

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

Dated: 29.11.2022

MINUTES OF THE 42nd EXPERT APPRAISAL COMMITTEE (INDUSTRY-3 SECTOR) MEETING HELD ON 14th-15th NOVEMBER, 2022

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

Time: 10:00 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 appraised the Committee about the details of Agenda items to be discussed during this EAC meeting.

(iii) Confirmation of Minutes of the 41st Meeting of the EAC (Industry-3 Sector) held during 31st October –1st November through VC.

The EAC noted that the final minutes of the above meeting were issued after incorporating the comments offered by the members and approved by the Chairman. Subsequently, M/s Bayer Vapi Pvt. Ltd. (Agenda No. 41.10) requested for a few modifications in the MoM. The EAC confirmed the MoM with the following modifications:

Agenda No. 41.10

Proposed Expansion in Pesticide Technical and Pesticide Specific Intermediates Manufacturing Unit from 26572 MTPA to 30790 MTPA and By-products: 13639 MTPA to 17852 MTPA located at Plot No. 306/3, Phase II, GIDC Estate, Vapi, Valsad, Gujarat by M/s Bayer Vapi Pvt. Ltd. - Consideration of EC

[Proposal No. IA/GJ/IND3/404001/2022; File No. J-11011/300/2015-IA-II(I)]

1. The proposal was recommended by the EAC in its 41st Meeting held on 31st October & 1st November, 2022 and the MoM were published on 15.11.2022. The PP vide e-mail dated 17.11.2022 requested the following corrections in the MoM:

| Page No. of Minutes | Specific Point | Information as per Minutes of Meeting | Details to be Corrected | Remarks/ Justification |
|---------------------|----------------|--|---|---|
| Page no. 37 | Subject | Proposed Expansion in Pesticide Technical and Pesticide Specific Intermediates Manufacturing Unit from 26572 MTPA to 30790 MTPA and By-product: 13639 MTPA to 17852 MTPA located at Plot No. 306/3, Phase II, GIDC Estate, Vapi, Valsad, Gujarat by M/s Bayer Vapi Pvt. Ltd. - Consideration of EC | Proposed Expansion in Pesticide Technical and Pesticide Specific Intermediates Manufacturing Unit from 26572 MTPA to 30790 MTPA and By-products: 13639 MTPA to 17852 MTPA located at Plot No./Survey No. 306/3, 306/2, 148, 304/2+305/1+305/2+305/3, 305/5, 300 & 301, 302/1-2-3, 302/4&5P, 302/5/2 & 302/6, 302/7-8, 302/10, 302/11-12, 387 (60/P3), 391 (60/P5), 392 (61/P1), 393 (61/P2), 414 (73/1), 435 (81/2/P1), 441 (85/1/P1), 442 (86/1/P1), 443 (87/2), 444 (91/P1), 446 (92/2/1), 575 (135/1/P), 1049 (143 to 147), Phase II, GIDC Estate, Vapi. District Valsad, Gujarat by M/s Bayer Vapi Pvt. Ltd. - Consideration of EC | The EIA Report uploaded has all the plot nos. indicated of the proposed project site. |
| Page no. 37 | Point no. 1 | The proposal is for environmental clearance to the Proposed Expansion in Pesticide Technical and Pesticide Specific Intermediates Manufacturing Unit from 26572 MTPA to 30790 MTPA and By-product: 13639 MTPA to 17852 | The proposal is for environmental clearance to the Proposed Expansion in Pesticide Technical and Pesticide Specific Intermediates Manufacturing Unit from 26572 MTPA to 30790 MTPA and By-product: 13639 MTPA to 17852 MTPA located at Plot | The EIA Report uploaded has all the plot nos. indicated of the proposed project site. |

| Page No. of Minutes | Specific Point | Information as per Minutes of Meeting | Details to be Corrected | Remarks/ Justification |
|---------------------|----------------|---|--|--|
| | | MTPA located at Plot No. 306/3, Phase II, GIDC Estate, Vapi, Valsad, Gujarat by M/s Bayer Vapi Pvt. Ltd | No./Survey No. 306/3, 306/2, 148, 304/2+305/1+305/2+305/3, 305/5, 300 & 301, 302/1-2-3, 302/4&5P, 302/5/2 & 302/6, 302/7-8, 302/10, 302/11-12, 387 (60/P3), 391 (60/P5), 392 (61/P1), 393 (61/P2), 414 (73/1), 435 (81/2/P1), 441 (85/1/P1), 442 (86/1/P1), 443 (87/2), 444 (91/P1), 446 (92/2/1), 575 (135/1/P), 1049 (143 to 147), Phase II, GIDC Estate, Vapi. District Valsad, Gujarat by M/s Bayer Vapi Pvt. Ltd. | |
| Page no. 37 & 38 | Point no. 3 | The PP applied for ToR vide proposal number IA/GJ/IND3/281831 /2022 dated 5.7.2022 and the ToR has been issued by the Ministry, vide letter No J-11011/300/2015-IA-II(I) dated 8.9.2022. The PP submitted as the project site is in a Notified Industrial Area i.e., GIDC Industrial Area, Vapi. Thus, in accordance with Clause 7(i) (III) of EIA notification 2006 & OM J-11011/321/2016-IA. II(I) dated 27.04.2018. The PP | The PP applied for ToR vide proposal number IA/GJ/IND3/281831/2022 dated 5.7.2022 and the ToR has been issued by the Ministry, vide letter No J-11011/300/2015-IA-II(I) dated 8.9.2022. The PP submitted as the project site is in a Notified Industrial Area i.e., GIDC Industrial Area, Vapi. Thus, in accordance with Clause 7(i) (III) of EIA notification 2006 & OM J-11011/321/2016-IA. II(I) dated 27.04.2018. The PP applied for | <ul style="list-style-type: none"> Proposed project is Expansion project and project was submitted under expansion category. Project was appraised in 41st EAC meeting dated 31st October-1st November, 2022. |

| Page No. of Minutes | Specific Point | Information as per Minutes of Meeting | Details to be Corrected | Remarks/ Justification |
|---------------------|----------------|---|---|--|
| | | applied for Environment Clearance on 21.10.2022 in Form-2 and submitted EIA/EMP Report and other documents. The PP reported in Form-2 that it is a Fresh EC . The proposal was placed in 41 th EAC Meeting held on 18-19 October, 2022, wherein the PP and an accredited Consultant, EQMS India Pvt Limited [Accreditation number NABET/EIA/1922/R A0197 dated 15.03.2021 valid till 23.11.2022], made a detailed presentation on the salient features of the project and informed the following: | Environment Clearance on 21.10.2022 in Form-2 and submitted EIA/EMP Report and other documents. The PP reported in Form-2 that it is an Expansion in EC . The proposal was placed in 41 st EAC Meeting held on 31st October-1st November, 2022 , wherein the PP and an accredited Consultant, EQMS India Pvt Limited [Accreditation number NABET/EIA/1922/R A0197 dated 15.03.2021 valid till 23.11.2022], made a detailed presentation on the salient features of the project and informed the following: | |
| Page no. 38 | Point no. 4 | The PP reported that the proposed land area is 34.8 Ha and no R& R is involved in the Project. The details of products are as follows: | The PP reported that the proposed land area is 34.8 Ha (29.3706 Ha manufacturing area located in GIDC + 5.4294 Ha (adjacent private land which is developed as green belt area)) and no R& R is involved in the Project. The details of products are as follows: | The EIA Report uploaded has all the details related to land area of proposed project site. |
| Page no. 43 | Point no. 13 | The PP reported that after expansion, total | The PP reported that after expansion, total | Additional details are |

| Page No. of Minutes | Specific Point | Information as per Minutes of Meeting | Details to be Corrected | Remarks/ Justification |
|---------------------|----------------|---|--|--|
| | | <p>water requirement of the plant will be 2890 KLD. Out of which 2530 KLD freshwater requirement shall be met through GIDC supply and rest 360 KLD from in-house treatment schemes. GIDC has already issued commitment letter to Bayer vide letter no. No./DEE/WS/NA/V PI/514 dated 04.08.2022 for supply of 2530 KLD fresh water. The facility has full-fledged wastewater pre-treatment plant (WWPT) and effluent treatment plants to treat wastewater (Domestic + Industrial) generated from plant. The wastewater is segregated at source and treated based on its characteristics viz. COD, TDS and BOD/COD Ratio. The wastewater pre-treatment plant comprised of Evaporators for treatment of high COD and high TDS streams, Fenton oxidation plant to treat streams having low biodegradability, stripper to separate</p> | <p>water requirement of the plant will be 2890 KLD. Out of which 2530 KLD freshwater requirement shall be met through GIDC supply and rest 360 KLD from in-house treatment schemes. GIDC has already issued commitment letter to Bayer vide letter no. No./DEE/WS/NA/V I/514 dated 04.08.2022 for supply of 2530 KLD fresh water. The facility has full-fledged wastewater pre-treatment plant (WWPT) and effluent treatment plants to treat wastewater (Domestic + Industrial) generated from plant. The wastewater pre-treatment plant comprise of Evaporators and Agitated Thin Film Dryer (ATFD) for treatment of high COD and high TDS streams (336 KLD), Fenton oxidation plant to treat streams having low biodegradability (21 KLD), stripper to separate low boiling liquid organic components in the wastewater (15 KLD) and H₂O₂</p> | <p>inserted as it will be required in Environmental clearance. Same details were mentioned in the EIA report uploaded and Annexure 1 submitted to MoEF&CC.</p> |

| Page No. of Minutes | Specific Point | Information as per Minutes of Meeting | Details to be Corrected | Remarks/ Justification |
|---------------------|----------------|--|--|---|
| | | low boiling liquid organic components in the wastewater. | treatment for streams containing unreacted sodium cyanide (31 KLD) and concentrated and toxic effluent streams (41 KLD/14965 MTA) will be incinerated in captive incinerators/Common Hazardous Waste Integration Facilities/send to authorized pre-processing and/or Co-processing Facilities. The ETP plant consists of primary, secondary and tertiary treatment plants. A part of treated wastewater, 800 KLD will be discharged to Common Effluent Treatment Plant operated by Vapi Green Enviro Ltd. (VGEL) and balance 450 KLD will be treated in Reverse Osmosis (RO) plant to recover water for recycling and reuse (360 KLD). 90 KLD Reject from RO/High TDS wastewater will be sent to common MEE. | |
| Page 43 & 44 | Point no. 14 | The PP reported that after expansion, total power requirement of plant will be 12000 | The PP reported that after expansion, total power requirement of plant will be 12000 | The EIA Report uploaded and Annexure 1 submitted to |

| Page No. of Minutes | Specific Point | Information as per Minutes of Meeting | Details to be Corrected | Remarks/ Justification |
|---------------------|----------------|--|--|--|
| | | KVA, being sourced through Dakshin Gujarat Vij Company Limited (DGVCL). For Power backup, DG sets of capacity 2x1500 kVA, will be installed in the unit along with existing DG sets of 3 x1500 kVA, 2x750 kVA. Bureau of Energy Efficiency (BEE) Star rated equipment are used in the plant to reduce the power consumption. | KVA, being sourced through Dakshin Gujarat Vij Company Limited (DGVCL). For Power backup, DG sets of capacity 2x1500 kVA, will be installed in the unit along with existing DG sets of 3 x1500 kVA, 2x750 kVA & 3x325 KVA . Bureau of Energy Efficiency (BEE) Star rated equipment are used in the plant to reduce the power consumption. | MoEF&CC has all the details related to already installed DG sets in the plant. |

2. Deliberations by the EAC:

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

Agenda No. 42.1

Proposed project of Methacrylate, Polyamide Resin, Adhesive, Polyurethane Resin, UV Monomer, Ketonic Resin, Epoxy Acrylate, Polyester Acrylate, Polyester Resin (Production Capacity: 2814 TPM) located at plot no. 1303/c, phase-III, notified industrial area, GIDC Vapi, Taluka Pardi, District Valsad, Gujarat by M/s Huber Group India Private Limited - Consideration of ToR

[Proposal No. IA/GJ/IND3/401000/2022; File No. IA-J-11011/410/2022-IA-II(I)]

1. The proposal is for the project of Methacrylate, Polyamide Resin, adhesive, Polyurethane resin, UV monomer, Ketonic resin, Epoxy acrylate, Polyester Acrylate, Polyester Resin (Production Capacity: 2814 TPM) located at plot no. 1303/c, phase-III, notified industrial area, GIDC Vapi, Taluka Pardi, District Valsad, Gujarat by M/s Huber Group India Private Limited. **The PP reported that the project is located in a Critically Polluted Area (CPA) as identified by the CPCB.**
2. The project/activity is covered under Category 'B' of item 5(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/IND3/401000/2022** dated 1.10.2022. The proposal was referred back to the PP on 9.10.2022 and its reply was submitted

on 7.11.2022. The proposal is now placed in 42th EAC Meeting held on 15-16th November, 2022, wherein the PP and an accredited Consultant, Eco Chem Sales & Services [Accreditation number –NABET/EIA/2023/SA 0156, Valid up to 3.2.2023] made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

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

| S. No. | Product | CAS Number | Capacity, MT/Month | End use of product |
|--------|--|-------------|--------------------|--|
| 1 | Methacrylates | 80-62-6 | 208.00 | Used in electronic industry, dental application, paints, coatings, sheets, etc. |
| 2 | Polyamide Resin | 63428-84-2 | 10.00 | Aerospace, automotive, oil & gas, wire enamel coatings, inks, electrical & electronic industries |
| 3 | Adhesives (Lamination Adhesive PU Solvent Base) and/or Lamination Adhesive PU Solvent Less | -- | 100.00 | Construction, woodworking, shoe production, and textile lamination |
| 4 | Polyurethane (Plasticizing Polyurethane Resin) and/or Film Forming Polyurethane Resin | 9009-54-5 | 10.00 | Construction, woodworking, shoe production, and textile lamination |
| 5 | UV Monomers | -- | 750.00 | Used for formulation of UV coating |
| 6 | Ketonic Resin (Ketonic Resin Grade 3) | 25052-06-2 | 208.00 | Useful in the manufacture of pvc lacquers and for polishing lacquers and finishes for the surface treatment of wooden furniture and articles and liquid inks |
| 7 | Epoxy Acrylates | 71281-65-7 | 1111.00 | Industrial, Building, and Construction, Aerospace, Automotive and coating and inks |
| 8 | Polyester Acrylate and/or | 921214-61-1 | 417.00 | Coatings and inks |

| | | | | |
|--|-------------------------------------|--|----------------|--|
| | Polyester Resin Solution in Monomer | | | |
| | Total | | 2814.00 | |

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 the proposed land area is 4122.00 m² and no R&R is involved in the Project.
7. The PP reported that the proposal does not involve Approval/Clearance under Forest (Conservation) Act,1980, Wildlife (Protection) Act,1972 and C.R.Z notification, 2011 as amended. There is no forest, Eco sensitive areas/National Park/Wildlife Sanctuary in 10 km radius of the site. The project doesn't fall within the CRZ boundaries.
8. The PP reported that the total water requirement is 446.00 KLD of which fresh water requirement of 155.00 KLD will be met from GIDC water supply department Vapi. Total industrial effluent generation will be 160 KLD. Out of which 15 KLD of cooling tower and boiler blow down will be separately treated in RO plant. 2 KLD of RO rejected and 145 KLD of other effluent will be treated in primary effluent treatment plant followed by MEE & ATFD. MEE/ATFD condensate will be recycled. 4 KLD of domestic effluents will be treated in STP. STP treated will be used for gardening. The plant will be based on Zero Liquid Discharge system.
9. The PP reported that the power requirement will be 1000 kVA and will be met from Dakshin Gujarat Vij Co. Ltd. (DGVCL). Unit has proposed 01 No. of D. G. set capacity of 1500 KVA. D. G. sets will be kept as standby and used during power failure. Stack (height 11.00 m) will be provided as per CPCB norms to the proposed DG sets.
10. The PP reported that the project, being in notified industrial area, is exempted from the public hearing as per the Ministry's O.M. J-11011/321/2016-IA.II(I) dated 27.04.2018.
11. Industry will develop greenbelt on an area of 40.03% i.e., 1650.00 m² out of total area of the project.
12. The estimated project cost is ₹ 35.58 Crores. The PP reported that the total employment will be 50 persons as direct & 15 persons indirect due to proposed project activity Industry proposes to allocate Rs. 142.32 Lakhs towards CER.
13. **Deliberations by the EAC:**

The EAC deliberated on the various environmental aspects such as air emissions and its mitigation measures, gaseous & fugitive emission control measures, water requirement, rain water harvesting, green belt development, carbon emissions and action plan proposed by the PP being in a critically polluted area.

The EAC also deliberated on the fuel and also advised for the usage of Natural Gas instead of Bio Coal/Briquettes as a fuel in the proposed Steam Boiler. The PP submitted an undertaking for the same.

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

- (i) The status of the action plan, if any, prepared by the State Government/SPCB for the CPA needs to be provided.
- (ii) The PP needs to submit the action plan with respect to mitigation measures for CPA mentioned in the Ministry's OMs dated 31.10.2019.
- (iii) Being in a Critically Polluted Area (CPA), the PP need to submit alternative site analysis and Environmental Cost Benefit analysis in the EIA report.
- (iv) The PP shall submit the details of carbon foot prints and carbon sequestration study w.r.t. the proposed project. The Action Plan for utilization of modern technologies for capturing carbon emitted and developing carbon sink/carbon sequestration resources shall also be prepared and submitted.
- (v) The PP should submit the photographs of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this, the PP should submit the original test reports and certificates of the labs which have analyzed the samples.
- (vi) Details of Onsite and Offsite emergency plans as per the provisions of the MSIHC Rules need to be submitted.
- (vii) The PP need to conduct the Life Cycle Assessment including the impact on flora and fauna.
- (viii) Industry shall use Natural gas as Primary Fuel for Boiler in the proposed 10 TPH capacity steam boiler.
- (ix) 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.
- (x) 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.
- (xi) 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.
- (xii) Action Plan for the management of hazardous waste and provision for its utilization in co-processing if applicable shall be prepared and submitted.

