notified industrial area vide notification number No. GHU-98 (64)- GID-1098-2094-G dated 18th November, 1998.

16. The PP proposed to set up an Environment Management Cell (EMC) by engaging Director-Enviornment Health and safety Manager- ETP incharge Health and safety officer - for the functioning of EMC.

17. The PP reported that the Carbon sequestration is the process of capturing and storing atmospheric carbon dioxide. One of the major tool for Carbon sequestration is green belt/green area development. Trees sequestrate the CO_2 during photosynthesis. Unit has proposed to develop around 33% greenbelt area (2,829.50 m^2) within plant premises with total 885 Nos. of trees, considering 2,500 trees per hectare. Further, for proposed project additional 7% of total plot area (as greenbelt outside the project premises and within GIDC area for the compliance of CEPI mechanism. around 600 m^2 – 188 trees) will be developed.

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. 29.2 crores (Existing - Rs. 18 crores + Proposed - 11.2 crores) including existing investment of Rs. 18 crores. Total Employment will be 120 persons (40 Existing + 80 Proposed) persons as direct & 165 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 noted that the existing EC was granted by the SEIAA Gujarat, which should have been submitted to and appraised at the Central level due to the applicablity of General condition. Based on the meeting held with SEIAA and SEAC, Gujarat w.r.t such proposals on 23-24th March, 2023, the EAC looked into the specific points of 40% greenbelt compliance, conservation plan for Schedule-I species etc.

The EAC also recommended for regularisation of the existing EC by stipulation of additional conditions by SEIAA, Gujarat w.r.t 40% greenbelt compliance and conservation plan for Schedule-I species.

The EAC inter-alia, deliberated on the greenbelt development plan, reuse and recycle of water, APCM details, Compliance to OM dated 31.10.2019 for projects falling within CPA, and advised the PP to submit the following:

- Revised greenbelt development plan and undertaking for the removal of shrubs.
- Reuse / Recycle of water at maximum extent.
- Revised APCM details of proposed process gas emission.
- Revised CEPI compliance.

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

v) Agro Briquettes/ Natural gas shall be proposed as a primary fuel and TFHs. Diesel shall be used as fuel for operating DG set, in the proposed project also diesel shall be used as fuel for the additional DG set.

vi) The best available technology shall be used.

vii) The PP shall develop greenbelt over an area of at least 2829.5m^2 whereas additional 7% (600.20 m^2) of total plot area shall be developed as greenbelt outside the project premises and within GIDC area within one year of grant of EC. The saplings (885 number of trees within the plant premises + 188 outsiode the premises within the GIDC area) 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 plantation in nearby villages (i.e. Alonj, Bakrol, Umarwada) 2,000 nos. of sapling and Contribution in Social Forestry for tree plantation 1,000 nos. of sapling in these villages.

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) Industrial waste effluent generation shall be 139 KLD, out of which 137.8 KLD shall be sent to ETP followed by Stripper (1.2 KLD Solvent Residue Generation) and sent to Common MEE. Total 4. 88 Sewage shall be treated in STP, out of which 4.5 KLD treated water shall be reused for gardening purpose within the project premises. There shall be no discharge of any industrial effluent on land. Thus, there shall be no additional discharge in CETP Panoli.

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

xii) 1,545 KL/year rain water can have harvested within the project premises, accordingly around 1.42% of the annual fresh water requirement shall be collected and stored for reuse purpose. Additionally, 10 nos. of rain water harvesting structures shall be installed in nearby villages (i.e. Alonj and Bakrol) total amount of Rs. 4 lakhs.

xiii) The total domestic waste water generation will be 4.88 KLD and it will be treated in the STP to be installed.

xiv) Unit shall strictly carry out handling, storage and disposal of STP sludge as per prevailing guideline by the Board. STP Sludge will be used as a manure within plant premises.

xv) The PP shall dispose the hazardous waste as per Hazardous Waste Management Rules 2016. The hazardous waste generated should be preferably utilized in co-processing.

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

xvii) As proposed, an amount of ₹ 22 Lakhs shall be allocated towards CER.

xviii) A separate Environmental Management Cell (having qualified persons with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. PP shall engage Director- Enviornment Health and safety Manager- ETP incharge Health and safety 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.

xix) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. The budget proposed under EMP is ₹ 3.376 crores (Capital cost) and ₹ 14.392 crores/annum (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

xx) The total water requirement is 395.8 m^3/day of which fresh water requirement of 296.3 m^3/day and shall be met from GIDC water supply The PP should ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawn only after obtaining valid agreement from Concerned Authority. The PP should submit the

details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year.

xxi) The Unit shall install inhouse MEE of 900 KLD capacity followed by a secondary tretament unit for the treatment of MEE condensate and an RO system of 80 KLD capacity to recycle additional 70 KLD water to achieve more than 60 % recycle water (i.e 169.5 KLD) from the total industrial effluent within next 2 – 3 year of duartion.

xxii) 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.

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

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

xxv) 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.

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 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.

xxviii) 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.

xxix) 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.

xxx) 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.

xxxi) 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.

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

Agenda No. 51.3

Proposed organic pigments (Organic yellow, Organic red and Organic orange) unit at Plot no. 193/2, 2" Phase, GIDC Vapi, Dist. Valsad, Gujarat by M/s Micas Organics Limited (Unit III) – Amendment in Environmental clearance

[Proposal No. IA/GJ/IND3/294344/2022; File No. J-11011/745/2008-IA II (I)]

1. The proposal is for amendment in the **Environmental Clearance** granted by the Ministry vide letter no. J-11011/745/2008-IA II (I) Dated: 02/02/2009 for the project of establishing an organic pigment (Organic Yellow, Organic Red and Organic Orange) manufacturing plant located at Plot. No. 193/2, 2nd Phase, GIDC Vapi, Dist: Valsad, Gujarat in favour of M/s. Dhiraj Intermediates Pvt. Ltd. The unit has obtained an EC transfer in the name of Micas Organics Limited (Unit III), dated: 23/01/2023.

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

Sr. No.	Para of EC issued by MoEF&CC	Details as per the EC	To be revised / read as	Justification / Reasons
1.	**Sr. No. 3, Page No. 01 of 05**	There will be one steam boiler of 1000 kg/hr capacity for which 75 m^3/hr of natural gas will be used as fuel. Two numbers of thermopack of 4 lacs k cal capacity each will be installed. Natural gas (37.5 m^3/hr)	There will be one steam boiler of **6000 kg/hr** capacity for which **274 SCM/Hr (i.e 3288 SCM/Day)** of natural gas will be used as fuel. **18** numbers of Hot Air Dryer (attached 2 Burner with each dryer) of 150	At the time of obtaining of EC (in year of 2009), the calculation for the steam consumption was carried out by taking consideration of the product quality requirement in the market. The product market requirement was also less at that time. In the recent years, various research was done on product

		will be used for each Thermopack. There will be one D G set of capacity 100 KVA. Fuel for DG set will be HSD (25 lts/hr). There will not be any process gas emission. However, all the reactors will be connected to a common scrubber. Stack height of 15 meters for the boiler & Thermopack and 11 Mts is proposed for the D.G. set for dispersion of gaseous emissions. Cyclone and bag filter will be provided for pulverizer to control the particulate emissions.	Kg/day capacity will be installed. Natural gas (2.5 SCM/Hr/Burner) will be used for Hot Air Dryer. There will be one D G set of capacity 100 KVA. Fuel for DG set will be HSD (28 lts/hr). There will not be any process gas emission. However, all the reactors will be connected to a common scrubber. Stack height of 30 meters for the boiler is proposed and 11 meters is proposed for the hot air dryer and D. G. set for dispersion of gaseous emissions. Cyclone and bag filter will be provided for pulverizer to control the particulate emissions.	through R&D and various new technologies are now available in the market. By adopting the latest technology & based on the various R&D results and different scenarios, we concluded following results which is as below: – Presently, we are using 3 TPH (installed after obtaining of CC&A of the SPCB) capacity of natural gas fired boiler for supply of live steam with temperature of 90-140 ^{0}C for the manufacturing process of organic pigment. The said 3 TPH boiler is operated for 24 hours. – During manufacturing of organic pigments, temperature by operating boilers even for 24 hours and time is important to achieve quality of pigment. By using 3 TPH boiler, we are achieving required temperature by operating 24 hours of boiler; however, we are not achieving required quality of our product as per market demand. – We have taken trial run in our laboratory and found that; to get required quality of our product as per market demand, we have to give required temperature within minimum time period, which can be provided by higher capacity of steam boiler.

				Also by using the said higher capacity of steam boiler process, we can reduce the operation time of boiler from 24 hours to 12 hours and also get required quality of our product as per market demand. – Hence, we want to replace gas fired 3 TPH capacity of steam boiler with 6 TPH gas fired steam boiler. Note: After installation of 6 TPH gas fired boiler in place of 3 TPH gas fired boiler… 1. There will be no change in water consumption and waste water generation, because presently 3 TPH boiler is operated for 24 hours and proposed 6 TPH boiler will be operated for 12 hours only. Thus there will be no change in water consumption and waste water generation. 2. There will be increase in natural gas consumption per hour i.e. 137 SCM/Hr to 274 SCM/Hr, but overall consumption of natural gas per day will remain same i.e. 3288 SCM/Day. Hence no change in the average flue gas emission from steam boiler. 3. There will be no change in hazardous waste generation, production capacity. There will be only change in quality of products. 4. We will dismantle the existing 3 TPH boiler.

				5. There will be no change in existing daily average flue gas emission from boiler as the proposed boiler will be run on half hours than that of existing installed boiler.

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 steam / heat generation capacity of the Steam Boiler and Thermopacks along with the fuel consumption, greenbelt development plan, water balance, additional activity and/or installation of additional machines and advised the PP to submit the following:

- Submit the details on the steam / heat generation capacity of the Steam Boiler and Thermopacks along with the fuel consumption details as per the utilities mentioned in the EC and after the EC Amendment.
- The details on existing and additional greenbelt areas developed and/or to be developed by the unit within / outside the premises with tree number of plantations to comply with the 40% requirement of greenbelt area in tabular format, also submit the intention / approval letter from the GIDC, INA or Industrie
- Revised water balance of the existing unit and water balance after the EC amendment.
- An undertaking stating that additional activity and/or installation of additional machines of higher capacities than those mentioned in the EC will not be repeated without obtaining a prior amendment to the existing EC rather than directly obtaining NOC and CC&A Amendment.

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 covering an area of 40% (500.00 m^2 (40.54% of the total plot area) outside the premises within the INA, GIDC, Vapi areas) by planting 360 number of trees and 978 number of shrubs to be planted within the premises area within a period of six months before monsoon from the grant of EC Amendment. 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 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) Proposed new boiler shall be operated only 10 hours per day+ 2 hours' time for the boiler blow down and cooling of boiler respectively.

Agenda No. 51.4

Proposed Expansion for manufacturing of Synthetic Organic Chemicals (API & its Intermediates) of Production Capacity 62.5 MT/M located at Plot No. 4780, GIDC Industrial Estate, Ankleshwar, Dist.: Bharuch, Gujarat by M/s Sarita Chemicals - Consideration of ToR

[Proposal No. IA/GJ/IND3/415755/2023; File No. IA-J-11011/27/2023-IA-II(I)]

The Project Proponent neither attended the meeting nor communicated to the Ministry regarding the reason for not attending the same. The Project proponent has not submitted any documents to the EAC.

The Committee therefore, **returned** the proposal in the present form.

Agenda No. 51.5.

Expansion in Existing plant capacity (Non-EC Products) with addition of synthetic organic chemicals manufacturing unit having total capacity of 110.0 MT/Month at its existing location at Plot No.: C-1B, 67/605, 100 Shed Area, GIDC Estate Vapi, Tal.: Pardi, District: Valsad, Gujarat by M/s. Patil Dyestuff Industries - Consideration of EC

[Proposal No. IA/GJ/IND3/403752/2022; File No. IA-J-11011/496/2022-IA-II(I)]

1. The proposal is for the grant of EC for the Expansion in the Existing plant capacity (Non-EC Products) with addition of synthetic organic chemicals manufacturing unit having total capacity of 110.0 MT/Month at its existing location at Plot No.: C-1B, 67/605, 100 Shed Area, GIDC Estate Vapi, Tal.: Pardi, District: Valsad, Gujarat by M/s. Patil Dyestuff 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 ToR was issued by the SEIAA vide letter no. SIA/GJ/217411/2021 dated 10.11.2021. 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 51st EAC Meeting held on 16th-17th May, 2023, wherein the PP and an accredited Consultant, M/s. ECOGREEN ENVIRO SERVICES [Accreditation number NABET/EIA/2124/SA 0185, Valid up to 24.12.2023], made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that the total land area of 885.0 sq. m. 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 Products	CAS no. /CI no.	Quantity MT/Month			End-use of products *
			Existing	Proposed	Total	
1	**Distillation of Solvent**		10.00	0.00	10.00	--
2	**Titanate**		0.00	75.00	75.00	Used as catalyst to produce plasticizers, esterification, polyesters & methacrylic esters, Adhesion promotor, cross linking for polymers, surface coating, surface modification (glass, metal).
	Tetra Isopropyl Titanate **&-or**	546-68-9				
	Tetra nButyl Titanate **&-or**	5593-70-4				
	Ehtyl Isopropxy Titanate **&-or**	64-17-5				
	Tetra Ethyl Titanate **&-or**	3087-36-3				
	Ethyl alkolamine Titante complex **&-or**	102-71-6				
	Ehtyl Isopropxy alkolamine Complex **&-or**	81731-43-3				
	2 Ethyl hexyl Isopropoxy Titanate **&-or**	546-68-9				
	Insocat BTP-11 **&-or**	71-36-3				
	IsoPropyl Butyl Titanate-85 **&-or**	68955-22-6				
	IsoPropyl Butyl Titanate	68955-22-6				
3	**Chelate**		0.00	25.00	25.00	Used in paint emulsion, used as a curative and coalescing agent, used as
	Isopropoxy Isobutoxy Ehtyl acetoacetate **&-or**	7779-75-1				

	Triethanol Amine Titanate **&-or**	36673-16-2				a catalysis of esterification, trans-esterification reaction, Waterborne paints and coatings.
	INSOCAT SD **&-or**	17927-72-9				
	Titanium Acetyl acetoacetate	97281-09-9				
	TOTAL		**10.00**	**100.00**	**110.00**	

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 there are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km distance from the project site. Reserve Forest Near Punat Village is at 7.5 km in West Direction. Daman Ganga river is flowing at a distance of 3.21 km in South-West direction, Darotha River is flowing at a distance 6.85 km in South-West direction, GIDC Vapi Lake is at a distance of 0.52 km in SE direction, Pond of Karvad Village is at 1.64 km in NE direction, Daman Ganga Dam is at the distance of 2.99 km at WSW direction & Daman Ganga Canal is at 2.30 km in E direction. There is no forest land involved in the proposed project. Schedule-I species i.e Indian peafowl (Pavo cristatus), is observed in the 10 km radius from the proposed expansion project site during baseline monitoring conducted by Function Area Expert. Wildlife Conservation Plan is submitted at the PCCF & Chief Wildlife Warden, Gandhinagar**.**

7. The PP reported that the **Ambient air quality** monitoring was carried out at 8 locations during 1st October 2021 to 31st December 2021 and the baseline data indicates the ranges of concentrations as: PM10 (51.6-108.2 µg/m^3), $PM_{2.5}$ (20.3-61.0 µg/m^3), SO_2 (9.9-24.1 µg/m^3), NOx (11.9-28.5 µg/m^3), CO (60-1970 µg/m^3), VOC (0.66-4.70 µg/m^3) & HCl is BDL. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.05566 µg/m^3, 0.02783 µg/m^3, 0.14576 µg/m^3, 0.05235 µg/m^3 and 0.00440 µg/m^3 with respect to PM10, 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 the fact that the project is in Vapi GIDC. Also, average values of PM10 & PM $_{2.5}$ are nearer to NAAQS standards which is due to Vapi GIDC. Other values are within the National Ambient Air Quality Standards (NAAQS). **Noise:** Noise monitoring was carried out at 8 locations during 1st October 2021 to 31st December 2021. The monitored noise level during the day time Leq(day) varied from 51.0 to 72.2 dB(A) and during night time Leq (night) varies from 49.4 to 70.7 dB(A) within the study area. Highest noise value of 72.2 dB(A) during day time was recorded at Project site & lowest noise value of 51.0 dB(A) during day time was recorded at Shree Shiddheshwar Mandir. Highest noise value of 70.7 dB(A) during night time was recorded at Project site & lowest noise value of 49.4 dB(A) during night time was recorded at Shree Shiddheshwar Mandir. 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. **Ground Water:** Ground water monitoring was carried out at 8 locations during 1st October 2021 to 31st December 2021 and the baseline data indicates the ranges of

concentrations as: pH of ground water samples varied from 7.00 to 7.82. Chloride is found within the acceptable (Desirable) limit of Drinking water standards IS: 10500 – 2012 at Kochrava Village (54.59 µg/m^3) & Borlai Village (131.50 µg/m^3) 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 found well within the Permissible limit except Kachigam village (207.20 µg/m^3). Sulphate is found within permissible limit at all the monitoring locations. TDS is found higher than the acceptable (Desirable) limit at all locations except Chanod Village (374.5 µg/m^3). 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 October 2021 to 31st December 2021 and the baseline data indicates the ranges of concentrations as: pH of surface water samples varied from 7.39 to 8.02. Chloride is found within the acceptable (Desirable) limit of Drinking water standards IS: 10500 – 2012 at & also permissible limit at all locations. Sulphate is found within the acceptable (Desirable) limit & permissible limit at all the locations. Calcium Hardness is found higher than the permissible limit at Damanganga River Upstream (376.81 µg/m^3) but it is found below permissible limit at all other locations. TDS is within the acceptable (Desirable) limit at all the locations except Damanganga River Upstream (1678.99 µg/m^3). Thus, surface water can be used after conventional treatment followed by disinfection in only domestic activities. **Soil:** Soil monitoring was carried out at 8 locations during 1st October 2021 to 31st December 2021 and the baseline data indicates the ranges of concentrations as: The soils of the proposed project area are Slightly Alkaline in nature. EC of soils at all the sampling locations is good at all locations. Organic carbon content of soils of all locations are Average sufficient as per ICAR standards. The soils of proposed project area are Clay soil in texture and water holding capacity of soils is found to be good. Nutrient availability of soil samples found Good in Nitrogen (N), medium in Phosphorus (P) and high in Potassium (K). Sodium value ranges from 32.8 to 119.5 mg/kg. SAR value of soil found high at Project site, Chanod Village and Nr. Vapi GIDC and at other locations the SAR value is low. Bulk density varied from 1.13 to 1.45 gm/cm3. In short, the soil of proposed project area Clay, moderately fertile, good water holding capacity and is slightly alkaline in nature.

8. The PP reported that the total water requirement is 10.46 KLD, out of which 2.0 + 1.75 +0.6+ 0.1 + 6.0 + 0.01 KLD will be used in Domestic, Gardening, Washing, Boiler, Cooling & Scrubbing respectively. Condensate from single effect evaporator will be reuse in Cooling & Domestic water will be reuse in Gardening purpose after necessary treatment. Hence total Fresh water requirement will be reduced up to 7.74 KLD (Industrial + Domestic), which will be met from GIDC water supply. Permission for water requirement has been obtained from GIDC, Dated: 29.06.2022. Total reuse/recycle of 2.72 KLD water within premises. Industrial wastewater @1.06 KLD will be generated. Out of which 1.05 KLD will be treated in in-house Primary ETP followed by Single effect evaporator & 0.01 KLD Scrubbing solution will be send to end users having permission under rule-9. 0.97 KLD evaporator condensate will be reused within Plant Premises in order to reduce overall freshwater consumption from 10.46 KLD to 7.74 KLD.

9. The PP reported that the Power requirement after expansion will be 250 KVA including existing 50 KVA and will be met from Daxin Gujarat Vij Co. Ltd. (DGVCL). Unit has proposed DG set

of 75 KVA 1 nos. Additionally DG set will be used as standby during power failure. Stack (30 meters) will be provided as per CPCB norms to the proposed DG set.

10. The unit has Natural gas-based Boiler (0.2 TPH) in existing & also proposed 1 Nos. of Thermic Fluid Heater having capacity of 2.0 Lac KCal/Hr. And adequate stack height of 30 m will be installed for controlling the particulate emissions within the statutory limit of 120 mg/Nm3 as per CPA notification for the existing boiler & proposed TFH.

Flue Gas Stack details

Sr. no.	Source of emission With Capacity	Stack Height (meter)	Type of Fuel	Quantity of Fuel MT/Day	Type of emissions i.e. Air Pollutants	Air Pollution Control Measures (APCM)
1	Boiler (0.2 TPH) **(Existing)**	30 m	Natural Gas	114 SCM/Day	PM<120 mg/Nm3 SO2<80 ppm NOx<40 ppm	Adequate stack height provided
2	Thermic Fluid Heater (2.0 Lac Kcal/hr) **(Proposed)**	30 m	Natural Gas	260 SCM / Day		Adequate stack height provided
3	DG Set 75 KVA (Standby) **(Proposed)**	11 m	HSD	30 Lit/Hr		Adequate stack height provided

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

Flue Gas Stack details

Sr. no.	Source of emission With Capacity	Stack Height (meter)	Type of Fuel	Quantity of Fuel MT/Day	Type of emissions i.e. Air Pollutants	Air Pollution Control Measures (APCM)
1	Boiler (0.2 TPH) **(Existing)**	30 m	Natural Gas	114 SCM/Day	PM<120 mg/Nm3 SO2<80 ppm NOx<40 ppm	Adequate stack height provided
2	Thermic Fluid Heater (2.0 Lac Kcal/hr) **(Proposed)**	30 m	Natural Gas	260 SCM / Day		Adequate stack height provided
3	DG Set 75 KVA (Standby) **(Proposed)**	11 m	HSD	30 Lit/Hr		Adequate stack height provided

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

Municipal Solid Waste

Particulars	No.	@kg/day/Person	Quantity of waste (in kg/day)
Workers	24	0.1 kg/day/person	2.4
		Total	**2.4 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.	Existing Quantity (MT/ Year)	Proposed Quantity (MT/ Year)	Quantity (MT/ Year)	Management of HW
1	Used Oil	Maintenance	5.1/ SCH.I	0.1	0.1	0.2	Collection, storage, transportation & Disposal by reuse as lubricants or selling to authorized recyclers through GPS mounted vehicles.
2	Discarded containers/ Bags/ Linear	Packing Materials, Storage of Raw material	33.1/ SCH.I	300 Nos./Year	4000 Nos./Year	4300 Nos./ Year	Collection, Storage, Reuse OR Disposal by selling to authorize Decontaminators through GPS mounted vehicles.
3	ETP Sludge	ETP	35.3/ SCH.I	0.0	6.0	6.0	Collection, Storage, Transportation & disposal at authorized TSDF through GPS mounted vehicles.

4	Distillation Residue	From Mfg. Process	20.3/ SCH.I	0.9	48.0	48.9	Collection, Storage, Transportation & send to pre/co-processing units (cement industries) OR disposal at nearest CHWIF site through GPS mounted vehicles.
5	Spent Solvent	From Mfg. Process Grp A: INSOCAT BTP-11 (TITANATES)	21.2/ SCH.I	120	1825	1945	Collection, Storage, Handling recovered & recycled by Solvent Distillation Plant within premises OR Transportation & Sell to End Users having permission under Rule-9 through GPS mounted vehicles
6	Spent Ammonium chloride (15-20%)	From Mfg. Process Grp A: Tetra Ethyl Titanate	21.1/ SCH.I	--	867.0	867.0	Collection, storage, transportation, Disposal by selling to end users under rule-9 through GPS mounted vehicles.
7.	Scrubbing solution HCl (25-30%)	From Scrubber (Mfg. Process	21.1/ SCH-1	--	3.65	3.65	Collection, Storage, Handling & Sell to End Users having

		Grp A: Tetra Ethyl Titanate)					permission under Rule-9 through GPS mounted vehicles.
8.	Contaminated Cotton Rags or Other Cleaning Materials	Process & Maintenance	33.2/ SCH.I	--	0.5	0.5	Collection, Storage, Transportation, Disposal at nearest CHWIF site through GPS mounted vehicles
9.	Salt	From single effect evaporator	35.3/ SCH.I	--	4.0	4.0	Collection, Storage, Transportation & disposal at Nearest TSDF site through GPS mounted vehicles.

13. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹- Rs. 0.74 Crores (capital) and the Recurring cost (operation and maintenance) will be about ₹ 0.17 Crores per annum. The industry proposes to allocate Rs 0.07 Crores towards CER.

14. Industry will develop greenbelt over an area of 65.4% i.e., 579.18 m^2 [360.18 sq. m. (40.6 %) within the plant premises & plant boundary have/will be developed + 219 sq. m. (24.8 %) is already developed outside plant premises i.e. Nr. Road side of J Type area in NW direction, Within GIDC Vapi] out of total area of the project.

15. The PP reported that the project, being in notified industrial area i.e., GIDC Vapi vide dated 6.5.1975 is exempted from the public hearing as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018 and as per the Para 7.III. Stage (3) (i) (b) of the EIA Notification, 2006

16. The PP proposed to set up an Environment Management Cell (EMC) consisting of General Manager- Office assistant- warehouse incharge- work manager- Manger- operator- unskilled workers for the functioning of EMC.

17. The PP reported that Industry will save / capture / reduce approx. 232.5 tons per year or 40.8 (~41 %) of total carbon dioxide generated during year (considering direct as well as indirect Source of CO2 emission) through above mitigation measures suggested.

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

19. The estimated project cost is Rs. 1.84 Crores including existing investment of Rs 0.39 Crores. Total Employment will be generated 24 persons after proposed expansion project.

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 noted that the ToR had been issued by the SEIAA, Gujarat. The project/activity is covered under 5(f) – Synthetic Organic Chemicals Industry under Category 'B'. However, since the project site is located in a critically polluted area, the proposal should have been submitted to the Ministry due to the applicability of the general conditions.

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

The EAC inter-alia, deliberated on the green belt development plan, water balance, Effluent Treatment plant, and advised the PP to submit the following:

- Revised Green belt development plan with its implementation schedule considering the coming Pre-Monsoon season of this year.
- Submit a revised water balance diagram along with a treatment scheme with respect to changing the mode of existing wastewater treatment and disposal from CETP to ZLD.

- Submit revised effluent treatment plant details along with ETP diagram.

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

The EAC also 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) Stack emission levels shall be stringent than the existing standards 80 % of existing & proposed flue gas & process gas emission standards with APCM.

