Minutes of 2nd Committee Meeting (2024-25), for By-Products and Hazardous waste categorization

Date : 23/08/2024

Venue : MPCB, 4th Floor, Conference Hall, Sion Circle, Sion (E), Mumbai.

Committee Members present for the meeting:

1.	Dr Avinash Dhakne, Member Secretary	Chairman
2.	Dr. V. M. Motghare, Joint Director (APC)	Member
4.	Shri. Shankar Waghmare, RO (BMW)	Member
5.	Dr. B. R. Naidu, Ex Zonal Officer, CPCB	Member
6.	Shri. Sujit Dholam, RO (HQ)	Invitee
7.	Shri. N. N. Gurav, Assistant Secretary (Tech), MPCB	Member convener

At the outset, the request was received from the members Shri. M.P. Patil, Representative of NEERI for leave of absence from attending the meeting was placed before the Committee meeting. The Committee considered the same.

Assistant Secretary (Tech.), MPCB, Member convener of the Committee, welcomed all the members of the Committee and requested Member Secretary, MPCB, Chairman of the committee to permit proceedings of the meeting to start.

Based on the applications made by the industries, the members thereafter deliberated on the agenda items placed before the committee and following decisions were taken.

Agenda Item No. 01

Project Name: **M/s. VINATI ORGANICS LIMITED.**
A 20 D 30/2 MIDC AREA LOTE PARSHURAM, TAL KHED DIST. RATNAGIRI. 415722

(i) **Application unique No.:** MPCB-BY_PRODUCT-0000000032.
(ii) **Environmental Clearance details:** SEIAA-EC-0000000208, dated 12/03/2018.
(iii) **Consent details:** Obtained consent to operate vide Format1.0/CAC/UAN No.0000107484/CO-2107001035, 19/07/2021, which is valid upto 31/03/2026.

<table>
<tr><th colspan="4">Proposed inclusion of By-product</th><th>Industry submission and deliberation</th><th>Committee decision</th></tr>
<tr><td colspan="4"><table>
<tr><th>Sr. No.</th><th>Name</th><th>Qty</th><th>Purity</th></tr>
<tr><td>1</td><td>Methanol</td><td>26880 MT/A</td><td>99.8%</td></tr>
<tr><td>2</td><td>N tertiary Butyl Acrylamide (TBA)</td><td>2112 MT/A</td><td>99%</td></tr>
<tr><td>3</td><td>Tertiary Butyl Amine</td><td>1608 MT/A</td><td>99%</td></tr>
</table></td><td>VINATI Lote unit manufactures Isobutylene 48000 MTA by thermal cracking of MIBK (methyl isobutyl ketone).
• The reaction products generated are isobutylene and methanol.
• Methanol is listed by MPCB in the hazardous waste in CTO under sr no 20, Stoichiometrically, 1 mole of MIBK generates 1 mole of Isobutylene and 1 mole of methanol.
• Thus, while producing 48000 MTA Isobutylene, theoretically 27000 MTA of methanol is produced.
VINATI Lote unit manufactures AAMPS OR ATBS 33000MTA by reacting acrylonitrile & isobutylene
• The reaction products generated are AAMPS, TBA and TB amine</td><td>Committee noted that the said proposal was discussed before 1st committee meeting of 2022-23 held on 12/08/2022 & it was decided to defer the case for next meeting, meanwhile industry shall submit the following documents
• Purity of the by-product with indicating its usability.
• End use of the by -product followed by the manufacturing process involves thereof.
• Last month invoices for by product indicating being sold to end consumer with commercial value.
• Last month's statement of sale of by product to end user.
• Details analysis report from IIT/NEERI /NCL showing concentration level of organic impurities.</td></tr>
</table>