- (xiii) 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.
- (xiv) 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.
- (xv) The PP should develop Greenbelt over an area of 40.03% (i.e.1650.00 m²) of the total land area, accordingly the plant species selected for greenbelt should have greater ecological value and should be of great utility value to the local population with emphasis on local and native species and the species which are tolerant to air pollution. Approx. 1428 number of plantations have to be planted considering 80% survival rate and with a spacing of 2 m x 2 m.
- (xvi) Plan for development of the green belt outside the project premises such as avenue plantation, plantation in vacant areas, social forestry, etc. shall be prepared and submitted.
- (xvii) Assessment of the carrying capacity of transportation load on roads inside the notified industrial premises shall be carried out and submitted.
- (xviii) In addition to the above, the EIA/EMP report shall also address issues such as i) Effective fugitive emission control measures for process, transportation, packing etc. ii) use of cleaner fuels and iii) best available technology for the plant.

Agenda No. 42.2

Expansion of Existing Unit by addition of API (Paracetamol) Manufacturing Plant, located at Nangal-Una Road, Naya Nangal, Rupnagar District, Punjab by M/s Punjab Alkalies and Chemicals Ltd. – Re-consideration of Environmental Clearance.

[Proposal No. IA/PB/IND3/247968/2021; File No. IA-J11011/332/2018-IAII(I)]

1. The proposal is for environmental clearance for the Expansion of Existing Unit by addition of API (Paracetamol) Manufacturing Plant, located at Nangal-Una Road, Naya Nangal, Rupnagar District, Punjab by M/s Punjab Alkalies and Chemicals Ltd.
2. The project/activity is covered under Category ‘B2’ of item 5 (f) ‘Synthetic, Organic Chemicals Industry’ of the schedule to the Environment Impact Assessment (EIA) Notification, 2006. However, due to presence of interstate boundary within 5 km from Project Site, General condition is applicable to the project and requires appraisal at Centre by the EAC.

3. The PP applied for Environment Clearance vide proposal number **IA/PB/IND3/247968/2021** on 28.12.2021 in Form-2 and submitted PFR/EMP Report and other documents. The PP in the Form-1 reported that it is an **Expansion EC**. The PP submitted that the project is exempted from Public Hearing. Due to some shortcomings, the Project was referred back to the PP on 3.1.2022 and 15.1.2022 and reply to the same was submitted on 10.1.2022 and 18.2.2022. The proposal was placed in 27th EAC meeting, wherein the EAC deferred the proposal for the want of requisite information, and the proposal is now placed in the 42nd EAC Meeting held on 14-15 November, 2022, wherein the Project Proponent and an accredited Consultant, M/s. Kadam Environmental Consultants with Accreditation Number NABET/EIA/2023/SA 0164, valid till 19.3.2023, made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that the proposed land area is 80.6 acres and no R&R is involved in the Project. The details of products and by-products are as follows:

| S. No. | Product | CAS No. | Capacity (MTPA) | | | End Use of the Product |
|-----------------|--------------------------|-----------|---|----------|---------------------------|--|
| | | | Existing as per granted EC dated 7 th March 2020 | Proposed | Total | |
| Products | | | | | | |
| 1 | Caustic Soda Lye | 1310-73-2 | 2,64,000 | 0 | 2,64,000 | Pulp, Paper, Pharmaceuticals, Textile, ETP & other organic & inorganic chemicals |
| 2 | Hydrogen Gas | 1333-74-0 | 739.2 Lac Nm ³ | 0 | 739.2 Lac Nm ³ | In house usage: used as fuel in flaring and process boilers, will be used in Hydrogen Peroxide plant. It will be also sold to Petroleum refining and Pharmaceuticals units |
| 3 | Liquid Chlorine | 7782-50-5 | 2,33,904 | 0 | 2,33,904 | Dyes intermediates & Pharmaceuticals |
| 4 | Caustic Flakes* | 1310-73-2 | 66,000 | 0 | 66,000 | Pulp, Paper, Pharmaceuticals, Textile, ETP & other organic & inorganic chemicals |
| 5 | Stable Bleaching Powder* | 7778-54-3 | 33,000 | 0 | 33,000 | Water treatment plants, paper industries |
| 6 | Hydrogen Peroxide* | 7722-84-1 | 16,500 | 0 | 16,500 | Bleaching agent for Pulp, Paper, Textiles, Sugar, Coir & Tobacco Industries, Antiseptic agent, Sterilizing agent, Effluent treatment, Propellant for Rockets & Aircrafts, Chemical reagent for |

| | | | | | | |
|--------------------|-----------------------------------|-----------------|----------|---------------|---------------|---|
| | | | | | | extraction of different metals like Cobalt, Uranium, Tungsten, etc. |
| 7 | Aluminum Chloride | 7446-70-0 | 16500 | 0 | 16,500 | Used in dye, Chemicals & Pharmaceutical manufacturing |
| 8 | Paracetamol | 103-90-2 | 0 | 20,625 | 20,625 | Analgesic; Used to treat fever |
| Co-Products | | | | | | |
| 1 | Hydrochloric Acid | 7647-01-0 | 1,05,600 | 42,689 | 1,48,289 | ETP, other organic & inorganic chemicals |
| 2 | Sodium Hypo Chlorite | 7681-52-9 | 6,000 | 0 | 6,000 | Water purification, textile dyes |
| 3 | 5% Aluminum Chloride Solution | 7446-70-0 | 1815 | 0 | 1815 | Used in Dyes, Chemicals manufacturing |
| 4 | Dilute Sulphuric Acid | 664-93-9 | 5,600 | 20,180 | 25,780 | SSP, manufacturing of hydrochloric acid, nitric acid, sulphate salts, synthetic detergents, dyes and pigments, explosives, and drugs; Petroleum refining to wash impurities out of gasoline and other refinery products; Metal processing metals; Rayon manufacturing). |
| 5 | Para Di Chloro Benzene (PDCB) | 106-46-7 | 0 | 5,821 | 5,821 | Disinfectant, deodorant, pre cursor to polymers |
| 6 | Ortho Di Chloro Benzene (ODCB) | 95-50-1 | 0 | 3,604 | 3,604 | |
| 7 | Meta Di Chloro Benzene (MDCB) | 541-73-1 | 0 | 194 | 194 | |
| 8 | Tri Chloro Benzene | 120-82-1 | 0 | 97 | 97 | |
| 9 | Ortho Nitro Chloro Benzene (ONCB) | 88-73-3 | 0 | 12,870 | 12,870 | |
| 10 | Meta Nitro Chloro Benzene (MNCB) | 121-73-3 | 0 | 248 | 248 | Pre-cursor to Anti-Leprosy drug Dapsone & raw material for various Dyes |
| 11 | Dilute Acetic Acid | 64-19-7 | 0 | 18,563 | 18,563 | Used to make MCAA and other chemicals |

5. The PP reported that there is no violation case as per the Notification No. S.O.804(E) dated 14.03.2017 and court notice direction (Case no. 02/22) is issued under E(P) Act/Air Act/Water Act.
6. The PP reported that the Ministry had issued Environmental Clearance for the existing unit vide F. No. IA-J-11011/332/2018- IA II(I) dated 07th January, 2020 and certified compliance report of EC was issued by IRO Chandigarh vide letter dated 17.2.2022.
7. The PP reported that there are no National Parks, Wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Sutlej River is flowing at a distance of 2.0 km in East direction.
8. The PP reported that the total water requirement is 14,710 KLD of which fresh water requirement of 12,625 KLD will be met from River Sutlej by the Irrigation Department, Government of Punjab, through the existing Bhakra-Nangal dam project located nearby. Effluent of 2,038 KLD (1,926 KLD industrial + 112 KLD domestic) quantity will be treated through ETP-1 & ETP-2. The plant will be based on Zero Liquid discharge system.
9. The Power requirement after expansion will be 3.5 MW from own power plant for proposed project. Existing unit has 90 TPH CPP Boiler. Hence, no new Boiler will be installed for the proposed project.

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

| S. No. | Stack Attached to | Stack Details | | | | Pollutants | Air Pollution Control measures |
|-----------------------------------|------------------------------------|---------------|--------------|-----------|----------------|---------------------------------------|--------------------------------|
| | | Height (m) | Diameter (m) | Temp (°C) | Velocity (m/s) | | |
| Flue Gas Stacks (Existing) | | | | | | | |
| 1 | Boiler 1 (Thermax) | 40 | 0.55 | 125 | 12.5 | PM, SO ₂ , NO _x | Adequate Stack Height |
| 2 | Boiler 2 (Thermax) | 40 | 0.55 | 125 | 12.5 | PM, SO ₂ , NO _x | Adequate Stack Height |
| 3 | DG SET - 1 | 9 | 0.15 | 150 | 12.5 | PM, SO ₂ , NO _x | Adequate Stack Height |
| 4 | DG SET - 2 | 9 | 0.15 | 150 | 12.5 | PM, SO ₂ , NO _x | Adequate Stack Height |
| 5 | DG Set - 3 | 9 | 0.15 | 150 | 12.5 | PM, SO ₂ , NO _x | Adequate Stack Height |
| 6 | Rice Husk boiler (used as standby) | 30 | 0.8 | 120 | 10 | PM, SO ₂ , NO _x | Adequate Stack Height |

| | | | | | | | |
|--------------------------------------|--|----|------|-----|------|---------------------------------------|--|
| 7 | CPP Stack 1 – Boiler (90 TPH) | 60 | 2.2 | 150 | 15 | PM, SO ₂ , NO _x | ESP |
| 8 | CPP Stack 2 – Boiler (90 TPH) | 60 | 2.2 | 150 | 15 | PM, SO ₂ , NO _x | ESP |
| 9 | CPP Stack 3 - Boiler (90 TPH) | 60 | 2.2 | 150 | 15 | PM, SO ₂ , NO _x | ESP |
| 10 | CPP Stack 4 - Boiler (70 TPH) | 55 | 1.8 | 150 | 15 | PM, SO ₂ , NO _x | ESP |
| 11 | Flaker Stack | 30 | 0.2 | 150 | 15 | PM, SO ₂ , NO _x | Adequate Stack Height |
| 12 | DG SET – 4 | 9 | 0.15 | 150 | 12.5 | PM, SO ₂ , NO _x | Adequate Stack Height |
| | | | | | | | |
| 13 | DG SET – 5 | 9 | 0.15 | 150 | 12.5 | PM, SO ₂ , NO _x | Adequate Stack Height |
| Flue Gas Stacks (Proposed) | | | | | | | |
| No addition in Boiler, Hence No Load | | | | | | | |
| Process Vents (Existing) | | | | | | | |
| 1 | Sodium Hypo 1 | 15 | 0.15 | 45 | 7.5 | Cl ₂ | Alkali Scrubber |
| 2 | Sodium Hypo 2 | 15 | 0.15 | 45 | 7.5 | Cl ₂ | Alkali Scrubber |
| 3 | HCl Furnace 1 | 25 | 0.15 | 55 | 5 | HCl Acid Mist | Water Scrubbers |
| 4 | HCl Furnace 2 | 25 | 0.15 | 55 | 5 | HCl Acid Mist | Water Scrubbers |
| 5 | Sodium Hypo 3 | 15 | 0.15 | 45 | 7.5 | Cl ₂ | Alkali Scrubber |
| 6 | HCl Plant 3 | 25 | 0.15 | 55 | 5 | HCl Acid Mist | Water Scrubbers |
| 7 | Solvent Recovery H ₂ O ₂ | 32 | 0.4 | 45 | 2.5 | HC | Chiller, Demister, Activated Carbon Adsorbed |
| Process Vents (Proposed) | | | | | | | |
| 1 | HCl Scrubber (PAP) | 14 | 0.15 | 55 | 5 | HCl | Water Scrubbers |
| 2 | Chlorinator of MCB | 20 | 0.15 | 30 | 1.5 | Chlorine and HCl | Water and Caustic Scrubber |
| 3 | Nitrator of PNCB/ONCB/MNCB | 15 | 0.5 | 35 | 1.5 | NO _x | Caustic Scrubber |

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

| S. No | Waste | Category as per HW Rules 2016 | Source | Quantities Generated (MTPA) | | | Mode of Disposal |
|-------|------------------------------|-------------------------------|---|-----------------------------|----------|--------|--|
| | | | | Existing | Proposed | Total | |
| 1. | Brine sludge (mercury based) | 16.3 | Erstwhile mercury cell based Chlor-alkali process | 26,642 | 0 | 26,642 | Disposed of in Secured Landfill Facility (on dry basis) within PACL premises |
| 2. | Used or spent oil | 5.1 | Entire Site | 2.7 | 0 | 2.7 | Sold to authorized recyclers |
| 3. | MEE sludge | 35.3 | MEE | 1,750 | 2625 | 4375 | Disposed as per HW Rules 2016 |
| 4. | ETP Sludge | 35.3 | ETP | 0 | 2,500 | 2,500 | Sent to authorized TSDF as per HW Rules 2016 |
| 5. | Spent catalyst | 17.2 | Production of Caustic soda | 4,267 | 0 | 4,267 | Sold to actual reusers |
| 6. | Distillation Residue | 20.3 | MCB/PNCB/ONCB/MNCB | 0 | 1,400 | 1,400 | To CHWIF |
| 7. | Waste Carbon | 21.6 | Paracetamol | 0 | 205 | 205 | To CHWIF |

Solid Waste Generation & Disposal

| S. No. | Solid Waste | Quantity (MTPA) | | | Mode of Disposal |
|--------|-------------|-----------------|----------|-------|------------------|
| | | Existing | Proposed | Total | |
| | | | | | |

| | | | | | |
|----|---|--------|--------|--------|---|
| 1. | Brine Sludge | 6,133 | 0 | 6,133 | Although Brine sludge is not hazardous waste, the same is disposed to secured landfill facility developed inside PACL premises. |
| 2. | Fly Ash | 55,005 | 0 | 55,005 | Fly Ash is given to nearest Cement plant (Gujarat Ambuja Cement) & Brick manufacturing units (Baljinder Pal Soni). |
| 3. | Sodium Chloride (10% Moisture) (From PAP) | 0 | 18,810 | 18,810 | To Government agents for landfill as per instant Rules and Guidelines |

12. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 31.9 Crores (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 10.5 Crores per annum, Industry proposes to allocate ₹ 1.125 Crore towards CER.
13. Industry will develop greenbelt in an area of 35% i.e., 1,13,856 m² out of total area of the project.
14. The PP reported that Generally, 1 ha of greenbelt/forest can absorb between 3-10 Tonnes of CO₂ per Annum. Considering the middle value 6.5 Tonnes of CO₂ per year expected sequestration of CO₂ will be in the order of 6.5x11.39 = 74 Tonnes CO₂ per Annum. Total carbon foot print from project = **8,54,633.81** MT of CO₂/Annum Balance carbon foot print = 8,54,633.81-74 = 8,54,559.81 MT of CO₂/Annum. PACL is also committing to reduce carbon foot print by undertaking additional measures.
15. The PP submitted the Disaster and Onsite and Offsite Emergency Plans in the EIA report.
16. The estimated project cost is Rs. 150 Crores apart from existing investment of Rs. 1240 Crores. Total Employment will be 100 persons as direct & 20 persons indirect after expansion
17. The proposal was placed in 27th EAC Meeting held on March 7- 8 2022, wherein the EAC deferred the proposal for want of requisite information. Reply to the same is submitted by PP on 7.11.2022, which is as follows:

| S. No. | Queries Raised by EAC | Reply by PP | Observation of EAC |
|--------|--|---|---|
| 1. | The Integrated Regional Office, MoEFCC, vide letter number File No. 5-01/2020-ENV/104-105 dated 16.02.2022, has submitted the certified compliance report. The report, inter-alia, mentioned some non-compliances. The EAC deliberated and advised the PP to | Ministry vide email dated 28.02.2022 requested IRO Chandigarh to submit the verification report w.r.t the non-compliance observed in the certified monitoring report dated 17.2.2022. In reply, the IRO vide letter dated 23.03.2022 submitted detailed | The EAC found the reply submitted by the PP to be satisfactory. |

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| | submit the comparative list of EC conditions, vis-à-vis, non-compliances points as raised by IRO, MoEFCC; The Action taken report may be verified by the IRO, MoEFCC for further deliberations of the EAC; | evaluation on the basis of ATR submitted by the PP. | |
| 2. | EAC noted that PP has written “API & Intermediates both in Form-I”; however, the consideration of Cat B2 project API. In this regard PP needs to revise the Form-1 and resubmit: | Form 1 & PFR has been revised with Project title as EIA Report for Environmental Clearance for Proposed Expansion of Existing EC (F. No. IA-J-1011/332/2018- IA II(I) on dated 07 th January, 2020) by addition of API (Paracetamol) Manufacturing Plant for B2 Category at Naya Nangal, Dist. Rupnagar, Punjab. Revised Form 1 & PFR is attached in the ADS Reply uploaded during application | The EAC found the reply submitted by the PP to be satisfactory. |
| 3. | The PP shall revise the water balance and waste water treatment plan and the same may be submitted on Parivesh portal; | Details of water balance and waste water treatment plan and the same has been submitted. | The EAC found the reply submitted by the PP to be satisfactory. |
| 4. | The PP shall revise greenbelt plan along with timelines, species and budgetary allocations; | As per statutory guidelines and TOR condition of considering 1500 trees per hectare, as per EC granted dated 07.01.2020, total green belt area was to be developed for 1,13,856 m ² which works out to approx. 35% of the total area of 3,26,174 m ² . During Virtual meeting with MoEF dtd. 07.03.2022, however it was advised to consider 2500 trees per hectare and plan the green belt accordingly. Further during EC Amendment Review meeting held on 18.10.2022, Committee members deliberated that installation of trees @2500 trees per hectare should be done considering 80% survival rate. Considering 2500 trees per hectare & 80% survival rate, the total number of trees now worked out to 34,156 trees (i.e. 11.3 ha*2500/0.8=34,156). | The EAC found the reply submitted by the PP to be satisfactory. |