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 the primary fuel.

vi) The best available technology shall be used.

vii) The PP shall develop greenbelt over an area of (40.6%) 236.18 sq. m (within the premises) and 219 sq.m area outside premises (within GIDC vapi near road side of J type area) within one

year of grant of EC. The saplings (174 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 submit annually the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

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

ix) Treated effluent from single effect evaporator shall be used in lime slurry preparation for ETP and cooling tower make up water. install in-house single effect forced type evaporator for treatment of additional waste water after primary treatment. Treated water quality is feasible to reuse in lime slurry preparation and cooling tower make up water.

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

xi) The PP shall construct a 3.0 KL* 1 nos. capacity rainwater harvesting tank (u/g) for 3.0 KL rainwater harvesting during raining season.

xii) Domestic wastewater generation in our premises shall be 1.8 KLD. After Treated 1.75 KLD water will be reused in gardening.

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

xiv) The PP shall shall strictly 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, preprocessing to the extent possible prior its disposal to incineration/ landfill. Used oil shall be reused as lubricant within premises or by selling to Authorized re-refiners through GPS Mounted Vehicles. Discarded Containers/ Bags/Liners shall be Reuse/ Sale to Authorized Vendor through GPS Mounted Vehicles. Distillation residue shall be sent to pre/co-processing units (cement industries) or disposal at nearest CHWIF site through GPS mounted vehicles

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

xvi) As proposed, an amount of ₹ 7.0 Lakhs shall be allocated towards CER for Common treatment facility, Solar Energy Utilization, Greenbelt development.

xvii) A separate Environmental Management Cell (having qualified persons with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and

Monitoring functions. PP shall engage General Manager- Office assistant- warehouse incharge- work manager- Manger- 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. 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.

xviii) 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 ₹ 0.74 crores (Capital cost) and ₹ 0.17 crores/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.

xix) The total water requirement is 10.46 m^3/day of which fresh water requirement of 7.74 m^3/day and shall be met from GIDC water supply The PP should ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawn only after obtaining valid agreement from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year.

xx) Dilute stream @ 1.05 KLD (0.05 KLD Boiler Blow down, 0.5 KLD from Washing, 0.5 KLD from Cooling) shall be subjected to in-house Primary ETP. ETP sludge shall be sent to nearest TSDF site. After that treated water from ETP shall be sent to Single effect evaporator for for removal TDS & COD and after treated water shall be reused in plant premises. Salt from Evaporator shall be sent to nearest TSDF site for final disposal. No effluent shall be discharge outside the premise. **The Unit shall achieve Zero Liquid Discharge.**

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

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

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

xxiv) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The project proponent shall implement the onsite/offsite emergency

plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

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

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

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

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

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

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

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

Agenda No. 51.6

Expansion of Synthetic Organic Chemicals Manufacturing Unit from 6.0 TPA to 7.50 TPA located at Gut No./S. No/ 65, H. No. 2, Paiki Village, Gatesh Budruk, Talathi Saja Kone, Tal. Wada, Dist. Palghar, Maharashtra by Synergia Life Sciences Private Limited – Corrigendum in EC

[Proposal No. IA/MH/IND3/300093/2023; File No. IA-J-11011/124/2022-IA-II(I)]

The PP vide email dated 13.5.2023 informed that they had applied for corrigendum in the EC issued under Parivesh 2.0 under amendment route vide SW No. **SW/111167/2022** dated 15.04.2023 vide Proposal No. **IA/MH/IND3/426153/2023.** However, later PP managed to upload the corrigendum route available in Parivesh portal 1.0 and applied for corrigendum in EC under Parivesh 1.0 under new application SW No. **SW/300089/2023** dated 11.05.2023. Hence, the PP requested to return the proposal.

The proposal was accordingly, **returned** in its present form**.**

Agenda No. 51.7

Installation of New Nano-Urea Fertilizer Plant of total capacity 27,375 KL/annum located at RCF Trombay Unit Industrial Area, Chembur, Suburban Mumbai, Maharashtra by M/s Rashtriya Chemicals and Fertilizers Limited (RCF) - Consideration of EC

[Proposal No. IA/MH/IND3/426519/2023; File No. IA-J-11011/216/2021-IA-II(I)]

1. The proposal is for environmental clearance for the Installation of New Nano-Urea Fertilizer Plant of total capacity 27,375 KL/annum located at RCF Trombay Unit Industrial Area, Chembur, Suburban Mumbai, Maharashtra by M/s Rashtriya Chemicals and Fertilizers Limited (RCF).

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

3. The standard ToR was issued by the Ministry, vide letter no. IA-J-11011/216/2021-IA-II(I) dated13.7.2022. The PP applied for Environment Clearance in Common Application Form and submitted the EIA/EMP Report and other documents. The PP in the CAF reported that it is Expansion case. The proposal is now placed in 51st EAC Meeting held on 16th- 17th May, 2023, wherein the Project Proponent and an accredited Consultant, M/s EQMS India Pvt. Ltd. [Accreditation number NABET/EIA/1922/RA0197, valid up to:2.08.2023, made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that the proposed nano urea plant will be developed in an area of 1.19 Ha. within existing premises and no R& R is involved in the Project. The details of products and capacity: New Nano-Urea Fertilizer Plant (Capacity 27,375 kL/annum).

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

6. The PP reported that the RCF Trombay is operational as per Consent to Operate granted by Maharashtra Pollution Control Board (MPCB) vide Letter No. 'RED/L.S. I (R52) No.: - Format 1.0/CAC /UAN No. 0000114391/CR/2206001329 dated 23/06/2022 valid till 31.07.2026.

Certified Compliance for earlier granted environmental clearance has been granted by Integrated Regional Office, Nagpur vide File No. 1701/RON/2022-NGP/11042 dated 27.01.2023.

7. The PP reported that there are no ecologically sensitive areas located within 10 km of the project. However, there is one recently declared RAMSAR Wetland Site on 13.08.2022 i.e., Thane Creek. There are a few mangroves located in the vicinity of project site. The nearest mangrove present from project is 1.31 km in south direction of project site. The nearest surface water body from the project site is Mahim/Mithi River flowing at 1.52 km, NW from site. and one Schedule- I species exist within the 10 km study area for which conservation plan has been prepared.

8. The **Ambient air quality** monitoring was carried out at nine (9) locations during 1st December 2021 to 28th February 2022. The baseline data indicates that ranges of concentrations as: PM_{10} (81-176 µg/m^3), $PM_{2.5}$ (35-77 µg/m^3), SO_2 (10- 24 µg/m^3) and NOx (20-39 µg/m^3), CO (0.3-1.3 mg/m^3). The 98%tile observed to be within the limits of standards prescribed by NAAQS, 2009 only for NOx & SO2. However, PM10 & PM2.5 levels during the season were found to be exceeding than the permissible limits of 100 µg/m^3 & 60 µg/m^3 respectively. The results have also been validated by live ambient air data located at Mumbai Airport collected by Central Pollution Control Board (CPCB). Since the manufacturing process of nano-fertilizer plants is a closed loop reactor vessel setup with regulated control, the nano-fertilizer plant will not contribute to process gas emissions. No stack has been proposed in expansion. Therefore, AAQ Modelling studies were not done. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). **Noise-** Ambient noise quality monitoring was done at eleven (11) locations during study period. Noise level values ranged from 50.9 to 69.4 dB(A) during day and 41.6 to 62.3 dB(A) during night-time. The noise levels observed in the project site and study are within prescribed limits except at N-8 i.e., Dadar located 3.81 km, in WSW direction of the project due community noise and vehicular movement at residential area. As per the results, it has been observed that noise levels are higher at residential areas than industrial areas. Vehicular traffic in the area also contribute to the increased noise levels in the area.

9. **Groundwater quality** monitoring was done at eight (8) locations during the study period. pH levels ranged between 6.35 to 7.24. Total hardness levels were recorded in the range between 28 to 478 mg/l. Total dissolved solids were recorded in the range of 45 to 1034 mg/l. Chloride levels were recorded between 12 to 226 mg/l. Sulphate levels were observed in the range of 2 to 78 mg/l. Bacteriological studies reveal that no coliform bacterial are present in the samples. The heavy metal contents were observed to be below detectable limits. Parameters for toxic substances were recorded within the permissible limits. All physical and general parameters were observed within the permissible limit as per IS10500:2012 (Second Revision). Thus, it is recommended that water be filtered and disinfected prior to be given for drinking water requirements. **Surface water quality** monitoring was done at seven (7) locations during study period. pH levels ranged between 6.25-7.35. Total hardness ranged from 212 to 4846 mg/l. The Total Dissolved Solids (TDS) concentration recorded ranged between 660 to 65268 mg/l. Chlorides levels ranged between 195 to 35490 mg/l. Sulphate levels were ranged between 10 to 558 mg/l. Total coliform levels were found the range of 4.9 x 10^3 to 4.8x 10^7 MPN/100 ml. Comparing the values as per classification for designated best use water quality criteria by

CPCB, 5 surface water locations (SW-1 to SW-5) were classified under "Below E Category as the parameters were found to be exceeding the permissible limits as per CPCB while SW-6 & SW-7 were classified under "Class-D i.e., suitable for propagation of wildlife and fisheries." **Soil quality monitoring** was done at eight (8) locations during the study period. As per the grain size distribution the percentage of sand in all sampled soil varied from 30.4% to 63.7%, silt varied from 16.8 to 51.3% and clay from 15.5 to 22.5% during winter season. The soil pH ranges were observed from 6.38 to 7.62. Available nitrogen content in the surface soils ranges between 86 kg/ha to 208 kg/ha. Available phosphorus content ranges between 3.11 kg/ha to 11.7 kg/ha. Available potassium content in these soils' ranges between 154 to 356 kg/ha. Based on Nutrient Index Value for N, P & K, the soils of study area fall into "Low to Medium" Fertility Status.

10. The PP reported that the existing water requirement of the Trombay Unit is 34165 KLD being sourced from BMC Supply & In-house STP (Capacity-2 x 22.75 MLD). For the proposed Nano Urea Fertilizer plant, approx. 90 KLD of water will be required. Out of 90 KLD, 5 KLD freshwater will be provided by BMC for drinking purposes while 85 KLD of water for industrial uses will be sourced from in-house STP. The existing permitted discharge of Effluent from the RCF Trombay unit is 15,788.80 KLD (Domestic Effluent: 2,700 KLD; Industrial Effluent: 13,088.80 KLD). Industrial effluent is being treated in ETP and treated effluent water is being reused for gardening and washing purposes to maximum extent & rest is being discharged to nearby creek (Mahul Creek). Domestic sewage sourced from BMC is treated in STP's (Capacity 2 x 22.75 MLD of sewage) and the treated water generated in this STPs is used as process water in the RCF Trombay Unit. Wastewater generation from proposed Nano-Urea fertilizer plant will be 9.25 KLD (Domestic Sewage-4 KLD; Industrial Effluent-5.25 KLD). After setting-up Nano Urea Plant, the permitted discharge of effluent from the RCF Trombay unit will be 15,798.05 KLD (Domestic Effluent: 2,704 KLD; Industrial Effluent: 13,094.05 KLD). Existing practices will be followed for the proposed Nano Urea Fertilizer Plant also. Existing ETP has the capacity to treat the wastewater generated in proposed Nano Urea Fertilizer Plant.

11. The PP reported the contract demand of the RCF Trombay Unit is 42000 kVA, being met through power generated from in-house Gas Turbine Generators. Power supply from M/s TATA Power is also available as an alternate source of power sourced. For emergency backup, DG sets of capacities 1x250 kVA, 1x625 kVA, 2x750 kVA, 1x690 kVA, 1x600 kVA, 1x320 kVA & 1x312 kVA have been installed at the RCF Trombay Unit. For the proposed project, 1.3 MW (1300 kVA) of power will be required. The power requirement for Nano Urea Project shall be fulfilled by these two sources.

12. **Details of Process Emissions Generation and its Management:** The manufacturing process of Nano Urea fertilizer plant is a closed loop mixing reactor vessel setup with regulated control. Steam produced in other existing plants of Trombay unit is to be used for operation of plant. Hence, the Nano Urea fertilizers plant will not contribute to process gas emissions. No additional Stack is proposed for the proposed Nano Urea Plant

13. **Details of Solid/ Hazardous Waste Generation and its Management**: There will not be any hazardous solid waste generation from the proposed Nano Urea Plant during its operation for Trombay Unit. Authorization under Hazardous Waste Management Rules has been obtained

from MPCB vide Letter No. 'RED/L.S. I (R52) No.: - Format 1.0/CAC /UAN No. 0000114391/CR/2206001329 dated 23/06/2022 valid till 31.07.2026. RCF strictly complies with the rules and regulations with regards to handling and disposal of hazardous waste in accordance with Hazardous & Other Waste (Management and Transboundary Movement) Amendment Rules, 2022. Total solid waste generated from the proposed Nano Urea fertilizer plant will be carefully segregated into biodegradable and non-biodegradable waste. Biodegradable waste will be disposed of to BMC approved vendors and Recyclable Waste will be sent to respective authorized vendors/recyclers.

14. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 129 Lakhs (capital) and the Recurring cost (operation and maintenance) will be about 54.12 Lakhs per annum. Industry proposes to allocate ₹ 1170 Lakh towards CER.

15. The PP reported that the Public Hearing for the project was successfully conducted on 2nd March 2023, 11:00 AM at Gangadhar Deshmukh Hall, RCF Colony, Chembur, Mumbai 400074 under the chairmanship of Additional District Magistrate, Mumbai Suburban District. The main issues raised during the public hearing were Employment, CSR activities, Pollution, etc. for which appropriate responses were addressed in the action plan.

PUBLIC HEARING PROCEEDINGS WITH ACTION PLAN

S. No.	Objections/ Suggestions/ Questions raised by Participant	Comments made by Project Proponent	Action Plan
1.	What is the process of making Nano Urea? What are the raw materials used to make Nano Urea? Briefly explain the benefits of this product (Nano Urea) to farmers as well as to the country.	The Project Proponent stated that, Nanoparticles and Nanoparticle based production processes are also known as "kitchen chemistry", i.e., processes that are carried out using simple home cooking methods. Technical grade Urea is the main raw material for making Nano Urea. Along with that, some natural carbohydrates like starch & chitosan are also used. The process involves very little use of harsh or synthetic raw materials. The process of making Nano Urea does not require high pressure or high temperature. It is a simple blending process in which Nano sized particles are formed on carbohydrates to form Nano Urea. It is a slow-release type of fertilizer.	The manufacturing process of nano urea fertilizer a closed loop mixing reactor vessel setup with regulated control. Overall benefits of proposed nano-urea fertilizer project. 1. Reduction in subsidy burden of GOI. 2. Maintenance of Stability in indigenous/domestic market. 3. Reduction in import of urea fertilizers. 4. Increase in yield

2.	Many people have lost their jobs during the covid period. So, first, I congratulate the management that this project will provide employment to local people. My question is how many environmental monitoring stations are there in RCF and how much cost is incurred on the maintenance and repair of these environmental monitoring stations?	The Project Proponent stated that RCF has four environmental monitoring stations in four strategic locations wherein SOx, NOx, Ammonia and Particulate Matter are continuously monitored. These monitoring stations have been set up as per the direction of IIT, Mumbai and National Environmental Engineering Research Institute, Nagpur (NEERI). The readings of two monitoring stations located inside and outside the factory are linked to the Maharashtra Pollution Control Board portal. Also, RCF has installed a display board outside factory gate no. 1 on which the monitoring readings of all four stations are continuously displayed. The cost of maintenance and repair of the Environment Monitoring Centre is around Rs.25.00 lakhs per annum.	There are 4 no. of ambient air quality monitoring stations based on Enview 2000 software installed within the premises of Trombay Unit. Additionally, there is an in-house laboratory for analysis of final treated water from ETP & STP. Additionally, outlet from ETP & STP, Supply water, GW are being examined by the lab & third party as per norms. 8 locations within the plant are being analysed once in a month by NABL accredited laboratory. Similarly, for noise, work zone and near boundary wall locations are assessed once in 3 months. For proposed nano-fertilizer plant, approx. Rs. 58 Lakhs (Capital) has been proposed for the same.
3.	We have no objection to the Nano Urea project. A project like Nano Urea will surely benefit the local community by creating employment. As mentioned, Nano Urea is in liquid form, so will it have any side effect? By bringing a project like Nano Urea, it will create employment opportunities, so we agree on this project.	The Project Proponent informed that the toxicity test (toxicological study) of Nano Urea has been done as per the international guidelines of Organization for Economic Co-operation and Development (OECD). It has been studied on every human organ like skin, eyes, respiratory tract and lungs (by using cell lines). Also, the impact of Nano Urea on the micro-organisms, macro-organisms and aquatic organisms present in the soil have also been studied. All these studies show that Nano Urea is very safe. Moreover, it did not show any adverse effect on agricultural	Nano-Urea has been tested by OECD & will not have any side-effect on human, soil & animals. **Construction Phase**: Approx. 150 no. of temporary employment will be generated during installation phase via contractor/supplier. **Operation Phase**: The existing manpower (permanent) of the RCF Trombay unit is 1455 as on 01.10.2022. For proposed Nano-Urea fertilizer plant, existing manpower of RCF Trombay Unit will be

		produce either. About 11,000 field trials of Nano Urea were conducted and subsequently it was included in the Fertilizer Control Order (FCO) by the Government of India.	utilized with proper deployment planning.
4.	Is the information you have given available on any website?	The Project Proponent stated that, RCF's Nano Urea plant is based on IFFCO's technology, and its information is available on the website https://nanourea.in. Also, a comprehensive research paper on Nano Urea has been published in Fertilizer Association of India (FAI) seminar last year which we can make available to you. We will also make this relevant information available on the website of RCF.	The details of Nano Urea is based on IFFCO's technology & is provided on https://nanourea.in. After the grant of Environmental Clearance, RCF shall provide information of Nano Urea on company website along with compliance reports and related documents.
5.	For manufacturing of Urea, Ammonia is used. Is there a possibility of Ammonia leakage? Please give detailed information about the measures taken for the same.	The Project Proponent stated that, as Ammonia is not used in the process of making Nano Urea, there is no possibility of Ammonia leakage from the Nano Urea plant. Urea itself will be converted into Nano form to make liquid Nano Urea. Hence, there is no possibility of Ammonia leakage from Nano Urea plant.	Ammonia is not being used in manufacturing process of Nano Urea. However, in the unit has implemented appropriate Onsite & Offsite Emergency Plan.
6.	In today's Environmental Public Hearing on the Nano Urea Project, RCF has given the information about the project and we - the residents, welcome the project.	---	---
7.	In the field we use 7 to 8 bags of Urea per acre which is about 300 to 400 kg of Urea. If I want to use Nano Urea, how much Nano Urea will I	The Project Proponent stated that, the technology of Nano Urea has been developed by IFFCO. According to a study conducted by IFFCO, one 500 mL bottle of Nano Urea is	Usage of 1 bag of 45 kg will be replaced by using 1 Nano Urea bottle of 500 ml. Nano Urea particles being very fine is sprayed onto leaves. Due to its

	need and what benefits will I get by using Nano Urea? Also, how the wastage of Urea can be reduced by using Nano Urea?	equivalent to 1 bag (45 kg) of conventional neem coated urea. Considering the same, about 7 to 8 number of 500 ml bottles of Nano Urea will be required. The particles of Nano Urea are very fine i.e., 20 to 50 nanometers. The finer size increases the surface area of this Urea and makes it more reactive. Also, Nano Urea is sprayed on the leaves and due to this, its Nutrient Use Efficiency (NUE) is high. Nutrient Use Efficiency (NUE) of conventional urea is only about 30 percent. According to the information published by IFFCO, the Nutrient Use Efficiency of Nano Urea is about 80 percent. Field trials have shown that application of Nano Urea increases yield by an average of 3 to 8 percent. Also, a 500 ml bottle of Nano Urea is easier to store and transport as compared to a 45 kg Urea bag. Looking at the demand for Urea, our country has to import 50 to 80 lakh metric tonnes of Urea. Nano Urea will reduce this shortage. Further, Nano Urea production will not require any subsidy, making it a beneficial project from the Indian government's point of view.	increased surface area, nano urea is more reactive. As per field trials by IFFCO, it has been recorded that yield will get increased by an average 3 to 8%. **BENEFITS FROM NANO-UREA FERTILIZER**: 1. Nano Urea has emerged as one of the alternatives to conventional Urea. 2. Nano Urea releases plant nutrients in a controlled manner contributing to higher nutrient use efficiency. 3. The increased use of Nano Urea may result in economic savings to the farmers, increase the crop productivity and reduce India's dependence on Urea Imports. 4. This shall also help in making India "Atmanirbhar" in the field of fertilizers and reduce subsidy burden on Government of India.
8.	What is the price difference between Neem coated Urea and Nano Urea? Which of	The Project Proponent stated that, the cost of a 500 ml bottle of Nano Urea is same as that of 45 kg bag of Neem Coated Urea i.e., Rs.242/- (excluding tax).	-

	these Urea is wasted more?	The Project Proponent stated that, about 50 percent of conventional Urea is wasted during its application. Whereas by spraying of Nano Urea on the leaves (of crop) and its fine particles are absorbed into the leaves due to this, its Nutrient Use Efficiency (NUE) increases. So Nano Urea is more beneficial compared to conventional Urea.	
9.	Is Nano Urea safe for storage, transportation, and handling by the farmer? Can Nano urea be used for all crops? Will it have to be sprayed (on leaves of crop) or can it be used in the soil? How much liquid Nano Urea should be added in one liter of water?	The Project Proponent stated that, Nano Urea is safe for storage, transportation, and handling by the farmer. Nano Urea should be stored away from direct sunlight and in a cool place. Nano Urea has been tested according to the international guidelines of the Organization for Economic Co-operation and Development (OECD) and is very safe for humans, soil, and animals. The Project Proponent explained that Nano Urea contains Nitrogen - a nutrient that is required by all crops. Hence, Nano Urea can be used for all crops. Nano Urea application is done through spraying. Around 1 to 2 ml of Nano Urea is added to 1 litre of water before application.	Nano Urea will be safe for storage and handling by farmer. It has been tested by OECD & declared safe for human, soil & animals. Urea fertilizer is used as a source of nitrogen and being used for all crops. Therefore, Nano Urea will be used for all crops.
10.	Where will Nano Urea be available?	The Project Proponent stated that, Nano Urea will be sold through their dealer network as per RCF's current practice for sale of fertilizers.	Nano Urea Fertilizer will be developed within 15 months post grant of Environmental Clearance.
11.	Is the company providing the technology for the Nano Urea project foreign or indigenous? How Nano	The Project Proponent stated that, the technology for RCF's Nano Urea project is being provided by IFFCO, which is an Indian company. No support	The technology has been developed by indigenous organization i.e., IFFCO. The nano-urea technology has been invented by

	Urea Project is useful in view of Atmanirbhar Bharat Abhiyaan.	from any foreign company is required for this project. With Nano Urea, Urea wastage will be reduced by 50 to 60%. This could reduce India's dependence on imports of Urea and consequently make us self-reliant – "Atmanirbhar" in meeting the domestic Urea demand of Indian farmers.	IFFCO which is an Indian Fertilizer Organization. Domestic production of nano-urea will lead to decrease in import demand and hence shall support "Atmanirbhar Abhiyaan".
12.	What is the shelf life of Nano Urea?	The Project Proponent stated that, the shelf life of Nano Urea is 1 year. Research is underway to extend the shelf life of Nano Urea.	-
13.	In the presentation about the Nano Urea Project, there was a mention of 'Zero Effluent Discharge'. Has RCF been successful in achieving 'Zero Effluent Discharge'? What measures have been taken for the treatment of effluent generated in this new project?	The Project Proponent stated that, the manufacturing process of Nano Urea is simple and generates minimum effluent. Therefore, the Nano Urea project will result in negligible increase in effluent, and it will be treated in the existing centralised Effluent Treatment Plant of RCF.	Under proposed nano-urea fertilizer plant, wastewater generation will be 9.25 KLD (Sewage: 4 KLD; Industrial Effluent: 5.25 KLD). Sewage will be treated in STP & reused for horticultural purposes while Industrial effluent will be treated in ETP & reused in gardening purposes. Hence, the plant is ZLD.
14.	I thank the Union Government for setting up this Nano Urea Project in Mumbai, Maharashtra under the Atmanirbhar Bharat initiative. All of us should approve and welcome this project to create employment in Chembur, Mumbai.	---	-
15.	If RCF first manufactures Urea and then produces liquid Nano Urea, will it increase the cost of	The Project Proponent stated that, the Nano Urea project is based on advanced technology so the cost of production is low. Also, as mentioned earlier, the	-

	production? For convenience of farmers RCF should provide Nano Urea at an affordable price.	nutrient utilization efficiency of Nano Urea is about 80 percent and it will benefit the farmers by increasing the production of the farmers by an average of 3 to 8 percent. Shri Dhananjaya Pathak, Wadvali village, Shri Christopher D'Melo, Marvali Church and shri Navin Vidyadhar Acharya, Wadvali village, raised issues other than environment related. In this regard, Hon. Chairman, Public Hearing Committee said that, this committee has very limited powers and objectives. He stated that this is not the right forum to put-up other issues non-related to the subject project. He further stated that RCF officials may take appropriate note of these queries and provide a separate forum for addressing such issues.	
16.	I extend a warm welcome to all those present at this public hearing. Information about Nano Urea product should be made available at RCF website.	--------	--

16. The PP reported that Industry has already developed approx. 34.43 Ha. of green area in the available open land in RCF Trombay Unit i.e. 93.27 Ha. RCF has also developed green belt/cover in its township in about 23.5 Ha. Considering this, the percentage of the green cover developed by Trombay Unit is approx. 62% of Open area (considering both township & industry.

17. The PP proposed to set up an Environment Management Cell (EMC) to engage executive director- dy. general manager (HSE)- Assistant general manager chem (Env)- chief manager (chem) Env- Engineer chem (Env) for the functioning of EMC.

18. The PP reported that from the existing Greenbelt of 117245 trees at current stage, the total Carbon sequestered per year by the existing greenbelt is estimated to be 1769.67 tons per year.

The total Carbon sequestered per year by the proposed additional plantation under existing greenbelt at its initial age will be 1161.44 tons per year

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

20. The estimated cost for the proposed nano urea fertilizer project is Rs 150 Crores Existing manpower of the plant is 1455 no. (as on 01.10.2022). For proposed Nano-Urea fertilizer plant, existing manpower of RCF Trombay Unit will be utilized with proper deployment planning.

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 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 green belt development and its budget, conservation plan for schedule- I species and advised the PP to submit the following:

- Revised list of proposed plantations along with detailed budget of greenbelt dvelopment.
- Wildlife conservation plan for Schedule-I species.

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 the 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 atleast, 57.93Ha (34.43 Ha in Trombay unit & 23.5 Ha in RCF Trombay Township) by planting 33306 within a period of one year of grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft (about 2 m). The budget earmarked for the plantation shall be kept in separate account and should be audited annually. PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of the expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.