	• TBA is listed as hazardous waste in CTO under sr no 14. • TB Amine is listed as hazardous waste in CTO under sr. no.15. • Along with AAMPS both TBA and TB Amine are formed simultaneously in the reaction. • Thus, while producing 33000 MTA AAMPS, 2112 MTA TBA & 1608 MTA TB AMINE are formed	It was also noted that the proposal was rediscussed before 1st Committee meeting of 2024-2025 held on 20/06/2024 & It was noted that the expert member of the committee was not present for the instant meeting & it was therefore decided to defer the case for next meeting. After due deliberations, it was decided that Methanol, N tertiary Butyl Acrylamide (TBA) & Tertiary Butyl Amine cannot be considered as By-Product, as it is a spent Methanol & other claimed by products contain organic impurities & shall be listed as Hazardous Waste as per the Schedule-I of Hazardous & Other Wastes (M & TM) Rules, 2016, however it can be utilized as a raw material at their sister concern unit, only after obtaining the Authorization under Rule 9 of Hazardous & Other Wastes (M & TM) Rules, 2016 by user industry, till that time it should be considered as hazardous waste as per consent and shall be disposed at CHWTSDF or sale to the Authorized recycler having Authorization under Rule 9 of Hazardous & Other Wastes (M & TM) Rules, 2016.

Agenda Item No. 02

Project Name: **M/s. BAKUL AROMATICS AND CHEMICALS PRIVATE LIMITED.**
PLOT NO. A/6, MIDC INDUSTRIAL AREA, VILLAGE- KAIRE, TAL- KHALPUR, DIST – RAIGAD

(i) **Application unique No.:** MPCB-BY_PRODUCT-0000000044.
(ii) **Environmental Clearance details:** Attracts EC & Establishment of unit is prior to 2006, i.e., BO/ROR/Raigad-160/PC-1042, dated 25/12/2000.
(iii) **Consent details:** Obtained consent to operate vide Format1.0/AS(T)/UAN No.MPCBCONSENT-0000209128/CR/2408000044, 01/08/2024, which is valid upto 30/06/2029.

<table>
<tr><th colspan="2">Proposed inclusion of By-product</th><th>Industry submission and deliberation</th><th>Committee decision</th></tr>
<tr><td colspan="2"><table>
<tr><th>Sr. No.</th><th>Name</th><th>Qty</th><th>Purity</th></tr>
<tr><td>1</td><td>Acetic Acid</td><td>612 MT/A</td><td>99.8%</td></tr>
</table></td><td>Industry submission: The industry is engaged in mfg. of API, applied for amendment in existing consent for inclusion of Acetic Acid as By-product.

Industry stated that the application was discussed before 2nd committee meeting of By-Product & Hazardous Waste categorization (2022-2023) held on 15/12/2022 & Committee After due deliberations, decided to defer the case for next meeting, meanwhile industry shall submit the following documents/details.
• Purity of the by-product with indicating its usability.
• End use of the by -product followed by the manufacturing process involves thereof.</td><td>Committee noted that the said application was previously discussed before 2nd committee meeting of By-Product & Hazardous Waste categorization (2022-2023) held on 15/12/2022 & Committee After due deliberations, decided to defer the case for next meeting, meanwhile industry shall submit the following documents/details.
• Purity of the by-product with indicating its usability.
• End use of the by -product followed by the manufacturing process involves thereof.
• Undertaking that, sale of the material is only to the end user industries & neither to the traders, nor to the industries which involving the Hazardous Waste processor or recyclers.</td></tr>
</table>

	• Undertaking that, sale of the material is only to the end user industries & neither to the traders, nor to the industries which involving the Hazardous Waste processor or recyclers. • Details analysis reports of Acetic Acid from IIT/NEERI/NCL or ICT showing concentration levels of organic impurities Industry submitted the analysis report of Acetic Acid from IIT, Bombay dated 02/02/2023 showing 99.9% purity of acetic acid. Industry has reported that the claimed By-Product is used for manufacture of acetate derivatives, mfg. of Bulk drugs, directly as acetic acid in Food industry as vinegar, manufacture of Acetic anhydride. Industry also submitted undertaking regarding sale of material only to end user industries.	• Details analysis reports of Acetic Acid from IIT/NEERI/NCL or ICT showing concentration levels of organic impurities Accordingly, industry has submitted the analysis reports of Acetic Acid from IIT, Bombay, wherein the reports indicate that the purity of the claimed By-Product is 99.9% which is sold by the industry to end user industries directly. After due deliberations, it was decided to consider the case for incorporation of Acetic Acid as By product into existing consent to Operate as the purity of the claimed by product is 99.9% & can be directly used as raw material for mfg. of acetate derivatives, mfg. of Bulk drugs, directly as acetic acid in Food industry as vinegar, manufacture of Acetic anhydride. After obtaining the undertaking that, sale of the material is only to the end user industries & neither to the traders, nor to industries which involve the Hazardous Waste processor or recycler. Industry shall maintain manifest of sale of claimed By-Product and submit quarterly data to MPCB.