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| | | <p>Based on above revised criteria and improvement in COVID situation now, we have undertaken the plantation work on war footing scale. Total plantation has been achieved for 24,220 number of trees covering approx. 20 acres out of total requirement of 29 acres and plantation of balance 9,936 trees will be achieved before onset of next monsoon season.</p> <p>Layout of the plant indicating green area is attached in next slide. The details of Plant species are also attached in next slide.</p> <p>The total budget allocated for the green belt was Rs. 17,20,500/- for 5 years (@ Rs. 3,44,100/ year). Out of above, approx. Rs. 31,19,369/- have already been incurred as on 31.10.2022</p> | |
| 5. | The PP needs to submit the analysis report of effluents/emissions along with pollution control equipment's and their efficiency; | <p>The analysis report of effluents/emissions from third party i.e. PPCB for effluent water and Emissions (i.e Hypo Stack, HCl)</p> <p>The reports have been found conforming in totality to the requisite standards of the PPCB guidelines.</p> <p>Following Pollution control systems /equipment/devices having 100% efficiency are in continuous operation and use:</p> <p>Alkali Scrubber in hypo plant to control any Cl₂ Gas Water Scrubber in HCl plant to control HCl vapors</p> <p>Bag Filters in husk based Boiler to control particulate matter</p> | The EAC found the reply submitted by the PP to be satisfactory. |
| 6. | The PP needs to submit a list of products with production capacity (existing, expansion and total) and their EC/CTO details; | Details of products with production capacity (existing, expansion and total) and their EC/CTO has been submitted. | The EAC found the reply submitted by the PP to be satisfactory. |
| 7. | The PP needs to submit details of energy conservation measures proposed in the Unit; | In addition to implementation LED based lighting system various other | The EAC found the reply submitted by the PP to be satisfactory. |

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| | | <p>energy conservation measure are as below.</p> <p>Implementation of EMS system i.e. ISO 50001:2018 under BEE System.</p> <p>Installation of Energy Efficient 6th generation membrane technology which reduced per ton power consumption from 2750 units to 2300 units.</p> <p>Usage of Super washery and washery salt in place of non washery salt to reduce generation and handling of solid process wastes.</p> <p>Usage of only H₂ Gas in dual fired (FO/H₂) boilers. H₂ is our co product along with Caustic Soda and Chlorine. FO is used only during startup of the plant or during safe emergency shut downs.</p> <p>Usage of more energy efficient equipment's like screw compressors instead of reciprocating compressors, IE3 motors instead of IE2 & IE1, Energy efficient pumps, Usage of VFD's, Efficient Economizers and pre heaters etc.</p> | |
| 8. | The PP needs to submit details of implementation of environment conservation plan; | <p>The environment conservation plan has already been submitted and approved while getting EC on dtd. 07.01.2020. As per said plan we have to get this implemented through Government of Punjab, department of Forest and wildlife conservation as per the budget allocation of Rs. 45 Lacs for a period of five (5) years till year 2023-24. Out of which we have already transferred Rs. 38 Lacs till 2021-22 to the concerned department is given in next slide.</p> <p>The utilization certificate from Forest and wildlife dept. dated 09.03.2022 for utilized amount of Rs. 20,40,922/- and balance amount yet to be utilized for an amount of Rs. 17,59,078/</p> | The EAC found the reply submitted by the PP to be satisfactory. |

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| 9. | The Details of carbon foot prints and carbon sequestration w.r.t. proposed project needs to spell out; | <p>Generally, 1 ha of greenbelt/Forest can absorb between 3-10 Tonnes of CO₂ per Annum.</p> <p>Considering the middle value 6.5 Tonnes of CO₂ per year expected sequestration of CO₂ will be in the order of $6.5 \times 11.39 = 74$ Tonnes CO₂ per Annum</p> <p>Total carbon foot print from project = 8,54,633.81 MT of CO₂/Annum</p> <p>Balance carbon foot print = $8,54,633.81 - 74 = 8,54,559.81$ MT of CO₂/Annum</p> <p>Further, PACL is additionally committing to reduce carbon foot print by taking following actions</p> | The EAC found the reply submitted by the PP to be satisfactory. |
| 10 | The PP needs to explore the possibility to use of bio fuel in place of coal; and | <p>Presently there is no consumption of coal. This will come in use when power plant will come under operational phase. We have already considered using bio-mass along with coal.</p> <p>As per present, out of total approved 75 MW power plant, 35 MW Power project is under implementation, we have designed and finally approved by MOEF&CC in EC given in next slide. Accordingly, all related equipment have been Procured, received and are in implementation Stage. However,</p> <p>As per the commitment given during our EC Amendment application review by Expert Committee –III held on 18.10.2022, we will be exploring the possibility of using bio fuel to the maximum extent possible while installing balance 40 MW power project.</p> | The EAC found the reply submitted by the PP to be satisfactory. |
| 11 | The PP needs to submit the details of onsite/offsite emergency plan and mitigation measures to be proposed during implementation of the project. | Onsite/offsite emergency plan and mitigation measures to be proposed during implementation of the project is given in separate document as hyperlink and also provided in ADS reply uploaded during application. | The EAC found the reply submitted by the PP to be satisfactory. |

18. **Deliberations by the EAC:**

The EAC constituted under the provisions of the EIA Notification, 2006 comprising expert members/domain experts in various fields, examined the proposal submitted by the 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, justification for sewage water, firefighting and boiler losses, Hydrogen detector and measure carbon footprint, carbon sequestration details, Greenbelt development, fuels and advised the PP to submit the following:

- Revised water balance along with the justification.
- Measures in place for avoiding any hazard on account of hydrogen leak.
- Carbon footprint details from the proposed project.
- Carbon sequestration details and mitigation measures to sequester the carbon emission.
- Commitment for use of bio-fuel in balance 40 MW Power plant.

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.

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

- (i) The PP shall develop Greenbelt over an area of at least, 1,13,856 m² by planting 34,156 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 ₹ 3,44,100/ year and shall be kept in separate account and should be audited annually. PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of 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. In addition, one safety & health officer as per the qualification given in Factories Act, 1948 shall be engaged within a month of grant of EC. The PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.
- (iii) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. The budget proposed under EMP [₹ 31.9 Crores (Capital cost) and ₹ 10.5 Crores (Recurring cost)] shall be kept in a separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.
- (iv) The water requirement is 14,710 KLD of which fresh water requirement of 12,625 KLD will be met from River Sutlej by the Irrigation Department, Government of Punjab, through the existing Bhakra-Nangal dam project located nearby. The PP should ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawal only after obtaining prior permission from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year.

- (v) As Committed by the PP, shall install 2 MW solar power plant.
- (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 project proponent shall comply with the environment norms for Organic Chemical Industry as notified by the Ministry of Environment, Forest and Climate Change, *vide* GSR 608(E), dated 21.07.2010 under the provisions of the Environment (Protection) Rules, 1986.
- (ix) The 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.
- (x) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The PP shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.
- (xi) The volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97 % with effective chillers/modern technology. Regular monitoring of VOCs shall be carried out. 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) As committed by the PP, Zero Liquid Discharge shall be ensured. Effluent of 2,038 KLD (1,926 KLD industrial + 112 KLD domestic) quantity will be treated through ETP-1 & ETP-2.
- (xiii) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB servers. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
- (xiv) The storage of toxic/hazardous raw material shall be bare minimum with respect to quantity and inventory. Quantity and days of storage shall be submitted to the Regional Office of Ministry and SPCB along with the compliance report.

- (xv) The occupational health centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (xvi) Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.
- (xvii) The unit shall make the arrangement for 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. 42.3

Expansion in Dyes Manufacturing, Blending of Dyes & Repacking of SO Dyes Plant at Plot No. 195,195/3, Phase II, GIDC Vapi, Taluka Pardi, District Valsad by M/s Nitin Dye Chem Pvt. Ltd. - Reconsideration of Amendment in EC

[Proposal No. IA/GJ/IND3/286824/2022; File No. IA-J-11011/335/2022-IAII(I)]

1. The proposal is for amendment in the EC granted by the SEIAA, Gujarat dated 04/05/2019 for Expansion in Dyes Manufacturing, Blending of Dyes & Repacking of SO Dyes Plant at Plot No. 195, 195/3, Phase II, GIDC Vapi, Taluka Pardi, District Valsad by M/s Nitin Dye Chem Pvt. Ltd.
2. The proposal was placed in 37th EAC Meeting held on 29th-30th August 2022, wherein the EAC deferred the proposal for want of requisite information. Reply to the same was submitted by PP on 7.11.2022, which is as follows:

| S. No. | Queries Raised by EAC | Reply by PP | Observation of EAC |
|---------------|---|--|---|
| 1. | The PP needs to submit an action plan for greenbelt and to increase the number of trees, accordingly and mitigation measures for CPA mentioned in Ministry's OM dated 31.10.2019 & 24.10.2019 | At the time of submission of EIA Report, 33% of Greenbelt area was developed as per the guidelines and 894 Nos. of Trees were planted in the plant premises. Thereafter, Vapi GIDC was declared as critically polluted area and as per Ministry's OM dated 31.10.2019 & 24.10.2019 for CPA area there was a requirement of development of greenbelt to the tune of 40%. Accordingly, the requirement was additional 192 Nos. of trees and total of 1086 Nos. trees which we had committed to plant at the time of last presentation. As per the MoM, Total requirement is 1086 Nos. of Trees to meet the greenbelt requirement of 40 % of the plant area. We had taken up the greenbelt development and Now planted total 1200 Nos. of Trees. The trees have been numbered and SOP has been prepared for growth and maintenance of the greenbelt. | The EAC found the reply submitted by the PP to be satisfactory. |
| 2. | The PP need to submit the detail calculation of fuel cost weightage in the cost structure | Detail Calculation of fuel cost comparison for per tonne of product manufacturing considering natural gas v/s coal and briquettes is given below. As per cost calculation if we using natural Gas as fuel product manufacturing is not economically viable. | The EAC found the reply submitted by the PP to be satisfactory. |
| 3. | The PP also needs to submit the environmental impact from the proposed amendment. | Due to amendment in the treatment scheme (Installation of additional MEE/ATFD in place of RO Plant), there will be increase in hazardous waste generation quantity i.e. MEE/ATFD Salt. For disposal of additional Salt, Unit has already obtained TSDF Membership vide membership no. 282 dated 09.02.2017 from VGEL Vapi. | The EAC found the reply submitted by the PP to be satisfactory. |

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| | | <p>For Operation of MEE/ATFD, It is proposed to install additional one number of hot air generators of 10 lakhs k cal/hr capacity and two numbers of boilers with 2000 kgs/hr capacity of steam boilers and spray dryer of 2400 kgs/hr capacity. To control the emission, unit will provide MDC & water scrubber along with 30 m stack height with Hot air Generator, MDC, bag filter and wet scrubber along with 30 m stack height with 2 nos. of steam boiler and cyclone separator & water scrubber along with 30 m stack height with spray dryer.</p> <p>For verify the environmental impact due to proposed amendment we have carried out Air Quality Modeling for proposed amendment.</p> | |
| 4. | The PP is also required to submit the details of carbon foot prints and carbon sequestration study w.r.t. proposed project and details of onsite and offsite emergency plans. | <p>Carbon Foot Print: The Total set of greenhouse gas emission caused directly and indirectly by an individual organization, event or product mfg. is commonly called their Carbon Footprint.</p> <p>GHG Emission Calculation Category:</p> <p>1.) Scope-1 (Direct Emission) Direct GHG emissions occurring from sources that are owned or controlled by the Company.</p> <p>2.) Scope-2 (Indirect Emission) GHG emissions from the generation of purchased electricity consumed by the company.</p> <p>3.) Scope-3 (Indirect Emission) All other indirect emissions which are optional in terms of reporting are considered under this category.</p> | The EAC found the reply submitted by the PP to be satisfactory. |

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

| Sr. no. | Condition no. in | Details as per the EC | To be revised/read as | Justification/ reasons |
|---------|------------------|-----------------------|-----------------------|------------------------|
|---------|------------------|-----------------------|-----------------------|------------------------|

| | which changes proposed. | | | |
|----|--------------------------------|--|---|--|
| 1. | A2 (9) | Total water requirement for the project shall not exceed 352.5 KLD, Unit shall reuse 278.5 KLD (Condensate from MEE- 168.5 KLD & RO Permeate- 110 KLD for process within premises. Hence, fresh water requirement shall not exceed 74 KLD and it shall be met through GIDC water supply only. Prior permission from the concerned authority shall be obtained for withdrawal of water. | After Proposed EC Amendment, Total Water requirement will be 352.5 KLD, Unit shall reuse 276 KLD (Condensate from MEE & ATFD – 267.5 KLD and STP treated water 5 KLD and 3.5 KLD from blowdown and cooling tower) Hence, fresh water requirement will not exceed 76.5 KLD and it shall be met through GIDC Water supply department. | Due to change in wastewater treatment technology, minor reduction will be done in quantity of recycled water. Remark: Due to the proposed amendment, there will be no change in the overall water requirement it will remain same as 352.5 KLD. Only 2.5 KLD recycle water will decrease and 2.5 KLD fresh water will increase. Unit has also obtained water permission from GIDC. |
| 2. | A2 (10) | The industrial effluent generation from the project shall not exceed 327 KLD. | After Proposed EC Amendment, The industrial effluent generation from the project will be 320.5 KLD | After proposed EC amendment, there will be no change in CETP discharge quantity. It will remain same as 7.0 KLD |
| 3. | A2 (13) | 200 KLD Effluent generated from Boiler Blow Down, Cooling Tower Blow Down | After Proposed EC Amendment, Industrial Effluent will be treated in in house | Due to Changing in effluent treatment |

| | | | | |
|----|---------|--|--|--|
| | | generated shall be treated in RO, RO permeate 110 KLD shall be reused while RO - Reject 90 KLD shall in treated in in-house MEE | MEE I and II followed by ATFD & Spray Dryer and MEE & ATFD Condensate i.e 267.5 KLD will be reused in plant. | scheme from RO to MEE-II. |
| 4. | A2 (14) | Process effluent 120 KLD shall be subjected to MEE along with RO-Reject 90 KLD, MEE Condensate 168.5 KLD shall be reused back in process while Reject Salt shall be disposed at approved TSDF. | After Proposed EC Amendment, Process effluent 120 KLD will be treated in MEE followed by ATFD & Spray Dryer and MEE & ATFD condensate will be reused and ATFD/Spray dryer Salt will be disposed at approved TSDF. | -- |
| 5. | A2 (15) | Unit shall provide adequate effluent treatment plant (ETP), RO & MEE system for treatment of industrial effluent and it shall be operated regularly and efficiently so as to achieve the GPCB/CPCB/MoEF&CC norms at the inlet to the CETP. | After Proposed EC Amendment, Unit will provide adequate effluent treatment plant (ETP), MEE: I and II system followed by ATFD & Spray Dryer for treatment of industrial effluent and it shall be operated regularly and efficiently so as to achieve the GPCB/CPCB/MoEF&CC norms at the inlet to the CETP. | Unit will provide MEE-II followed by ATFD & Spray dryer and ETP for treatment of Industrial Effluent. |
| 6. | A2 (16) | Domestic wastewater generation shall not exceed 5.0 KL/day and it shall be treated in soak pit/septic tank. | After Proposed EC Amendment, Domestic wastewater generation will be 5.0 KLD and it will be treated in STP and treated water will be reused for gardening and floor washing purpose. | Unit will provide package STP Plant for treatment of domestic effluent and treated sewage will be reuse. |
| 7. | A2 (18) | Proper logbooks of ETP, Chemical consumption, quantities and qualities of effluent discharge to RO, MEE, CETP power | After Proposed EC Amendment, Proper logbooks of ETP, Chemical consumption, quantities and qualities of effluent discharge to | -- |