(ii) A separate Environmental Management Cell (having qualified persons with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. PP shall engage executive director- dy. general manager (HSE)- Assistant general manager chem (Env)- chief manager (chem) Env- Engineer chem (Env). 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 ₹ 129 Lakh (Capital cost) and ₹ 54.12 Lakhs /annum (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by

photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(iv) The total water requirement for the proposed project shall be 90 KLD Out of 90 KLD. 5 KLD freshwater shall be provided by BMC for drinking 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 withdrawn only after obtaining valid agreement from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year.

(v) The wastewater generation shall not exceed 9.25 KLD (sewage: 4 KLD, Industrial Effluent 5.25 KLD), Sewage shall be treated in STP & reused for horticultural purposes while Industrial effluent shall be treated in ETP & reused in gardening purposes. The plant shall achieve ZLD.

(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 fertlizer Industry as notified by the Ministry of Environment, Forest and Climate Change, *vide* GSR 1607(E), dated 29.12.2017 under the provisions of the Environment (Protection) Rules, 1986.

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

(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.

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

Agenda No. 51.8

Proposed expansion of Synthetic Organic Chemical Manufacturing Unit from 13,266 TPA to 11,066 TPA along with R&D facility, located at Plot No. N-14/2, MIDC Tarapur, Taluka & District Palghar, Maharashtra by M/s VE Caps LLP – Amendment in Terms of Reference (ToR)

[Proposal No. IA/MH/IND3/426409/2023; File No. IA-J-11011/145/2022-IA-II(I)]

1. The proposal is for the amendment in the ToR granted by the Ministry vide letter F.No. IA-J-11011/145/2022-IA-II(I) dated 11th July, 2022 for the Proposed Expansion of Synthetic Organic Chemical Manufacturing Unit located at Plot No. N-14/2, MIDC Tarapur, Taluka & District Palghar, Maharashtra by M/s VE CAPS LLP.

2. M/s VE CAPS LLP proposal sought for amendment of ToR w.r.t addition of new products /revised quantity of existing products as per the approved ToR and total water requirement/waste water generation/treatment methodology, power requirement etc.

3. The ToR approved total production capacity is 13,266 TPA. after the amendment of ToR, the proposed total production capacity of the unit shall be 11,066 TPA.

4. The project proponent has requested for amendment in the ToR with the details are as under; Details of Existing & New Category of proposed products along with production capacity are given in Table shown below.

S. No.	**Category of product as per the approved ToR/additional category of products**	**As per the ToR approved quantity -TPA**	**Addition/modification of ToR approved quantity-TPA**	**Final after ToR amendment/Proposed revised quantity - TPA**	**Remarks**
1	Vesol - EG (Polyol)	2520	-2020	500	Quantity Decreased from Approved ToR
2	Glycol Solutions	480	-400	40	Quantity Decreased from Approved ToR
	Total-1	3000	-2460	540	-
1	Phenolic Resin, Antioxidant, Antioxidant Formulations	8004	Nil	8004	No changes in quantity
2	Perfumery Aromatic Aldehydes And Ketone Such As Benzaldehyde,	600	+90	690	Quantity increased from Approved ToR

	Acetophenone etc.				
3	Perfumery Esters Such As Aldehyde C16 Melonal etc.	360	-150	210	Quantity Decreased from Approved ToR
4	Perfumery Aliphatic Aldehdyes Such As Aldehyde C8, C10, C12 ETC.	640	-220	420	Quantity Decreased from Approved ToR
5	Tops and High boilers (By-Product) Tops and higher Boiling fractions of the Job Work, R&D Chemicals and other Speciality Chemicals which can be used in low cost applications, as solvents or as fuel.	240	Nil	240	No changes in quantity
6	Ammonium /calcium /sodium Salts from acids	120	Nil	120	No changes in quantity
7	Aqueous Blend Of Ethoxylat Product	152	Nil	152	No changes in quantity
10	Job works	100	Nil	100	No changes in quantity

11	R & D products	50	Nil	50	No changes in quantity
Total-2		10266	-280	9986	
Additional Category of products to be included in ToR amendment					
12	Perfumery Primary Alcohols such as Phenyl Ethyl Alcohol, Acetates ETC	-	-	480	New product proposed
13	Latex Surfactant Product	-	-	60	New product proposed
	Total-3	--	--	540	
Total Proposed Production Capacity (1+2+3)				11,066	The 2200 TPA production capacity has been decreased from the Approved ToR.
Earlier ToR approved total production capacity				13,266	

5. Total Water Requirement & Wastewater Generation

Total water requirement is estimated to be 19 KLD which will be met from Tarapur MIDC supply. Total effluent generation is 9.3 KLD after the ToR Amendment. The break-up of consumption of water is as presented in the table below.

S. No	**Particulars**	**Water Requirement (KLD)**			**Waste Water Generation (KLD)**		
		As per the approved ToR dated 11th July 2022	**Addition/modification proposed**	**After expansion**	**As per the approved ToR dated 11th July 2022**	**Addition/modification proposed**	**After expansion**

I	**Domestic purpose**	4	-2	2	3.2	-1.6	1.6
II	**Gardening**	2	Nil	2	Nil	Nil	Nil
III	**Industrial purpose**						
A	Process & scrubbing	9.87	-1.87	8	9.87	-3.97	5.9
B	Boiler	0.5	Nil	0.5	0.50	Nil	0.5
C	Cooling tower	4.5	2.0	6.5	0.90	0.4	1.3
Total		**20.87**	**-1.87**	**19**	**14.47**	**-5.17**	**9.3**

After ToR Amendment, total effluent generated from the unit will be 9.3 KLD (Domestic waste water: 1.6 KLD+ Industrial waste water: 7.7 KLD). Therefore, total domestic waste water generation would be 1.6 KLD. Which will be sent to septic tank/soak pits. Total Generated Industrial purpose wastewater will be 7.7 KLD which will be treated by internal ETP capacity of 15 KLD which will be located inside the premises. This plant is based on ZLD system.

Note: This VE CAPS LLP Manufacturing unit comes under the M/s Nikita Group of Companies and Nikita Group needs to establish the own common ETP in VE CAPS unit. The proposed estimated Common ETP capacity is 15 KLD which will be treated trade effluent from all 3 units of Nikita group of Companies which is located same region in Tarapur MIDC area within 1 km distance. Other two units which is (Plot No-T-95, 95/1, 96) and (Plot No: N-180, 181, 182) the trade effluent will be brought by tanker (Robust Transportation System) and will be treated by internal common ETP to achieve prescribed standards of treated effluent norms fixed by MPCB and then reuse/recycle to process & utilities inside the plant only.

6. Power Requirement & DG Sets

Power requirement for the proposed industry is 500 kVA. The power is sourced from MSEDCL. Diesel Generator of capacity 1 Nos x 45KVA will be installed as a backup source.

Details	As per the approved ToR	Additional requirement	After –ToR Amendment	Source
Power Requirement	62 KVA	+438 KVA	500 KVA	MSEDCL
Power Backup DG Sets	45 KVA x 1 Nos	--	45 KVA x 1 No.	-

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

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 water balance and wastewater generation, ETP, Photographs showing the existing greenbelt and advised the PP to submit the following:

- Details of water consumption and wastewater generation.
- The treatment scheme for industrial effluent and ETP details.
- Photographs showing the existing greenbelt.

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

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

(i). The Total water requirement shall be 19 KLD which shall be met from Tarapur MIDC supply.

(ii). The total effluent generated from the unit shall be 9.3 KLD (Domestic waste water: 1.6 KLD+ Industrial waste water: 7.7 KLD). Therefore, total domestic waste water generation shall be 1.6 KLD. Which shall be sent to septic tank/soak pits. Total Generated Industrial purpose wastewater shall be 7.7 KLD and treated by internal ETP capacity of 15 KLD. This plant is based on ZLD system.

(iii). The Power requirement for the proposed industry shall be 500 KvA and sourced from MSEDCL. Diesel Generator of capacity 1 Nos x 45KVA shall be installed as a backup source.

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

Agenda No. 51.9

Setting up of a manufacturing unit of Formaldehyde 37%, Phenol Formaldehyde, Melamine Formaldehyde, Liquid urea formaldehyde, Powder Formaldehyde @ 14000 MT/M located at Survey No. 479, Village Neja, Taluka Khambhat, District Anand, Gujarat by M/s Abhi Colchem - Amendment in Terms of Reference (ToR)

[Proposal No. IA/GJ/IND3/426230/2023; File No. IA-J-11011/547/2022-IA-II(I)]

1. The proposal is for amendment in the Terms of Reference (ToR) granted by the Ministry vide letter F. No. IA-J-11011/547/2022-IA-II(I) dated 06-01-2023 for the project of synthetic organic chemicals (Resin) located at: Survey No.: 479, Vill: Neja, Tal: Khambhat, Dist Anand, Gujarat in favour of M/s. Abhi Colchem

Sr. No.	Auto Granted ToR by MoEF&CC	Details as per the ToR	To be revised/read as	Justification/reasons
1	Change in Flue Gas Emission Table	– TFH (6 Lac k cal/hr) – D.G. Set (350 KVA)	– TFH (6 Lac k cal/hr) – D.G. Set (350 KVA) – Steam Boiler (2 TPH)	Addition of steam boiler
2	Change in Fuel Quantity	Imported Coal: 1.5 MTPD OR Bio Coal: 2.0 MTPD OR Agro Waste: 2.5 MTPD	Imported Coal: 3.5 MTPD OR Bio Coal: 4.5 MTPD OR Agro Waste: 5.5 MTPD	Due to Addition of steam boiler
3	Change in Water Consumption & Wastewater Generation	Total Water requirement: 151 KLPD(Fresh: 136 + Reuse: 15) Industrial water Consumption @ **145 KLPD will be passed through RO plant.** **So, RO permeate @ 133.5 KLPD will be used for industrial purposed and RO rejected @ 11.5 KLPD** will be treated in primary ETP followed by RO plant Generated Industrial Effluent @ **5 KLPD (From; Cooling b/w @ 1.2 KLPD, Washing @ 2.0 KLPD, Scrubber B/L @ 1.8 KLPD)** will be treated in primary ETP followed by RO plant. Total industrial effluent **@ 16.5 KLPD** will be	Total Water requirement: 156 KLPD(Fresh: 139 + Reuse: 16) Industrial water Consumption @ **150 KLPD will be passed through RO plant.** **So, RO permeate @ 138 KLPD will be used for industrial purpose and RO rejected @ 12 KLPD** will be treated in primary ETP followed by RO plant Generated Industrial Effluent @ **5.5 KLPD (From; Cooling b/w @ 1.2 KLPD, Washing @ 2.0 KLPD, Scrubber B/L @ 1.8 KLPD, Boiler B/d@ 0.5)** will be treated in primary ETP followed by RO plant. Total industrial effluent **@ 17.5 KLPD** will be treated in primary ETP followed by RO plant	Due to Addition of steam boiler

		treated in primary ETP followed by RO plant RO permeate **@ 12.5 KLPD** will be reused in industrial purpose. RO rejected **@ 4.0 KLPD** will be sent to common spray drying facility by tanker having GPS facility.	RO permeate **@ 13.5 KLPD** will be reused in industrial purpose. RO rejected **@ 4 KLPD** will be sent to common spray drying facility by tanker having GPS facility.	
4	Change in Generation of Hazardous Waste & Its Management	– ETP Sludge: 16 MTPY – Used Oil: 1.5 KLPY – Discarded Container/Bags/Liners: 180 MTPY – Fly Ash: 75 MTPY	– ETP Sludge: 17.5 MTPY – Used Oil: 1.5 KLPY – Discarded Container/Bags/Liners: 180 MTPY – Fly Ash: 165 MTPY	–

2. **Deliberations by the EAC**:

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

The EAC inter-alia, deliberated on the fuel, greenbelt development, fuel requirement for boiler, sewage treated water, sewage sludge management and advised the PP to submit the following:

- Undertaking w.r.t primary fuel & secondary fuel and Greenbelt development.
- Details of fuel requirement for Boiler.
- Reuse of sewage treated water for gardening.
- Sewage sludge management in Non Hazardous waste table

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

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

(i). Agrowaste shall be used as a primary fuel during the unavailibilty of agrowaste bio-coal / imported coal shall be used as secondary fuel.

(ii). The total water requirement shall be 156 KLD and out of which fresh water shall be 140 KLD

(iii). The generated sewage (180 MTPA) from domestic use as manure in gardening purpose.

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

Agenda No. 51.10

Proposed manufacture of Pesticides Technical and Pesticide Intermediates of Total production capacity 1450 MTPM [(Pesticides Technical (Insecticides, Herbicides & Fungicides): 850 MTPM, Pesticide Intermediates: 550 MTPM, R&D Products: 50 MTPM)] located at Plot No. D2/CH-334, Dahej-II Industrial Estate, GIDC Dahej, Ta.: Vagra, Dist.: Bharuch, Gujarat by M/s. Indus Finechem LLP- Consideration of EC

[Proposal No. IA/GJ/IND3/426101/2023; File No. IA-J-11011/166/2022-IA-II(I)]

1. The proposal is for the environmental clearance for Proposed manufacture of Pesticides Technical and Pesticide Intermediates of Total production capacity 1450 MTPM [(Pesticides Technical (Insecticides, Herbicides & Fungicides): 850 MTPM, Pesticide Intermediates: 550 MTPM, R&D Products: 50 MTPM)] located at Plot No. D2/CH-334, Dahej-II Industrial Estate, GIDC Dahej, Ta.: Vagra, Dist.: Bharuch, Gujarat by M/s. Indus Finechem LLP.

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 was issued by the Ministry, vide letter no. IA-J-11011/166/2022-IA-II(I), dated10.6.2022. The PP applied for Environment Clearance in the Common Application Form and submitted EIA/EMP Report and other documents. The PP in the Form reported that it is a **Fresh EC case.** The proposal is placed in this 51st EAC meeting on 16-17th May, 2023, wherein the PP along with accredited Consultant, M/s. San Envirotech Pvt. Ltd., Ahmedabad., [Accreditation number NABET/EIA/1922/RA0216_Rev 01 valid till 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 proposed land area of the project is 17567.75 m^2 and no R& R is involved in the Project. The details of products to be manufactured are as follows:

Sr. No.	Name of Products	CAS no.	Quantity (MT/Month)	Uses of products
Insecticides Compounds				
Group-1	**Synthetic Pyrethroids Insecticides-1**			
1	Alphacypermethrin Technical	67375-30-8	**50**	

2	Acetamiprid Technical	135410-20-7		**Control insects in agriculture field**
3	Deltamethrin Technical	52918-63-5		
Group-2	**Synthetic Pyrethroids Insecticides-2**			
4	Cypermethrin (T) & Beta, Zeta, Theta etc. Isomers (T)	52315-07-8	**200**	**Control insects in agriculture field**
5	Lambda Cyhalothrin Technical	91465-08-6		
6	Permethrin Technical	52645-53-1		
7	Bifenthrin Technical	82657-4-3		
Group-3	**Organo Phosphorus Insecticides/Neo Nicotiods Insecticides**			
8	Profenophos Technical	41198-08-7	**100**	**Control insects in agriculture field**
9	Chlorpyriphos Ethyl Technical	5598-13-0		
10	Chlorpyriphos Methyl Technical	5598-13-0		
11	Temephos Technical	3383-96-8		
12	Chlorantraniliprole Technical 93% Min.	500008-45-7		
13	Dinotefuran Technical	165252-70-0		
14	Diafenthiuron Technical	80060-09-9		
15	Thiamethoxam Technical	153719-23-4		
16	Pymetrozine Technical	123312-89-0		
17	Fipronil Technical	120068-37-3		
Herbicides Compounds				
Group-4	**Triazinone & Other Herbicides**			
18	Glyphosate Technical	1071-83-6	**150**	**Kill undesirable plants or weeds**
19	Metribuzin Technical	21087-64-9		
20	Sulfentrazone Technical	122836-35-5		
21	Bispyribac-Sodium Technical 95% Min	125401-92-5		
22	Fenoxaprop-P-Ethyl Technical	71283-80-2		
23	Pyriproxyfen Technical	95737-68-1		
Fungicides Compounds				
Group-5	**Strobilurins/Conazole Fungicides Compounds-1**			
24	Tebuconazole Technical	105734-96-3	**150**	**Kill/prevent the growth of**

25	Difenoconazole Technical	119446-68-3		**fungi in plants**
26	Propiconazole Technical	60207-90-1		
27	Trifloxystrobin Technical	141517-21-7		
28	Hexaconazole Technical	79983-71-4		
Group-6	**Strobilurins/Conazole Fungicides Compounds-2**			
29	Metconazole Technical	125116-23-6	**200**	**Kill/prevent the growth of fungi in plants**
30	Cyproconazole Technical	94361-06-5		
31	Pyraclostrobin Technical	175013-18-0		
32	Azoxystrobin Technical	131860-33		
33	Pyroxystrobin Technical	131860-33-8		
34	Picoxystrobin Technical	117428-22-5		
35	Paclobutrazol Technical	76738-62-0		
36	Tricyclazole Technical	41814-78-2		
Group-7	**Advance Specific Pesticide Intermediates**			
37	Cypermethric Acid Chloride & it's all Isomers	7726-95-6	**350**	**Pesticide products**
38	Meta Phenoxy Benzaldehyde (MPBAD)	39515-51-0		
39	Lambda Cyhalothric Acid	72748-35-7		
40	NaTCP (Sodium salt of 3,5,6-Tri Chloro Pyridinol)	6515-38-4		
41	4,4'-Thio Diphenol	2664-63-3		
Group-8	**Advance Specific Pesticide Intermediates**			
42	1,2,4-Triazol	288-88-0	**200**	**Pesticide products**
43	2,4 Dichloro Valerophenone	61023-66-3		
44	1-(4-Chloro Benzyl) Methyl-3, 3-Methyl-2-Oxo Cyclopentane Carboxylate	80969-68-2		
45	Tebu-Ketal/2-[2-(4-Chlorophenyl) Ethyl] - 2 -(1,1-DiMethyl Ethyl) Oxirane	80443-63-6		
Group-9	**Research & Development Based Products**			
46	Research & Development Based Products	--	**50**	**--**
		Total	**1450**	

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. Estuary of Narmada River is at a distance of 4.71 km in S 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.

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 concentration as: PM_{10} (64.3 - 69.6 µg/m^3), $PM_{2.5}$ (37.8 - 40.0 µg/m^3), SO_2 (17.9 - 19.5 µg/m^3), NOx (21.6 - 23.2 µg/m^3). AAQ modeling study for point source emission indicated that the maximum incremental GLCs after the proposed project would be 2.151 µg/m^3, 1.219 µg/m^3, 1.017 µg/m^3, 1.117 µg/m^3 and 0.200 µg/m^3 with respect to PM, SO_2, NOx, HCl and HBr. The resultant concentrations are within the national ambient air quality standards (NAAQS). **Noise-** Noise monitoring has been conducted at nine locations in the study area. The monitored noise level in the day time Leq (Ld) varies from 49.2 to 55.6 dB(A) and the night time Leq (Ln) varies from 40.9 to 43.4 dB(A) within the study area. Higher noise value of 55.6 dB(A) was recorded during day time near Bus stand of Galenda & lower noise value of 40.9 dB(A) was recorded during night time at Village Vav. Based on the observations made during the studies, it is concluded that; the noise levels recorded at various locations in the study area show considerable fluctuations because of changes in traffic movement, commercial and other domestic activities in the study area. Overall the ambient noise level in the monitored locations was found to be within the permissible limits stipulated for residential, industrial areas, silence and commercial. **Ground Water Quality**: 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 & Chloride. This is due to sea water ingress because study area is very close to costal line. **Surface Water Quality**: All the physico-chemical parameters and heavy metals from surface water samples, except turbidity and coliforms, are below stipulated drinking water standards and it is suitable for domestic usage after filtration/boiling. Results of TDS and Chloride at Estuary of Narmada are higher than the stipulated drinking water standards due to high tide of sea water back to river water stream. . **Soil-** In the study area, variations in the pH value ranging from 7.39 to 7.81, which shows that the soil is slightly alkaline in nature. Organic Matter ranges from 2.1 to 5.3 mg/kg in the soil samples. Soil of the study area 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.

8. The PP reported that the Total water requirement is 624.0 m^3/day; of which fresh water requirement of 569.0 m^3/day will be met from GIDC water supply. 55.0 m^3/day will be recycled water. Sources of industrial effluent generation will be from process, lab, scrubber, washing and utilities. Total trade effluent generation will be 391 KLD. Effluent streams will be segregated. Concentrated process stream (305 KLD) will be first taken into ETP-2 and then

send to MEE. MEE concentrate (85 KLD) will be passed through ATFD system. MEE condensate (60 KLD) will be treated in ETP-1 along with dilute stream. Utility w/w will be passed through RO. RO Permeate (40 KLD) will be reused in plant, whereas RO Reject will be sent to ETP-1 along with w/w of other dilute stream. Effluent from scrubber, lab and washing along with MEE & ATFD condensate and RO reject will be treated in ETP-1 and treated water (326 KLD) will be sent to CETP of Dahej for further treatment & disposal after achieving CETP inlet norms. Domestic sewage (15.0 KLD) will be treated in STP and treated sewage will be utilized for Greenbelt development.

9. Power requirement will be 3500 kVA and will be met from Dakshin Gujarat Vij Company Ltd. (DGVCL). Unit proposed to install two D.G. Sets (500 kVA capacity each) 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.

10. In proposed unit, Natural Gas fired 2 Steam Boilers (5 TPH x 2 nos.), Natural Gas fired Thermo Pack (10.0 Lakhs Kcal/hr.) will be installed. No APCM required as Natural Gas will be used as fuel. Common stack (Boiler & Thermo Pack) with stack height of 32 m will be installed for controlling the particulate emissions within the statutory limit of 150 mg/Nm^3 for the proposed utilities. Details of flue gas stacks are given below.

Sr. No.	Stack attached to	Fuel Type	Fuel consumption	Stack Height (m)	APC measures	Probable emission
➢	**Flue Gas Stacks**					
1	Steam Boiler (5 TPH x 2 nos.)	Natural Gas	16224 SCM/Day	32	Adequate Stack Height	PM<150 mg/Nm^3 SO_2<100 ppm NOx<50 ppm
2	Thermo Pack (10 Lakhs Kcal/hr.)	Natural Gas	3312 SCM/Day			
3	D.G. Set (500 kVA x 2 nos.)	HSD	1000 Lit/hr.	11	Adequate Stack Height	

11. **Details of Process Emissions Generation and its Management:** Process gas emission will be from vent attached with Reaction Vessel (Deltamethrin, Permethrin, Bifenthrin, Pymetrozine, Finoxaprop P Ethyl, Difenoconazole, Propiconazole, Trifloxystrobin, Hexaconazole, Metconazole, Pyraclostrobin, Pyroxystrobin, Paclobutrazol, Cypermethric Acid Chloride, Lambda Cyhalothric Acid, Sodium Salt of 3, 5, 6-Tri Chloro Pyridinol (Na-TCP), 4 - 4' Thio Di Phenol, 2,4 Di Chloro Valerophenone, 1-(4-Chloro Benzyl) Methyl-3,3-Methyl-2-Oxo Cyclopentane Carboxylate), one vent of Reaction Vessel (Profenophos, Diafenthiuron, Difenoconazole, Propiconazole, Hexaconazole), one vent attached to Reaction Vessel (Deltamethrin, Cypermethric Acid Chloride) and one vent attached to Reaction Vessel (Trifloxystrobin). Two Stage Water and Alkali Scrubber and Two Stage Alkali and Nitrosyl Sulphuric Acid Scrubber will be installed on process reactors to control process emission. Details of process stack are given below.

Sr. No.	Stack attached to	Stack Height (m)	APC measures	Probable emission
➢	**Process Gas Stacks**			
1	Reaction Vessel (Deltamethrin, Permethrin, Bifenthrin, Pymetrozine, Finoxaprop P Ethyl, Difenoconazole, Propiconazole, Trifloxystrobin, Hexaconazole, Metconazole, Pyraclostrobin, Pyroxystrobin, Paclobutrazol, Cypermethric Acid Chloride, Lambda Cyhalothric Acid, Sodium Salt of 3, 5, 6-Tri Chloro Pyridinol (Na-TCP), 4 - 4' Thio Di Phenol, 2,4 Di Chloro Valerophenone, 1-(4-Chloro Benzyl) Methyl-3,3-Methyl-2-Oxo Cyclopentane Carboxylate)	11	Two Stage Water Scrubber	HCl<20 mg/Nm^3
2	Reaction Vessel (Profenophos, Diafenthiuron, Difenoconazole, Propiconazole, Hexaconazole)	11	Two Stage Water Scrubber	HBr<5 mg/Nm^3
3	Reaction Vessel (Deltamethrin, Cypermethric Acid Chloride)	11	Two Stage water and Alkali Scrubber	HCl<20 mg/Nm^3 SO_2<40 mg/Nm^3
4	Reaction Vessel (Trifloxystrobin)	11	Two Stage Alkali and Nitrosyl Sulphuric Acid Scrubber	NOx<25 mg/Nm^3

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

Sr. No.	Type of Waste	Source	Category of Waste as per HWM Rules, 2016	Quantity (MT/ Annum)	Disposal facility
1.	ETP Sludge	ETP	Sch-I/35.3	1145	Collection, Storage, Transportation and disposal at approved TSDF site
2.	MEE/ATFD Salt	MEE	Sch-I/35.3	4368	
3.	Distillation & Process Residue/ Organic Impurity	Solvent Distillation/ process	Sch-I/36.1	11500	Collection, Storage, Transportation and sent for co-processing in cement industries or nearest incineration site.

4.	Spent Solvent	Process	Sch-I/29.4	328865	Collection, Storage & Recovery within the premises and reuse in plant premises.
5.	Hydro Chloric Acid (30%)	Scrubber	Sch- II-Class B (15)	6240	Collection, Storage, Transportation & Disposal by selling to authorize end user registered under Rule-9
6.	Hydro Bromic acid (45%)	Scrubber	Sch- II-Class B (15)	312	Collection, Storage & reuse in manufacturing Plant & excess quantity will be sold to end users having Rule 9 Permission.
7.	Spent H_2SO_4	Process	Sch-I/29.6	32375	Collection, Storage & reuse in manufacturing Plant & excess quantity will be sold to end users having Rule 9 Permission.
8.	Sodium Bromide	Process	Sch- II-Class B (15)	3120	Collection, Storage, Transportation & Disposal by selling to authorized end user registered under Rule-9.
9.	Potassium Bromide Salt	Process	Sch- II-Class B (15)	1173	Collection, Storage, Transportation & Disposal by selling to authorize end user registered under Rule-9.
10.	Aluminum Chloride Soln (22-25%)	Process	Sch- II-Class B (15)	39500	Collection, Storage, Transportation & Disposal by selling to authorize end user registered under Rule-9.
11.	Potassium Methyl Mercaptide	Process	Sch-I/29.1	720	Collection, Storage, Transportation & Disposal by selling to authorize end user registered under Rule-9.
12.	Discarded Containers/Bags/ Liners	Raw material storage	Sch-I/33.1	Drum: 24000 nos. /annum Liners: 36 MT/annum	Collection, Storage, Transportation, Decontamination & Disposal by selling to registered recycler
13.	Used/Spent Oil	Driving unit & D.G. set	Sch-I/5.1	2.0 KL/year	Collection, Storage, Transportation and sell to Registered recyclers.
14.	Catalyst Recovered	Process	Sch-I/29.5	200	Collection, Storage, Transportation and sent for co-processing in cement

					industries or common incineration facility.
15.	Date Expired products	From mfg. Process (Batch failure)	Sch-I/29.3	150	Collection, Storage, Transportation and sent for co-processing in cement industries or nearest incineration site.
16.	Off specification pesticide		Sch-I/29.3	150	Collection, Storage, Transportation and sent for co-processing in cement industries or nearest incineration site.

13. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 4.61 Crore (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 4.32 Crore per annum. Industry proposes to allocate Rs. 71.8 Lakhs towards Corporate Social Responsibility.

14. Industry will develop greenbelt over an area of 34.35% i.e. 6035 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-II GIDC Industrial Estate. Dahej-II 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 Senior manager (EHS)- Manager- Executive- ETP incharge- SD incharge- Safety officer- ETP RO MEE opeartor- SD opertaor for the functioning of EMC.

17. The PP reported that the total carbon emission from the proposed project will be 15061.71 Tonnes/Annum. Unit will sequestrate/reduce total carbon dioxide generated during year by planting trees within premises, installing solar panels at rooftop of building.

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. 35.0 Crore. Total employment will be 200 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 that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the PP.

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

The EAC inter-alia, deliberated on the water balance, rooftop solar panels, and advised the PP to submit the following:

- Revised Water Balance to considering maximum recycling of treated water.
- Additional Solar power generation at rooftop of storage area and process plant and resulted to increased 90 KW in the area of ~1025 m After this changes our total solar power generation will be tune around 370 KW.

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 the 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, 6035 m^2 by planting 1510 number of trees within a period of one year of grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft (about 2 m). The budget earmarked for the plantation shall be 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 Senior manager (EHS)- Manager- Executive- ETP incharge- SD incharge- Safety officer- ETP RO MEE opeartor- SD opertaor. 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 ₹ 4.61 Crore (Capital cost) and ₹ 4.32 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) Additional Solar power generation at rooftop of storage area and process plant and resulted to increased 90 KW in the area of ~1025 m 2 After this changes total solar power generation shall be 370 KW.

(v) The Total water requirement is 624 m^3/day of which fresh water requirement of 389 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) 235.0 m^3/day shall be recycled water. Sources of industrial effluent generation shall be from process, lab, scrubber, washing and utilities. Total trade effluent generation shall be 391 KLD.. Concentrated process stream (305 KLD) shall be first taken into ETP-2 and then send to MEE. MEE concentrate (85 KLD) shall be passed through ATFD system. MEE condensate (60 KLD) shall be treated in ETP-1 along with dilute stream. Utility w/w shall be passed through RO. RO Permeate shall be reused in plant, whereas RO Reject will be sent to ETP-1 along with w/w of other dilute stream. Effluent from scrubber, lab and washing along with MEE & ATFD condensate and RO reject shall be treated in ETP-1 and treated water shall be sent to CETP of Dahej for further treatment & disposal after achieving CETP inlet norms. Domestic sewage shall be treated in STP and treated sewage will be utilized for Greenbelt development.

(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. 51.11

Proposed Pesticide Technical, Pesticide Specific Intermediates & Specialty Chemicals of production capacity (2850 MT/Month) manufacturing plant at Plot No.: D-3/152 +153 + 154, Dahej-III Industrial Estate, GIDC, Dahej III, Ta: Vagra, Dist: Bharuch (Gujarat) by M/s Vital Chemtech Limited (Unit-II) - Consideration of EC

[Proposal No. IA/GJ/IND3/426101/2023; File No. IA-J-11011/166/2022-IA-II(I)]

1. The proposal is for the environmental clearance Proposed Pesticide Technical, Pesticide Specific Intermediates & Specialty Chemicals of production capacity (2850 MT/Month) manufacturing plant at Plot No.: D-3/152 +153 + 154, Dahej-III Industrial Estate, GIDC, Dahej III, Ta: Vagra, Dist: Bharuch (Gujarat) by M/s Vital Chemtech Limited (Unit-II).

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

3. The ToR has been issued by the Ministry, vide letter no. No. IA-J-11011/141/2022-IA-II(I) , dated 28.4.2022. The PP applied for Environment Clearance in the Common Application Form and submitted EIA/EMP Report and other documents. The PP in the Form reported that it is a **Fresh EC case.** The proposal is placed in this 51st EAC meeting on 16-17th May, 2023, wherein

the PP along with accredited Consultant, M/s. Aqua-Air Environmental Engineers Pvt. Ltd. (NABET Accreditation No.: NABET/EIA/2023/IA0062 (Rev. 03) Valid Up to October 7, 2023] made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

4. The PP reported that the Total 18000 m^2 land area 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

Sr. No.	**NAME OF PRODUCTS**	**CAS NO.**	**Quantity (MT/M)**	**LD50**	**Category**	**End use**
Group-1	**Pesticides Intermediates-1**					
1	1-(4-Phenoxy Phenoxy)-2-Propanol	57650-78-9	600	-	5(b)	Used as a Pesticides Intermediate for Pyriproxyfen
2	3,4'-Dichloro Diphenyl Ether	6842-62-2		-	5(b)	Used as a Pesticides Intermediate for Difenoconazole
3	4-Bromo-2-Chloro Phenol	3964-56-5		-	5(b)	Used as a Pesticides Intermediate for Profenophos
4	2-Chloro 5-Chloromethyl Pyridine (CCMP)	70258-18-3		-	5(b)	Used as a Pesticides Intermediate for Acetamiprid, Imidacloprid & Thiacloprid
5	2-Nitro Imino Imidazolidine (NII)	5465-96-3		-	5(b)	Used as a Pesticides Intermediate for

						Imidaclopri d
6	3-Methyl 4-Nitromiono 1,3,5 Oxidiazine (MNIO)	153719-38-1		3914 mg/kg	5(b)	Used as Intermediat e for Thiamethox am
7	1,2,4-Triazol	288-88-0		1350 mg/kg	5(b)	Intermediat e for Fluquincon azole, Triticonazo le, Myclobutan il
8	5- Chloro 2, 3 Di Fluoro Pyridine (CDFP)	89402-43-7		342 mg/kg	5(b)	Used as a Pesticides Intermediat e for Clodinafop Propargyl
9	Transfluthrin Acid Chloride	52314-67-7		-	5(b)	Used as a Pesticides Intermediat e for Transfluthri n
10	N-Chloromethyl Chloro Carbonyl Aniline (CCA)	52123-54-3		-	5(b)	Used as a Pesticides Intermediat e for Buprofezin
11	t-Butyl Iso Thiocyanate Amino Iso Propionate (BTU)	590-42-1		-	5(b)	Used as a Pesticides Intermediat e for Buprofezin
12	2- Amino-2',4,4'-Trichloro Diphenyl Ether	56966-52-0		2 287 mg/kg bw.	5(b)	Used as a Pesticides Intermediat e
13	2,5-Dimethyl Phenyl Acetyl Chloride	55312-97-5		>= 5000 mg/kg bw	5(b)	Used as a Pesticides Intermediat e

14	3-Chloro-2-Hydrazinopyridine	22841-92-5		-	5(b)	Used as a Pesticides Intermediate
15	4-Chloro-2,6-Dimethyl Bromobenzene	103724-99-8		-	5(f)	Synthetic Organic Chemical
16	Amino-Dimethoxy-1,3 Diazabenzene	36315-01-2		Mice (Oral)LD50 737 mg/kg bw	5(b)	Used as a Pesticides Intermediate
17	4,4-Dimethoxy-2-Butanone	5436-21-5		6200mg/kg	5(b)/ 5(f)	Used as a Medicine & Pesticides Intermediate
18	N-Methyl Methane Sulfonamide	1184-85-6		<2000 mg/kg bw	5(b)/ 5(f)	Used as a Pharmaceutical & Pesticides Intermediate
19	2-Trilfuoromethyl Benzamide	360-64-5		LC50(calculated) > 100 mg/l @ 96 hr	5(b)	Used as a Pesticides Intermediate
20	1,3-Dimethyl-5-Fluoropyrazol Carbonyl Fluoride	191614-02-5		-	5(b)	Used as a Pesticides Intermediate
21	3-Chloro-5- Trifluormethyl-Pyridine-2-Acetonitrile	157764-10-8		> 300 - <2.000 mg/kg	5(b)	Used as a Pesticides Intermediate
22	Dichloro-1,3 Diazabenzene	1193-21-1		> 200 mg/kg bw	5(b)	Used as a Chemical Intermediate
23	3',4'-Difluoro-2-Aminobiphenyl	873056-62-3		>1200 mg/Kg	5(b)	Used as a Pesticides Intermediate

24	Diethyl Disulfide	110-81-6		Oral (RAT)2030 mg/kg	5(b)	Used as a Pesticides or Biocidal Products
25	1,3-Dimethyl-5-Pyrazolone	2749-59-9		<2000 mg/kg bw	5(b)	Used as a Pesticides Intermediate
26	Chloro Butoxy Ethyl Acetate (CBEA)	5330-17-6		-	5(b)	Used as a Pesticides Intermediate
27	Propargyl Chloride	624-65-7		-	5(b)	Used as an intermediate in Organic Synthesis
Group-2	**Pesticides Intermediate-2 / Specialty Chemical**					
28	PEG Ester (Poly Ethylene Glycol Ester)	1509941-93-8	200	-	5(b)	Used as a Pesticides Intermediate for Clodinafop Propargyl
29	4,4'-Thio Diphenol	2664-63-3		>10250 mg/kg	5(b)	Used as a Pesticides Intermediate for Temephose
30	2- Hydroxy 4- Methyl Benzothioate (HMBT)	20174-68-9		-	5(b)	Used as a Pesticides Intermediate for Tricyclazole
31	2-Chloro 5-Chloromethyl Thiazole (CCMT)	105827-91-6		-	5(b)	Used as a Pesticides Intermediate for Thiamethoxam
32	Lambda Cyhalothric Acid	72748-35-7		-	5(b)	Used as a Pesticides Intermediat

						e for Lambda Cyhalothrin, Bifenthrin etc
33	Lambda Cyhalothric Acid Chloride	72748-35-7		-	5(b)	Used as a Pesticides Intermediate for Lambda Cyhalothrin, Bifenthrin etc
34	Triazinone - 4- Amino 3-Mecapto- 6-t-Butyl -1,2,4-triazine-5-one (AMBT)	33509-43-2		-	5(b)	Used as a Pesticides Intermediate for Metribuzine
35	4-HPPA- 4-(Hydroxyphenoxy) Propionic Acid	67648-61-7		-	5(b)	Pesticides Intermediates for Clodinafop, Quizalofop Ethyl etc
36	NaTCP (Sodium salt of 3,5,6-Tri Chloro Pyridinol)	6515-38-4		-	5(b)	Used as a Pesticides Intermediate for Chlorpyrifose
37	2,6-Difluoro Phenyl Hydrazine HCl	502496-26-6		>1100 mg/kg	5(b)	Used as a Pesticides Intermediate
38	2,4,6 Trimethyl Phenyl Acetyl Chloride	52629-46-6		>= 5000 mg/kg bw	5(b)	Pesticides Chemicals
39	4-Acetyl-2-Methyl Benzamide	1095275-06-1		>1200 mg/Kg	5(b)	Used as a Pesticides Intermediate
40	4-(Trifluoromethylbenzyl) Alcohol	349-95-1		>1200 mg/Kg	5(f)	Used as a Pharmaceutical

						Intermediate
41	2-Chloro-5-Methoxy Benzene Sulfonamide	349-95-1		>1100 mg/kg	5(b)	Used as a Pesticides Intermediate
42	Isopropyl-3-Chloro-4- Methyl-6-Nitrobenzoate	1204518-43-3		-	5(b)	Used as a Pesticides Intermediate
43	2,3-Dichloropyridine	2402-77-9		135mg/kg	5(b)/ 5(f)	Used as raw material for the preparation of crop protection agents, pharmaceuticals and other fine chemicals.
44	M-[(5-Pyrimidinyl) Methyl]-2-Pyridinamine	1383916-51-5		Rat (Oral) MOAEL 57.6 mg/kg	5(b)	Used as a Pesticides Intermediate
45	Aryl Fused Pyrimidine Dione	1263133-33-0		-	5(f)	Speciality Chemicals
46	O-(2,4-Dichlorophenyl) o-Ethyl 5-Propyl Phosphoro Dithioate	34643-46-4		Oral (Rabbit) 750 mg/kg	5(f)	Speciality Chemicals
47	2,3-Dimethyl-1-Nitroisourea	255708-80-6		-	5(f)	Speciality Chemicals
48	4-Methoxycyclohexanone	13482-23-0		> 2000 mg/kgbw	5(b)	Used as a Pesticides Intermediate
49	Nitroguanidine	556-88-7		4640 mg/kg	5(f)	Speciality Chemicals
50	N,N-Dimethyl-1,2,3-Trithian-5-Amine Hydrochloride	424827-89-4		>1100 mg/kg	5(b)	Used as a Pesticides Intermediate
51	4-Nitro-2-Sulphobenzoic Acid Potassium Salt	5344-48-9		-	5(b)	Used as a Pesticides

						Intermediate
52	2-Iodobenzene Sulfonamide	53730-99-7		>1200 mg/Kg	5(f)	Speciality Chemicals
53	2-Sulfonamide-3-Trifluoromethylpyridine	104040-76-8		>1000 mg/Kg	5(b)	Agrochemical Herbicide
54	2-Thiobenzyl Nicotinic Acid	112811-90-2		>1100 mg/kg	5(f)	Used as a pharmaceutical Intermediate
55	4,6-Dimethoxy-2-Chloropyrimidine	13223-25-1		>1000 mg/kg	5(b)	Used as a Pesticides Intermediate
56	2-Amino-4,6-Dimethylpyrimidine	767-15-7		> 735 mg/kg	5(b)	Used as a Pesticides Intermediate for Sulfuron Methyl
57	2-Amino-5,8- Dimethoxy (1,2,4) Triazolo(1,5-C) Pyrimidine	219715-62-5		>1000 mg/kg	5(b)	Used as a Pesticides Intermediate for Penoxsulam
58	4,6-Difluoro-2-Ethoxy Pyrimidine	166524-65-8		<500 mg/kgbw	5(b)	Used as a Pesticides Intermediate
59	2,6-Dichloroquinoxaline	18671-97-1		195 mg/kg	5(b)	Used as a Pesticides Intermediate
60	2-Chloro-4,6-Dimethoxy-1,3,5-Triazine	3140-73-6		LD50 870 mg/kg bw	5(b)	Used as a Herbicides Intermediate for Quizalofop-Ethyl
61	2,5-Dimethoxypyrimidin-4-Amine	6960-17-4		>1000 mg/kg	5(b)	Used as a Pesticides &

						Parmaceuti cal Intermediat e
62	2-Bromo-4-Fluoro Acetanilide	1009-22-9		-	5(b)	Used as a Pesticides Intermediat e
63	3-(Trifluoromethyl) Acetophenone	349-76-8		> 2000 mg/kgbw	5(b)	Used as a Pesticides Intermediat e
64	3,4,5-Trimethoxy-Toluene	6443-69-2		2664.35 mg/kg bw	5(b)	Used as a Pesticides Intermediat e
65	2-Amino Benzo Nitrile	1885-29-6		LD50 Mouse -180 mg/kg	5(b)	Used as a Pesticides Intermediat e
66	2,3-Dichloro-4-Hydroxy Aniline	39183-17-0		>1000 mg/kg	5(b)	Used as a Pesticides Intermediat e
67	4-Amino-2,5- Dimethylphenol	3096-71-7		>1100 mg/kg	5(b)	Used as a Pesticides Intermediat e
68	1,3-Dimethyl-5- Chloropyrazol Carbonyl Chloride	27006-83-3		>25 - <50 mg/kg	5(b)	Used as a Pesticides Intermediat e
69	3-Amino-2-(1,3-Dimethylbutyl) Thiophene	183677-34-1		>1100 mg/kg	5(b)	Used as a Pesticides Intermediat e
70	Mepanipyrim	110235-47-7		> 5000 mg/kgbw	5(b)	A fungicide used to control a wide range of fungal diseases mainly on salads and fruit

71	Methyl 3-Amino-2-Thiophenecarboxylate	22288-78-4		RAT (Oral)LD 150mg/kg	5(b)	Used in the synthesis of 4-Nitro and 4-Aminothienyl Ureas
72	2-Chloro-N- [Cyano (Thiophen-2-yl) Methyl] Acetamide	263137-41-3		>1300 mg/kg	5(b)	Used as a Pesticides Intermediate
73	Bis[1-(N, N-Dimethylsulfamoyl)- 1,2,4-Triazole-3- yl]Disulfide	247236-09-5		>1500 mg/kg	5(b)	Used as a Pesticides Intermediate
74	5-Chloro-2-Methoxy-4-Methylpyridine-3-Carboxylic Acid	851607-38-0		> 2000 mg/kg	5(b)	Used as a Pesticides Intermediate
75	Dimethyl 1,3- Acetone Dicarboxylate	1830-54-2		> 2000 mg/kgbw	5(b)	Used as intermediate for the Synthesis of organic chemicals
76	(3-Ethylsulfonyl)-2-Pyridinesulfonamide	117671-01-9		7500 mg/kg	5(b)	Used as Herbicides Intermediate for Rimsulfuron
77	2,6-Dimethyl-,2,3-Dihydro-1h-inden-1-One	66309-83-9		2000 mg/kg	5(b)	Used as a Pesticides Intermediate
78	6-Fluoro-2-Methyl indole	40311-13-5		>1100 mg/kg	5(f)	Used as a Pharmaceutical Intermediate
79	Para Chloro Isovaleric Acid Chloride (PCACI)	51631-50-6		-	5(b)	Used as a Pesticides Intermediate Fenvalerate

80	2,4-Dichloro Valerophenone	61023-66-3		-	5(b)	Used as a Pesticides Intermediate Hexaconazole
Group-3	**Pharmaceutical Intermediates**					
81	2(2-Chloroethoxy Ethanol)	628-89-7	250	6300 mg/kg	5(f)	Used as a Pharmaceutical Intermediate
82	4,7-Dichloroquinoline	86-98-6		-	5(f)	Used as a Pharmaceutical Intermediate
83	4,6-Dichloro Pyrimidine	1193-21-1		LD50 >200 mg/kg bw	5(f)	Used as a Pharmaceutical Intermediate
84	Lauryl Chloride	112-52-7		> 2000 mg/kg	5(f)	Used as a Pharmaceutical Intermediate
85	Pyridate	55512-33-9		1,970 mg/kg (rat)	5(f)	Used as a Pharmaceutical Intermediate
86	5-Amino-2,4-Di-Tert-Butylphenol	873055-58-4		<1100 mg/kg	5(f)	Used as a Pharmaceutical Intermediate
87	2-Carbethoxy-3-(2- Thienyl) Propanoic Acid	143468-96-6		> 2000 mg/kg bw	5(f)	Used as a Pharmaceutical Intermediate

88	N-(2-Amino-4,6-Dichloropyrimidin-5-yl) Formamide	171887-03-9		500 mg/kg bw	5(f)	Used as a Pharmaceutical Intermediate
89	Methyl 4-Methyl-3-Oxopentanoate	42558-54-3		> 2000 mg/kgbw	5(f)	Used as a Pharmaceutical Intermediate
90	Phosphorus Oxychloride (POCl3)	10025-87-3		Oral (RAT) 36mg/kg	5(b)	Used as a Pesticide Intermediate
91	Phosphorylchloline Calcium Salt Tetra Hydrate	72556-74-2		-	5(f)	Used as a Pharmaceutical Intermediate
92	Cytidine 5'-Monophosphate	63-37-6		> 2000 mg/kg (Rat) Dermal	5(f)	Used as a Pharmaceutical Intermediate
93	N, N'-Dicyclohexyl Carbodiimide	538-75-0		1110 mg/kg	5(f)	Used as a Pharmaceutical Intermediate
94	6-Chloro 2-Hexanone	10226-30-9		rabbit - > 5 000 mg/kg bw.	5(f)	Used as a Pharmaceutical Intermediate
Group-4	**Herbicides Products**					
95	Clodinafop Propagyl	105512-06-9	200	1,392 mg/kg 300 mg/kg	5(b)	Used on spring wheat.
96	Glyphosate	1071-83-6		>5000mg/kg	5(b)	Is widely used herbicide that controls broadleaf

						weeds and grasses
97	Quizalofop Ethyl	76578-14-8		1480 mg/kg	5(b)	Used to control annual and perennial grass weeds in potatoes, soybeans, sugar beets, peanuts vegetables, cotton and flax, Herbicides
98	Metamitron	41394-05-2		> 5000	5(b)	Widely used for weed control in sugar beets.
99	Aclonifen	74070-46-5		>6500 mg/kg	5(b)	Herbicide to control broadleaf and grass weed species in Carrot.
100	Benfuresate	68505-69-1		2031 mg/kg	5(b)	Used for post-emergence control of grass and broad-leaved
101	Imazethapyar	81335-77-5		>5000 mg/kg	5(b)	Post Emergence Herbicide
102	Bispyribac Sodium	125401-92-5		2,635 mg/kg	5(b)	For the control of wide range of weeds, Herbicide
103	Glufosinate Ammonium	77182-82-2		1620 mg/kg	5(b)	Used as broad-

						spectrum post-emergence herbicide for grapes, orchards, plantations, ornamentals, and non-cropland
104	Metribuzine	21087-64-9		2000 mg/kg	5(b)	Used to selectively control certain broadleaf weeds and grassy weed species
105	Pendimethalin	40487-42-1		1,050 mg/kg (rat)	5(b)	Used to Control Annual Grasses and Certain Broadleaf Weeds
106	Atrazine	1912-24-9		672 mg/kg (Rat)	5(b)	Used as an herbicide to control weeds in corn, asparagus, tomato, potato, and ornamental plantings
107	Clethodim (T)	99129-21-2		1630mg/kg	5(b)	Used to control of grassy weeds on a variety of broadleaved crops
108	Napropamide	15299-99-7		> 5,000 mg/kg	5(b)	Used to control a

						number of annual grasses and broad-leaved weeds
109	Oxadiargyl	39807-15-3		> 2000 mg/kg	5(b)	Very effective for control of grasses, sedges, and some broad leaf weeds in Rice.
110	Propanil	709-98-8		367 mg/kg (rat)	5(b)	Used as an Herbicide to control numerous grasses and Broad-Leaved weeds in Rice, Potatoes and Wheat.
111	Sulfentrazone	122836-35-5		> 300 and < 2,000 mg/kg	5(b)	Herbicide to control broadleaf and grass weed species in soybeans, sugarcane, tobacco, and several species of turf grass.