Agenda Item No. 03

Project Name: **M/s. Evonik Catalysts India Private Limited.,**
Plot No. F-1/1 & F-1/2, MIDC Phase- I, Dombivali,
Taluka Kalyan, District Thane

(iv) **Application unique No.:** MPCB-BY_PRODUCT-0000000049.

(v) **Environmental Clearance details:** NA.

(vi) **Consent details:** Obtained consent to operate vide Format1.0/CAC/UAN No. MPCBCONSENT-0000119211/CO/2207000109 dated 02/07/2022 valid upto 30/04/2025.

Proposed inclusion of By-product				Industry submission and deliberation	Committee decision
Sr. No.	**Name**	**Qty**	**Purity**		
1	Nickel Aluminum alloy	96 MT/A	-	Industry stated that the proposal was earlier discussed before 2nd committee meeting of 2023-24 held on 30/01/2024 held on as per the minutes of the said meeting industry has presented/submitted; • Purity of the by-product including metal analysis with indicating its usability. • End use of the by -product followed by the manufacturing process involves thereof. • Last month invoices for by product indicating being sold to end consumer with commercial value. • Last month's statement of sale of by product to end user. **Sodium Aluminates Solution:** Industry has claimed that by-product Sodium Aluminum Solution is generated in purification of	Committee noted that the said application was again discussed before 1st Committee meeting of 2024-2025 held on 20/06/2024 & After due deliberations, it was decided to consider **Nickel Aluminum alloy, Noble Metal Chemicals, Noble Metal (sponge & flats)** as products as the industry has installed dedicated plant for manufacturing of the same & it is directly used as an intermediate for manufacturing of Activated alloy (Raney) catalyst, Palladium catalyst & Precious Metal Catalyst respectively.
2	Noble Metal Chemicals	6 MT/A	-		
3	Noble Metal (sponge & flats)	1.2 MT/A	-		
4	Sodium Aluminates Solution	8402 MT/A	12 to 25%		

	Nickel Aluminum alloy with caustic for mfg. of Raney nickel catalyst. They have reported that analysis reports of purity carried out by NABL accredited laboratory is submitted. The application was again discussed before 1st Committee meeting of 2024-2025 held on 20/06/2024 & After due deliberations, it was decided to consider **Nickel Aluminum alloy, Noble Metal Chemicals, Noble Metal (sponge & flats)** as products as the industry has installed dedicated plant for manufacturing of the same & it is directly used as an intermediate for manufacturing of Activated alloy (Raney) catalyst, Palladium catalyst & Precious Metal Catalyst respectively. It was noted that the expert member of the committee that had raised queries during the meeting held on 30/01/2024 was not present for the instant meeting. Therefore, after due deliberations, it was decided to defer the case wrt **Sodium Aluminates Solution** for next meeting. Industry reported that they are sending Sodium Aluminates Solution partly to end user industries outside Maharashtra & partly to end user industries located in Maharashtra.	It was noted that the expert member of the committee that had raised queries during the meeting held on 30/01/2024 was not present for the instant meeting. Accordingly, it was decided to defer the case wrt **Sodium Aluminates Solution** for next meeting. After due deliberations, it was decided to again defer the case. In the meantime, Regional Officer/Sub Regional Officer of the respective regions shall visit & verify the manufacturing process of end user industries located in Maharashtra that are using **Sodium Aluminates Solution** as Raw material in their process and accordingly submit detailed report regarding the use of the same & resubmit the case before next meeting along with report from respective Regional Officer/Sub Regional Officer.

Agenda Item No. 04

Project Name: **M/s. Privi Speciality Chemicals Limited.,**
A-07, MIDC Mahad, Dist. Raigad.

(i) Application unique No.: MPCB-BY_PRODUCT-0000000058
(ii) Environmental Clearance details: Industry has obtained Environmental Clearance vide No. SEAC-2013/CR-242/TC-2 dated 08/10/2015.
(iii) Consent details: Consent to Operate under Red/LSI category, vide No. Format1.0/CC/UAN No.0000151650/CO/2304000648 dated 11/04/2023 valid up to 31/08/2025.