| | | | | |
|----|---------|---|--|---|
| | | Consumption etc. shall be maintained and shall be furnished to the GPCB from time to time. | MEE followed by ATFD & Spray dryer, CETP power Consumption etc. shall be maintained and shall be furnished to the GPCB from time to time. | |
| 8. | A3 (19) | <p>In Existing Scenario, Unit has installed NG fired 600 Kg/h capacity of Steam boiler, 70000 K Cal capacity of Thermopack and 3 Nos. of white coal fired 1 Lakhs K Cal capacity of Hot Air Generator: I,II,III. Dust collector has installed to Hot Air Generator. 11 m stack height has provided to Steam Boiler, Thermopack and Hot Air Generator.</p> <p>In Proposed Scenario, NG fired 2000 Kg/h capacity of Steam boiler and 2 Lakhs K Cal capacity of Thermopack will be installed along with 11 m stack height. 3 Nos. of White coal fired 1 Lakhs k cal capacity of Hot air generator: IV, V, VI will be installed. Bag filter and 11 m stack height will be provided. NG fired spray dryer will be installed. Cyclone separator & water scrubber along with 15 m stack height will be provided. HSD fired DG Set will be installed along with 11 m of stack height.</p> | <p>After Proposed EC Amendment, Additional, imported coal fired 10 Lakhs K Cal/hr capacity of Hot Air generator will be installed. MDC & Wet Scrubber along with 30 m stack height will be provided. 2400 kg/h capacity of spray dryer will be provided. Cyclone separator & water scrubber along with 30 m stack height will be provided. 2 Nos. of Imported coal fired 2000 kg/h capacity of steam boiler will be provided. MDC, Bag filter & Wet Scrubber along with 30 m stack height will be provided. Other utilities will remain same as per granted EC and only change in fuel in Hot Air Generator-III, IV. Wood is also used as a fuel and/or of white coal in hot air generators.</p> | <p>Due to change in treatment scheme, unit will install additional one number of hot air generator of 10 lakhs k cal/hr capacity and two numbers of boilers with 2000 kg/h capacity of steam boilers and spray dryer of 2400 kg/h capacity.</p> <p>Remark: Other utilities will remain same</p> |
| 9. | A4 (28) | Waste containing metals from the process – 353.40 TPA- Disposed off into TSDF Vapi. | After Proposed EC Amendment, Waste containing metals from the process – | Due to changing in treatment technologies, there will be |

| | | | | |
|-----|---------|--|--|--|
| | | Used Oil – 0.024 TPA – Sell to registered recycler. Discarded Containers – 20 TPA – Sell to Authorized recycler. Waste from ETP – 300 TPA – Disposed off into TSDF Vapi. Salt from MEE – 5110 TPA – Disposed off into TSDF Vapi. | 353.40 TPA- Disposed off into TSDF Vapi. Used Oil – 0.024 TPA – Sell to registered re-refiner. Discarded Containers – 20 TPA – Sell to Authorized recycler. Waste from ETP – 300 TPA – Disposed of into TSDF Vapi. Salt from ATFD/Spray Dryer – 8190 TPA – Disposed of into TSDF Vapi. | increase in quantity of Salt generated from MEE, ATFD and Spray dryer. Remark: Only change in quantity of Salt from ATFD/Spray Dryer from 5110 to 8190 TPA |
| 10. | A5 (32) | The project-proponent shall allocate the separate fund of Rs. 2.51 Lakhs i.e. 1 % of the capital investment for activities under Corporate Environment Responsibility (CER) in accordance to the MoEFCC's Office Memorandum No. F. No. 22-65/2017-IA.III dated 01/05/2018. The entire activities proposed under CER shall be monitored and the monitoring report shall be submitted to the regional office of MoEF&CC as a part of half-yearly compliance report and to district collector. The monitoring report shall be posted on the website of the project proponent. | After Proposed EC Amendment, Unit will be spent Rs. 7.21 Lakhs i.e. 1 % of the additional capital investment for activities under Corporate Environment Responsibility (CER) in accordance to the MoEFCC's Office Memorandum No. F. No. 22-65/2017-IA.III dated 01/05/2018. | Due to increase in project cost, there will be increased cost of CER. |

4. Deliberations by the EAC:

The EAC noted that the project is located in a critically polluted area. The EAC deliberated on the fuel type, Environment cost, carbon sequestration study based on fuel, energy conservation measures, Onsite/Offsite emergency plan and mitigation measures, water balance etc.

- (i). Being an amendment case, the PP shall submit the revised the capital cost and recurring cost for EMP.
- (ii). The PP shall submit the separate column for the usage of Briquette and their merits and demerits regarding the cost of environmental load.
- (iii). The PP shall submit the details of carbon foot print and carbon sequestration study w.r.t. proposed project and based on natural gas and agro based briquettes. Proposed mitigation measures also needs to be submitted for further appraisal of the EAC
- (iv). The PP shall submit revised and detailed water balance
- (v). The PP needs to submit details of energy conservation measures proposed in the Unit.
- (vi). The PP shall submit the compliance/action plan w.r.t each of the mitigation measure for CPA mentioned in the Ministry's O.M. dated 31.10.2019
- (vii). The PP needs to submit the details of Onsite/Offsite emergency plan and mitigation measures to be proposed during implementation of the project.

In view of above, the EAC recommended to **defer** the proposal.

Agenda No. 42.4

Expansion of Technical Grade Pesticides & Pesticide Intermediates Manufacturing Plant (Plant Capacity After Expansion: 15991 TPA (Technical Pesticide- 7550 TPA, Hydrochloric Acid-1441 TPA and Formulation -7,000 TPA). located at Plot B1/1, MIDC Lote Parshuram, Taluka Khed, Dist. Ratnagiri, Maharashtra by M/s AIMCO Pesticides Limited - Consideration of EC.

[Proposal No. IA/MH/IND3/276944/2021; File No. IA-J-11011/263/2021-IA-II(I)]

The PP/EIA Consultant vide email dated 13.11.2022 informed that there is a change in project details including product list, production quantum, water consumption, wastewater generation etc., and requested the EAC to defer and return the proposal in its present form for making requisite modifications.

The EAC agreed to the request of PP.

Agenda No. 42.5

Expansion of Synthetic Rubber and Lattices Manufacturing Plant of capacity upto 75600 MTPA located at Survey No. 27, 103, 104, 105 & 131 to 137 & Survey No. 20, 22, 24, 26, 26A, 26B, 30, 31, 32, 130, 138, Village Dungari, Taluka Valia, District Bharuch, Gujarat by M/s Apcotex Industries Limited - Consideration of Amendment in Environmental Clearance

[Proposal No. IA/GJ/IND3/292868/2022; File No. J-11011/242/2005-IA-II(I)]

1. The proposal is for amendment in the Environmental Clearance granted by the Ministry vide letter No. EC22A021GJ199495 dated 1st June, 2022 for the Expansion of Synthetic Rubber and Lattices Manufacturing Plant of capacity upto 75600 MTPA located at Survey No. 27, 103, 104, 105 & 131 to 137 & Survey No. 20, 22, 24, 26, 26A, 26B, 30, 31, 32, 130, 138, Village Dungari, Taluka Valia, District Bharuch, Gujarat by M/s Apcotex Industries Limited.
2. The project proponent has requested for amendment in the EC with the details as under:

| S. No. | Para of EC issued by MoEF&CC | Details as per the EC | To be revised/ read as | Justification/ reasons |
|--------|---|--|--|---|
| 1 | Clause No. 8, Page 3 of EC Maximum Incremental GLC | The PP reported that Ambient air quality monitoring was carried out at 8 locations during January 2020 to March 2020 and the baseline data indicates the ranges of concentrations as: PM10 (77-81 $\mu\text{g}/\text{m}^3$), PM2.5 (20-23 $\mu\text{g}/\text{m}^3$), SO2 (10.5-12.2 $\mu\text{g}/\text{m}^3$) and NO2 (14.4-16.3 $\mu\text{g}/\text{m}^3$). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.0208 $\mu\text{g}/\text{m}^3$, 0.0211 $\mu\text{g}/\text{m}^3$ and 0.174 $\mu\text{g}/\text{m}^3$ with respect to PM10, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). | AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.06836 $\mu\text{g}/\text{m}^3$, 0.0487 $\mu\text{g}/\text{m}^3$ and 2.062 $\mu\text{g}/\text{m}^3$ with respect to PM10, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). | There will use 3 Nos. of DG Set having capacity 910 KVA each instead of single DG Set having capacity 2000 KVA. |
| 2 | Clause No. 10, Page 3 of EC DG Set | The PP reported that Power requirement after expansion will be 7904 KW including existing 6904 KVA and will be met from Dakshin Gujarat Vij Company Limited | Instead of a single 2000 KVA capacity DG set, we propose to add 3 nos of 910 KVA capacity DG sets which will be used as standby power during power failure. So in all | It was changed from a single DG of 2000 KVA to 3 sets of 910 KVA each to get more flexibility in terms of |

| | | | | |
|---|---------------------------|---|---|--|
| | | <p>(DGVCL). Existing unit has 3 DG sets of 1000 kVA, 520 KVA and 910 KVA capacity, additionally 1 DG set of 2000 KVA capacity will be required. DG sets are used as standby during power failure. Stack (height 30 m) will be provided as per CPCB norms to the proposed DG sets. Existing unit has two Natural Gas Fired Boilers (6 TPH each) and one Coal fired CPP boiler (3.95 MW). Additionally, no boiler will be required. ESP + Scrubber with a stack of height of 50m is installed for controlling the particulate emissions within the statutory limit of 150 mg/Nm³ for the existing boilers. No additional boiler will be required</p> | <p>the unit will have a total of 6 DG sets in future with capacity of 1000 KVA- 1 no, 520 KVA -1 No and 910 KVA- 4 nos. with suitable stack complying with CPCB norms.</p> | <p>operation and maintenance.</p> |
| 3 | Change in Site Layout Map | <p>Existing SBR plant of 10000 MTA shown as 5(a) & 5(c) in site layout plan. EC received for production of 38000 MTA Synthetic lattices.</p> | <p>Existing SBR plant of 10000 MTA is relocated and shown as 11(b) in revised site layout plan. Out of 38000 MTA Synthetic lattices, 13000 MTA will be produced separately and remained 25000 MTA will be produced in existing relocated SBR plant alternatively.</p> | <p>The structure of existing SBR Plant was become weak due to atmospheric effect. The equipment had become old and obsolete. In view of this the company has created new manufacturing facility in the same premises with the permission from GPCB @CTE No:113933.</p> |

| | | | | |
|---|---|---|--|--|
| 4 | Production of 25000 MTA Synthetic lattices (dry) in the existing SBR plant having capacity 10000 MTA which relocated within same premises | Existing SBR plant location is shown in plant layout as 5(a) near NBR process plant and 5(c). | Existing Plant of SBR is relocated and constructed new plant in which SBR and Synthetic Lattices will be manufactured in the single plant alternatively. Shown as 11(b) and 11(a) in revised site layout Plan. | AIL has received Letter from GPCB @ CTE No:113933 for relocation of SBR plant of capacity 10000 MTA. During the detail Engineering for this plant, AIL has realized that SBR Plant of 10000 MTA can produce 25000 MTA (dry) Synthetic Lattices since the equipment configuration based on the process remains almost same. |
|---|---|---|--|--|

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

The EAC inter-alia, deliberated on the Production Details for EC Amendment, Emission estimate for NO_x, Greenbelt development Plan and advised the PP to submit the following:

- Production Details as per EC, Proposed changes and Total production after amendments in a tabular format.
- Basis of Emission estimate for NO_x from proposed 3 Nos. of DG Set (910 KVA) in place of single 2000 KVA DG set.
- Greenbelt development plan.

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

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

- (i). About 87500 saplings shall be planted within one year considering a density of 2500 trees per ha. and 80% survival rate.
- (ii). All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The Project proponent shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of

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

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

Agenda No. 42.6

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

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

1. The proposal is for Expansion of Surfactants and Pigments Manufacturing Facility (production capacity from 6550 TPM to 6400 TPM) located at S. F. No. 52 & 846 and Plot No. 25B, SIPCOT Industrial Complex Ranipet, Karai Village, Walajah Taluka, Vellore District (Now Ranipet), Tamil Nadu by M/s. Ultramarine and Pigments Ltd.
2. The project/activity is covered under 5(f) – Synthetic Organic Chemicals Industry under category ‘B’. However, since the project site is located in a critically polluted area (CEPI – 79.38), the project attracts the general condition and considered as Category ‘A’ at Centre.
3. The PP applied for the Environment Clearance on 6.5.2022 in Form-2 and submitted the EIA/EMP Report and other documents. Due to some shortcomings, the project was referred back to PP on 23.5.2022 and reply to the same was submitted by the PP on 2.11.2022. The PP in the Form-2 reported that it is an Expansion case. The proposal was placed in 42nd EAC Meeting held on 14-15th November, 2022, wherein the PP and an accredited Consultant, Hubert Enviro Care Systems (P) Ltd, Chennai [Accreditation number NABET/EIA/1922/RA0172 Valid up to 3.1.2023], made a detailed presentation on the salient features of the project and informed the following:
4. The PP reported that the proposed land area is 8.66 Ha and no R&R is involved in the Project. The details of products are as follows:

| S. No. | Product Details (complete name) | CAS No. | Existing Quantity | Proposed Quantity | Total Quantity | Uses |
|--------|---|------------|-------------------|-------------------|----------------|--|
| 1 | Ultramarine Blue | 57455-37-5 | 200 | 100 | 300 | For coloring Plastics, Engineering Plastics, Laundry application |
| 2 | Linear Alkyl Benzene Sulphonic acid – LABSA | 68411-30-3 | 1350 | -350 | 1000 | Raw Material for Detergents cake, Powder & liquids, |

| | | | | | | |
|---|---|--|-------------|-------------|-------------|---|
| | | | | | | wetting agent for textiles |
| 3 | Alpha olefin Sulphonate – AOS | 68439-57-6 | 1000 | Nil | 1000 | Raw Material for Detergents, Hand wash, Toilet soaps, Pesticides, Textile & leather |
| 4 | Synthetic detergents | 68411-30-3 / 68439-57-6/ 497-19-8 | 4000 | -2000 | 2000 | For Home & Fabric care application |
| 5 | Mixed Metal Oxide Pigments | 1345-16-0 (PBI) 68186-85-6 (PG) 68186-90-3 (PB) 68412-38-4 (PY) | -- | 50 | 50 | For specialty application in automotive coatings, ceramics etc. |
| 6 | Bismuth Vanadate pigments | 14059-33-7 | -- | 50 | 50 | Engineering Plastics, Road Marking etc. |
| 7 | Sodium Lauryl Ether Sulphate (SLES) or Sodium Lauryl Sulphate (SLS) | 68891-38-3 | -- | 1500 | 1500 | For mfg shampoo, Body wash, hand wash, detergents etc |
| 8 | Speciality surfactants | 85409-22-9 (BKC) 101403-98-9 (CPO) 61789-40-0 (CPB) 68403-42-9 (CDA) 68140-001 (CMA) 73398-61-5 (MCT) | -- | 500 | 500 | Floor Cleaners, Shampoo, Hand Wash, Body wash, Dish wash liquids, Car wash liquids, flavours & fragrances, hair care application etc. |
| | Total | | 6550 | -150 | 6400 | |

- The PP reported that there is no violation as per the EIA notification, 2006, no court case is pending against the proposal and one direction issued under E(P) Act/Air Act/Water Act i.e. received direction from TNPCB to pay environmental compensation.
- The PP reported that there are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Lake near Edapalayam – 0.4km (NNE), Lake near Karai – 0.84km (S), Lake near Tandalam – 0.93km (E), Puliyan kannu Lake – 1.82km (W), Lake near Puliantangal – 2.35 (WNW), Palar R - 2.82 (S), Ponnai R – 4.17 (W), Mahendravadi Channel – 9.77 (SE), Kaveripak Main Channel – 9.82 (SE). The PP reported that no forest area is involved in the proposed project. and two Schedule I species i.e. Indian Peafowl & Hypolimnas misippus exist within 10 km study area of the project, for which conservation plan is

submitted to District Forest Officer on 20.7.2021 with budgetary provision of Rs. 202500 Lakh for three years.

7. The PP reported that the certified compliance of consent was issued by TNPCB vide Lr. No. T3/TNPCB/F.0108/VLR/2022 dated 29.1.2022. Most of the conditions of the consents are complied.
8. The PP reported that the ambient air quality monitoring was carried out at 8 locations during Mid of January 2020 – Mid of April 2020 and the baseline data indicates the ranges of concentrations as: PM₁₀ 55.14 – 74.92 µg/m³, PM_{2.5} (23.11 – 31.01 µg/m³), SO₂ (7.86 - 12.93 µg/m³) and NO₂ (16.64 – 26.89 µg/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.55 µg/m³ of PM. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). In Industrial areas day time noise levels was about 68.5dB(A) and 61.3 dB(A) during night time, which is within prescribed limit by CPCB (75 dB(A) Day time & 70 dB(A) Night time). In residential areas day time noise levels varied from 52.2dB(A) to 54.9 dB(A) and night time noise levels varied from 41.1 dB(A) to 44.3dB(A) across the sampling stations. The field observations during the study period indicate that the ambient noise levels are within the prescribed limit by CPCB (55 dB(A) Day time & 45 dB(A) Night time).
9. The pH of the collected ground water sample ranges from 7.12 to 8.25 which are within the acceptable limit of IS 10500:2012. Total Dissolved Solids (TDS) value of the collected ground water sample varies from 374 mg/l to 1332 mg/l, where TDS value of some of the samples exceeds the acceptable limits but all the TDS value of the collected ground water samples are within the permissible limits of IS 10500: 2012. Total hardness of the collected ground water sample ranges from 172 mg/l to 595 mg/l, where Total Hardness value of most samples exceeds the acceptable limits but all are within the permissible limits of IS 10500: 2012. Sulphate content of the collected ground water samples ranges from 30.61 to 162.63 mg/l, where sulphate content of all the collected ground water samples are well below the acceptable limit of IS 10500:2012. Chloride content of the collected ground water samples ranges from 74.29 to 431.72 mg/l, where chloride content of all the collected ground water samples are well below the acceptable limit of IS 10500:2012. pH in the collected surface water samples varies between 6.89 to 7.83 which is within the limit of IS 2296:1992. The Total Dissolved Solids (TDS) value of collected surface water sample ranges from 1017 mg/l to 3088 mg/l. The Total hardness value of the collected surface water sample ranges between 353.8 mg/l – 900.5 mg/l. BOD value of the collected surface water samples ranges between 1.9 mg/l and 82.3 mg/l. COD value of the collected surface water varies from 12 mg/l to 258 mg/l.
10. The pH of the soil samples ranged from 6.52 – 8.07 indicating that the soil is neutral to moderately alkaline in nature. Conductivity of the soil samples ranged from 97.5 – 273.4 µmho/cm. Nitrogen content in the collected soil samples ranges from 158.34 mg/kg to 309.52mg/kg. Phosphorous content in the collected soil samples ranges from 19.71 mg/kg to 43.78mg/kg. Potassium content in the collected soil samples ranges from 117.63 mg/kg to 381.24 mg/kg
11. The PP reported that total water requirement is 412.8 m³/day of which fresh water requirement of 329.5 m³/day will be met from SIPCOT. Effluent of 39.2 KLD quantity will

be treated through ETP followed by RO, MEE and VTFD. The plant will be based on Zero Liquid Discharge system.