112	Flufenacet	142459-58-3		> 589 mg/kg (Flufenacet)	5(b)	Use for control of many annual grasses and certain broadleaf weeds in field corn, white corn, corn grown for silage, field corn grown for seed, sweet corn, and soybeans.
113	Ethephone	16672-87-0		> 2,970 mg/kg	5(b)	Used to Promote Fruit Ripening, Abscission, Flower Induction, And Other Responses
114	Cloquintocet Mexyl (T)	99607-70-2		> 2.000 mg/kg	5(b)	Used to prevent damage to target crops due to phytotoxic effects
115	Chlorimuron	99283-00-8		-	5(b)	Used as post-emergence weed control of listed broadleaf weeds and yellow nutsedge in peanuts, soybeans,

						and non-crop areas
Group-5	**Amino Diphenyl Ether / Phenoxy Compounds/Amino Benzoic Esters / Aliphatic Esters**					
116	3,4'-Di Amino Di Phenyl Ether	2657-87-6	250	-	5(b)	Used for the synthesis of asymmetric Soluble Polyimides
117	4-Amino -2,4'-Di Chloro Di Phenyl Ether (GE/Aminophene)	14861-17-7		-	5(b)	Used as Intermediate
118	2- Amino -4'- Chloro -4 - Trifluoromethyl Di Phenyl Ether (ACTM)	349-20-2		-	5(b)	Used as Pesticide Intermediate
119	2-Amino-4,4'-Dichloro Diphenyl Ether (PD Amino)	121-27-7		-	5(b)	Used as Intermediate
120	2-Acetyl-2',4,4'-Trichloro Diphenyl Ether	211125-94-9		-	5(b)	Used as Intermediate
121	5 Chloro-6-(2,3 Dichloro Phenoxy)-2-Methyl thio -1H Benzimidazole /Triclabendazole	68786-66-3		Oral LD50 (rat): >8 gm/kg; Oral LD50 (mouse): >8 gm/kg	5(f)	Pharma Intermediate, Veterinary drug intermediate
122	2, 4-Bis [4-(2-ethylhexyloxy)-2-hydroxyphenyl]-6-(4-methoxyphenyl)-1, 3, 5-triazine/ Bemotrizinol.	187393-00-6		> 2000 mg/kg	5(b)	Used as Pesticides Intermediate
123	2-[3-(Trifluoromethyl) Phenoxy] Nicotinic Acid	36701-89-0		-	5(b)	Used as Pesticide Intermediate

124	2-Hydroxy-4-4 Dichloro Diphenyl Ether	3380-30-1		-	5(b)	Used as Pesticide Intermediate
125	3-Amino 4-Methyl Benzoic Acid Isopropyl Ester	21447-47-2		-	5(f)	Used as a Pharmaceutical Intermediate
126	3-Amino-4-Methyl Benzoic Acid	2458-12-0		Acute oral toxicity Category IV (> 5000)	5(f)	Used as an organic intermediate, Pharmaceutical intermediate
127	p-Xylene Dimethyl Ether	6770-38-3		> 2000 mg/kgbw	5(f)	Used as a Pharmaceutical Intermediate
Group-6	**Speciality Phenols / Speciality Chloro Phenol**					
128	3-Mehtyl Phenol (m-Cresol)	108-39-4	150	242 mg/kg (Rat)	5(f)	Pharma Intermediate
129	4-Bromo 2, 5 Dichloro Phenol	1940-42-7		1350 mg/kg	5(b)	Used as pesticide intermediate.
130	4-Fluoro Phenol	371-41-5		340 mg/kg (rat)	5(f)	Pharma Intermediate
131	2-Fluoro Phenol	367-12-4		Intraperitoneal - Mouse - 537 mg/kg	5(f)/5(b)	Used as pesticide, and pharmaceutical intermediates
132	O-Cyano Phenol	611-20-1		Acute oral toxicity Category IV (> 5000)	5(b)	Intermediate for Pesticide and Synthetic

						Organic Chemicals
133	3, 4, 5 Tri Methoxy Toluene	6443-69-2		2664.35 mg/kg bw	5(f)/5(b)	Used as Food, Pesticide or Biocidal product
134	4-Bromo Anisole	104-92-7		1186 mg/kg	5(f)	Used as a Pharmaceutical Intermediate
135	Resorcinol / 1,3 Benzenediol / Meta Di Hydroxy Benzene	108-46-3		3800 mg/kg	5(f)	Used as an intermediate for the synthesis of Pharmaceuticals
136	Meta Amino Phenol	591-27-5		924 mg/kg	5(f)	Used as an intermediate for the synthesis of Pharmaceuticals
Group-7	**Amino Compounds / Hydrogenation Compounds**					
137	3-Amino Benzotrifluoride	98-16-8	150	>300 mg/kg bodyweight	5(f)	Pharma Intermediate, veterinary drug intermediate
138	6-Methyl-5-Amino Benzimidazolone	67014-36-2		-	5(f)	Pharma Intermediate.
139	2,4-Dichloro-3,5-Dinitrobenzotrifluoride	29091-09-6		Dermal rat (male/female) -> 2 000 mg/kg bw	5(f)/5(b)	Use For pesticides, pharmaceuticals, organic synthesis

						intermediates
140	2,3,4,5,6 Penta Chloro Pyridine	2176-62-7		435 mg/kg	5(f)/5(b)	Used as pesticide and Pharmaceutical intermediates
141	3,7-Di Chloro 8-Methyl Quinoline	84086-96-4		-	5(b)	Used as Herbicides
142	Ortho Phenylene Diamine	95-54-5		510 mg/kg	5(b)	Used as a chemical intermediate & analytical reagent
143	Meta Phenylene Diamine	108-45-2		280 mg/kg	5(b)	Used as a chemical intermediate & analytical reagent
144	Para Phenylene Diamine	106-50-3		80 mg/kg	5(b)	Used as a chemical intermediate & analytical reagent
Group-8	**Miscelleneous Specialty Chemicals**					
145	Resorcinol Di (Beta - Hydroxy Ethyl) Ether	112-40-9	250	-	5(f)	It is used as an antiseptic and disinfectant in topical pharmaceutical products
146	Fosetyl-Aluminium	39148-24-8		dermal rabbit 2680 mg/kg bodyweight	5(f)	Fosetyl-Al product label must include an additional water

						contaminati on warning, and a reentry and protective clothing statement.
147	Chlorodiphenyl Phosphine	1079-66-9		316 mg/kg (Rat)	5(f)	Used as an intermediat e to make antioxidant s, flame retardants, stabilizers, catalysts, photo initiators etc.
148	Ethyl / Ethoxy Diphenyl Phosphine	607-01-2		-	5(f)	Specialty Chemicals
149	4-Fluoro Benzaldehyde	459-57-4		>= 1 600 - <= 1 800 mg/kg (Rat)	5(f)	Synthetic intermediat e in the preparation of Pharmaceut ical compounds
150	Ethyl Benzyl Aniline Sulphonic Acid (EBASA)	101-11-1		-	5(f)	an extraction solvent in the production of Pharmaceut icals and food
151	Iso Propyl Bromide-IPBr	75-26-3		> 2000 mg/kg	5(f)/5 (b)	Used for the manufactur e of Medicines, Pesticides
152	Ortho Nitro Anisole	91-23-6		740 mg/kg (Rat)	5(b)	Used in the organic

						synthesis, also used as an intermediate
153	3,5 Xylenol	108-68-9		608 mg/kg	5(f)	Used in Manufacture of Muscle Relaxant Drug, Metaxalone
154	NAS -2- Diazo-1-Naphthol -5-Sulphonic Acid Sodium Salt	64173-96-2		-	5(f)	Used as Pharmaceutical Intermediate
155	Lasamide -2,4Dichloro 5-Sulfamoyl Benzoic Acid	2736-23-4		-	5(f)	Used as Pharmaceutical Intermediate
156	4-4' Bi Pyridine	553-26-4		172 mg/kg	5(b)	Use intermediate in the production of Paraquat, a widely-used Herbicide
157	4-Methyl -1,3 Dioxolane/ 1, 4 Dioxane	1072-47-5		-	5(b)	Used as a Pesticide Intermediates
158	2-Chloro -4-(4-Chloro Phenoxy) Phenacyl Bromide	112110-16-4		-	5(f)	Used as Pharmaceutical Intermediate
159	1-(4-Chloro Benzyl) Methyl-3,3-Dimethyl-2-Oxo Cyclopentane Carboxylate	80969-68-2		-	5(b)	Used as a Pesticide Intermediates
160	2-(2-(4-Chlorophyll) ethyl-2-(1,1-Dimethyl ethyl) Oxirane	80443-63-6		-	5(b)	Used as a Pesticide

						Intermediates
161	(Methyl (E)-2-(2-(6-Chloropyrimidine-4-4Xyloxy) Phenyl)-3-Methoxy Acetate)	131860-97-4		-	5(b)	Used as a Pesticide Intermediates
162	2-Methyl Phenyl Glyoxylate Ortho Methyl Oxime	115199-21-8		-	5(b)	Used as a Pesticide Intermediates
163	2,6 Dihydroxy Benzoic Acid	303-07-1		> 600 mg/kg	5(f)	Active Pharmaceutical Ingredients
164	4,6-Dimethoxy 2-Methyl Sulfonyl Pyrimidine	113583-35-0		-	5(b)	Used as a Pesticide Intermediates
165	2-(Methyl Sulfonyl)-5-(Trifluoromethyl)-1,3,4-Thiadiazole	27603-25-4		-	5(b)	Used as a Pesticide Intermediates
166	N-(4-Fluorophenyl)-2-Hydroxy-N-Isopropyl Acetamide	54041-17-7		-	5(b)	Used as an Intermediate for the synthesis of Flufenacet
167	Bifenthrin Alcohol	76350-90-8		2,219 mg/kg	5(b)	Used as an Insecticide
168	Thiophene-2-Aldehyde(T2A)/Thiophene-2-Carboxaldehyde	98-03-3		915 mg/kg	5(f)	Used as a Pharmaceutical Intermediate
169	Thiophene-2-Acetyl (T2AC)/2-Acetylthiophene	88-15-3		25 - 200 mg/kg	5(f)/ 5(b)	Used as Pesticide or Biocide
170	Thiophene-2-Carboxylic Acid	527-72-0		1500 mg/kg	5(f)/ 5(b)	Used as Pesticide, Drug or Biocide
171	Thiophene-2-Methanol	636-72-6		-	5(f)/5(b)	Used as Pesticide or Biocide

172	Triphenyl Phosphine	603-35-0		6400 mg/kg	5(b)	Used in the synthesis of an organophosphorus Intermediate
173	Tetra Bromo Bisphenol-A (TBBA)	79-94-7		5000 mg/kg	5(b)/ 5(f)	Used as Pesticide or biocide
174	Deca Bromo Diphenyl Ethane (DBDPE)	84852-53-9		5000 mg/kg[1]	5(b)	Used as Pesticide
Group-9	**Chlorinated Compounds / Carbonyl Chlorides**					
175	N- Valeroyl Chloride	638-29-9	200	Inhalation - Rat - 4 h - 2,070 mg/m^3	5(f)/5(b)	Used as an intermediate in the manufacturing of Pesticides, Pharmaceuticals
176	4- Nitro Benzoyl Chloride	122-04-3		5600 mg/kg	5(f)/5(b)	Used as Pesticide or biocide
177	3- Nitro Benzoyl Chloride	121-90-4		2460 µL/kg	5(f)/5(b)	Used as Intermediate for pharmaceuticals, pesticides
178	4- Chloro Benzoyl Chloride	122-01-0		-	5(f)	Used as a Pharmaceutical Intermediate for Indomethacin, Dimethomorph
179	4- Methyl Benzoyl Chloride	874-60-2		Intravenous Mouse 56 mg/kg	5(f)	Used as a Pharmaceutical Intermediate for

						Desloratadine
180	2,4 Di Chloro Benzoyl Chloride	89-75-8		4640 mg/kg	5(f)	Used as a Pharmaceutical Intermediate for Sarcosine
181	Pivaloyl Chloride	3282-30-2		638 mg/kg	5(b)	Used as an input in the manufacture of Insecticides and Herbicides.
182	Mono Chloro Acetic Acid	79-11-8		55 mg/kg	5(f)/5(b)	Used as an Intermediate in the Manufacturing of Pesticides, Pharmaceuticals
183	2,4,6-Trimethyl Benzoyl Chloride	938-18-1		2300 mg/kg bw (rat)	5(f)	Used as a Pharmaceutical Intermediate
Group-10	**Organic Phosphite/Organic Phosphate**					
184	Tri Phenyl Phosphite	101-02-0	500	1600 mg/kg	5(f)	Used as stabilizers for polymers, such as polyethylene, polypropylene, polystyrene, polyvinyl chloride,
185	Diphenyl Isodecyl phosphite	26544-23-0		4.000 mg/kg	5(f)	It is used as a colour sealant and

						processing in polycarbonate
186	2- Ethyl Hexyl Diphenyl Phosphite	15647-08-2		1880 mg/kg	5(b)	Used to protect agricultural crops and method to control phytopathogenic fungi in agricultural crops
187	Phenyl Di-isodecyl Phosphite	25550-98-5		> 5.000 mg/kg	5(f)	-
188	Tri-Decyl Phosphite	2929-86-4		-	5(f)	-
189	Tri Trisdecyl Phosphite	77745-66-5		-	5(f)	-
190	Tris Nonyl Phenyl Phosphite	26523-78-4		> 2,000 mg/kg	5(f)	-
191	Diphenyl Tridecyl Phosphite (DPTDP)	60628-17-3		-	5(f)	-
192	Tetra Phenyl Dipropylene Glycol Phosphite (THOP)	80584-85-6		-	5(b)	Used as a Pesticide Intermediates
193	Poly (Dipropylene Glycol) Phenyl Phosphite (DHOP)	80584-86-7		-	5(f)	-
194	4,4-Isopropylidene bis (Diisodecyl Phenyl Phosphite)	61670-79-9		-	5(f)	-
195	Distearyl Pentaerythritol Diphosphite (DPEDP)	3806-34-6		>1,000 mg/kg	5(b)	Used as Pesticide Intermediates
196	Tris (2,4 Ditertbutylphenyl) phosphite	31570-04-4		> 6000 mg/kg	5(b)	Used as Pesticide Intermediates
197	Tris (2,4 Ditertpentylphenyl phosphite)	1065-97-0		-	5(b)	Used as Pesticide Intermediates

198	Triphenyl Phosphate	115-86-6		3500 mg/kg	5(b)	Used as an internal standard in the screening and quantification of pesticide residues in vegetables
199	Tricresyl Phosphate	1330-78-5		> 4640 mg/kg	5(b)	Used as Pesticides
200	Tributyl Phosphate	126-73-8		1390 mg/kg	5(b)	Used as a Solvent in Herbicide formulations.
201	Cresyl Diphenyl Phosphate	115-86-6		6400 mg/kg	5(b)	Used as Pesticides
202	Zinc Di-organo Di-thiophosphates (ZDDP)	68649-42-3		>2230 mg/kg	5(f)	Active Pharmaceutical Ingredients
203	Lithium Hexafluorophosphate (LiPF6)	21324-40-3		> 50 - 300 mg/kg	5(f)/5(b)	Used as an Intermediate in the Manufacturing of Pharmaceuticals & Pesticides
204	Di-Ethyl Meta Amino Phenol Aldehyde	17754-90-4		-	5(f)	Used as an Intermediate
205	Trimethyl Phosphenoacetate	5927-18-4		-	5(f)	Used as a Pharmaceutical Intermediate
206	Triethyl Phosphite	122-52-1		3200 mg/kg	5(b)	Used in the production of insecticides.

207	2-Chloro-1,3-bis (Dimethylamino)-Trimethinium Hexafluoro Phosphate	291756-76-8		-	5(f)	Used as a Pharmaceutical Intermediate
208	Tris Chloropropyl Phosphate (TCPP)	13674-84-5		1500 mg/kg	5(f)	Organophosphorus Flame Retardant
209	Diethyl Phosphite	762-04-9		3900 mg/kg	5(f)	Intermediate in the production of Organophosphorous Compounds
Group-11	**Research & Development Based Products**					
210	Research & Development Based Products		100			
	TOTAL		**2,850**			

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. lies within 10 km distance from the project site. River Narmada is flowing at distance of 8.03 Km in South direction. There is no forest land involved in the proposed project. Schedule-I species i.e., Oriental honey buzzard, Black kite, Shikra, Indian peafowl, Black-shouldered kite, 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 10 locations during March 2022 to May 2022 and the baseline data indicates the ranges of concentrations as: PM_{10} (74.96 – 79.55 μg/m^3), $PM_{2.5}$ (40.46 - 46.38 μg/m^3), SO_2 (15.4 – 18.25 μg/m^3) and NO_2 (17.16 – 19.65 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, 0.19 μg/m^3 and 0.06 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 level** monitoring was carried out at 9 Residential locations, 13 Industrial locations including project site during March 2022 to May 2022. The baseline data indicates the ranges of concentrations for Industrial Location Leq (Day) (62.5 – 68.5 dB) A)) and Leq (Night) (60.6 – 68 dB(A)). Residential Location Leq (Day**) (49.6 – 54.7 dB) A)) and Leq (Night) (40 – 44.3 dB(A)). Ground Water quality** monitoring was carried out at 10 locations during March 2022 to May 2022 and the baseline data indicates

the ranges of concentrations as: pH (7.41 – 7.96), Total Dissolved Solids (588 - 1958 mg/l), Total Hardness (194.7 – 582.8 mg/l), Chlorides (142.9 – 589.7 mg/l), Fluoride (<0.05 - <0.05 mg/l) and Zinc (<0.05 - <0.05 mg/l). **Surface Water quality** monitoring was carried out at 9 locations during March 2022 to May 2022 and the baseline data indicates the ranges of concentrations as: pH (7.71 – 8.52), Dissolved Oxygen (6.19 – 6.49 mg/l), Chemical Oxygen Demand (6.58 – 17.52 mg/l), Bio-Chemical Oxygen Demand (1.83 – 4.87 mg/l). **Soil quality** monitoring was carried out at 10 locations during March 2022 to May 2022 and the baseline data indicates the ranges of concentrations as pH (7.12 – 8.64), Nitrogen (1338.24 – 2814.7 mg/kg), Phosphorus (18.56 – 36.57 mg/kg), Potassium (151.6 – 264.9 mg/kg) and Electric Conductivity (0.23 – 2.82 mS/cm).

8. The PP reported that the total water requirement is 596 m^3/day of which fresh water requirement of 526 m^3/day will be met from GIDC Water Supply, rest 70 m^3/day water will be recycled water. Effluent of 488 m^3/day quantity will be treated as per below treatment description Utility Stream: 70.0 KL/Day effluent (from Boiler + from Cooling Tower) will be treated in RO, & RO permeate (50.0 KL/Day) will be reused for industrial purpose whereas RO reject (20.0 KL/Day) will be send to the MEE System. Low COD & Low TDS wastewater (160 KL/Day) will be treated in Primary Treatment Stage, Lamella followed by Fenton Treatment. Treated water will be further treated in Bio reactor and then disposed to CETP. Combined Stream: (Waste Water from Process: + Washings = 386.0 KL/Day) Wastewater from Process (381 KL/Day) & Washing (5 KL/Day) - Total (386 KL/Day) from which 226 KL/Day (High COD & High TDS wastewater) along with RO Reject (20 KL/Day) and with steam (59 KL/Day) - Total (246 KL/Day) will be treated in in-house MEE. MEE Condensate (245 KL/Day) will be further treated in Bio Reactor along with treated water of Fenton treatment. MEE concentrated Product (60 KL/Day) will be treated in ATFD. ATFD Condensate (35 KL/Day) will be further treated in Bio Reactor & then sent to CETP of Dahej Industrial Estate for further treatment and disposal to Drainage system of Dahej GIDC leads to Marine Deep Sea Discharge Point. Scrubbing solution which is mainly Hazardous Waste / By Products from respective gases such as HCl, CL_2, H_2S, HBr, SO_2, NOx etc. are sold out to actual End users under Rule-9 of HoW-2016. Domestic wastewater (20 KL/Day) will be treated in STP and Treated water reused with in plant premises for gardening, washing & domestic purpose. The plant is not based on the total zero liquid discharge system.

9. The Power requirement will be 1000 KVA and will be met from Dakshin Gujarat Vij Company Limited (DGVCL). Unit will have 1 Nos. DG sets of 500 KVA capacity, additionally DG sets are used as standby during power failure. Stack (height 11 m) will be provided as per CPCB norms to the proposed DG sets.

10. The unit will have 1 Nos. of Steam Boilers (10 TPH) & 1 Nos. of Thermic fluid heater (10 Lac Kilo Cal/hr.) will be installed. Adequate Stack Height of 32 m will be installed for controlling the particulate emissions within the statutory limit of 150 mg/Nm3 for the proposed boilers.

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

Sr. no.	Source of Emission With Capacity	Stack Height (meter)	Type of Fuel	Quantity of Fuel	Air Pollution Control Measures (APCM)
1	Steam Boiler (Capacity: 10.0 MT/hr.) × 1 Nos	32	Briquettes or Imported Coal	50 MT /Day or 40.0 MT /Day	3- Filed ESP System & Adequate Stack Height – 32 MT
2	Thermopack (Capacity: 10.0 Lac Kilo Cal/ hr.)			15 MT /Day or 10.0 MT /Day	
4	D. G. Set - Stand By (Capacity: 1×500 KVA)	11	HSD	500 Liters/day	Adequate Stack Height

Process Gas Emission

Sr. No.	Vent attached to	Vent Height & Diameter	Pollutants	Air pollution Control System
1	Reaction Vessel-1	Height-11 Meters	HCl	Two Stage Water Scrubber
2	Reaction Vessel-2	Height-11 Meters	NOx	Two Stage Alkali scrubber
3	Reaction Vessel-3	Height-11 Meters	HCl + SO_2	Two Stage Scrubber (Water + Alkali)
4	Reaction Vessel-4	Height-11 Meters	H_2S	Two Stage Alkali scrubber
5	Reaction Vessel-5	Height-11 Meters	HCl+Cl_2	Two Stage Scrubber (Water + Alkali)
6	Reaction Vessel-6	Height-11 Meters	HBr	Two Stage Water Scrubber

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

Sr. No.	Hazardous Waste	Category	Quantity (MT/Year)	Mode of disposal
1	Discarded Containers / Bags / Liners	Sch-I/ 33.1	100	Collection, Storage, Transportation, Decontamination & Disposal by selling to registered recycler.
2	Used/ Spent Oil	Sch-I/ 5.1	50	Collection, Storage, Transportation, Decontamination & Disposal by selling to registered recycler.

3	ETP Sludge	Sch-I/ 35.3	720	Collection, Storage, Transportation & Disposal at Common TSDF.
4	MEE Salt	Sch-I/ 28.1	16200	Collection, Storage, Transportation & Disposal at Common TSDF.
5	Recovered Solvent	Sch-I/ 28.6	1042020	Collection, Storage, Management & Recovery within the premises and reuse in plant premises.
6	Sodium Chloride (NaCl) Salt/ Sodium Bicarbonate Salt	Sch-I/28.1	12138	Collection, Storage, Transportation & Disposal at Common TSDF.
7	Distillation Residue / Organic Sludge /Incinerable Wastes	Sch-I/36.1	19960.8	Collection, Storage, Transportation and sent for Co-Processing in cement industries or common incineration facility.
8	Hydrobromic Acid (28%)	Sch-I/ 28.1	22458	Collection, Storage, Transportation & Disposal bysell to authorized end user/s having permission under Rule-9 of HoW-2016.
9	Phosphoric Acid	Sch-I/ 28.1	30933	Collection, Storage, Transportation & Disposal bysell to authorized end user/s having permission under Rule-9 of HoW-2016.
10	Sodium Sulphate Solution	Sch-I/ 28.1	42429	Collection, Storage, Transportation & Disposal bysell to authorized end user/s having permission under Rule-9 of HoW-2016.
11	Ammonium Sulphate Salt	Sch-I/ 28.1	10269.6	Collection, Storage, Transportation & Disposal by sell to authorized end user/s having permission under Rule-9 of HoW-2016.
12	Recovered Liquid Ammonia	Sch-I/ 28.1	27064.8	Collection, Storage, Transportation & Disposal by sell to authorized end user/s having permission under Rule-9 of HoW-2016.

13	Hydrochloric Acid (30%)	Sch-II/ Class B(15)	54304.8	Collection, Storage, Transportation & Disposal by sell to authorized end user/s having permission under Rule-9 of HoW-2016.
14	Sodium Sulphite Solution (20%)	Sch-I/ 28.1	89463	Collection, Storage, Transportation & Disposal by sell to authorized end user/s having permission under Rule-9 of HoW-2016.
15	Iron Sludge	Sch-I/ 35.3	20718	Collection, Storage, Transportation & Disposal at Common TSDF.
16	Acetic Acid	Sch-I/ 28.1	2664	Collection, Storage, Transportation & Disposal by sell to authorized end user/s having permission under Rule-9 of HoW-2016.
17	Inorganic Salt	Sch-I/28.1	23378.4	Collection, Storage, Transportation & Disposal at Common TSDF.
18	Ammonium Chloride	Sch-I/ 28.1	37884	Collection, Storage & reuse in plant for manufacturing & excess quantity will be sold to end users having Permission under Rule-9 of HoW-2016.
19	Sodium Hydrosulfide solution (30%)	Sch-I/ 28.1	3120	Collection, Storage, Transportation & Disposal by sell to authorized end user/s having permission under Rule-9 of HoW-2016.
20	Recovered Catalyst-Raney Nickel	Sch-I/ 28.2	10389.6	Collection, Storage, Transportation and sent for co-processing in cement industries or common incineration facility.
21	Activated Carbon / Spent Carbon	Sch-/28.3	480	Collection, Storage, Transportation & Disposal at Common TSDF.
22	Phosphorous Acid	Sch-I/ 28.1	30	Collection, Storage, Transportation & Disposal by sell to authorized end user/s

				having permission under Rule-9 of HoW-2016.
23	Sodium Bromide	Sch-I/ 28.1	12235.2	Collection, Storage, Transportation & Disposal by sell to authorized end user/s having permission under Rule-9 of HoW-2016.
24	Sodium Fluoride	Sch-I/ 28.1	307.2	Collection, Storage, Transportation & Disposal by sell to authorized end user/s having permission under Rule-9 of HoW-2016.
25	34% Calcium Chloride Solution	Sch-I/ 28.1	5611.2	Collection, Storage, Transportation & Disposal by sell to authorized end user/s having permission under Rule-9 of HoW-2016.
26	Spent Sulfuric Acid (45%)	Sch-I/ 28.1	70354.2	Collection, Storage, Transportation &Disposal by sell to authorized end user/s having permission under Rule-9 of HoW-2016.
27	Sodium Hydroxide Solution	Sch-I/ 28.1	6436.8	Collection, Storage &Reuse within premises & Remaining quantity will be sold to authorized end user/s having Permission under Rule-9 of HoW-2016.
28	Sodium Methyl Sulfate	Sch-I/ 28.1	720	Collection, Storage, Transportation & Disposal by sell to authorized end user/s having permission under Rule-9 of HoW-2016.
29	Aluminium Chloride Solution (20%)	Sch-II/ Class B (15)	13800	Collection, Storage, Transportation & Disposal by sell to authorized end user/s having permission under Rule-9 of HoW-2016.
30	Methyl Bisulfate	Sch-I/ 28.1	1680	Collection, Storage, Transportation & Disposal by sell to authorized end user/s having permission under Rule-9 of HoW-2016.

31	Sodium bi Sulfide Solution (30%)	Sch-I/28.1	1950	Collection, Storage, Transportation & Disposal by sell to authorized end user/s having permission under Rule-9 of HoW-2016.
32	Iron Hydroxide Salt	Sch-I/ 28.1	4860	Collection, Storage, Transportation & Disposal at Common TSDF.
33	Ammonium Bi Sulphate Salt	Sch-I/ 28.1	5266.8	Collection, Storage, Transportation & Disposal by sell to authorized end user/s having permission under Rule-9 of HoW-2016.
34	Sodium Hypochlorite (8-10%)	Sch-I/28.1	10185.6	Collection, Storage, Transportation & Disposal by sell to authorized end user/s having permission under Rule-9 of HoW-2016.
35	Sodium Methyl Sulphide (20%)	Sch-I/ 28.1	5346	Collection, Storage, Transportation & Disposal by sell to authorized end user/s having permission under Rule-9 of HoW-2016.
36	Potassium Sulfate	Sch-I/ 28.1	7494	Collection, Storage, Transportation & Disposal by sell to authorized end user/s having permission under Rule-9 of HoW-2016.
37	Magnesium Bromo Chloride	Sch-I/ 28.1	2319	Collection, Storage, Transportation & Disposal by sell to authorized end user/s having permission under Rule-9 of HoW-2016.
38	Magnesium Chloride	Sch-I/ 28.1	3870	Collection, Storage, Transportation &Disposal by sell to authorized end user/s having permission under Rule-9 of HoW-2016.
39	Sodium Hydrogen Sulphide	Sch-I/ 28.1	2580	Collection, Storage, Transportation & Disposal by sell to authorized end user/s having permission under Rule-9 of HoW-2016.

40	Off specification Materials	Sch-I/ 28.4	150	Collection, Storage, Transportation and sent for co-processing in cement industries or common incineration facility.
41	Expiry/Returned / Rejected Materials	Sch-I/ 28.5	150	Collection, Storage, Transportation and sent for co-processing in cement industries or common incineration facility.
Non- Hazardous Waste				
42	Fly Ash	--	600	Collection, Storage, Transportation and sent for brick manufacturer or co-processing in cement industries.
43	STP Sludge	--	7	Collection, Storage, Transportation and Sent to TSDF for further disposal or send for use as manure.

13. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 7.5 Crore (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 6.54 Crore per annum. Industry proposes to allocate Rs. 1.2 Crore towards Corporate Social Responsibility.

14. Industry will develop greenbelt over an area of 33% i.e. 5940 m^2 out of total area of the project. Total 18000 sq. meter land area is available at site; out of this area about 5940 sq. meter (33 %) area will be covered as greenbelt. Approx. 1800 number of trees will be developed accordingly.

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 Project site is located at Dahej-III GIDC Industrial Estate which is covered under 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 enviorment officials for the functioning of EMC.