Proposed inclusion of By-product				**Industry submission and deliberation**	**Committee decision**
Sr. No.	**Name**	**Qty**	**Purity**		
1	Aqueous Fluoroboric Acid	82.7 MT/A	22.32%	**Industry submission:** Industry is engaged in mfg of Aromatic chemicals. Industry has claimed 01 no. of Hazardous Wastes listed in existing consent as By-Products & 1 no. of additional By-Product to be mfg. by processing Aqueous Fluoroboric Acid in-house to form Potassium/ Sodium/ Calcium Tetrafluoroborate for consideration of the same as By-Products: Industry stated that their proposal was earlier discussed in 1st Meeting of 2023-24 for By-Product & Hazardous Waste Categorization held on 18/10/2023 & the said case was deferred to reexamine the case to verify on whether the claimed By Product Aqueous Fluoroboric Acid is listed under Schedule-I/II/III/IV of Hazardous Wastes Rules 2016.	Committee noted that the said application was discussed before 1st Committee Meeting of 2023-24 for By-Product & Hazardous Waste Categorization held on 20/06/2024 & the committee had decided to defer the case for next meeting to reexamine the case to verify on whether the claimed By Product Aqueous Fluoroboric Acid is listed under Schedule-I/II/III/IV of Hazardous Wastes Rules 2016. It was noted that the expert member of the committee was not present for the instant meeting & it was therefore decided to defer the case for next meeting. After due deliberations, it was decided that the claimed byproduct Aqueous Fluoroboric Acid is HW as per the

	Industry further reported that the case was again discussed before 1st Committee Meeting of 2023-24 for By-Product & Hazardous Waste Categorization held on 20/06/2024 & the committee had decided to defer the case for next meeting to reexamine the case to verify on whether the claimed By Product Aqueous Fluoroboric Acid is listed under Schedule-I/II/III/IV of Hazardous Wastes Rules 2016. It was noted that the expert member of the committee was not present for the instant meeting & it was therefore decided to defer the case for next meeting. Industry has withdrawn claimed by product Potassium/ Sodium/ Calcium Tetrafluoroborate during the meeting as it was not included in CTO. Regarding Aqueous Fluoroboric Acid industry stated that the same is utilized inhouse & in sister concern industry as Raw material.	Schedule-I of Hazardous & Other Wastes (M & TM) Rules, 2016 and cannot be considered as by-Product, however it can be utilized as a raw material inhouse, but can be used at their sister concern unit, only after obtaining the Authorization under Rule 9 of Hazardous & Other Wastes (M & TM) Rules, 2016 by user industry, till that time it should be considered as hazardous waste as per consent and shall be disposed at CHWTSDF or sale to the Authorized recycler having Authorization under Rule 9 of Hazardous & Other Wastes (M & TM) Rules, 2016.

Agenda Item No. 05

Project Name: **M/s. DMCC Specialty Chemicals Limited.**
105, MIDC Dhatav, Tal. Roha, Dist. Raigad, Maharashtra

(vii) **Application unique No.:** MPCB-BY_PRODUCT-0000000060.
(viii) **Environmental Clearance details:** Attracts EC & Establishment of unit is prior to 2006.
(ix) **Consent details:** Obtained consent to operate vide Format1.0/CC/UAN No. MPCB-CONSENT-0000190331/CR/2403002522, dated 23/03/2023 which is valid up to 28/02/2027.

Proposed inclusion of By-product				Industry submission and deliberation	Committee decision
Sr. No.	**Name**	**Qty**	**Purity**		
1	Dil. Sulphuric acid	11600 MT/M	60-70%	This proposal was discussed before 1st Meeting of 2024-25 for By-Product & Hazardous Waste Categorization dtd., 20/06/2024 & It was noted that the expert member of the committee that had raised queries during the meeting held on 30/01/2024 was not present for the instant meeting. It was therefore decided to defer the case for next meeting. Industry has resubmitted the case along with. • The analysis report purity of by-product i.e. Diphenyl Sulphone is 99.88%, • End use of Diphenyl Sulphone is for Manufacturing of polymers in the polymer and plastic industry, Manufacturing of Thermal paper, For the creation of membranes for water	Committee noted that the said proposal was discussed before 1st Meeting of 2024-25 for By-Product & Hazardous Waste Categorization. Dtd., 20/06/2024 & It was noted that the expert member of the committee that had raised queries during the meeting held on 30/01/2024 was not present for the instant meeting. It was therefore decided to defer the case for next meeting. **Diphenyl Sulphone:** After due deliberations, Committee opined that Diphenyl sulphone generated from manufacturing of products Benzene sulphonyl chloride can be considered as a byproduct,
2	Diphenyl Sulphone	24 MT/M	99.88%		
3	Sodium Sulphate	400 MT/M	91.9%		