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

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

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

| S. No. | Waste | Quantity (kg/day) | | | Collection method | Treatment/Disposal method |
|--------------|------------------|-------------------|----------|-----------------|-------------------|------------------------------------|
| | | Existing | Proposed | After Expansion | | |
| 1 | Organic | 67.5 | - | 67.5 | -- | Vermi composting |
| 2 | Inorganic wastes | 45 | - | 45 | Bins | Send to TNPCB authorized recyclers |
| Total | | 112.5 | - | 112.5 | -- | |

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

Hazardous Waste Management:

| S. No. | Schedule No. As per HWM rule, 2016 | Hazardous waste Type | Quantity (MT/Year) | | | Disposal Method |
|--------|------------------------------------|---------------------------------|--------------------|----------|-----------------|---|
| | | | Existing | Proposed | After Expansion | |
| 1 | 5.1 | Used/ Spent oil | 4.5 | - | 4.5 | Recover and Reuse-TNPCB Authorized recyclers |
| 2 | 5.2 | Wastes/ residues containing oil | 1.2 | - | 1.2 | Gujarat Enviro Production and Infrastructure Limited (GEPIL), Vellore |

| S. No. | Schedule No. As per HWM rule, 2016 | Hazardous waste Type | Quantity (MT/Year) | | | Disposal Method |
|--------|------------------------------------|---|--------------------|----------|-----------------|---|
| | | | Existing | Proposed | After Expansion | |
| 3 | 17.1 | Residues, dusts or filter cakes | 6 | - | 6 | TNWML, Gummidipoondi |
| 4 | A70 | Vanadium Compounds | 0.2 | - | 0.2 | TNWML, Gummidipoondi |
| 5 | 33.1 | Discarded containers / barrels / liners contaminated with hazardous wastes /chemicals | 1.2 | - | 1.2 | Gujarat Enviro Production and Infrastructure Limited (GEPIL), Vellore |

15. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 40.00 Lakh (capital) and the Recurring cost (operation and maintenance) will be about ₹ 14.5 Lakhs per annum. The industry proposes to allocate ₹ 2 Lakhs towards CER for Green Belt Development outside the premises, providing solar lights for the school nearby, desilting the oxidation pond (in between NH & service road) – 2 nos. and planting trees.
16. The PP reported that as the project site is located in a Notified SIPCOT Industrial Complex, Public hearing may kindly be exempted under the provisions as per paragraph 7-III Stage (3)(b) of the EIA Notification, 2006 and also as per, MoEF&CC O.M dated 27th April 2018
17. As per the rules and regulations laid by the Ministry of Environment and Forest, Central Pollution Control Board (CPCB) and State Pollution Control Board (SPCB), it is legally mandatory to earmark 40% of the project area for greenbelt development to promote integration of environmental issues with industrial development projects. The total plot area is 8.66 Ha. i.e., 21.4 Acres. 9.02 Acres of land is dedicated for green belt which is 42.1 % of the total plot area.
18. The PP proposed to set up an Environment Management Cell (EMC) consisting of Director- Head EHS-Senior Engineer- Quality Head for the functioning of EMC.
19. The PP submitted the Onsite and Offsite disaster management plans in the EIA report.
20. The estimated project cost is ₹ 86.79 Crores (Existing – ₹ 85.79 Crores and proposed ₹ 1 Crore). The total employment in the existing facility is 250 persons including contractual workers (203 regular and 47 contractual).

21. Deliberations by the EAC:

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

- (i) The detailed greenbelt plan along with budgetary allocation for completion of greenbelt in one year and details of green belt developed/number of trees. Action plan for high carbon sequestration species trees in the greenbelt needs to be submitted.
- (ii) The PP shall submit the details of carbon foot print and carbon sequestration study w.r.t. proposed project. Proposed mitigation measures also needs to be submitted for further appraisal of the EAC.
- (iii) The PP needs to submit the details of Onsite/Offsite emergency plan and mitigation measures to be proposed during implementation of the project.
- (iv) The PP needs to submit details of water and energy conservation measures proposed in the Unit.
- (v) The PP shall submit revised designing of STP.

Agenda No. 42.7

Proposed Agrochemicals & Intermediates, API Ingredients & Intermediates and Fine Chemicals Manufacturing Unit (Production capacity: agrochemicals products -100 TPD, API products -2 TPD, R&D trial Products -2 TPD and By-products about 500 TPD) located at Plot No. TM-1, UPSIDC Industrial Area, Sumerpur, District Hamirpur, Uttar Pradesh by M/s Shalvis Specialities Limited - Consideration of EC.

[Proposal No. IA/UP/IND3/405303/2022; File No. IA-J-11011/163/2022-IA-II(I)]

1. The proposal is for environmental clearance to the Proposed Agrochemicals & Intermediates, API Ingredients & Intermediates and Fine Chemicals Manufacturing Unit (Production capacity: agrochemicals products -100 TPD, API products -2 TPD, R&D trial Products -2 TPD and By-products about 500 TPD) located at Plot No. TM-1, UPSIDC Industrial Area, Sumerpur, District Hamirpur, Uttar Pradesh by M/s Shalvis Specialities Limited.
2. The project/activity is covered under Category 'A' of item 5 (b), Pesticides industry and pesticide specific intermediates (excluding formulations) and 5(f), Synthetic organic chemicals industry of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) and requires appraisal at Centre by the EAC.
3. The PP submitted that Public Hearing is exempted as the Unit is located in Notified Industrial Area. The PP applied for Environment Clearance on 4.11.2022 in Form-2 and submitted EIA/EMP Report and other documents. The PP in the Form-2 reported that it is a **Fresh EC case**. The proposal was placed in 42nd EAC Meeting held on 14-15th November, 2022, wherein the PP and an accredited Consultant, M/s. EQMS India Pvt Ltd. [Accreditation number NABET/EIA/1922/RA0197 Valid up to 23.11.2022], made a detailed presentation on the salient features of the project and informed the following:
4. The PP reported that the proposed land area is **100440.41m²** and no R& R is involved in the Project. The details of products are as follows:

| S. No. | Name of the Products | CAS Nos. | Capacity (TPD) |
|----------------|---|-------------|----------------|
| A. | Fungicides Compounds | | 100 |
| GROUP 1 | Triazole Fungicides | | |
| 1 | Hexaconazole | 79983-71-4 | |
| 2 | Tebuconazole | 107534-96-3 | |
| 3 | Difenconazole | 119446-68-3 | |
| 4 | Propiconazole | 60207-90-1 | |
| 5 | Metoconazole | 125116-23-6 | |
| 6 | Cyproconazole | 94361-06-5 | |
| 7 | Epoxiconazole | 133855-98-8 | |
| 8 | Fenbuconazole | 114369-43-6 | |
| 9 | Ipconazole | 125225-28-7 | |
| 10 | Tetraconazole | 112281-77-3 | |
| 11 | Prothioconazole | 178928-70-6 | |
| 12 | Fluquiconazole | 136426-54-5 | |
| 13 | Triticonazole | 131983-72-7 | |
| 14 | Tricylazole | 41814-78-2 | |
| 15 | Myclobutanil | 88671-89-0 | |
| 16 | Dithianon | 3347-22-6 | |
| 17 | 1,2-Benzisothiazolin-3-One(Bit) | 2634-33-5 | |
| | <u>Intermediate</u> | | |
| 18 | Dithiodibenzoic Acid (DTDBA) | 119-80-2 | |
| GROUP-2 | Organo Chloro , Sulfonamide , Acyl Amino Acid, Monocarboxylic Amide, Benzamides, Acyl Alanine. Imidazole , Carboxamide | | |
| 19 | Valifenalate | 283159-90-0 | |
| 20 | Metalaxyl | 57837-19-1 | |
| 21 | Silthiofam | 175217-20-6 | |
| 22 | Boscalid | 188425-85-6 | |
| 23 | Dimethomorph | 110488-70-5 | |
| GROUP-3 | Fungicide Multicide | | |
| 24 | Thifluzamide | 130000-40-7 | |
| 25 | Thiophanate Methyl | 23564-05-8 | |
| 26 | Chlorothalonil | 1897-45-6 | |
| 27 | Isoprothiolane | 50512-35-1 | |
| 28 | Carbendazim | 10605-21-7 | |
| 29 | Validamycin | 37248-47-8 | |

| | | |
|----------------|---|-------------|
| 30 | Quinoxifen | 124495-18-7 |
| 31 | Fluazinam | 79622-59-6 |
| 32 | Famoxadone | 131807-57-3 |
| 33 | Benalaxyl | 71626-11-4 |
| 34 | Triclopyricarb | 902760-40-1 |
| 35 | Iprobenfos(Kitazin) | 26087-47-8 |
| 36 | Bixafen | 581809-46-3 |
| 37 | Isopyrazam | 881685-58-1 |
| GROUP 4 | Strobilurins Fungicides | |
| 38 | Pyraclostrobin | 175013-18-0 |
| 39 | Azoxystrobin | 131860-33-8 |
| 40 | Pyroxystrobin | 131860-33-8 |
| 41 | Picoxystrobin | 117428-22-5 |
| 42 | Fluoxastrobin | 361377-29-9 |
| 43 | Flufenoxystrobin | 918162-02-4 |
| 44 | Trifloxystrobin | 141517-21-7 |
| 45 | Pyraclostrobin | 175013-18-0 |
| 46 | Kresoxim-Methyl | 143390-89-0 |
| B | Insecticides Compounds | |
| GROUP-5 | Neo Nicotinoids Insecticides | |
| 47 | Thiamethoxam | 153719-23-4 |
| 48 | Imidacloporid | 138261-41-3 |
| 49 | Acetamiprid | 135410-20-7 |
| 50 | Fipronil | 120068-37-3 |
| 51 | Buprofezin | 69327-76-0 |
| 52 | Pymetrozine | 123312-89-0 |
| 53 | Thiacloprid | 111988-49-9 |
| GROUP-6 | Synthetic Pyrethroids Insecticides | |
| 54 | Cypermethrin | 52315-07-8 |
| 55 | Deltamethrin | 52918-63-5 |
| 56 | Bifenthrin | 82657-04-3 |
| 57 | Lambda Cyahalothrin | 91465-08-6 |
| 58 | Permethrin | 52645-53-1 |
| 59 | Alphamethrin | 67375-30-8 |
| 60 | Allethrin | 584-79-2 |
| 61 | Transfluthrin | 118712-89-3 |
| 62 | Prallethrin | 23031-36-9 |

| | | |
|-----------------|--|-------------|
| 63 | Cyfluthrin | 68359-37-5 |
| 64 | Fenpropathrin | 39515-41-8 |
| GROUP- 7 | Organo Phosphorus Insecticides/ Keto -Enol/ Spirocyclic Insecticides | |
| 65 | Ethion | 563-12-2 |
| 66 | Acephate | 30560-19-1 |
| 67 | Dimethoate | 60-51-5 |
| 68 | Phenothoate | :2597/03/7 |
| 69 | Profenofos | 41198-08-7 |
| GROUP-8 | Miscellaneous Insecticides : Thiourea, Aromatic Ethers, Benzoyl Urea, Oxadiazepine, Pyrazole, Carbamate | |
| 70 | Diafenthiuron | 80060-09-9 |
| 71 | Fenobucarb | 3766-81-2 |
| 72 | Propargite | 2312-35-8 |
| 73 | Diflubenzuron | 35367-38-5 |
| 74 | Thiocyclam Oxalate | 31895-22-4 |
| 75 | Fenpyroximate | 111812-58-9 |
| 76 | Etoxazole | 153233-91-1 |
| 77 | Indoxacarb | 144171-61-9 |
| 78 | Pyriproxyfen | 95737-68-1 |
| 79 | Thiodicarb | 59669-26-0 |
| 80 | Spirodiclofen | 148477-71-8 |
| 81 | Chlorantraniliprole | 500008-45-7 |
| 82 | Cyantraniliprole | 736994-63-1 |
| 83 | Pyriithiobac | 123343-16-8 |
| 84 | Tolfenpyrad | 129558-76-5 |
| 85 | Emamcren Benzoate | 155569-91-8 |
| 86 | Flonicamid | 158062-67-0 |
| 87 | Novaluron | 116714-46-6 |
| C | Herbicides Compounds | |
| GROUP-9 | Amino Acids/Ureas/Benzamides/Pyridine Carboxamide/ Phenyl Pyrazolines/Substituted Aniline/Organo Chlorine/ Other Groups | |
| 88 | Imazethapyr | 81335-77-5 |
| 89 | Imazamox | 114311-32-9 |
| 90 | Diuron | 330-54-1 |
| 91 | Sulfosulfuron | 141776-32-1 |

| | | |
|-----------------|--|-------------|
| 92 | Penoxsulam | 219714-96-2 |
| 93 | Metasulfuron Methyl | 74223-64-6 |
| 94 | Mesosulfuron Methyl | 208465-21-8 |
| 95 | Chlorimuron Ethyl | 90982-32-4 |
| 96 | Bispyribac Sodium | 125401-92-5 |
| 97 | Pyrazosulfuron Ethyl | 93697-74-6 |
| 98 | Florasulam | 145701-23-1 |
| 99 | Thiencarbazone Methyl | 317815-83-1 |
| 100 | Pronamide | 23950-58-5 |
| 101 | Piclonafen | 137641-05-5 |
| 102 | Pinoxaden | 243973-20-8 |
| 103 | Bixlozone | 81777-95-9 |
| 104 | Aclonifen | 74070-46-5 |
| 105 | Glyphosate | 1071-83-6 |
| 106 | Glufosinate Ammonium | 77182-82-2 |
| 107 | Pendimethalin | 40487-42-1 |
| 108 | Dicamba | 1918-00-9 |
| 109 | Metribuzin | 21087-64-9 |
| 110 | Atrazine | 1912-24-9 |
| 111 | Metamitron | 41394-05-2 |
| 112 | Napropamide | 15299-99-7 |
| 113 | Topramezone | 210631-68-8 |
| 114 | Propoxycarbozone | 145026-81-9 |
| 115 | Flufenacet | 142459-58-3 |
| GROUP 10 | Aryloxyphenoxypropionates/ Pyrimidenediones/Pyrazoles | |
| 116 | Oxyflurofen | 42874-03-3 |
| 117 | Quizalofop Ethyl | 76578-14-8 |
| 118 | Clodinfop Propargyl | 105512-06-9 |
| 119 | Fenoxaprop Ethyl | 71283-80-2 |
| 120 | 2,4-D Ethyl Ester | 533-23-3 |
| 121 | Sulfentrazone | 122836-35-5 |
| 122 | 2,4-D Sodium Salt | 2702-72-9 |
| 123 | Oxadiargil | 39807-15-3 |
| 124 | Propanil | 709-98-8 |
| 125 | Isoproturon | 34123-59-6 |
| 126 | Mesotrione | 104206-82-8 |
| 127 | Tembotrione | 335104-84-2 |

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|------------------|---|-------------|
| 128 | Butalachlor | 23184-66-9 |
| 129 | S-Metalachlor | 87392-12-9 |
| 130 | Triallate | 2303-17-5 |
| 131 | S-Ethyl Dipropyl Thiocarbamate | 759-94-4 |
| D. | Plant Growth Regulators | |
| GROUP -11 | | |
| 132 | Chlormequate Chloride | 999-81-5 |
| 133 | Ethephon | 16672-87-0 |
| 134 | Forchlorofenuron | 68157-60-8 |
| 135 | Mepiquate Chloride | 24307-26-4 |
| 136 | Bromadilon | 28772-56-7 |
| 137 | Cloquintocet | 99607-70-2 |
| 138 | Paclobutrazole | 76738-62-0 |
| | Organofluorine Insecticide/Thiocarbamate | |
| 139 | Flubendiamide | 272451-65-7 |
| 140 | Cartap Hydrochloride | 15263-52-2 |
| Group-12 | Acaricide | |
| 141 | Hexythiazox | 78587-05-0 |
| E. | Advance Specific Pesticide Intermediates | |
| Group-13 | | |
| 142 | Meta Phenoxy Benzaldehyde | 39515-51-0 |
| 143 | Meta Phenoxy Benzyl Alcohol | 13826-35-2 |
| 144 | Cypermethric Acid Chloride | 52314-07-8 |
| 145 | Natcp (Sodium Salt Of 3,5,6 Tri Chloro Pyridinol) | 37439-34-2 |
| 146 | Ccmp (2- Chloro 5- Chloromethyl Pyridine) | 70258-18-3 |
| 147 | Ccmt (2- Chloro 5- Chloromethyl Thiazol) | 105827-91-6 |
| 148 | Nii (2- Nitro Imino Imidazolidine) | 5465-96-3 |
| 149 | Mnio (2- Methyl 5- Nitro 1,3,5 Oxidiazine) | 53898-39-8 |
| 150 | 4-Hppa- 2-(Hydroxyphenoxy) Propionic Acid | 94050-90-5 |
| 151 | Transfluthrin Acid Chloride | 118712-89-3 |