17. The PP reported that the The total carbon sequestered through trees (1800 trees) =6196.096 t CO2 eq. /year.

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. 62.5 Crores. Total Employment will be 1200 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 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, STP and advised the PP to submit the following:

- Undertaking for use of Briquettes of Bio-Coal as Primary Fuel.
- Revised Plant Layout showing greenbelt demarcation.
- Revised Water Balance Diagram with i.e. Domestic Water Consumption and Waste water generation.
- Revised STP Diagram.

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 the 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, 5940 m^2 by planting 1800 number of trees within a period of one year of grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft (about 2 m). The budget earmarked for the plantation shall be 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 environment officials. 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 ₹ 7.5 Crore (Capital cost) and ₹ 6.54 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) Agrobriquette shall be used as the primary fuel, during it's unavailability imported coal shall be used in case of emergency.

(v) The total water requirement is 596 KL/Day of which fresh water requirement 530.0 KL/Day shall be met from GIDC Water Supply, rest 66.0 KL/Day water shall be recycled water. The PP should ensure that water supply should not be above the permissible limit as mentioned

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

(vi) Effluent of 488 m^3/day quantity shall be treated as per below treatment description. 70.0 KL/Day effluent (from Boiler + from Cooling Tower) shall be treated in Primary ETP followed by RO, & RO permeate (50.0 KL/Day) will be reused for industrial purpose whereas RO reject (20.0 KL/Day) shall be sent to the MEE System. **Low COD & Low TDS wastewater (160 KL/Day)** will be treated in Primary Treatment Stage, Lamella followed by Fenton Treatment. Treated water shall be further treated in Bio reactor and then disposed to CETP. **Combined Stream: (Waste Water from Process: + Washings = 386.0 KL/Day)** Wastewater from Process (381 KL/Day) & Washing (5 KL/Day) - Total (386 KL/Day) Out of that 226 KL/Day (High COD & High TDS wastewater) along with RO Reject (20 KL/Day) and with steam (59 KL/Day) - Total (246 KL/Day) shall be treated in in-house MEE. MEE Condensate (245 KL/Day) will be further treated in Bio Reactor along with treated water of Fenton treatment. MEE concentrated Product (60 KL/Day) will be treated in ATFD. ATFD Condensate (35 KL/Day) shall be further treated in Bio Reactor. Total 428.0 KL/Day sent to CETP of Dahej Industrial Estate for further treatment and disposal to Drainage system of Dahej GIDC leads to Marine Deep Sea Discharge Point.

(vii) Domestic wastewater (16.0 KL/Day) shall be treated in STP and Treated water reused with in plant premises for Gardening, Washing & Domestic purpose.

(viii) 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.

(ix) The project proponent shall comply with the environment norms for Pesticide Industry as notified by the Ministry of Environment, Forest and Climate Change, *vide* GSR 446 (E), dated 13.6.2011 under the provisions of the Environment (Protection) Rules, 1986.

(x) 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.

(xi) 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.

(xii) 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.

(xiii) 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.

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

(xix) The 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. 51.12

Proposed Expansion of Bulk Drug Intermediate Facility by Increasing Mineral Salt Production by Conventional Process from 1020 TPA to 1770 TPA and by Spray Dryer Process from 1034 TPA to 1784 TPA and also installation of a New facility for production of API with a capacity of 100 TPA with addition of 0.4 Ha land area of 19A contiguous to existing 1.02 Ha Land area of 19 and 19B located at Notified Industrial Complex Plot No. 19, 19B, 19A,

SIPCOT Complex Phase-I, Hosur, Krishnagiri Dist., Tamilnadu by Global Calcium Private limited Unit-III - Consideration of EC

[Proposal No. IA/TN/IND3/426704/2023; File No. IA-J-11011/141/2019-IA-II (I)]

1. The proposal is for the environmental clearance for the Proposed Expansion of Bulk Drug Intermediate Facility by Increasing Mineral Salt Production by Conventional Process from 1020 TPA to 1770 TPA and by Spray Dryer Process from 1034 TPA to 1784 TPA and also installation of a New facility for production of API with a capacity of 100 TPA with addition of 0.4 Ha land area of 19A contiguous to existing 1.02 Ha Land area of 19 and 19B located at Notified Industrial Complex Plot No. 19, 19B, 19A, SIPCOT Complex Phase-I, Hosur, Krishnagiri Dist., Tamilnadu by Global Calcium Private limited Unit-III.

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) as General condition is applicable the plant site is located within 5 Kms radius of interstate boundary ie Tamil Nādu & Karnataka

3. The standard ToR for the preparation of EIA/EMP Report was issued vide letter No. IA-J-11011/141/2019-IA-II(I) dated11.5.2019 and amendment in Terms of References (ToRs) which was then issued by Ministry vide letter No. IA-J-11011/411/2006-IA-II(I) dated 17.06.2022. The PP applied for Environment Clearance in Common application form and submitted EIA/EMP Report and other documents. The PP reported that it is a **Expansion EC.** The proposal is placed in 51st EAC Meeting held on 16th-17th May, 2023 wherein the Project Proponent and an accredited Consultant, Chennai Testing Laboratory Private Limited [Accreditation number NABET/EIA/2023/SA0152 dated 14/02/2022, Valid upto: 15/08/2023], made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that the Existing Land Area is 1.02 ha., and additional land area of 0.40 ha for expansion has been acquired contiguous to the existing land. The details of products are as follows:

Products	**Process**	**Quantity in TPA**		
		Existing	**Proposed**	**Total**
Pharmaceutical Bulk Drug & Chemicals MINERAL SALTS Gluconates, Citrates, Lactates, Lactobionates, Fumarates, Orotates, Ascorbates, Aspartates, Pidolates, Glycinate, Calcium D Saccharates, Phosphates, Phosphites, Selenates, Stearates, Succinates, Peroxides, Pre-Mix etc	**by Conventional Process**	1020	750	1770

Calcium Glubionate, Calcium Borogluconate, Calcium lacto Gluconate, Gluconates, Acetates Pidolates and other Mineral Salts	**by spray drier process**	1034	750	1784
BEPOTASTINE BESILATE, BENFOTIAMINE, CALCIUM DOBESILATE, CLOZAPINE, CITICOLINE, CINITAPRIDE HYDROGEN TARTRATE, CARBIMAZOLE, DEFERASIROX, DIATRIZOIC ACID, DORZOLAMIDE HYDROCHLORIDE, DESVENLAFAXINE SUCCINATE, FENPIVERINIUM BROMIDE, FLUPENTIXOL HYDROCHLORIDE, CALCIUM FOLINATE, FERRIC ISOMALTOSIDE, FERRIC MALTOL, FOMEPIZOLE, FLUPHENAZINE DIHYDROCHLORIDE, FLUPHENAZINE DECANOATE, FLUPENTIXOL DECANOATE, FOSPHENYTOIN SODIUM, CALCIUM GLYCEROPHOSPHATE, IRON SUCROSE, IRON SORBITOL COMPLEX, IRON POLY MALTOSE COMPLEX, IVABRADINE HYDROCHLORIDE, IOHEXOL, CALCIUM L-METHYL FOLATE, MEBEVERINE HYDROCHLORIDE, MELITRACEN HYDROCHLORIDE, MINOXIDIL SULPHATE, METHOTREXATE, METOPIMAZINE, NIFUROXAZIDE, NAFTIFINE HYDROCHLORIDE, NEFOPAM HYDROCHLORIDE, NEBIVOLOL HYDROCHLORIDE, OXETACAINE, OXCARBAZEPINE, PITOFENONE HYDROCHLORIDE, PHENYTOIN SODIUM, PHENOZOPYRIDINE HCL, PHENYRAMIDOL HYDROCHLORIDE, PYRIDOSTIGMINE BROMIDE, STRONTIUM RANELATE, SUCROFERRIC OXYHYDROXIDE, TERBINAFINE HYDROCHLORIDE,	API	--	100	100

TRIBENOSIDE, TIEMONIUM METHYLSULPHATE, TOLPERISONE HYDROCHLORIDE, TOPIRAMATE, TRIMETAZIDINE HYDROCHLORIDE, UBIQUINOL (ACETATE), VENLAFAXINE HYDROCHLORIDE, ESMOLOL HYDROCHLORIDE, SODIUM PHENYL BUTRATE Etc				

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 granted by the Ministry are as follows:

No.	ENVIRONMENTAL CLEARANCE	Issued Date	Issued For
1.	J-11012/77/96-IA-II(I)	29.07.1997	For Increase in Production Capacity of Mineral Salts
2.	J-11011/417/2006-IA-II(I)	18.07.2007	For Increase in Production Capacity of Mineral Salts
3.	J-11011/417/2006-IA-II(I)	25.06.2018	Name Transferred from Calci Tech India Pvt Ltd to Global Calcium Pvt Ltd.

7. The PP reported that the unit had obtained Certified Compliance Report for Environmental Clearance vide J-11011/417/2006-IA-II(I) dated 18.07.2007 vide F.No. EP/12.1/118/TN (Vol-II)/222 dated 20.02.2023 IRO, MOEF&CC, Chennai, and all the conditions of the last environmental clearance have been complied with as reported in the CCR

8. The PP reported that there are no National Parks, wild life sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wild Life Corridor, etc within 10 Km Distance from the project site. The nearest major river is River Ponnaiyar, which is at the distance of 7 Kms East of the plant site, and the nearest water body of any significance is a Minor River Chinnar, which is 2.0 Km ENE of the plant site, and this predominantly sees run off only during rain fall, otherwise this Chinnar River is dry during most parts of the year. There are no wet lands in the proximity or around the plant site, and area is dominated by fully built-up areas because of the industrial complex housing many industries. The area also had not seen flooding for more than 30-Years. No Schedule I species exist within 10 km study area of the project.

9. The PP reported that the **Ambient Air Quality** monitoring was carried out at 8 locations during 01 January to 31 March 2022 and the baseline data indicates the ranges of concentrations as : **PM_{10}** in ambient air during the present study varied between **40 and 87 µg/m³. $PM_{2.5}$** in ambient air during the present study varied between **10 and 38 µg/m³. SO_2** in ambient air during the present study was found to vary between **11.5 and 26.4 µg/m³**. **NOx** in ambient air during the

present study varied between **20.8 and 40.6 μg/m³. O_3** in ambient air during the present study varied between **10.7 and 54.8 μg/m³. NH_3** in ambient air during the present study varied between **6.7 and 36.4 μg/m³**. Whereas all other parameters such as Carbon Mono Oxide, Nickel, Arsenic, Lead, Benzene & Benzo Pyrene including other additional parameters were Below Deductible Limit **Noise:** The area falls to a large extent in the Industrial Zone, the average noise level during day time varies between 48.0 – 71.2 dB(A) & during night time varies between 37.1 – 61.0 dB(A) and with respect to it the Ambient Noise Levels were within the permissible levels at present. **Ground Water:** The ground water samples analyzed had pH with in the standard range, while the Hardness of all ground water samples were above acceptable limits, which could be because of higher levels of Calcium present in the ground surface. Chloride, Sulphates & Fluoride in all ground water samples were within the limits. However, Nitrates were marginally higher than the permissible limits. Total Dissolved Solids (TDS) samples were within permissible limits, and the Heavy Metals were also within limits or absent. The ground water was also free of any Bacteriological, Pesticidal and Organic Toxics. **Surface Water:** The surface water samples tested were found to be unpolluted, and the parameters such as TDS, Hardness, were within acceptable levels, whereas Metal, Pesticides & Microbial Contamination was Below Deductible Levels, however had exhibited marginally higher level of Nitrates, Turbidity, which could be because of the run-off carrying sediments. Soil- The pH of all soil samples was neutral, while the range of Electrical Conductivity of all soil samples indicate soil is non-saline. Nitrogen, Phosphorus and Potassium the Macro Nutrients in all soil samples were high thus restraining the ability of soil to absorb nutrients. However, all soil samples tested were free of any toxicity due to Arsenic, Mercury, Lead etc.

10. The PP reported that the Total water requirement upon this expansion will be 172.8 KLD of which 94.9 KLD will be treated & recycled water for use back in the process, and hence fresh water make-up required daily will only be 77.9 KLD, which will be met from SIPCOT & SIPCOT has issued their letter of approval for supply of water. The source of domestic sewage is the employee's usage of water, and no. of employees at present is 70 and that upon expansion will be 300. Thus, the total domestic sewage that will be generated of 11.5 KLD will be treated in the existing STP of 10 KL Capacity based on Sequential Batch Reactor, each batch of 12 Hrs Duration and thus the capacity of existing STP is 20 KL. Treated domestic sewage will be entirely being used for green belt development. There is an Existing operating ETP of 38.5 KLD for waste water generated from mineral salt unit, which is proposed to be upgraded to 73.5 KLD and an additional ETP II proposed to treat and recycle/reuse 24 KLD waste water from API unit, and thus the entire plant upon expansion will be a "**ZERO LIQUID DISCHARGE UNIT.**

11. The PP reported that the power requirement are as follows:

Power Consumption			
Source	**Existing**	**Proposed**	**Upon Expansion**
CAPTIVE & GROUP CAPTIVE WIND MILL	0.9 MW	1.3 MW	2.2 MW

Global Calcium as a group has already 2.4 MW of wind mill of it's own, and also has proposed an additional 2.25 MW of wind mill of it's own, and additionally has a group captive agreement for

wind mill with another IPP, thus will in total have 5.65 MW of wind mill to meet its entire power requirement. The Global Calcium Unit III power requirement upon expansion will be 2.2 MW, which will entirely be met from it's captive wind mills, and the balance captive wind mill generation of 3.45 MW will be consumed by its parent unit also located at Hosur, and hence entire group of Global Calcium will be operating entirely on wind mill ie **GREEN ENERGY**. D.G. Sets of 180 KVA x 1, 380 KVA X 1, & 250 KVA X 1. capacity is existing and 1010 KVA x 1 No. is proposed to be installed in the expansion plan, will be used only during emergency or grid failure. HSD will be used as fuel for D.G. Sets, and D.G. Sets are generally used only during exigencies, however, the fuel requirement if and when all the D.G. Sets would operate will be to the maximum of 0.9 Kl/Hour. The process Boiler and D.G. Sets

PROCESS BOILER	
EXISTING	**PROPOSED ADDITION**
1 x 2 T	1 x 3 T
1 x 3 T	

D.G. Set	
EXISTING	**PROPOSED ADDITION**
1 x 180 KVA Gen set 1 x 380 KVA Gen set 1 x 250 KVA Gen set	1 x 1010 KVA – DG Set

Multi Cyclone Separator/bag filter with a stack of height of 30 mts already provided for the existing boiler & the additional boiler will also be provided similar control measures for controlling the particulate emissions within the statutory limit of 115 mg/Nm³ for all the boilers existing and proposed.

12. **Details of Process Emissions Generation and its Management**: The process of production of mineral salts is devoid of any air pollution except during production of Calcium D Saccharate, wherein there will be emission of NO_X, which is controlled by provision of scrubber with Caustic Lye & Aqueous Ammonia as media, wherein entire NO_X gets scrubbed, the scrubbed liquor thus obtained is further taken to ETP for treatment. There aren't any other significant source of emission from production of mineral salts except CO_2 during use mineral Carbonates, which is also proposed to be sequestered with adequate green belt.

<u>API</u>

The major source of concern with respect to air emission in production of API is the volatile organic compounds, which is also provided with robust measures in the form of distillation columns for each of the reactor for recovery of solvents, and is followed by primary/secondary condenser with chiller and thereafter passed through water scrubbers before emission of flue, thus the entire VOC probably that could emanate is controlled.

<u>FUEL BURNING FOR STEAM</u>

The fuel used in existing operation as well as in proposed operation is Woody Biomass/Briquetted Wood, and thus pollutant of significance is Particulates, which is also controlled by provision Dust Control Measures with stack of 30 Mts Height.

The entire air pollution control systems are subject to comprehensive post project monitoring system including online continuous monitoring of stacks.

FUGITIVE VOC FROM SOLVENT STORAGE

The solvent storage area is proposed with primary/secondary condenser with chillers to control any remnants of Fugitive VOC.

EXISTING

Sl. No.	Source of emission	Pollution Control measures	Material of Construction	Stack top Diameter (in Metres)	Stack Height above ground level (meters)
1.	Reactor – I	Wet scrubber with stack	FRP	0.4	12
2.	Spray Drier – 1	Multi Cyclone Dust Collector with stack	S.S	0.4	22
3.	Spray Drier – 2	Multi Cyclone Dust Collector with stack	S.S	0.4	22
4.	3 T BOILER	Dust Collector with Stack	M.S	0.6	30
5.	2 T Boiler	Dust Collector with Stack	M.S	0.6	30
6.	D.G. Set 380 KVA	Acoustic enclosures with stack	M.S	0.125	7
7.	D.G. Set 180 KVA	Acoustic enclosures with stack	M.S	0.125	7
8.	D.G. Set 250 KVA	Acoustic enclosures with stack	M.S	0.125	7
9.	ATFD Reactor - II	Wet scrubber with stack	FRP	0.4	12

PROPOSED

Sl. No.	Source of emission	Pollution Control measures	Material of Construction	Stack top dimension (in Metres)	Stack Height above ground level(meters)
10.	3 T BOILER	Cyclone Dust Collector/Bag Filter with Stack	M.S	0.6	30
11	Reactor - II	Stack	FRP	0.5	12

12.	Reactor – III	Stack	FRP	0.4	12
13.	Reactor – IV	Stack	FRP	0.4	12
14.	IB I (5 Reactors & 2 Centrifuges)	Primary/Secondary Condensor Followed by Wet scrubber with stack	FRP	0.4	12
15.	I B II (6 Reactors& 3 Centrifuges)	Primary/Secondary Condensor Followed by Wet scrubber with stack	FRP	0.4	12
16.	Spray Drier 3	Multi Cyclone Dust Collector with stack	S.S	0.4	22
17.	D.G. Set 1010 KVA	Acoustic enclosures with twin stack	M.S	0.35x 2 Nos	15 x 2Nos

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

Name of Process	**Name of Process Waste (Category No)**	**Quantity (T/Year)**		**Waste Type**	**Waste Storage**	**Waste Disposal**	**Area earmarked for Storage/ Disposal (m^3)**
		Existing	**Upon Expansion**				
5. Industrial operations using mineral or synthetic oil as lubricant in hydraulic systems or other applications	5.1-Used or spent oil	0.2	1.0	Recyclable	MS Drums	Recover and Reuse-CPCB Authorized recyclers	4.0
5. Industrial operations using mineral or synthetic oil as lubricant in hydraulic systems or other applications	5.2-Waste or residues containing oil	-	1.0	Reusable	MS Drums	Pre-Processing for Co-Processing CPCB Authorized Facility	4.0
20. Production and/ or Industrial use of Solvents	20.4-Process Sludge	-	10.0	Reusable	HDPE Bags		10.0
28. Production/ formulation of drugs/	28.1-Process	3.0	75.0	Reusable	HDPE Bags		10.0

pharmaceutical and health care product	Residue and wastes						
28. Production/ formulation of drugs/ pharmaceutical and health care product	28.2 Spent catalyst	0	0.2	Recyclable	HDPE Bags	Recover and Reuse-CPCB Authorized recyclers	
28. Production/ formulation of drugs/ pharmaceutical and health care product	28.3-Spent carbon	2.0	15.0	Reusable	HDPE Bags	Pre-Processing for Co-Processing CPCB Authorized Facility	5.0
28. Production/ formulation of drugs/ pharmaceutical and health care product	28.4 Off specification products	1.0	1.0	Reusable	HDPE Bags		1.0
28. Production/ formulation of drugs/ pharmaceutical and health care product	28.5 Date expired products	0.5	1.0	Reusable	HDPE Bags		1.0
28. Production/ formulation of drugs/ pharmaceutical and health care product	28.6-Spent solvents	-	400.0	Recyclable	HDPE Drums	Recover and Reuse-CPCB Authorized recyclers	15.0
33. Handling of hazardous chemicals and wastes	33.1-Empty barrels/ containers/ liners contaminated with hazardous chemicals /wastes	3.0	10.0	Recyclable	Empty Barrels / Containers	Recover and Reuse-CPCB Authorized recyclers/ Landfill at TSDF	10.0
35. Purification and treatment of exhaust air/gases, water and waste water from the processes in this schedule and common industrial	35.3-Chemical sludge from waste water treatment	30.0	70.0	Reusable	HDPE Bags	Pre-Processing for Co-Processing CPCB	10.0

effluent treatment plants (CETP's)						Authorized Facility	
35. Hazardous waste treatment processes, e.g., pre-processing, incineration and concentration	35.3-Chemical sludge from waste water treatment (evaporation residues, (ATFD mixed Salt)	30	200.0	Reusable	HDPE Bags		20.0

14. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ Rs 6.5 Crores (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 1.43 Crores. Industry proposes to allocate Rs. 0.17 Crores towards CER.

15. The Industry had already developed green belt in an Area of 0.33 Ha & Proposes to develop additionally 0.13 Ha thus will have 33% ie 0.46 Ha Land area of the total 1.42 Ha land area as greenbelt. The total number of trees existing at present is 972 Nos., and have proposed to additionally plant 178 Nos., thus the total No. of Trees upon expansion will be 1150 Nos, at the rate of 2500 Nos per Hectare.

16. The unit is exempt from public hearing as it is located in a notified industrial complex ie SIPCOT Industrial Complex Gazetted vide G.O.Ms. No.533 Dated 11.04.1974 of Government of Tamil Nadu

17. The PP proposed to set up an Environment Management Cell (EMC) by engaging Director opeartion- HQ (QA, QC, PRODUCTION, EHS, HOD ENGG- HOD MKTG- HOD PURCHASE- HOD STORES- HOD-HR) 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 the Carbon Sequestration potential of the green belt was estimated using methods prescribed by Ravindranath & Ostwald (2008) in Carbon Inventory Methods Hand Books for Green House Gas Inventory, Carbon Mitigation & Roundwood production process. AGB (Above Ground Biomass) = Exp (-2.997 + ln (WD x (GBH)2 x Length) = Exp (-2.997 + ln (0.45 x (0.2)2 x 1.5) = 7.2 Kg per Tree per Day. Above Ground Carbon = Above Ground Biomass x 0.5 = 7.2 Ton x 0.5 = 3.6 Ton 3.6 x 44 □ CO2 = 12 = 13.2 Kg per Tree per Day No. of Trees with GBH of 0.2 m = 972-Nos existing, and additional 178-Nos would be planted in the expansion plan, and hence with 1150-Nos of trees, the total sequestration that can be done is 5457-Tonnes Per Year whereas, the total CO2 that would be generated from the operation of this plant will only be 1020 Tonnes Per Year

20. The estimated project cost for this proposed expansion alone is Rs 16.27 Crores & that of the existing plant is Rs.13.73 Crores Total Employment upon this proposed expansion will be 300-Nos including Direct & In- Direct Employment.

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 plant layout with adequate greenbelt, advised the PP to submit the revised Greenbelt development plan. 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 the 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 of1.42 Ha , by planting 238 additional 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 Director opeartion- HQ (QA, QC, PRODUCTION, EHS, HOD ENGG- HOD MKTG- HOD PURCHASE- HOD STORES-HOD-HR). 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 ₹ 6.5 Crores (Capital cost) and ₹ 1.43 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 shall be 172.8 KLD of which 94.9 KLD shall be treated & recycled water for use back in the process, and hence fresh water make-up required daily will only be 77.9 KLD, which shall be met from SIPCOT. The PP should ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawal only after obtaining valid agreement from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year.

(v) The total domestic sewage that shall be generated of 11.5 KLD shall be treated in the existing STP of 10 KL Capacity based on Sequential Batch Reactor, each batch of 12 Hrs Duration and thus the capacity of existing STP is 20 KL. Treated domestic sewage shall be entirely be used for green belt development. ETP of 38.5 KLD for waste water generated from mineral salt unit, which shall be proposed to be upgraded to 73.5 KLD and an additional ETP II proposed to treat and recycle/reuse 24 KLD waste water from API unit The plant shall 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.

Agenda No. 51.13

Establishment of "Active Pharmaceutical Ingredients (APIs) and Intermediates Manufacturing Unit" production capacity of 37 TPM (any 10 products out of 32 products at a given point of time) located at Plot Nos. 38 & 39-P, Kadechur Industrial area, Yadagir Taluk & District, Karnataka by M/s. YSR Pharma Pvt. Ltd. - Consideration of EC

[Proposal No. IA/KA/IND3/428290/2023; File No. IA-J-11011/540/2022-IA-II(I)]

1. The proposal is for the grant of environmental clearance to the project for Establishment of "Active Pharmaceutical Ingredients (APIs) and Intermediates Manufacturing Unit" production capacity of 37 TPM (any 10 products out of 32 products at a given point of time) located at Plot Nos. 38 & 39-P, Kadechur Industrial area, Yadagir Taluk & District, Karnataka by M/s. YSR Pharma Pvt Ltd.

2. The project/activity is covered under Category 'A' of item 5(f), Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates) of Schedule of Environment Impact Assessment (EIA) Notification2006 (as amended) as the General condition is applicable due to presence of (interstate boundary within 5 km) since the Karnataka - Telangana interstate boundary is at 2.37 km in South direction. Therefore, the project requires appraisal at Central Level.

3. The ToR has been issued by Ministry vide letter No. F. No. IA-J-11011/540/2022-IA-II(I) dated 06.01.2023. The PP submitted that Public Hearing is not required for the proposed project as it is located at KIADB, Industrial area – Kadechur Industrial Area. EC was granted by MOEFCC dated 14.10.2016. The PP applied for Environment Clearance in Common application form and submitted EIA/EMP Report and other documents. The PP reported that it is a **Fresh EC.** The proposal is placed in 51st EAC Meeting held on 16th-17th May, 2023 wherein the Project Proponent and an accredited Consultant, M/s. AM Enviro Engineers [Accreditation number NABET/EIA/2023/SA 0167 (Rev.01) valid till June 30, 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 12,140.60 m^2 and no R& R is involved in the Project. The details of products and by–products are as follows:

Sl. No.	Product Name	Qty (TPM)	CAS Number	Therapeutic use
1	Cis Bromo Benzoate	1	61397-56-6	Used in industrial applications like synthetic hormones, veterinary products, vitamins, amino acids, etc.
2	**Ambroxol hydrochloride**	1	23828-92-4	For the treatment of children with acute and chronic respiratory diseases
2 (a)	trans-4-Aminocyclohexanol	0.3	27489-62-9	Treatment of respiratory diseases associated with viscid or excessive mucus
2 (b)	2-amino 3,5 dibromobenzaldehyde	0.7	50910-55-9	Ambroxol hydrochloride Intermediate
3	**Fexofenadine hydrochloride**	1	153439-40-8	To relieve the symptoms of hay fever and hives of the skin (chronic idiopathic urticaria)
3 (a)	2,2 di methyl phenyl acetic acid	1.3	826-55-1	Fexofenadine hydrochloride Intermediate

Sl. No.	Product Name	Qty (TPM)	CAS Number	Therapeutic use
3 (b)	methyl 2-(4-(4 chlorobutanoyl) phenyl)-2-methylpropanote	1.1	154477-54-0	Fexofenadine hydrochloride Intermediate
3 (c)	Azacyclonol	0.8	115-46-8	Fexofenadine hydrochloride Intermediate
4	Niclosamide	1	50-65-7	To treat broad or fish tapeworm, dwarf tapeworm, and beef tapeworm infections
5	4-Chlorobenzophenone	1	134-85-0	Used for the preparation of functionalized Coumarin derivatives.
6	Bimatoprost	2	155206-00-1	Treats high pressure in the eye (ocular hypertension) and helps with glaucoma
7	Dabigatran Etexilate Mesylate	1	872728-81-9	To treat blood clots in the veins of legs (deep vein thrombosis) or lungs (pulmonary embolism)
8	3,4-Ethylenedioxythiophene	1	126213-50-1	-
9	Domperidone	1	57808-66-9	To treat stomach pain during end-of-life care (palliative care)
10	Loratadine	1	79794-75-5	To temporarily relieve the symptoms of hay fever (allergy to pollen, dust, or other substances in the air) and other allergies.
11	Triphenylphosphine	10	603-35-0	It is used as basic chemical in synthesis and as intermediate for production of complexing agents, reducing agents, process regulators, and pharmaceuticals.
12	Triphenylphosphine Oxide	5	791-28-6	-
13	Oxyclozanide	1	2277-92-1	Used for the treatment and control of fascioliasis in cattle, sheep and goats.

Sl. No.	Product Name	Qty (TPM)	CAS Number	Therapeutic use
14	Closantel	1	57808-65-8	Used to treat liver fluke in cattle and sheep.
15	Rafoxanide	1	22662-39-1	For treating F. hepatica infection in sheep and cattle.
16	Molnupiravir	2	2492423-29-5	For treatment of mild to moderate coronavirus disease (COVID-19) in adults with a positive SARS-COV-2 diagnostic test
17	Oseltamivir phosphate	1	204255-11-8	For treatment of the infection caused by the flu virus (influenza A and influenza B)
18	Pantoprazole sodium	1	138786-67-1	Used for heartburn, acid reflux and gastro-oesophageal reflux disease (GORD)
19	**Dabigatran**	1	211915-06-9	To treat deep vein thrombosis (DVT; a blood clot, usually in the leg) and pulmonary embolism (PE; a blood clot in the lung)
19 (a)	2-(4-Cyanophenylamino) acetic acid	0.3	42288-26-6	Dabigatran Intermediate
19 (b)	Ethyl 3-(2-(4-carbamimdoylpheny)amino)methyl)-1-methyl-N-(Pyridin-2-yl)-1H-benzo[d]imidazole-5-carboxamido)propanate	1.0	-	Dabigatran Intermediate
20	**Olemesartan**	3	144689-63-4	To treat high blood pressure
20 (a)	Ethyl-4-(1-hydroxy-methylethyl)-2-propyl-imidazole-5-carboxylate	6.0	144689-93-0	Olemesartan Intermediate
20 (b)	4-Chloromethyl-5-Methyl-1,3-Dioxol,2-One(DMDO Chloro)	5.3	80841-78-7	Olemesartan Intermediate
20 (c)	5-(4'-Bromomethyl-1,1' –Biphenyl-2-yl)-1-Triphenylmethyl-1H-Tetrazole (TTBB)	5.0	124750-51-2	Olemesartan Intermediate
21	Telmisartan	3	144701-48-4	To treat high blood pressure (hypertension)

Sl. No.	Product Name	Qty (TPM)	CAS Number	Therapeutic use
22	Trityl chloride	1	76-83-5	-
23	**Vildagliptin**	1	274901-16-5	Used for the treatment of Type 2 diabetes mellitus.
23 (a)	Trifluoro acetic acid	1	76-05-1	Vildagliptin Intermediate
24	Rivaroxaban	1	366789-02-8	Used to treat and prevent deep venous thrombosis (DVT)
25	Rosuvastatin calcium	1	147098-20-2	To reduce the risk of heart attack and stroke and to decrease the chance of heart surgery
26	Sertraline hydrochloride	1	79617-96-2	Used to treat obsessive-compulsive disorder, panic disorder, post-traumatic stress disorder, premenstrual dysphoric disorder, and social anxiety disorder.
27	**Favipiravir**	3	259793-96-9	An antiviral drug used to treat COVID-19 patients having mild to moderate symptoms.
27 (a)	5-Bromo-2-chloro benzoic acid	4.8	21739-92-4	Favipiravir Intermediate
27 (b)	6-Bromo-3-Hydroxy Pyridine-2-Carboxamide	6.8	259793-88-9	Favipiravir Intermediate
28	Meldrum's acid	3	2033-24-1	Meldrum's acid derivatives have antibacterial properties against MDR bacterial strains.
29	Sunitinib maleate	2	341031-54-7	To treat adults with: Gastrointestinal stromal tumor (a type of stomach cancer)
30	**Bilastine**	3	202189-78-4	Used in the treatment of allergic conditions
30 (a)	2-Ethoxyethyl-4-methylbenzenesulfonate	2.6	17178-11-9	Bilastine Intermediate
30 (b)	2-Piperidin-4-yl-1H-benzoimidazole	1.8	38385-95-4	Bilastine Intermediate
30 (c)	2,3,4,5-Bis-O-(1-methylethylidene)-B-D-fructo pyranoside	3.0	-	Bilastine Intermediate

Sl. No.	Product Name	Qty (TPM)	CAS Number	Therapeutic use
31	**Ritonavir**	3	155213-67-5	To treat human immunodeficiency virus (HIV) infection
31 (a)	((5-thiazoly)methyl)-(4-nitrophenyl)carbonate	3.0	144163-97-3	Ritonavir Intermediate
31 (b)	5-Hydroxymethylthiazol	0.8	38585-74-9	Ritonavir Intermediate
31 (c)	Carbonic acid 4-nitrophenyl-5-thiazolylmethylester	1.8	144163-97-3	Ritonavir Intermediate
31 (d)	(2S,3S,5S)-5,Amino-2-(N-2(5-thiazolyl)-methxycarbonyl)amino))-1,6-diphenyl-3-hydroxyhexane	1.8	-	Ritonavir Intermediate
31 (e)	N-[[N-Methyl-N-[(2-Isopropyle]-4-thizoly)methyl)amino]carbonyl-L-valine carboxylic acid	3.5	-	Ritonavir Intermediate
32	**Valsartan**	1	137862-53-4	To treat high blood pressure (hypertension)
32 (a)	L-valine methyl ester hydrochloride	0.6	6306-52-1	Valsartan Intermediate
32 (b)	4-Bromomethyl-2-cyanobiphenyl(bromo OTBN)	1	114772-54-2	Valsartan Intermediate
	TOTAL (any 10 products at a time)	**37**		

Note: From the above list of products, any 10 products will be manufactured at a given point of time.

LIST OF BY-PRODUCTS

S. No.	Name of the Product	Name of the By-product	Quantity in Kg/Day
1.	Ambroxol Hydrochloride	Manganese Chloride	10.52
2.	Bimatoprost	Tri phenyl phosphonium bromide	85.96
3.	Domperidone	Sodium acetate	23.63
		Ammonia sulphate	25.04
		Ammonium Chloride	6.69
		Sodium bromide	12.85
		Ammonium Chloride	5.05
4.	Loratadine	Potassium chloride	15.87
5.	Oseltamivir Phosphate	Tert-butyl chloride	9.89
6.	Olmesartan	Trityl chloride	57.95
7.	Telmisartan	Sodium bromide	25.82
		Sodium acetate	18.10
8.	Rivaroxaban	Potassium chloride	12.52

S. No.	Name of the Product	Name of the By-product	Quantity in Kg/Day
		Tri ethyl amine Hydrochloride	34.14
9.	Rosuvastatin Calcium	Meta chlorobenzoic acid	73.28
		Ethanol	6.85
10.	Sertraline Hydrochloride	Hydroxy phenyl acetic acid	16.44
11.	Meldrum's Acid	Calcium Acetate	205
12.	Sunitinib Maleate	Potassium chloride	58.07
13.	Ritonavir	Sodium acetate	53.95

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

6. The PP reported that there are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Bhima River is flowing at a distance of 8.8 km SW in direction. The PP reported that no Schedule-I species exist within 10 km study area of the project.

7. **Air**-Ambient air quality monitoring was carried out at 8 locations during December 2022 to February 2023 and the baseline data indicates the ranges of concentrations as: PM_{10} (67.63 – 73.84 $\mu g/m^3$), $PM_{2.5}$ (32.60 – 43.53 $\mu g/m^3$), SO_2 (18.92 – 24.31 $\mu g/m^3$) and NO_2 (29.0 – 41.60 $\mu g/m^3$). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.6 $\mu g/m^3$, 0.1 $\mu g/m^3$ and 0.3 $\mu g/m^3$ with respect to PM_{10}, SO_2 and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). Similarly, for Ground Water, Surface Water, Soil and Noise monitoring was carried out. **Noise -** Ambient noise levels monitoring locations were selected by considering the sensitive receptors. Noise monitoring was conducted in 6 locations (4 in project site & other 2 in buffer area). A sound level meter was used for measuring the noise level at one-hour interval continuously for 24 hours at 1.5 m above ground level from wall, building or other sound reflecting sources. The daytime noise level at the Project site were observed to be in the range of 52.5 dB (A) to 54.4 dB(A), which is below the permissible limits of 75 dB (A) for industrial zone. The night-time noise level in the Project site were observed to be in the range of 41.9 dB (A) to 43.2 dB (A), which is below the permissible limits of 70 dB (A) for industrial zone. **Water -** Water Monitoring locations were selected by studying drainage pattern and hydrogeological condition of the study area. Total 11 number of water samples (8 - groundwater samples & 3 - surface water samples) were collected as per CPCB guidelines of Water Quality Monitoring. And the samples were analyzed for their physicochemical parameters as per IS 10500-2012. The pH of the ground water samples collected was in the range between 6.97 – 7.84. Total dissolved solids in the ground water samples were in the range between 654 – 1260 mg/l. Total hardness was found to vary between 290 - 530 mg/l. The Chlorides concentration was found to vary between 112.0 – 340.0 mg/l. The Sulphates concentration was found to vary between 35.1 – 81.3 mg/l. Fluoride concentration in all samples are found to be below permissible limits of 1.5 mg/l. Most of the heavy metals were not detected. Overall, the ground water is potable and suitable for domestic use. The pH of surface water sample collected were in the range between 7.23 – 7.38. Total

dissolved solids in the samples were in the range of 340 - 510 mg/l. Total hardness was found to be between 180 - 240 mg/l. Chloride's concentration was found to be between 62 - 90 mg/l. Fluoride concentration was found to be between 0.2 – 0.4 mg/l. Sulphate's concentration was found to be between 15.1 – 23.1 mg/l. Each of the parameter analyzed conforms to all the class criteria **Soil -** The topsoil of the study area having higher proportion of sand and silt. The pH of the soil is neutral in nature (6.94-7.30) at all sampling points other than Rachanahalli. Electrical conductivity of the sample varied from 395 to 614 µS/cm, which indicates, no salinity ingress in the study area. Percentage of Total Organic Carbon is observed in between 0.52% to 0.78% indicating average sufficiency in nature for seven points other than Badiyal which showed 0.95%. The concentration of available Nitrogen, Phosphorous and Potassium in the samples signifies that the soil has sufficient nutrient content, and the area is fertile.

8. The PP reported that total water requirement is 142.6 KLD of which freshwater requirement of 90.8 KLD will be met from KIADB Water Supply. The total effluent of quantity is 63.8 KLD, out of which industrial effluent of 60.9 KLD will be sent to CETP, Kadechur and domestic effluent of 2.9 KLD will be send to septic tank (As per IS:2470 Part-I) followed by soak pit.

9. Power requirement will be 500 KVA which will be met from GESCOM (Gulbarga Electricity Supply Company Limited). DG sets of capacity 1X250 KVA and 1X125 KVA will be used as standby during power failure. Stack of height 6 m AGL will be provided as per CPCB norms to the proposed DG sets.

10. The boilers with capacities 1 X 2 TPH & 1 X 3 TPH (Briquettes/Coal), 2 Lakh kcal/Hr (Diesel fired), scrubbers of 2 X 500 cfm & 1 X 1000 cfm (Two stage) and cooling tower of 3 X 250 TR will be used. Multi-Cyclone separator with bag filters will be provided for the boilers for controlling the particulate emissions within the statutory limit of 115 mg/Nm^3.

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

S. No	Name of the Gas	Quantity in Kg/Day	Treatment Method	Disposal Method
1.	Hydrogen chloride	60.6	Scrubbed by using water media	Generated Dil. HCl will be reused within the industry
2.	Ammonia	149.1		Generated NH_4OH will be reused within the industry
3.	Sulphur dioxide	28.4	Scrubbed by using C.S. Lye solution	The generated effluent will be sent to CETP along with high TDS effluent.
4.	Hydrogen Bromide	116.6		
5.	Hydrogen Iodide	27.5		
6.	Methyl Chloride	18.0		
7.	Methyl Bromide	36.0		
8.	Hydrogen Fluoride	4.3		
9.	Ethyl chloride	14.4		

S. No	Name of the Gas	Quantity in Kg/Day	Treatment Method	Disposal Method
10.	Oxygen	78.2	Dispersed into atmosphere	-
11.	Propane	7.4		
12.	Nitrogen	66.7		
13.	Carbon dioxide	137.4		
14.	Hydrogen	136.56	Dispersed into atmosphere through flame arrester	-

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

S. No.	Category of HW	Name of HW	Quantity	Disposal Method
Hazardous waste generation from plant				
1.	5.1	Waste oils & Grease/ Used Mineral oil	0.2 KL/Annum	Agencies authorized by KSPCB
2.	5.2	Oil-Soaked Cotton	2 Kgs/month	KSPCB authorized Vendor
3.	20.3	Distillation Residue	1083.0 kgs/day	Store in secured manner and hand over to authorized cement industry for Co-processing
4.	28.1	Process Residues & Waste	1522.5 kgs/day	Store in secured manner and hand over to authorized cement industry for Co-processing/TSDF
5.	28.2	Spent Catalyst	206.9 kgs/day	Store in secured manner and hand over to authorized recycler
6.	28.3	Spent Carbon	96.5 kgs/Day	Store in secured manner and hand over to authorized cement industry for Co-processing
7.	28.4	Off Specification Products	2 TPM	Store in secured manner and hand over to authorized cement industry for Co-processing/TSDF
8.	28.5	Date expired products	500 Kgs/Month	Store in secured manner and hand over to authorized cement industry for Co-processing/TSDF
9.	28.6	Spent Solvents	300 KL/Month	Store in secured manner and hand over to authorized recyclers/cement industries
10.	33.1			

S. No.	Category of HW	Name of HW	Quantity	Disposal Method
		Detoxified-Container & Container Liners of Hazardous Chemicals and Wastes	300 No's/Month	After complete detoxification, shall be disposed to the outside agencies/buyers.
11.	33.2	Contaminated cotton rags or other cleaning materials	25 Kgs/month	Store in secured manner and hand over to KSPCB Authorized Vendor
12.	35.2	Spent ion exchange resin	150 kgs/annum	Sent to TSDF
13.	A1160	Used Lead Acid batteries	2 No's/Annum	Returned back to dealer/ Supplier
Other Solid Wastes				
14.	--	Coal ash	1400 kgs/day	Sent to Brick Manufacturers
15.	--	Briquette ash	3640 kgs/day	Sent to fertilizer industries
16.	--	Used PPE	6 Kgs/ Month	Sent to TSDF
17.	--	E- Waste	150 Kgs/ Annum	Authorized recyclers
18.	--	Plastic Waste	200 Kgs/ Annum	Authorized recyclers
19.	DB1010	Metal Scrap	3 TPA	Sale to outside agencies/ recyclers
20.	3.3	Used Filters (HEPA filters, Oil Filters etc.)	25 Nos /year	Sent to TSDF
21.	--	Used / Discarded RO Membranes	0.2 TPA	Sent to TSDF

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

Kg per day													
EFFLUENT WATER								SOLID WASTE					
Water in put	Water in Effluent	Organics in effluents	TDS	COD	HTDS	LTDS	Total Effluent	Organic	Inorganic	Spent carbon	Spent Catalyst	Process Emission	Distillation residue
332620.0	34110.7	621.6	3988.3	1567.3	27415.0	9774.9	37189.9	1299.1	223.4	96.5	206.9	759.8	1083.0

14. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 114.95 lakhs (capital) and the Recurring cost (operation and maintenance) will be about ₹ 26.50 lakhs per annum, Industry proposes to allocate Rs. 15 *lakhs* towards CER.

15. Industry will develop greenbelt in an area of 33.70 % ie., 4,091.69 m^2 out of total area of the project.

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

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

18. The PP reported that The total carbon emission from the project in operation phase will be 3189.07 Tons/Year and by adopting Greenbelt and Afforestation and solar energy consumption the amount of carbon offset that could be achieved will be 1756.37 Tons/Year. Therefore, net distribution of CO2 will be 1432.70 Tons/Year.

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

20. The estimated project cost is Rs. 25 Crores. Total Employment will be 75 persons.

21. **Deliberations by the EAC**

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

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

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

The EAC inter-alia, deliberated on green belt development, Carbon footprint, and advised the PP to submit the following:

- Details of greenbelt development plan.
- Submit to revalidate Carbon footprint.

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

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

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

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

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

(i) The PP shall develop Greenbelt over an area of at least 4091.69 m^2 by planting 1230 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). The budget earmarked for the plantation shall be kept in separate account and should be audited annually. PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of the expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.

(ii) A separate Environmental Management Cell (having qualified persons with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. PP shall engage HOD – Enviornment and safety- Dy manager (Enviornment) – Assistant Manager safety- 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 the previous year.

(iii) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. The budget propose under EMP is ₹ 114.95 lakhs Lakh (Capital cost) and ₹ 26.50 Lakh Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.

(iv) The total water requirement is 142.6 KLD of which freshwater requirement of 90.8 KLD shall be met from KIADB Water Supply The PP should ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawal only after obtaining valid agreement from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year

(v) The total effluent of quantity is 63.8 KLD, out of which industrial effluent of 60.9 KLD shall be sent to CETP, Kadechur and domestic effluent of 2.9 KLD shall be send to septic tank (As per IS:2470 Part-I) followed by soak pit.

(vi) 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.

(vii) 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.

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

(ix) 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.

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

(xii) The industrial effluent will be segregated based on the concentration of total dissolved solids (TDS). High TDS effluent of 42.6 KLD will be collected and neutralized in Equalization and Neutralization tank of capacity 50 KLD each and later on, will be sent to CETP. Low TDS effluent of 28.2 KLD (excluding domestic sewage) will be collected and neutralized in Equalization and Neutralization tank of capacity 35 KLD each and later on, shall be sent to CETP.

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

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

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

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

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

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

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

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

Agenda No. 51.14

Setting up of a Synthetic Organic Chemicals-API and Intermediates Manufacturing Unit of production capacity 62 TPM located at Survey no. 133 p6, Village: Pipaliya, Pipaliya Mahendaragadh Road, Taluka & District: Morbi, Gujarat by M/s. Kodel Lifescience LLP - Consideration of EC

[Proposal No. IA/GJ/IND3/427355/2023; File No. IA-J-11011/378/2022-IA-II(I)]

1. The proposal is for the environmental clearance for the Setting up of a Synthetic Organic Chemicals-API and Intermediates Manufacturing Unit of production capacity 62 TPM located at Survey no. 133 p6, Village: Pipaliya, Pipaliya Mahendaragadh Road, Taluka & District: Morbi, Gujarat by M/s. Kodel Lifescience 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 for the preparation of EIA/EMP Report was issued vide letter No. IA-J-11011/378/2022-IA-II(I) dated 23.9.2022. The PP applied for Environment Clearance in Common application form and submitted EIA/EMP Report and other documents. The PP reported that it is a **Fresh EC.** The proposal is placed in 51st EAC Meeting held on 16th-17th May,

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 12950 m^2; no additional land will be used for the proposed project. The details of products are as follows:

Sr. No.	Product Name	Quantity, MT/M	Group	CAS no. (product)	Type/ category of product (API/ intermediate)	Said API is used for/end use of said API
1.	Furosemide	25	A	54-31-9	API	To treat fluid retention edema and heart failure, liver diseases
2.	Chlorthalidone			77-36-1	API	To treat high blood pressure
3.	Hydrochlorthiazide			58-93-5	API	To treat high blood pressure
4.	Pregabalin			148553-50-8	API	To treat pain caused by nerve damage due to diabetes or shingles infection
5.	Ambroxol HCL			23828-92-4	API	To treat respiratory disease
6.	Amlodipine besylate			88150-42-9	API	To treat high blood pressure in adults and children 6 years and older.

7.	Metformin HCL			1115-70-4	API	To treat controlled high blood sugar
8.	Metoprolol Succinate			98418-47-4	API	to treat chest pain (angina), heart failure, and high blood pressure
9.	Propranolol HCL	20	B	318-98-9	API	To treat heart problems, help with anxiety and prevent migraines
10.	Clotrimazole			25593-75-1	API	To treat skin infection caused by fungus
11.	Torsemide			56211-40-6	API	To treat fluid retention edema and swelling that is caused by congestive heart failure, liver disease and kidney disease
12.	Atenolol			29122-68-7	API	To treat high blood pressure
13.	Cyclo hexanyl acetyl nitrile			6975-71-9	Intermediate (n-2)	Synthesis of 5-subsituated from nitriles and

						sodium azide
14.	Benzocaine			94-09-7	API	Local anesthetic
15.	Lidocaine			6108-05-0	API	Local anesthetic
16.	Lidocaine HCL			137-58-6	API	Local anesthetic
17.	Piroxicam			36322-90-4	API	Used to reduce pain, swelling and joint stiffness from arthritis
18.	Meloxicam			71125-38-7	API	To treat arthritis
19.	Dimethyl fumarate			624-49-7	API	To treat adults with relapsing forms of multiple sclerosis
20.	Mefanamic acid			61-68-7	API	To treat of short-term treatment of mild to moderate pain from various condition
21.	Carvidilol phosphate			610309-89-2	API	To treat high blood pressure and heart failure
22.	Metoprolol Tartrate			37350-58-6	API	to treat high blood pressure (hypertension)
23.	Albendazole	15	C	54965-21-8	API	To treat infection of

						nervous system caused by pork tapeworms
24.	Bromo OTBN			114772-54-2	Intermediate (n-2)	In treating high blood pressure Intermediate is used in IBERSARTAN, LOSARTAN, VALSARTAN, AZILSARTAN, TELMISARTAN
25.	Dex chlorpheniramine meleate			2438-32-6	API	To use relive symptoms of allergy, fever, and the common cold
26.	Febuxostat			144060-53-7	API	To treat hyperuricemia
27.	Fexofenidine hcl			83799-24-0	API	To treat fever and conjunctivitis
28.	Fluconazole			86386-73-4	API	To treat fungus and yeast infection
29.	Gabapentin			60142-96-3	API	To treat seizures by decreasing abnormal

						excitement in the brain
30.	Levocitrizine dihcl			130018-77-8	API	To treat relieve runny nose, sneezing, redness and itching, fever and allergic substance
31.	Levosulphide			15676-16-1	API	To treat dyspepsia, nausea and vomit also treat to second line
32.	Omeprazole			73590-58-6	API	To treat certain stomach and esophagus problems
33.	Ondancetron HCL			103639-04-9	API	Used to prevent nausea and vomiting caused by cancer, chemother apy, radiation therapy, and surgery
34.	Telmisartan			144701-48-4	API	To treat high blood pressure
35.	Diclofenac Sodium			15307-79-6	API	To use relive pain and joint stiffness caused by arthritis

	R&D	2	--	--		
	Total	**62**				

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 Sanctuary within 10 km distance from the project site. However, Wild Ass Sanctuary at 16.13 km in WNW direction. Pipaliya Pond at 1.44 km in WSW 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 20.1.2023.

7. The PP reported that the **Ambient air** quality monitoring was carried out at **8 locations** during **October 2022 to December 2022**. The baseline data indicates the ranges of concentrations as: PM_{10} (59.11 µg/m^3 to 86.35 µg/m^3), $PM_{2.5}$ (27.57 µg/m^3 to 50.7 µg/m^3), SO_2 (2.97 µg/m^3 to 14.79 µg/m^3) and NO_2 (16.17 µg/m^3 to 37.89 µg/m^3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.0019 µg/m^3, 0.16 µg/m^3 and 0.4 µg/m^3 with respect to PM_{10}, SO_2 and NO_2 in case of Briquettes and would be 0.03 µg/m^3, 0.2 µg/m^3 and 0.4 µg/m^3 with respect to PM_{10}, SO_2 and NO_2 in case of Indonesian coal. 0.18 µg/m^3 Br_2,0.015 µg/m^3 Cl_2, 0.14 µg/m^3 for HCL, 0.2 µg/m^3 for NH_3.The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). **Noise:** The maximum noise level measured in the study area was 74.5 dB (A) in day time and 58.3 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 of the residential area ranges from 33.5 – 55.6 dB (A) in the day time and 29.3 – 45.2 dB (A) in the night time. That of commercial area ranges from 42.2 – 64.6 dB (A) in day time and 43.9 – 55.5 dB (A) in night time and the noise levels of the silence zone ranges from 30.1 – 48.6 dB (A) in day time and 25.1 – 39.7 dB in night time. All the results are below the stipulated standards in day time as well as in night time. **Ground Water-** pH, TDS, Total hardness and Chloride were found more than the permissible limit, it may be due to sandstone formation of Cretaceous period and the salinity in the region. pH is found between 6.80 to 7.35 which is within the Acceptable limit. Calcium is found within the range of 47.4 to 1623.2 mg/L. It was observed within the permissible limit and above acceptable limit at all locations except at sarvad i.e. 1632.2 mg/L. Also, Magnesium ranges between 18.9 to 1057.1 mg/L. It was observed within the permissible limit and above acceptable limit at all locations except at sarvad i.e. 1057.7 mg/L. Total Hardness within the range of 311 mg/L to 8400 mg/L. TDS is found within the range of 740 to 8032 mg/L. Chloride is found within range of 233 to 3598 mg/L. Ground water is suitable for domestic and agricultural purpose after primary treatment and disinfection. **Surface water:** pH is found between 7.03 to 8.11 which is well within the acceptable limits. Chloride is found within the range of 94 to 237 mg/L which is well within the acceptable limit. Total Hardness is found within the range of 190 to 480 mg/L. Magnesium is found within the range of 26.7 to 58.3 mg/L. It is well within the permissible limit. Calcium is found within the range of 32.1 to 96.2 mg/L. It is well within the permissible limit. TDS is found within the range of 428 to 1192 mg/L. It is well within the permissible limit. DO is found within the range of 3.8 to 5.0 mg/L. COD is found within the range of 19.8 mg/L to 55.4 mg/L which may be due to the agriculture run off

and storm water runoff. Total coliform was found in Khevaliya pond, macchu river, mahendragadh, sarvad and pipaliya pond and it may be due to the cattle washing, presence of algae, and use of water for domestic activities, which may impact on health of persons who will use this water. soil- Based on pH values, soils of project area are neutral in reaction except soils of sarvad and Targhari villages are slightly alkaline.EC values are normal which shows normal soil. Organic carbon content of soils is low the probable reasons for such result may be that the farmers may not be using judiciously organic manures, burring crop residues in the soil after harvesting of crops and non-adoption of green manuring. CEC values varied from medium to high. This shows that soils of project area would have medium to high fertility level. As soils of project area seem to be sandy loam which is found to be medium. Calcium and Magnesium salts content in soil are found to be more than critical level (Ca < 25% of CEC and mg <4% of CEC) Nutrient availability of soil samples reveals that soils by large medium in N, low in P_2O_5 and high in K_2O. SAR values found to be medium, indicating that soils of project area are slightly salt affected. Bulk density ranged from 1.13 to 1.74 (g/cm3). Soils of project area seem to be compact in nature. In sum up, soils of project area are by and large area normal, low in organic carbon content and sandy loam with medium water holding capacity.