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|-----------|---|-------------|----------|
| 152 | 2-Hydrazino-4-Methylbenzothiazole (Hmbt) | 80945-73-9 | |
| 153 | 1,2,4-Triazole | 288-88-0 | |
| 154 | Phenylhydrazine | 100-63-0 | |
| 155 | 2-Chloro-1-(1-Chloro-Cyclopropyl) Ethanone | 120983-72-4 | |
| F. | Active Pharmaceutical Ingredients (APIs) | | |
| 1 | Metformin Hcl | 1115-70-4 | 2 |
| 2 | Atenolol | 29122-68-7 | |
| 3 | Metoprolol Succinate | 207983-04-8 | |
| 4 | Metoprolol Tartrate | 56392-17-7 | |
| 5 | Carvedilol Phosphate | 610309-89-2 | |
| 6 | Bisoprolol Fumerate | 104344-23-2 | |
| 7 | Propranolol Hydrochloride | 318_98_9 | |
| 8 | Pregabalin | 148553-50-8 | |
| 9 | Gabapentin | 60142-96-3 | |
| 10 | Topiramate | 97240-79-4 | |
| 11 | Sildenafil Citrate | 171599-83-0 | |
| 12 | Naproxen | 22204-53-1 | |
| 13 | Naproxen Sodium | 26159-34-2 | |
| 14 | Levofloxacin | 100986-85-4 | |
| 15 | Norfloxacin | 70458-96-7 | |
| 16 | Moxifloxacin Hcl | 186826-86-8 | |
| 17 | Ciproflocacin Hcl | 86393-32-0 | |
| 18 | O-Floxacin | 82419-36-1 | |
| 19 | Silver Sulfadiazine | 22199-08-2 | |
| 20 | Capecitabine | 154361-50-9 | |
| 21 | Lamivudine | 134678-17-4 | |
| 22 | Levetiracetam | 103833-72-3 | |
| 23 | Pazopanib Hcl | 635702-64-6 | |
| 24 | Ribavirin | 36791-04-5 | |
| 25 | Esomeprazole Magnesium Hydrate | 217087-10-0 | |
| 26 | Losartan Potassium | 124750-99-8 | |
| 27 | Telmisartan | 144701-48-4 | |
| 28 | Chloramphenicol | 56-75-7 | |
| 29 | Citalopram Hbr | 59729-32-7 | |
| 30 | Clopedogrelbisulphate | 120202-66-6 | |

| | | | |
|-----------|---|-------------|------------|
| 31 | Donepezil Hcl | 120011-70-3 | |
| 32 | Etodolac | 4130-25-4 | |
| 33 | Fluconazole | 86386-73-4 | |
| 34 | Sitagliptinphosphate Mono Hydrate | 654671-77-9 | |
| G | R&D and Pilot Plant trial Products | | 2 |
| H | By-Products | | |
| 1 | Hydrobromic Acid (28%) | 10035-10-6 | 500 |
| 2 | Hydrochloric Acid (30%) | 7647-01-0 | |
| 3 | Potassium Bromide | 7758-02-3 | |
| 4 | Potassium Chloride | 7447-40-7 | |
| 5 | Sodium Bromide Sol 20-25% | 7647-15-6 | |
| 6 | Sulphur | 7704-34-9 | |
| 7 | Sodium Sulfite Sol. (20%) | 7757-83-7 | |
| 8 | Sodium chloride | 7647-14-5 | |
| 9 | Sodium Sulfate Sol. 20% | 7757-82-6 | |
| 10 | Succinamide | 123-56-8 | |
| 11 | Charcoal | 16291-96-6 | |
| 12 | Sodium carbonate | 497-19-8 | |
| 13 | Ammonium Acetate | 631-61-8 | |
| 14 | Ammonia (20%) | 7664-41-7 | |
| 15 | Sodium bisulfite Sol. 20% | 7631-90-5 | |
| 16 | Calcium Chloride 30% | 10043-52-4 | |
| 17 | Formaldehyde | 50-00-0 | |
| 18 | Spent Sulphuric Acid(35%) | 7664-93-9 | |
| 19 | Sodium Bisulphate | 7681-38-1 | |
| 20 | NaOH Sol.20% | 1310-73-2 | |
| 21 | Di Calcium Phosphate | 7789-77-7 | |
| 22 | Calcium chloride | 10043-52-4 | |
| 23 | Benzyl Chloride | 100-44-7 | |
| 24 | Phosphoric Acid | 7664-38-2 | |
| 25 | Benzoic Acid | 65-85-0 | |
| 26 | Ammonium Sulphate | 7783-20-2 | |
| 27 | Sodium Acetate | 127-09-3 | |
| | Total Production | | 604 |
| I. | Formulation | | |
| 1 | Solid Formulations & | | 30 |

| | | |
|--|----------------------------|-----------|
| 2 | Liquid Formulations | 50 |
| Total Production of Formulation | | 80 |

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. The PP reported that no forest area is involved in the proposed project and one Schedule-I species exist within 10 km study area of the project, for which conservation plan is submitted to chief wildlife warden on 12.9.2022 with budgetary provision of Rs. 9.6 lakhs.
7. The PP reported that ambient air quality monitoring was carried out at 8 locations during March-2022 to May-2022 and the baseline data indicates the ranges of concentrations as: PM₁₀ (49- 81µg/m³), PM_{2.5} (18-40 µg/m³), SO₂ (7.53-16.83 µg/m³) and NO_x (8.11 -21.68 µg/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 3.89 µg/m³, 3.07 µg/m³, 5.73 µg/m³, 5.88 µg/m³, 0.140 µg/m³, 0.672 µg/m³, 0.033 µg/m³ and 0.072 µg/m³ with respect to PM₁₀, PM_{2.5}, NO_x, SO_x, HBr, HCl Cl₂ and NH₃ respectively. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). **Noise-** As there is no major source of the noise except vehicles and some industrial activities, the ambient noise quality of the study area is within the prescribed National Ambient Noise Quality Standards prescribed for industrial (Standards - 75 dB(A) during day time and 65 dB(A) during night time) residential area (Standards - 55 dB(A) during day time and 45 dB(A) during night time) and commercial area (Standards - 65 dB(A) during day time and 55 dB(A) during night time). **Ground water quality** - The Water Quality Index based on weighted average of 11 parameters (Total Hardness as CaCO₃, Calcium, Alkalinity, Chloride, Magnesium, TDS, Sulphate, Fluoride, pH, Iron, Nitrates) have been found to range between good to poor water quality. **Surface water quality-** The Water Quality Index based on above methodology has been found Class C indicating Surface water quality as Bad. Thus, based on Nutrient Index Value for N, P & K, the soils of study area fall into "LOW to HIGH FERTILITY STATUS". Soils have medium organic carbon and are capable of moderately supporting for agriculture. The soils of study area area and project site is slightly alkaline in nature as pH value of soils in all analyzed samples is less than 8.5 and simultaneously the value of EC is less than 1 dS/m (1000 µmhos/cm).
8. The PP reported that the total water requirement is **1582 KLD** of which freshwater requirement of 945 KLD will be met from borewell. Effluent of **791 KLD** (Industrial Effluent- 771 KLD; Domestic Sewage- 20 KLD). Industrial quantity will be treated in **MEE/ATFD (capacity- 350 KLD)** and **ETP (capacity 600 KLD)** followed by **PTRO/SPRO** (capacity 600 & 900 KLD respectively) and also 100 KLD effluent will be sent to effluent spray dryer (capacity 250 KLD) for dehydration of a liquid feed containing dissolved and/or dispersed solids. Domestic sewage will be treated in **Sewage Treatment Plant of capacity 30 KLD**. The plant will be based on **Zero Liquid Discharge system**.
9. The power requirement of the plant will be **7 MW** from 33 KV feeder to be met through Uttar Pradesh Power Corporation Limited (UPPCL). DG sets of capacity **4 x 750 KVA** (with appropriate stack height as per CPCB norms) are proposed as power backup. **2 nos. of boiler**

(16 TPH) will be installed. Cyclone followed by bag filter with a stack of height of 30 m will be installed for controlling the particulate emissions within the statutory limit of 800 mg/Nm³ for the proposed boiler.

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

| S. No. | Stack Attached to | Stack Height in Meter | Fuel | Diameter in m | Velocity (m/s) | Temp (C) | Flow Rate (m ³ /hr) | Expected Parameters | Permissible Limits | Control Measures provided |
|--------|--|-----------------------|-------------------|---------------|----------------|------------|--------------------------------|---|--|--|
| 1 | Boiler - 2 no (2x 16 TPH) | 30 | Rice Husk | 1.5 | 19 | 105 to 125 | 35000 | Particulate Matter, SO ₂ , Nox | PM < 800 SO ₂ < 600 NO _x < 300 | Bag Filter with cyclone |
| 2 | DG Sets - 4 Nos (4 X 750 KVA) Used in Emergency Backup | 30 | High-Speed Diesel | 0.15 | 17 | 80 to 90 | 900 | Particulate Matter, Nox, CO | PM: 0.2 g/kw-hr, Nox: 4 g/kw-hr, CO: 3.5 g/kw-hr | Adequate Stack Height |
| 3 | Thermic fluid heater: 2X 20 Lac K Cal | 30 | Rice Husk | 0.8 | 5 | 170 | 9000 | SPM SO ₂ NO _x | SPM < 150 ppm SO ₂ < 150 ppm NO _x < 20 ppm | Bag Filter with cyclone |
| 4 | Hot air generator | 30 | Rice Husk | 0.8 | 5 | 90 | 8000 | Particulate Matter, Nox, CO | PM: 0.2 g/kw-hr, Nox: 4 g/kw-hr, CO: 3.5 g/kw-hr | Adequate Stack height, bag filter & cyclones |

| Process Stacks / Vents | | | | | | | | | | | |
|------------------------|-------------------------|---------------|------------------|------------------|-----------------|----------------|------------------------|--------------------------------|---|---|---|
| S. No. | Stack Attached to | APC M | Stack Height (m) | Stack Radius (m) | Temperature (K) | Velocity (m/s) | Area (m ²) | Flow Rate (m ³ /hr) | Expected Pollutants | Maximum Emission (mg/N m ³) | No of Stacks |
| 1 | Process Reactor – Vents | Wet Scrubber | 10 | 0.15 | 298.15 | 4 | 0.07 | 1017 | HCl, HBr, SO ₂ , Cl ₂ , NH ₃ | HCl < 20; HBr < 5; SO ₂ < 40; NH ₃ < 30 Cl ₂ < 5 | HCl : 7; HBr : 7; SO ₂ : 5; NH ₃ : 3; Cl ₂ : 3 |
| 2 | Process Reactor – Vents | Vent Scrubber | 10 | 0.15 | 298.15 | 4 | 0.07 | 1017 | CO ₂ , excess O ₂ | - | CO : 1 |

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

| Type of waste | Cat. | Generation | Disposal Method | Source |
|--|------|------------|--|---------------------------|
| HAZARDOUS WASTE | | | | |
| Chemical Sludge from wastewater Treatment (ETP sludge + Salt from MEE/ATFD+ Spray Dryer) (dry basis) | 35.3 | 50 MT/Day | Approved vendors/TSDf | ETP /MEE/ATFD/Spray Dryer |
| Concentration & evaporation Residue. | 37.3 | 20 MT/Day | Approved vendors/TSDf | MEE/SPD |
| Spent Solvents | 29.4 | 1MT/Day | Approved vendors/TSDf | Process |
| Discarded Containers/barrel/liners/contaminated with wastes/chemicals | 33.1 | 200 Nos. | Sold to approved vendors after decontamination | Process |
| Used/spent oil | 5.1 | 200 Kg/Day | Approved vendors/TSDf | Process |
| Carton/liners contaminated with hazardous chemicals & waste | 33.1 | 2 MT/Day | Approved vendors/TSDf | Process |
| Organic Residue | 29.1 | 15 MT/Day | TSDf | Process |
| Process Residue/Solids | 35.3 | 5MT/Day | TSDf | Process |
| Date Expired and off specification Pesticide | 29.3 | 5 MT/Year | TSDf | FM/RM storage |

| | | | | |
|---|------|--|----------|---------|
| Spent filter Material | 36.2 | 2 MT/Day | TSDf | Process |
| Spent Catalyst | 29.5 | 2 MT/Year | TSDf | Process |
| NON-HAZARDOUS/INDUSTRIAL | | | | |
| Ash | - | Landfill / Cement Industries/Brick Kiln industries, | 40 TPD | - |
| Empty barrels (used for non-hazardous material) | - | Approved vendors. | 200 Nos. | - |

| S.No. | Waste | Colour of Bin | Disposal Method | Quantity (kg/day) |
|--------------|-------------------------|---------------|---|-------------------|
| 1 | Biodegradable Waste | Green | Waste will be disposed through organic waste composting | 24 |
| 2 | Non-Biodegradable Waste | Blue/Black | Waste will be given to Authorized Recycler | 36 |
| TOTAL | | | | 60 |

12. The budget earmarked towards Environmental Management Plan (EMP) is ₹ 3175 lakhs (capital) and the recurring cost (operation and maintenance) will be about ₹ 1780 Lakhs per annum. The PP proposes to allocate ₹ 5 Crores towards Corporate Environment Responsibility (CER) for education, water and village facility, infrastructure development, agriculture promotion activity and animal husbandry.
13. The PP reported that M/s Shalvis Specialities Limited will developed a dense greenbelt in 3.3 ha 33145.34 Sq.m) i.e. about 33% area of the total plot area. On an average about 8250 trees/shrubs (2500 trees/ha) along with, garden, herbs and shall be planted within the premises as a greenbelt. Shalvis shall develop the greenbelt as per CPCB/MoEF guidelines.
14. The PP proposed to set up an Environment Management Cell (EMC) by engaging Board of Directors- Chief Executive Officer- Vice President – Sustainability (ESG QMS) – ESG sustainability QMS- ESG sustainable QMS Executives- GMC- GMC members- GMC coordinators for the functioning of EMC.
15. The PP reported that carbon emission from the Project site (Considering Scope-I and Scope II) is 43284.55 TPA, carbon sequestration from the plantation is 1274.92 TPA, Carbon Sequestration from the 1 MW solar energy is 3250 TPA . and reduction of carbon IS 4524.92 (10.45%)
16. The PP submitted the Disaster and Onsite and Offsite Emergency Plans in the EIA report.
17. Total capital investment for the project will be ₹ 250 Crores. Total Employment will be 250 persons during operation phase.
18. **Deliberations by the EAC:**

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

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

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

The EAC inter-alia, deliberated on the green belt development and budget, carbon sequestration and advised the PP to submit the following:

- Revised green belt development plan and budget.
- Undertaking additional tree plantation in the surrounding area under CER.
- Provision for energy saving through installation of energy saving device and solar panels
- Details of CO₂ generation from the unit and CO₂ sequestration through plantation and technology installation.

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

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

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

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

and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

19. The EAC, after detailed deliberations, **recommended the project for the grant of environmental clearance, subject to the compliance of the terms and conditions as under, and general terms and conditions in Annexure-I:**
- (i) The PP shall develop an additional Greenbelt over an area of at least, 33,145.34 m² by planting 9000 number of trees within a period of one year of grant of EC. In addition to this 1000 number of saplings shall be planted in nearby villages. 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 by engaging Board of Directors- Chief Executive Officer- Vice President – Sustainability (ESG QMS) – ESG sustainability QMS- ESG sustainable QMS executives- GMC- GMC members- GMC coordinators. 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.
 - (iii) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. The budget proposed under EMP [₹ 3175 Lakh (Capital cost) and ₹ 1780 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.
 - (iv) As committed by the PP, shall install 1MW solar energy and installation of energy saving devices.
 - (v) Total water requirement is 1582 KLD of which freshwater requirement of 945 KLD will be met from borewell. The PP should ensure that water supply should not be above the

permissible limit as mentioned in the letter and fresh water shall be withdrawal only after obtaining 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

- (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 project proponent shall comply with the environment norms for Organic Chemical Industry as notified by the Ministry of Environment, Forest and Climate Change, *vide* GSR 608(E), dated 21.07.2010 under the provisions of the Environment (Protection) Rules, 1986.
- (ix) The 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.
- (x) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The PP shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.
- (xi) The volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97 % with effective chillers/modern technology. Regular monitoring of VOCs shall be carried out. 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) As committed by the PP, Zero Liquid Discharge shall be ensured. Effluent of 791 KLD (Industrial Effluent- 771 KLD; Domestic Sewage- 20 KLD). Industrial quantity shall be treated in MEE/ATFD (capacity- 350 KLD) and ETP (capacity 600 KLD) followed by PTRO/SPRO (capacity 600 & 900 KLD respectively) and also 100 KLD effluent shall be sent to effluent spray dryer (capacity 250 KLD) for dehydration of a liquid feed containing dissolved and/or dispersed solids. Domestic sewage shall be treated in Sewage Treatment Plant of capacity 30 KLD.
- (xiii) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB servers. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

- (xiv) The storage of toxic/hazardous raw material shall be bare minimum with respect to quantity and inventory. Quantity and days of storage shall be submitted to the Regional Office of Ministry and SPCB along with the compliance report.
- (xv) The occupational health centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (xvi) Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.
- (xvii) The unit shall make the arrangement for 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.
- (xxi) The activities and the action plan proposed by the project proponent to address the issues raised during the public hearing as well as the related socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit.