8. The PP reported that the total water requirement for proposed project will be 68.5 m^3/day (Fresh – 49.52 m^3/day + reuse – 18.98 m^3/day) which will be met from Bore Well. Effluent of **19.6** 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 the Power requirement for proposed project will be 250 KVA and has met from PGVCL. 125 KVA D. G. Set [Fuel: Diesel (32 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 Steam Boiler-1 of 2 TPH [Fuel: Briquettes (6.87 Ton/day) / Indonesian coal (4.99 Ton/day)], and Steam Boiler-2 of 3 TPH [Fuel: Briquettes (10.30 Ton/day) / Indonesian coal (7.49 Ton/day)]. Multicyclone separator followed by bag filter followed by alkali scrubber with common stack height of 40 m will be installed with boiler 1 and boiler 2.

10. **Details of Process Emissions Generation and its Management**: There will be process emission of Br_2, HCl, NH_3, H_2SO_4, Cl_2, VOCs from manufacturing activity. To control the emission, Dual stage condenser system followed by the Dual Stage Scrubber (Primary water + secondary media) followed by common activated carbon column will be provided with process reactor of API and intermediates.

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

Sr. No.	Description	Category	Quantity (MT/Annum)	Mode of Disposal
1.	ETP Sludge	35.3	35.64	Collection, storage and disposal at Approved TSDF site
2.	MEE residue	35.3	60.6	Collection, storage and disposal at Approved TSDF site

3.	Organic Residue	28.1	15	Collection, storage and disposal at Approved CHWIF site
4.	Distillation residue	28.1	372	Collection, storage and disposal at Approved CHWIF site
5.	Spent Carbon-process	28.3	55.8	Collection, storage and disposal at Approved CHWIF site
6.	Spent Catalyst	28.2	2.4	Collection, storage and disposal at Approved CHWIF site
7.	Expired Drugs	28.5	2	Collection, storage and disposal at Approved CHWIF site
8.	Off-Specification drugs	28.4	2	Collection, storage and disposal at Approved CHWIF site
9.	Spent Solvent	28.6	110.95	Collection, storage and disposal at Approved CHWIF site
10.	Spent HBr	28.1	61.8	Collection, storage and disposal at Approved CHWIF site or Rule 9
11.	Spent Carbon-APCM	35.1	250.90	Collection, storage and disposal at Approved CHWIF site
12.	Spent Solvent	28.6	22552.68	Will be reused in process
13.	Bleed liquor, NH3, H2SO4, Br2, HNO3, Cl2	35.1	230.8	Will be treated in inhouse MEE followed by ATFD or Rule 9
14.	Discarded Bags and Drums	33.1	133.77	Collection, storage & sold to authorized re-processors.
15.	Used Oil	5.1	0.5	Will be used as Lubricant or sold to registered recyclers.
16.	Bleed liquor HCL (30%)	35.1	62.4	Will be reused in process or Rule 9

12. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 221.35 lakhs (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 9236.98 lakhs per annum. Industry proposes to allocate 13.932 Lakhs towards CER.

13. The PP reported that Industry will develop greenbelt in an area of 33 % i.e., 4274 m^2 out of total area (12950 m^2) of the project.

14. The PP reported that Public Hearing (PH) Public Hearing for the Proposed project has been conducted by the State Pollution Control Board at the project site on **05/04/2023**.which was presided by the Resident Additional Collector & Additional District Magistrate, Morbi The main issues raised during the public hearing are related to how will the industry dispose of waste water coming out from process. 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
Wastewater	The technical representative of the industry thanked for upcoming of this industry and replied that two major streams will emerge from the industry which include high COD stream and low COD stream. After collection of process wastewater, it will be passed through ammonia stripper/ solvent stripping and then neutralized and passed through primary settling tank. The condensate water will then be recovered after being treated in a multiple effect evaporator and then combined with a low COD stream. After primary, secondary and tertiary treatment in this stream, the water will be reused in industrial process. Thus, the industry will maintain zero liquid discharge. Thus, there will be no adverse impact on the water environment by the industry.	Unit will provide ETP followed by MEE & ATFD for water pollution control measures and maintain ZERO LIQUID DISCHARGE. Capital Cost of ETP – 49.3 lakhs which includes in ETP cost. Recurring cost of ETP– **41.13 Lakhs per annum**.

15. The PP proposed to set up an Environment Management Cell (EMC) by engaging Partner-Environment engineer- Chemist (QA/QC)- 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**
Steps towards carbon reduction/sequestration after the Plant Commencement			
Renewable source of energy	The unit will install Solar Panel (100 KW) at Roof top of Industrial shed within 5 years.	101.12 MT CO_2 emission reduction per year (128000 units year per annum generated.)	10.03 %

CER activity for renewable source of energy	The unit will install Solar Panel (25 KW) in Gram-panchayat and school of Pipaliya and Mahendragadh villages within 3 years.	25.28 MT CO_2 emission reduction per year (32000 units year per annum generated)	2.51 %
Greenbelt (within Premises) according greenbelt plan	1283 no. of trees will be planted in 4274 m^2 (33.00%) area within the premises.	213.83 MT CO_2 per year sequestrate (after 5 years when tree will be matured)	21.22 %
Tree plantation for conservation of Schedule-I Species	Approx. 460 nos. of tress will be planted for conservation of Schdeule-1 species (Indian peafowl) in nearby villages.	76.66MT CO_2 per year sequestrate (after 5 years when tree will be matured)	7.61 %
Total CO2 to be sequestrate by plantation and reduce from Renewable source of energy		Approx. 416.89 MT CO_2 per year	41.37 %

18. The estimated project cost total after expansion is Rs 696.6 lakhs 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 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 APCM system, STP greenbelt deveopment pman and its budget and advised the PP to submit the following:

- Revised APCM system for the dryer exhaust.

- Sewage treatment plant for domestic effluent.
- Revised budgetof Greenbelt development

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 the 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 4274 m^2, by planting 1283 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 (QA/QC)- 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 ₹ 221.35 lakhs (Capital cost) and ₹ 236.98 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 68.5 m^3/day (Fresh – 49.52 m^3/day + reuse – 18.98 m^3/day) which shall 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 **19.6** m^3/day quantity shall be treated through Effluent Treatment Plant. STP shall alos be install to treat the domestic effluent. 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.

(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. 51.15

Proposed project for manufacturing of Synthetic Organic Chemicals of production capacity 597.5 TPM located at Plot no. 141-20 + 141-2E, Notified GIDC Industrial Estate, Ankleshwar, Dist. Bharuch, Gujarat by M/s Aum Vibrant Pharma LLP- Consideration of ToR

[Proposal No. IA/GJ/IND3/426235/2023; **File No. IA-J-11011/172/2023-IA-II(I)]**

1. The proposal is for the issue of ToR for preparation of EIA/EMP for the Proposed project for manufacturing of Synthetic Organic Chemicals of production capacity 597.5 TPM located at Plot no. 141-20 + 141-2E, Notified GIDC Industrial Estate, Ankleshwar, Dist. Bharuch, Gujarat by M/s Aum Vibrant Pharma 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/GJ/IND3/426235/2023** dated 22.11.2023. The proposal is now placed in the 51st EAC meeting held on 16th-17th May, 2023, wherein the PP made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

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

Sr. No.	**Name of Product**	**HSN Code / CAS No.**	**Production Capacity (MT/Month)**	**End Use**
1.	Para Nitro Benzoic Acid	62-23-7	35	Dyes & Intermediates
2.	Ortho Nitro Benzoic Acid	552-16-9		

Sr. No.	Name of Product	HSN Code / CAS No.	Production Capacity (MT/Month)	End Use
3.	Para Amino Benzoic Acid	150-13-0		
4.	Para Amino Benzamide	2835-68-9		
5.	Para Chloro Benzoic Acid	74-11-3		
6.	Ortho Chloro Benzoic Acid	118-91-2		
7.	3-Amino-4-Chloro Benzoic Acid	2840-28-0		
8.	3 Nitro 4 Methoxy Benzoic Acid	89-41-8	25	Dyes & Intermediates
9.	3 Amino 4 Methoxy Benzamide (Fast Red KL Base)	17481-27-5		
10.	3 Amino 4 Methoxy Benzanilide (Fast Red KD Base)	120-35-4		
11.	3 Nitro 4 Methoxy Benzanilide	97-32-5		
12.	5 Chloro 8 Hydroxy Quinoline	130-16-5	15	Dyes & Intermediates
13.	8 Hydroxy Quinoline	148-24-3		
14.	2,4 Di amino Toluene	95-80-7	35	Dyes & Intermediates
15.	1,8 Dinitro Naphthalene & 1,5 Dinitro Naphthalene	602-38-0 & 605-71-0		
16.	4 amino n (Tert Butyl) bezamide	93483-71-7		
17.	2-Amino-3,5 Di Bromo Benzaladehyde (ADBA)	50910-55-9		
18.	2,5 Dichloro Aniline (2,5 DCA)	95-82-9	60	Dyes & Intermediates
19.	3,4 Dichloro Aniline 6-Sulfonic Acid (3,4 DCASA)	6331-96-0		
20.	2-Chloro 5-Toludine 4-sulphonic acid (CLT Acid)	88-53-9		
21.	2-Chloro-4-Aminotoluene-5-Sulfonic Acid (2B Acid)	88-51-7	40	Dyes & Intermediates
22.	P-Toluidine-m-sulfonic acid (4B Acid)	88-44-8		
23.	3-Amino N-N Diethyl 4-Methoxy Benzene Sulphonamide (Fast Red ITR Base)	97-35-8		
24.	4-Chloro-o-toluidine (Fast red TR Base)	95-69-2		
25.	1 Phenyl 3 Methyl Pyrazolone (PMP)	89-25-8	40	

Sr. No.	Name of Product	HSN Code / CAS No.	Production Capacity (MT/Month)	End Use
26.	1-(4-Tolyl) Phenyl 3-Methyl 5 Pyrazolone (PT PMP)	86-92-0		Dyes & Intermediates
27.	3-Mehtyl 5-Pyrazolone	108-26-9		
28.	1-(3 Sulfo Phenyl) 3-Methyl- Pyrazolone (1,3 SPMP)	119-17-5		
29.	Naphthol AS	92-77-3	65	Dyes & Intermediates
30.	Naphthol ASLC	4273-92-1		
31.	Naphthol ASPH	92-74-0		
32.	Napthol ASITR	92-72-8		
33.	Naphthol ASTR	92-76-2		
34.	Naphthol ASOL	135-62-6		
35.	Naphthol ASBO	132-68-3		
36.	Naphthol ASBS	135-65-9		
37.	Naphthol ASD	135-61-5		
38.	Naphthol ASE	92-78-4		
39.	Naphthol ASG	91-96-3		
40.	Barbituric Acid	67-52-7		
41.	2,5-Dimethyl-P-Phenylene Diamine	6393-01-7	10	Dyes & Intermediates
42.	2-Amino Di Methyl Teraphalate	5372-81-6		
43.	Niclosamide (5-Chloro-N-(2-Chloro-4-Nitrophenyl)-2-Hydroxybenzamide)	50-65-7	1	Pharma / Intermediate
44.	Amlodipine Besylate(3-Ethyl 5-Methyl (4RS)-2-[(2-Aminoethoxy)Methyl]-4-(2-chlorophenl)-6-Methyl-1,4-Dihydropyridine-3,5-Dicarboxylate Benzenesulphonate)	111470-99-6	3.5	Pharma / Intermediate
45.	Bupropion Hydrochloride	31677-93-7	12	Pharma / Intermediate

Sr. No.	Name of Product	HSN Code / CAS No.	Production Capacity (MT/Month)	End Use
46.	Drotaverine Hydrochloride	985-12-6		Pharma / Intermediate
47.	Quetiapine Hemifumarate	111974-72-2		Pharma / Intermediate
48.	Telmisartan	144701-48-4		Pharma / Intermediate
49.	Sofosbuvir	1190307-88-0	10	Pharma / Intermediate
50.	Ursodeoxycholic acid	128-13-2		Pharma / Intermediate
51.	Phthaloyl Amlodipine	88150-62-3	15	Pharma / Intermediate
52.	Iso Amyl Acetate	123-92-2	1	Pharma / Intermediate
53.	Iso Amyl Propionate	105-68-0	1	Pharma / Intermediate
54.	Iso Amyl Butyrate	106-27-4	1	Pharma / Intermediate
55.	Phenyl Ethyl Acetate	103-45-7	1	Pharma / Intermediate
56.	Phenyl Ethyl Propionate	122-70-3	1	Pharma / Intermediate
57.	Methyl-3- Amino Crotonate	14205-39-1	5	Pharma / Intermediate
58.	Poly Allaylamine Hydrochloride	71550-12-4	200	Pharma / Intermediate
59.	Sevelamer Hydrochloride	152751-57-0		Hyper Phosphataemia
60.	Sevelamer Carbonate	845273-93-0		Hyper Phosphataemia
61.	Furosemide	54-31-9	20	Anti Diabetic
62.	Rabeprazole Sodium	117976-90-6		Pharma Intermediate
63.	Carvediol	72956-09-3		Hypertension
64.	Clopidogrel Bisulfate	120202-66-6		Heart attacks

Sr. No.	Name of Product	HSN Code / CAS No.	Production Capacity (MT/Month)	End Use
65.	R & D Products	--	1	--
		Total	**597.5**	

5. The PP reported that the Proposed land area is 8016 m^2.

6. The PP reported that There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Narmada river is flowing at a distance of ~7 km towards NNW direction.

7. The PP reported that the total water requirement is 445 m^3/day of which fresh water requirement of 333 m^3/day will be met from GIDC supply. Industrial effluent @142 KLD shall be treated in own ETP consisting of Primary, Secondary & Tertiary treatment and 140 KLD treated water shall be discharged into GIDC underground drainage system and conveyed to FETP of M/s. NCT, Ankleshwar which ultimately leads to deep sea for final disposal through pipeline. 2 MT ETP sludge shall be disposed to TSDF site. Domestic effluent of 4 m^3/day will be treated through Sewage Treatment Plant (STP) & treated water shall be used for greenbelt development & maintenance purpose.

8. Power requirement will be 500 KVA will be met from M/s. Dakshin Gujarat Vij Company Ltd. (DGVCL). 1 Nos. DG set of 500 KVA capacity. DG sets will be used as standby during power failure for proposed project. Stack (11 m Height) will be provided as per CPCB norms to the proposed DG Set.

9. The PP reported that the project, being in notified industrial area i.e., GIDC Industrial Estate, Ankleshwar vide Notification No. GHU ;8/2008-GID; 102004: 1496 DATED 1.4.2008 is exempted from the public hearing as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018.

10. Industry will develop greenbelt in an area of ~40 % i.e. 3210 m^2 out of total area of the project.

11. The estimated project cost is Rs. 45 Crore. The PP reported that Total Employment will be 30 Nos. persons as direct & 20 Nos. persons indirect after proposed new project shall become operational.

12. **Deliberations by the EAC:**

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

- Submit revised GB Calculation considering 80% survival rate and increased tree count to 964 nos.
- Submit Revised Hazardous Waste Matrix excluding the spent solvent category and to be shown as footnote.

The PP submitted the same and the EAC found these 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 status of the action plan, if any, prepared by the State Government/SPCB for the CPA needs to be provided.

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

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

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

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

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

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

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

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

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

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

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

(xiii) The PP shall develop Greenbelt over an area 3210 $m^{2.}$ Accordingly, 964 Number of saplings selected for greenbelt should have greater ecological value and should be of great utility value to the local population with emphasis on local and native species and the species which are tolerant to air pollution.

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

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

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

Any other item with the permission of the Chair:

Agenda No. 46.8

Proposed Expansion of Herbicides Product & Pesticide Specific Intermediates with production capacity from 1200 TPM to 4350 TPM located at Plot No. 3246 to 3251, 3325 to 3329, GIDC Estate Panoli, Ankleshwar, District Bharuch, Gujarat by M/s. Aero Agro Chemical Industries Limited - Consideration of EC

[Proposal No. IA/GJ/IND3/410132/2023; File No. J-11011/938/2008-IA-II(I)]

1. The proposal was recommended by the EAC in its 46th Meeting held on 30th-31st January, 1st February, 2023. Subsequently, the Ministry noted that even though the existing Project was granted EC in 2009, only 28 out of the 51 conditions have been complied with and the Project is also located in the CPA. Hence, the Ministry recommended that the previous EC conditions may be first complied with substantially before the EC for the expansion in CPA is granted and accordingly, the EAC may re-examine the proposal.

2. Accordingly, the PP was requested to ensure full compliance of the existing EC conditions and submit a latest certified compliance report from the IRO, MoEF&CC. The PP submitted the latest CCR from IRO, which was examined by the Ministry and the PP was asked to submit the time targeted action taken report for all the partly complied, agreed to comply, noted by the unit, not applicable and can't be ascertained conditions. The PP submitted the ATR and accordingly, the matter was placed before the EAC for its appraisal.

3. The EAC noted that two conditions i.e. (i) green belt, and (ii) eco developmental measures including community welfare measures were reported as partly complied by the IRO. Regarding the green belt compliance, the EAC noted that it had deliberated the matter in detail in the 33rd EAC meeting held in June, 2022 for ToR and deferred the proposal. Based on the action taken by the PP w.r.t green belt development, the EAC recommended ToR in the 36th EAC meeting held in August, 2022. Further, while recommending for EC in the said 46th meeting, the EAC inter-alia, deliberated on the progress made w.r.t green belt development and the following specific condition was also stipulated:

   "The PP shall develop an additional greenbelt over an area of at least 6600 $m^{2,}$ by planting approx. 2694 numbers of saplings within a year of grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft. The budget earmarked for the plantation shall be kept in a separate account and should be audited annually. The PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year". The Ministry may take appropriate action on non-compliance of the same.

4. Regarding the compliance to eco developmental measures including community welfare measures undertaken, the EAC noted that the PP has submitted only the amount paid to various organisations for CSR without any details of the activities undertaken, **which needs to be duly aunthenticated and submitted.**

5. W.r.t the agreed to comply, noted by the unit, not applicable and can't be ascertained conditions, these are not considered as non-complied/partly complied conditions**. The EAC noted them to be in order except for few conditions i.e. Specific Condition no. (vi), (xxii), (xxiv) and General Condiiton no. (xvii), wherein the PP claimed compliance without any documentary proof of the same, which needs to be submitted.**

<u>Agenda No. 43.3</u>

Setting up of manufacturing plant of 'Synthetic Organic Chemicals' [API & its Intermediates] located at Plot No. 7904/F, GIDC Estate Ankleshwar, Dist. Bharuch by M/s Apex Pharma Chem - Amendment in Environmental Clearance and Regularization of the EC granted by SEIAA, Gujarat

[Proposal No. IA/GJ/IND3/292501/2022; File No. IA-J-11011/469/2022-IA-II(I)]

1. The proposal was recommended by the EAC in its 43rd meeting held on 30th November, 1st & 2nd December, 2022. Subsequently, the Ministry noted that the EC was granted by the SEIAA Gujarat, which should have been submitted to and appraised at the Central level due to the applicablity of General Condition. It was decided by the Ministry that such proposals and their respective ECs as granted by the SEIAA, Gujarat be discussed between the concerned EAC and SEIAA in batches and based on the endorsements of EAC, the ECs granted by SEIAA, Gujarat be considered for regularization by the Ministry based on the recommendations of EAC.

2. Accordingly, the said proposals including this one was discussed in the meeting held with SEIAA and SEAC, Gujarat on 23rd - 24th March, 2023, wherein the EAC sought the revised briefs of the proposals confirming, inter-alia, the following:
   (i) As per the CEPI mechanism, provision of 40% greenbelt of total plot area is mandatory. If adequate land is not available within the premises, then as per the Ministry's O.M. dated 27.10.2020, the balance green belt of 40% shall be provided within the industrial estate only (As all projects discussed in the meeting are located within industrial estates).
   (ii) In case of Schedule-I species found through the baseline study, the conservation plan shall be prepared (if not done so yet) and submitted for approval to the Chief Wildlife Warden.
   (iii) In case of any notices/directions/legal actions issued/taken by the GPCB, the status of compliance/action taken by the project proponent on each of the issue (at the time of the grant of the EC).

3. The said revised brief was provided by the SEIAA, wherein it was reported that there there are no Schedule-I species and there is no violation, direction issued and court case for the project. Regarding the green belt, the EAC noted that the instant amendment includes addition of adjoining plot and increase in green belt area. The EAC had deliberated the issue of green belt development in the 41st and 43rd EAC meetings held in October and November, 2022. It was inter-alia, noted that the Unit is under Construction Phase. Unit has not converted EC into CTO and the Greenbelt Development work is under progress. Total plot area is 11626.99 sq. m. Green belt shall be developed in 4999.60 Sq. m. within premises (approx. 43%). Further, the following additional specific condition was recommended w.r.t green belt:

"About 1250 saplings shall be planted within one year considering a density of 2500 trees per ha. and 80% survival rate".

4. In view of the above, the EAC recommended for regularisation of the EC No. SEIAA/GUJ/EC/5(f)/1212/2020 dated 12.10.2020 granted to this project by the SEIAA, Gujarat.

Expansion of manufacturing plant of "Synthetic Organic Chemicals" (API & its intermediate) located at plot no. 7901/A+B+C/1, GIDC Estate, Tal: Ankleshwar, District-Bharuch, Gujarat by M/s. Dhiraj Can Co. Pvt. Ltd. - Regularization of the EC granted by SEIAA, Gujarat

1. The SEIAA, Gujarat had earlier granted EC vide letter dated 15.12.2021. Subsequently, M/s. Ninay Lifescience had applied to the Ministry for transfer of the said EC. The Ministry noted that the EC was granted by the SEIAA Gujarat, which should have been submitted to and appraised at the Central level due to the applicablity of General Condition. It was decided by the Ministry that such proposals and their respective ECs as granted by the SEIAA, Gujarat

be discussed between the concerned EAC and SEIAA in batches and based on the endorsements of EAC, the ECs granted by SEIAA, Gujarat be considered for regularization by the Ministry based on the recommendations of EAC.

2. Accordingly, the said proposals including this one was discussed in the meeting held with SEIAA and SEAC, Gujarat on 23rd - 24th March, 2023, wherein the EAC sought the revised briefs of the proposals confirming, inter-alia, the following:
   (iv) As per the CEPI mechanism, provision of 40% greenbelt of total plot area is mandatory. If adequate land is not available within the premises, then as per the Ministry's O.M. dated 27.10.2020, the balance green belt of 40% shall be provided within the industrial estate only (As all projects discussed in the meeting are located within industrial estates).
   (v) In case of Schedule-I species found through the baseline study, the conservation plan shall be prepared (if not done so yet) and submitted for approval to the Chief Wildlife Warden.
   (vi) In case of any notices/directions/legal actions issued/taken by the GPCB, the status of compliance/action taken by the project proponent on each of the issue (at the time of the grant of the EC).

3. The said revised brief was provided by the SEIAA, wherein it was reported that there there are no Schedule-I species and there is no violation, direction issued and court case for the project. Regarding the green belt, it was noted that the green belt condition in the EC mandates 33% as against the requisite 40% for the CPA/SPAs.

4. In view of the above, the EAC recommended that the PP may submit a time bound action plan for green belt development of 40% as per the Ministry's O.M. dated 27.10.2020 to the SEIAA, Gujarat, which may issue an amendment to the EC based on the recommendation of the SEAC. Accordingly, the EC granted by SEIAA may be regularized by the Ministry.

ANNEXURE-I

GENERAL EC CONDITIONS

- No further expansion or modifications in the plant, other than mentioned in the EIA Notification, 2006 and its amendments, shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change/SEIAA, as applicable. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry/SEIAA, as applicable, to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
- The PP shall strictly comply with the rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996, and Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016 and other rules notified under various Acts.
- The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.
- The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
- The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. The activities shall be undertaken by involving local villages and administration. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
- The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.
- A copy of the clearance letter shall be sent by the PP to concerned Panchayat, ZillaParishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.
- The PP shall also upload/submit six monthly reports on Parivesh Portal on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data to the respective Integrated Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.
- The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Integrated Regional Office of MoEF&CC by e-mail.

- The PP shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry and at **https://parivesh.nic.in/**. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.
- The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.
- This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.

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ANNEXURE-II

STANDARD TERMS OF REFERENCE

A. GENERIC TERMS OF REFERENCE

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

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

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

4) Site Details

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

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

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

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

6) Environmental Status

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

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

7) Environment Impact and Environment Management Plan

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

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

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

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

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

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

vi. Measures for fugitive emission control

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

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

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

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

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

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

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

8) Occupational health

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

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

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

9) Corporate Environment Policy

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

10) Corporate Environmental Responsibility (CER)

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

11) Additional studies/Measures to be considered

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

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

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

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

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

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

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Annexure-III

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

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

8.	**Dr. M. Ramesh** Scientist 'E' Ministry of Environment, Forest and Climate Change Indira Paryavaran Bhawan, Room No. V-203, Vayu Wing, Jor Bagh Road, New Delhi-110003 Tel. 011-20819338 E-mail: ramesh.motipalli@nic.in	Member Secretary

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MOM approved by

(Prof. Aniruddha B. Pandit)
Chairman

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