Agenda No. 42.8

Expansion of Technical Ammonium Nitrate Project for Manufacturing of Technical Ammonium Nitrate (Production capacity– 700 MTPD), Weak Nitric Acid (Production capacity – 600 MTPD) and Concentrated Nitric Acid (Production capacity – 150 MTPD)

within CFCL's Existing Premises located at P.O. Gadepan, District Kota, Rajasthan by M/s Chambal Fertilizers and Chemicals Limited (CFCL). - Consideration of EC

[Proposal No. IA/RJ/IND3/405385/2022; File No. No. J-11011/664/2008-IA.II(I)]

1. The proposal is for environmental clearance to the Expansion of Technical Ammonium Nitrate Project for Manufacturing of Technical Ammonium Nitrate (Production capacity– 700 MTPD), Weak Nitric Acid (Production capacity – 600 MTPD) and Concentrated Nitric Acid (Production capacity – 150 MTPD) within CFCL's Existing Premises located at P.O. Gadepan, District Kota, Rajasthan by M/s Chambal Fertilizers and Chemicals Limited (CFCL).
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 PP submitted that Public Hearing for the proposed project has been conducted by the State Pollution Control Board at "Bharat Nirman Rajiv Gandhi Sewa Kendra" Gram Panchayat Gadepan, Panchayat Committee, Sultanpur, Tehsil Digod, Dist. Kota, Rajasthan on 22.07.2022 presided by the Additional District Magistrate, Kota. The main issues raised during the public hearing were related to Provision of Doctor Facility, CSR, Improvisation of Educational facilities in nearby areas, Enhancement of plantation etc. The PP applied for Environment Clearance on 4.11.2022 in Form-2 and submitted EIA/EMP Report and other documents. The PP in the Form-2 reported that it is an **Expansion EC case**. The proposal was placed in 42nd EAC Meeting held on 14th-15th November, 2022, wherein the PP and an accredited Consultant, M/s. EQMS India Pvt Ltd [Accreditation number NABET/EIA/1922/RA0197 Valid up to 23.11.2022], made a detailed presentation on the salient features of the project and informed the following:
4. The PP reported that the proposed land area is **400 ha** and no R& R is involved in the Project. The details of products are as follows:

| S. No. | Product | Unit | As per EC granted | Proposed | After Expansion | Remark |
|--------|--|------|-------------------|----------|-----------------|-------------------------------------|
| 1 | Weak Nitric Acid (WNA)* as 100wt% | MTPD | 0 | 600 | 600 | New Products |
| 2 | Technical Ammonium Nitrate (TAN) as 100wt% (Melt / HDAN / LDAN) ** | MTPD | 0 | 700 | 700 | |
| 3 | Concentrated Nitric Acid (CNA) as 100wt% | MTPD | 0 | 150 | 150 | |
| 4 | Ammonia | MTPD | 6100 | 0 | 6100 | Existing Products- No Change |
| 5 | Urea | MTPD | 10800 | 0 | 10800 | |
| 6 | Captive Power | MWH | 55 | 0 | 55 | |

| | | | | | |
|--|----------------|-----|-----|---|-----|
| 7 | Steam (HRSG) | TPH | 240 | 0 | 240 |
| 8 | Steam (Boiler) | TPH | 320 | 0 | 320 |
| <p><i>* Weak Nitric Acid (WNA) will be used as raw material for Ammonium Nitrate. Surplus if any will be sold as Weak Nitric Acid (WNA) and/or Concentrated Nitric Acid (CNA).</i></p> <p><i>** Ammonium Nitrate (AN) solution will be Prilled to manufacture High-density Ammonium Nitrate (HDAN) and / or Low-density Ammonium Nitrate (LDAN) in quantities as per market demand. It may also be sold as Ammonium Nitrate (AN) Melt. Melt/HDAN/LDAN capacity will be 700 MTPD.</i></p> | | | | | |

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 Environment Clearance has been granted by MoEF&CC vide letter no. J-11011/664/2008-IA II (I) dated 16.11.2021 for existing plant having Ammonia Plant (6100 MTPD), Urea Plant (10800 MTPD), Captive Power Plant (55 MW), Steam HRSG (240 TPH), Steam Boilers (320 TPH) and Offsite Facilities
7. The PP reported that there are no National Parks, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from site. There are some protected and reserved forests patches present within the study area. The nearest Protected Forest is located about 1.6 km east of the plant site. There are two rivers flowing in the study area namely Parwan River about 2.22 km in SE direction and Kali Sindh River about 2.40 km in east direction from plant site. The PP reported that Black Buck, Chinkara, Indian Peafowl, Great Indian Bustard, Crocodile and Python, Schedule-I species exist within 10 km study area of the project, for which conservation plan has been prepared for Rs. 20 Lakhs.
8. The PP reported that ambient air quality monitoring was carried out at eight (8) locations during 1st December 2021 to 28th February 2022 and the baseline data indicates the range of concentration as: PM_{2.5} (18 µg/m³ to 48 µg/m³), PM₁₀ (52 µg/m³ to 89 µg/m³), SO₂ (6.1 µg/m³ to 12.7 µg/m³), NO_x (10.2 µg/m³- 30.3 µg/m³) and CO (0.51 mg/m³-0.91 mg/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after proposed project would be 3.0 µg/m³, 1.2 µg/m³, 8.8 µg/m³ & 4.5 µg/m³ for PM₁₀, PM_{2.5}, NO_x & NH₃. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). Noise - Ambient noise quality monitoring was done at eight (8) locations during study period. Noise level values ranged from 51.7 to 64.7 dB(A) during day and 41.8 to 58.3 dB(A) during night time.
9. Groundwater quality monitoring was done at eight (8) locations during the study period. pH levels ranged between 7.16 to 7.82. Total hardness was ranged from 170.5 to 569 mg/l. The Total Dissolved Solids (TDS) concentration recorded ranged between 602 to 1772 mg/l. Chlorides levels were ranged between 120-451mg/l. Sulphate levels were ranged between 36 –365 mg/l. Bacteriological studies reveal that no coliform bacterial are present in the samples. The heavy metal contents were observed to be in below detectable limits. All physical and general parameters were observed within the permissible limit as per IS10500:2012 (Second Revision). Surface water quality monitoring was done at six (6) locations during study period. pH levels ranged between 7.2 to 7.87. TDS levels were observed to be 272 to 356 mg/l. Total hardness levels ranged from 75.9 to 188 mg/l. The dissolved oxygen values were 4.8-6.5 mg/l. The chlorides levels were observed to be between 72 mg/l- 102 mg/l. The sulphates levels

ranged from 18 to 23 mg/l. The Total Coliform levels were observed to be 210 to 1510 MPN/100 ml.

10. Soil quality monitoring was done at eight (8) locations during study period. As per the grain size distribution the percentage of Sand in all sampled soil was found varied from 55.8% to 65.2%, Silt varied from 13.3 to 20.1% and Clay from 20.9 % to 24.1% during winter season. The soil pH ranges were observed from 7.34 to 8.26. Available nitrogen content in the surface soils ranges between 228 kg/ha to 302 kg/ha. Available phosphorus content ranges between 13.2 kg/ha to 24.3 kg/ha. Available potassium content in these soils' ranges between 110 kg/ha to 162 kg/ha. Based on Nutrient Index Value for N, P & K, the soils of study area fall into "Medium FERTILITY STATUS".
11. Total freshwater requirement of project after expansion will be 55251 KLD which will be sourced from Kalisindh River. Total industrial effluent generation will increase from 11305 to 12746 KLD. Proposed TAN plant industrial effluent generation will be 1441 KLD, out of which 1440 KLD wastewater will be treated in new installed ZLD unit and recycled as cooling water make-up. Remaining 1 KLD oily wastewater generated mainly from rotary equipment in proposed plant will be collected and routed to oil separator in existing ETP for oil separation. Additionally, 20 KLD domestic effluent will be generated from proposed new plants. After proposed expansion, domestic effluent will increase from 1272 KLD to 1292 KLD which will be treated in existing Sewage treatment plants and further disposed into irrigation network within the CFCL premises.
12. Power requirement after expansion will be 60 MW and will be met from Captive power & State Grid supply. Electrical supply will be supplied from State Electricity Grid. Part supply may be from existing captive generation if required. Emergency power generator sets of 1.6 MW, 2.5 MW and 2.4 MW capacity are installed to keep the most essential equipment inline in the event of temporary power failure and to provide a safe shutdown of the plants in case of prolonged power failure. Additional, Emergency diesel generator (EDG) of 1.2 MW capacity shall be installed to meet power requirements of plants in emergencies like power failure etc.
13. **Details of Process Emissions Generation and Its Management:**

Details of Proposed Stacks

| Particular | Stack Height (m) | Air Pollution Control System | Parameter & Limits as per RSPCB |
|--|------------------|------------------------------|---|
| Proposed | | | |
| Tail Gas Stack (in Weak Nitric Acid Plant) | 50 (minimum) | NOx Abatement system | NOx < 400 mg/Nm ³ |
| Prilling Plant vent | 60 (minimum) | Scrubber | PM< 100 mg/Nm ³ , NH ₃ < 150 mg/Nm ³ |
| TAN Plant Stack/Scrubber | 35 (minimum) | Scrubber | PM< 100 mg/Nm ³ , NH ₃ < 150 mg/Nm ³ |
| Concentrated Nitric Acid | 30 (minimum) | Scrubber | NOx < 400 mg/Nm ³ , NH ₃ |

| | | | |
|--|--------------|-------------------------|---|
| Emergency Diesel Generator (1.2 MW) | 30 (minimum) | Non-continuous Emission | PM < 75 mg/Nm ³ NMHC < 100 mg/Nm ³ CO < 150 mg/Nm ³ NO _x < 710 ppm |
| <ul style="list-style-type: none"> • Vent stack height may increase during detailed engineering. • TAN Plant vent and prilling plant vent may be clubbed at detailed engineering stage, if required to achieve reduction in emissions. • DG set stack is non-continuous stack as will be operated for short duration only in emergency. | | | |

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

| S. No | Name of Waste | Source of Generation | Category | As per EC | Proposed/Additonal | After Expansion | Disposal Method |
|-------|--|--|------------|--------------------|--------------------|--------------------|---|
| 1 | Discarded containers, drums | Receipt, storage and handling of raw / packing materials | Sch-I/33.1 | 1000 nos. per year | 500 nos. per year | 1500 nos. per year | Authorized TSDF |
| 2 | Used/Spent Oil | Process / rotary machines / transformers | Sch-I/5.1 | 107 MTPA | 20 MTPA | 127 MTPA | Collection in drums, storage, transportation and sales to authorized recyclers |
| 3 | Spent Catalyst | Process | Sch-I/18.1 | 660 MTPA | 0.1 MTPA | 660.1 MTPA | Regeneration through Catalyst supplier / Recycle through authorized catalyst recycler |
| 4 | NO _x abatement Spent Catalyst | Nitric Acid Plant | Sch-I/18.1 | 0 | 10 MT in 5 years | 10 MT in 5 years | To authorized recyclers / authorized TSDF |
| 5 | Chemical sludge from | Wastewater | Sch-I/35.3 | 17000 | 900 MTPA | 17900 MTPA | Chemical Sludge from |

| | | | | | | | |
|---|---|-------------------------------------|------------|----------|--------|--------|--|
| | wastewater treatment | treatment schemes | | MTP A | | | wastewater treatment scheme is being disposed to cement plants for co-processing / authorized TSDF |
| 6 | Contaminated cotton waste or other cleaning materials | Maintenance and cleaning activities | Sch-I/33.2 | 12 MTP A | 5 MTPA | 17 TPA | Collection, storage and transportation to Common incinerator |

15. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 24.8 Crores (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 0.34 Crore, Industry proposes to allocate ₹ 34 Lakh towards CER.
16. The PP reported that Industry has already developed greenbelt in an area of 136.5 ha i.e., about 34.1% of the total plot area of the CFCL Complex.
17. The PP proposed to set up an Environment Management Cell (EMC) by engaging Dy. General Manger- Senior Manager (Environment) – manager (Environment & QC)- Senior Officer- QC – Coordinator- Technical assistant- Technician for the functioning of EMC.
18. The PP submitted the Disaster and Onsite and Offsite Emergency Plans in the EIA report.
19. The estimated project cost is ₹ 1170 Crores. Total Employment Existing: 2568 No. (Permanent- 1020 no.; Temporary- 1548 no.) Proposed Addition: 150 No. (Permanent- 100 no. Temporary- 50 no.) After Expansion: 2718 No. (Permanent – 1120 no, Temporary- 1598).
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 that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be

rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

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

The EAC inter-alia, deliberated on the plantation schedule, water balance, EMP cost Public Hearing activities and advised the PP to submit the following:

- Undertaking for planting additional trees.
- Data of the last one year of water discharged to Kalisindh river permitted during rainy season and quantity of water proposed to be discharged from the proposed TAN plant.
- Revised water balance for TAN plant.
- Revised EMP cost
- Public Hearing Activities/Commitments.

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

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

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

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

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

- (i) The PP shall develop Greenbelt over an area at least 136.5 ha by planting 145560 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 ₹ 4.5 Crores and shall be kept in separate account and should be audited annually. PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- (ii) A separate Environmental Management Cell (having qualified persons with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. PP shall engage General Manager- Senior Manager (Environment) – manager (Environment & QC)- Senior Officer- QC – Coordinator- Technical assistant- Technician. In addition to this one safety & health officer as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- (iii) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. The budget proposed under EMP is ₹ 24.8 Crores (Capital cost) and ₹ 0.34 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 documents as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- (iv) Total freshwater requirement of project after expansion will be 55251 KLD which will be sourced from Kalisindh River. The PP should ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawal only after obtaining valid agreement from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year.
- (v) No banned chemicals shall be manufactured by the project proponent. No banned raw materials shall be used in the unit. The project proponent shall adhere to the notifications/guidelines of the Government in this regard.
- (vi) The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

- (vii) The project proponent shall comply with the environment norms for 'Fertilizer Industry' as notified by the Ministry of Environment, Forest and Climate Change, vide GSR 1607 (E), dated 29.12.2017 under the provisions of the Environment (Protection) Rules, 1986.
- (viii) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The project proponent shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.
- (ix) The volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97 % with effective chillers/modern technology. Regular monitoring of VOCs shall be carried out.
- (x) The project proponent shall explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.
- (xi) As committed by PP, zero liquid discharge shall be ensured. After proposed expansion, the increased domestic effluent (1272 KLD to 1292 KLD) which shall be treated in existing Sewage treatment plants and further disposal into irrigation network with the CFCL premises.
- (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 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.

- (xviii) The storm water from the roof top shall be channelized through pipes to the storage tank constructed for harvesting of rain water in the premises and harvested water shall be used for various industrial processes in the unit. No recharge shall be permitted within the premises. Process effluent/ any wastewater shall not be allowed to mix with storm water.
- (xix) The PP shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.
- (xx) The activities and the action plan proposed by the project proponent to address the issues raised during the public hearing as well as the related socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit.

Agenda No. 42.9

Proposed Expansion in Existing Facility by adding Synthetic Organic Chemicals Plant (Production capacity from 45,989 TPM to 61,878 TPM) located at Survey No. 31, 34, 36, 37/1, 207, 208, 209, 210 Gandhidham – Mandvi Highway, Nr. Pragpar Chokadi, Village Pragpar-1, Taluka Mundra, District Kutch, Gujarat by M/s Adani Wilmar Limited - Consideration of EC

[Proposal No. IA/GJ/IND3/405788/2022; File No. IA-J-11011/152/2021-IA-II(I)]

1. The proposal is for environmental clearance to the project for Proposed Expansion in Existing Facility by adding Synthetic Organic Chemicals Plant (Production capacity from 45,989 TPM to 61,878 TPM) located at Survey No. 31, 34, 36, 37/1, 207, 208, 209, 210 Gandhidham – Mandvi Highway, Nr. Pragpar Chokadi, Village Pragpar-1, Taluka Mundra, District Kutch, Gujarat by M/s Adani Wilmar Limited.
2. The project/activity is covered under Category ‘A’ of item 5(f), Synthetic Organic Chemicals industry of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) and requires appraisal at Centre by the EAC.
3. The standard ToR has been issued by the Ministry, vide letter No. IA-J-11011/152/2021-IA-II(I) Dated 30/04/2021. The PP submitted that Public Hearing was conducted on 2.8.2022 which was presided by SDM and Deputy collector and the main issues raised during the public hearing are related to employment and CSR. The PP applied for Environment Clearance on 8.11.2022 in Form-2 and submitted EIA/EMP Report and other documents. The PP in the Form-2 reported that it is an **Expansion case**. The proposal is now placed in 42nd EAC Meeting held on 14-15 November, 2022, wherein the PP and an

accredited Consultant, Kadam Environmental Consultants (NABET Certificate No. NABET/EIA/2023/SA 0164 valid up to 19. [Accreditation number NABET/EIA/2023/SA 0164 Valid up to 19.3.2023], made a detailed presentation on the salient features of the project and informed the following:

4. The PP reported that the proposed land area is 1,97,439 sq.m. and no R& R is involved in the Project. The details of products and by-products are as follows:

| Sr. No. | Name of Product | CAS number | Production Quantity | | |
|-------------------------|--|---------------------|-------------------------------|--------------------|-----------------------------------|
| | | | Existing as per CTE, MT/Month | Proposed, MT/Month | Total After Proposed EC, MT/Month |
| 1 | Castor Oil | 8001-79-4 | 9,600 | 0 | 9,600 |
| 2 | De-Oiled Cake | - | 10,400 | 0 | 10,400 |
| 3 | Rice | - | 9,000 | 0 | 9,000 |
| 4 | Dal/Besan | - | 15,000 | 0 | 15,000 |
| 5 | Sebacic Acid | 111-20-6 | 0 | 1,667 | 1,667 |
| 6 | Hydrogenated Castor Oil (HCO) | 8001-78-3 | 0 | 2,750 | 2,750 |
| 7 | 12 Hydroxy Stearic Acid (HAS) / Ricinoleic Acid (RA) | 106-14-9 / 141-22-0 | 0 | 2,750 | 2,750 |
| 8 | Dehydrated Castor Oil (DCO) | 8001-79-4 | 0 | 275 | 275 |
| 9 | DCO Fatty Acid (DCOFA) | 61789-45-5 | 0 | 275 | 275 |
| 10 | Blown Castor Oil | 68187-84-8 | 0 | 275 | 275 |
| 11 | Turkey Red Oil | 68187-76-8 | 0 | 275 | 275 |
| 12 | Methyl Ricinolate (MR) | 141-24-2 | 0 | 275 | 275 |
| 13 | Methyl 12 Hydroxy Stearate | 141-23-1 | 0 | 275 | 275 |
| 14 | Spent Earth | - | 436 | 2 | 438 |
| 15 | White Bran | - | 63 | 0 | 63 |
| 16 | Discolored Rice | - | 90 | 0 | 90 |
| 17 | Husk | - | 750 | 0 | 750 |
| 18 | Chunni | - | 475 | 0 | 475 |
| 19 | Powder | - | 175 | 0 | 175 |
| 20 | 2-Octanol | 123-96-6 | 0 | 980 | 980 |
| 21 | 2-Octanone | 111-13-7 | 0 | 70 | 70 |
| 22 | Fatty Acid | 85049-31-6 | 0 | 680 | 680 |
| 23 | Glycerine | 56-81-5 | 0 | 804 | 804 |
| 24 | Sodium Sulphate | 7757-82-6 | 0 | 4,536 | 4,536 |
| Total (MT/Month) | | | 45,989 | 15,889 | 61,878 |

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 existing products are non-EC products hence EC was not required. The current unit has a valid CC&A vide No. AWH-113927 dated 26th July 2021, valid up to 29th June 2029. Compliance of the present valid Consent to Operate (CTO) approved by GPCB is received. All 73 conditions of CTO are complied.
7. The PP reported that there are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. River/ water body Bhukhi River is flowing at a distance of 0.55 km in East direction. The PP reported that one Schedule-I species exist within 10 km study area of the project for which conservation plan has been prepared and submitted to Chief Conservator of Forest on 6.5.2022 with a budget of Rs. 4.07 Lakh.
8. The PP reported that **Air** – Ambient Air Quality monitoring was carried out at **8** Locations during 5th Jan 2021 – 4th April 2021 and base line data indicates the ranges of Average concentrations as: PM₁₀ (**57-75** µg/m³), PM_{2.5} (**16-23** µg/m³), SO₂ (**7.8-9.1** µg/m³) and NO₂ (**14.1-19.2** µg/m³). AAQ modeling study for point source emissions indicates that maximum incremental GLCs after the proposed project would be 1.87 µg/m³, 1.26 µg/m³, 1.48 µg/m³ with respect to PM₁₀, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). **Noise** - The day-time noise levels at the project site were observed to be in the range of 42.5 dB (A) to 61.2 dB(A), which is below the permissible limits of 75 dB(A) for industrial zone. The night-time noise levels in the project site were observed to be in the range of 53.2 dB (A) to 66.8 dB (A), which is below the permissible limits of 70 dB (A) for industrial zone. **Water** - The pH of the ground water samples collected was in the range of 7.69 – 8.07. TDS in the ground water samples were in the range of 416 – 2048 mg/l. Total hardness was found to vary between 240 - 550 mg/l. The chlorides concentration was found to vary between 130 – 835 mg/l. Fluoride concentration in all samples was found to be below acceptable limit of 1 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 samples collected was in the range of 6.4 – 8.32. TDS in the samples were in the range of 470 - 2984 mg/l. Total hardness was found to be between 110 - 600 mg/l. Chloride concentration was found to be between 216 - 1208 mg/l. Each of the parameter analysed conform to all the class criteria. **Soil**- The topsoil of the study area is having higher proportion of loamy sand. The pH of the soil ranges from 7.99 - 8.75). Electrical conductivity of the sample varied from 0.110 to 1.104 dS/m. Total Organic Carbon is observed in between 0.44 to 0.68 g/kg indicating average sufficiency in nature. The concentration of available Nitrogen, Phosphorous and Potassium in the samples signifies that the soil has sufficient nutrient content, and the area is fertile.
9. The PP reported that Total Water requirement is **3207** m³/day of which fresh water requirement of **1001** m³/day will be met from **APSEZL Desalination plant**. Effluent of **2236** KLD quantity will be treated through Effluent Treatment Plants. The plant will be based on Zero Liquid discharge system.
10. Power requirement after expansion will be 4.6 MVA including existing 1.6 MVA and will be met from **Paschim Gujarat Vij Company Limited (PGVCL)**. Existing unit has 3 DG sets of capacity 320 kVA, 20 kVA and 250 kVA, additionally 2 DG Sets of 1200 kVA each will be used as standby during power failure. Stack (30m) will be provided as per CPCB norms to the proposed DG sets.

11. Existing unit has 10 TPH De-Oiled Cake / coal fired boiler. Additionally, 32 TPH De-Oiled Cake / coal fired boiler will be installed. ESP, Lime Dosing OR Alkali Scrubber with a stack of height of 54 m will be installed for controlling the particulate emissions within the statutory limit of 150 mg/Nm³ for the proposed boiler.

12. Details of Process Emissions Generation and its Management:

| S. No. | Stack Attached to | Nos. of Stacks | Stack Height in m | Stack Top Dia, mm | Pollutants Emitted | APCM Attached |
|--|---|----------------|-------------------|-------------------|--|------------------|
| Existing (CCA Received - In Operation) | | | | | | |
| 1 | Dryer (Reverse Jet Filter Outlet – 6 Nos.) | 1 | 7 | 0.3 | PM < 150 mg/Nm ³ | Bag Filter |
| Existing (NOC Received - Not Installed) | | | | | | |
| 2 | Dryer (Reverse Jet Filter Outlet – 21 Nos.) | 1 | 7 | 0.3 | PM < 150 mg/Nm ³ | Bag Filter |
| Proposed (For EC Products) | | | | | | |
| 1 | Cracking Section of Sebacic Acid | 1 | 21 | 0.2 | HC < 15 mg/m ³ | Caustic Scrubber |
| 2 | Neutralization Section of Sebacic Acid | 1 | 19 | 0.4 | Sulfuric Acid mist < 50 mg/Nm ³ | Caustic Scrubber |
| 3 | Acidification Section of Sebacic Acid | 1 | 39 | 0.4 | Sulfuric Acid mist < 50 mg/Nm ³ | Caustic Scrubber |

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

| Sr. No. | Type of Waste | Hazardous Waste Category | Source | Quantity in MT/Annum | | | Method of Storage | Treatment / Disposal |
|------------------------|--------------------|--------------------------|----------------------------------|----------------------|------------|-------------|-------------------|--|
| | | | | Existing | Proposed | Total | | |
| Hazardous Waste | | | | | | | | |
| 1 | Used / Spent Oil | 5.1 | DG Set / Turbine / Engg Workshop | 200 Litres | 820 Litres | 1020 Litres | Drums | Collection, Storage, Transportation and Sold to registered recyclers |
| 2 | ETP Waste / Sludge | 35.3 | ETP | 105 | 2060 | 2165 | HDPE Bags | Collection, Storage, Transportation and Disposed to TSDF/ Sent to Cement |

| Sr. No. | Type of Waste | Hazardous Waste Category | Source | Quantity in MT/Annum | | | Method of Storage | Treatment / Disposal |
|---------|--|--------------------------|---|----------------------|----------|-------|-------------------|--|
| | | | | Existing | Proposed | Total | | |
| | | | | | | | | Industries for Co-processing |
| 3 | Discarded Container / Barrels / Liners | 33.1 | Entire Site | 4.88 | 5 | 9.88 | - | Collection, Storage, Transportation and Sold to registered recyclers |
| 4 | Waste Resin / Membrane | 35.2 | Process / ETP / WTP | 0.12 | 35 | 35.12 | HDPE Bags | Collection, Storage, Transportation and Sent to Cement Industries for Co-processing / Disposed to TSDF |
| 5 | Spent Activated Carbon | 36.2 | Decolorizing Section | 0 | 502 | 502 | HDPE Bags | Collection, Storage, Transportation and Sold to registered recyclers |
| 6 | Spent Catalyst | 28.2 | Hydrogenated Castor Oil | 0 | 69 | 69 | HDPE Bags | Collection, Storage, Transportation and Sold to registered recyclers |
| 7 | Distillation residue | 20.3 | Distillation Section | 0 | 421 | 421 | Drums | Collection, Storage, Transportation and Send to CHWIF |
| 8 | Filter Residue | 35.2 | Glycerine Water treatment and HCO treatment | 0 | 33.5 | 33.5 | HDPE Bags | Collection, Storage, Transportation and Sold to registered recyclers |
| 9 | Spent Acid (H ₂ SO ₄) | B - 15 | From Process | 0 | 33 | 33 | Drums | Collection, Storage, Transportation and Sold to |

| Sr. No. | Type of Waste | Hazardous Waste Category | Source | Quantity in MT/Annum | | | Method of Storage | Treatment / Disposal |
|--------------------|---------------|--------------------------|--------|----------------------|----------|-------|-------------------|---|
| | | | | Existing | Proposed | Total | | |
| | | | | | | | | registered recyclers under Rule 9 |
| 10 | MEE Salt | 35.3 | MEE | 0 | 7934 | 7934 | HDPE Bags | Collection, Storage, Transportation and Disposed to TSDF |
| Solid Waste | | | | | | | | |
| 11 | Fly Ash | - | Boiler | 792 | 2178 | 2970 | Silos | Collection, Storage, Transportation and Sent to Brick Manufacturing Units |

14. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 94.28 Crores (capital) and the Recurring cost (operation and maintenance) will be about ₹ 40.03 Crores. Industry proposes to allocate ₹ 3.57 Crores towards CER.
15. Greenbelt will be developed in 33% i.e. 65,155 m² of total plot area 1,97,439 m². Considering 20% survival rate total 19,546 trees need to be planted. Existing 6,900 trees are already planted at site, additional 12,646 trees will be planted within 3 years.
16. The PP proposed to set up an Environment Management Cell (EMC) to engage Managing Director / Director- General Manager (Operations)- Plant Manager- Manager (Utilities) EHS in-charge for the functioning of EMC.
17. The PP reported that

| | | |
|--|-----------------|-----------------------------|
| Total CO₂ emission from Proposed Project | 1,01,285 | TCO₂/year |
| Total CO ₂ emission sequestration (reduction) | 39913 | TCO ₂ /year |
| Total CO ₂ emission sequestration (reduction) | 39% | % |

18. The PP submitted the Onsite and Offsite disaster management plan in their EIA report.
19. The estimated project cost is ₹ 731.3 Crores including existing investment of ₹ 255.3 Crores. Total employment will be **~500 numbers during construction phase** (i.e. ~5 direct and ~455 indirect) and **~160 numbers during operation phase** (i.e. ~40 on direct and ~120 indirect).

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

The EAC inter-alia, deliberated on the Greenbelt development plan and budget, existing and proposed domestic sewage, fuel, carbon sequestration, CER budget, Summary/Outcome of Public Hearing with Reply, and advised the PP to submit the following:

- Existing and proposed domestic sewage shall be treated in STP. Submit revised water balance showing Agitated Thin Film Dryer (ATFD).
- Time bound planning for usage of Environment Friendly fuel i.e. De-oiled cake (Agro waste-Non fossil fuel as available).
- Details of CO₂ Emission from proposed expansion project.
- Revised CER budget
- Revised Summary/Outcome of Public Hearing with Reply, Fund and Timeline

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.

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 65,155 m² by planting 19546 number of trees within a period of one year grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft (about 2m). In addition to this, The budget earmarked for the plantation shall be ₹ 63 Lakh and shall be kept in separate account and should be audited annually. PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of the expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.
- (ii) A separate Environmental Management Cell (having qualified persons with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. PP shall engage Managing Director / Director- General Manager (Operations)- Plant Manager- Manager (Utilities) EHS in-charge. The Production Head manages the Department of Occupational Health & Safety (OHS) and Operations department. The OHS Department is headed by Safety Officer who is assisted by Manager, Executive 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 ₹ 94.28 Crores (Capital cost) and ₹ 40.03 Crores Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.
- (iv) The PP reported that Total Water requirement is **3207** m³/day of which fresh water requirement of **1001** m³/day will be met from **APSEZL Desalination plant** The PP should ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawal only after obtaining valid agreement from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office

(IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year

- (v) No banned chemicals shall be manufactured by the PP. No banned raw materials shall be used in the unit. The PP shall adhere to the notifications/guidelines of the Government in this regard.
- (vi) The PP shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.
- (vii) The PP shall comply with the environment norms for synthetic organic Chemical as notified by the Ministry of Environment, Forest and Climate Change, vide GSR 608(E), dated 21.7.2010 under the provisions of the Environment (Protection) Rules, 1986.
- (viii) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The PP shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.
- (ix) The volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97 % with effective chillers/modern technology. Regular monitoring of VOCs shall be carried out.
- (x) The PP shall explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.
- (xi) As Committed by the PP zero liquid Discharge shall be ensured, Effluent of **2236** KLD quantity will be treated through Effluent Treatment Plants. STP shall be installed for the treatment of 39 KLD sewage.
- (xii) A continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB servers. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
- (xiii) The storage of toxic/hazardous raw material shall be bare minimum with respect to quantity and inventory. Quantity and days of storage shall be submitted to the Regional Office of Ministry and SPCB along with the compliance report.
- (xiv) The occupational health centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
- (xv) Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.

- (xvi) The unit shall make the arrangement for the protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.
- (xvii) The solvent management shall be carried out as follows: (a) Reactor shall be connected to chilled brine condenser system. (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (c) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be 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.
- (xviii) The storm water from the roof top shall be channelized through pipes to the storage tank constructed for harvesting of rain water in the premises and harvested water shall be used for various industrial processes in the unit. No recharge shall be permitted within the premises. Process effluent/ any wastewater shall not be allowed to mix with storm water.
- (xix) The PP shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.
- (xx) The activities and the action plan proposed by the project proponent to address the issues raised during the public hearing as well as the related socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit.

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.

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) Forest, wildlife and CRZ related issues (if applicable):

- 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 carried out 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.

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

| S. No. | Name of Members | Designation |
|---------------|--|--------------------|
| 1. | Prof. (Dr.) A.B. Pandit Vice Chancellor, Institute of Chemical Technology, Mumbai, Sir JC Bose Fellow, Government of India Email: ab.pandit@ictmumbai.edu.in | Chairman |
| 2. | Dr. Ashok Kumar Saxena, IFS Bunglow No. 38, Sector-8A, Gandhinagar, Gujarat – 382008 E-mail: ashoksaxena1159@gmail.com | Member |
| 3. | Prof. (Dr.) S. N. Upadhyay Research Professor (Hon.), Department of Chemical Engineering & Technology, Indian Institute of Technology (Banaras Hindu University), Varanasi E-mail: snupadhyay.che@iitbhu.ac.in | Member |
| 4. | Prof. (Dr.) Suneet Dwivedi, Professor in K Banerjee Centre of Atmospheric and Ocean Studies, University of Allahabad, Allahabad - 02 Uttar Pradesh E-mail: dwivedisuneet@rediffmail.com /suneetdwivedi@gmail.com | Member |
| 5. | Shri Santosh Gondhalkar 'Shree' Apartment, Flat 401, Plot No. 22, Tukaram Society, Santnagar, Pune- 411009 E-mail: santoshgo@gmail.com | Member |
| 6. | Prof. (Dr.) Pradeep Kumar Mishra Department of Chemical Engineering & Technology, Indian Institute of Technology (BHU) Varanasi, Varanasi - 221005 E-mail: pkmishra.che@itbhu.ac.in / drpkm18@gmail.com | Member |
| 7. | Prof. (Dr.) Vijay S. Moholkar Professor in Department of Chemical Engineering, Block-K (Academic complex), Room No. 111, India Institute of Technology Gawahati, Gawahati – 781039 E-mail: vmoholkar@iitg.ac.in | Member |
| 8. | Dr. Suresh Panwar House No.4, Gayateri Green Society, NH 58 Bypass, Kankerkhara, Meerut, Uttar Pradesh Email-spcppri@gmail.com | Member |

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|-----|--|---------------------|
| 9. | Shri Tukaram M Karne "SHREYAS ORNATE" F-1, 95-Tulasibagwale Colony, Sahakarnagar-2, PUNE: 411 009, Maharashtra E-mail: tmkarne@gmail.com | Member |
| 10. | 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 |
| 11. | Dr. M. Ramesh Scientist 'E' Ministry of Environment, Forest and Climate Change Indira Paryavaran Bhawan, Room No. A-233, Agni Wing, Jor Bagh Road, New Delhi-110003 Tel. 011-20819249 E-mail: ramesh.motipalli@nic.in | Member Secretary |

MOM approved by



(Prof. Aniruddha B. Pandit)
Chairman