	filtration, Serves as intermediates or precursor in the synthesis of various organic compounds and pharmaceuticals. Manufacturing process of Thermal paper is also submitted where Diphenyl Sulphone is used as a raw material for coating of paper. One of the end user is Ayaan Nanotech Pvt. Ltd. They use Diphenyl Sulphone as one of the raw material for the manufacturing of thermal papers. As per the invoice, for the month of April, 2024, 0.4 T of diphenyl sulphone was sold once for one lakh thirty- Two Thousand one hundred sixty. • Statement of sales for the last six months detailing the sale of the by-product to the end user was submitted by company. • Industry stated that the claimed by-products are as pure as a fresh products and generated from the unit operation of the manufacturing process and not from pollution control equipment. As the claimed by-product does not contain any contamination/ impurity there will not be any generation of other waste due to use of the claimed by-product. Hence, there is no negative impact on the quality where this by-product will be used directly.	After due deliberations, it was decided to consider the case of incorporation of the only one by-product i.e Diphenyl Sulphone into the existing consent to operate, as the materials are not intended to be produced but gets produced in the production process & as the claimed byproducts does not contain any contamination/impurity there will not be any generation of other waste due to use of the claimed by products. Hence no negative impact on the quality where these by product will be used directly. **Dil. Sulphuric acid & Sodium Sulphate:** However, the other claimed by products i.e dil. sulphuric acid and sodium sulphate the CPCB has already formed SOP's for these & are already published for utilization of these as hazardous waste under rule 9 as per Hazardous And Other Wastes (Management and Transboundary Movement) Rules, 2016. Hence, considering this it was decided Dil. Sulphuric acid & Sodium Sulphate shall not be considered as By Product and same shall be disposed by sale to Authorized Party having permission under Rule 9 of H&OW Rules/CHWTSDF

Agenda Item No. 06

Project Name: **M/s. Metallurgical Products (I) Pvt. Ltd**
(Plot T-27, MIDC Industrial Area Taloja Tal-Panvel, District- Raigad.

(i) Application unique No.: MPCB-BY_PRODUCT- 0000000066.
(ii) Environmental Clearance details: NA.
(iii) Consent details: Format1.0/AS(T)/UAN No. 0000114973/CR-2109000389, dated 13/09/2021 which is valid up to 31/07/2026.

<table>
<tr><th colspan="2">Proposed inclusion of By-product</th><th>Industry submission and deliberation</th><th>Committee decision</th></tr>
<tr><td colspan="2"><table>
<tr><th>Sr. No.</th><th>Name</th><th>Qty</th><th>Purity</th></tr>
<tr><td>1</td><td>Sodium Fluoride</td><td>2000 Kg/D</td><td>96%</td></tr>
<tr><td>2</td><td>Calcium Fluoride</td><td>12000 Kg/D</td><td>95%</td></tr>
<tr><td>3</td><td>Calcium Sulphate</td><td>8000 Kg/D</td><td>96%</td></tr>
</table></td><td>Industry submission:
1) Sodium Fluoride (NaF), Calcium Fluoride – CaF2 & Calcium Sulphate – CaSO4: They are generated during mfg. of Tantalum Pentoxide Or Ferro Tantalum Or Potassium Fluoro Tantalate and Niobium Pentoxide Or Niobium Metal (ATR) Or Ferro Niobium. They are mentioned as by-product in the previous Consent to Operate dated-18/10/2017. Not falling under Guidelines for Identification of Materials Generated from Industrial Processes as Wastes or By-products [Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. The process of production is not listed in the projects or activities which require Environment Clearance (EC) under the EIA</td><td>Committee noted that it is a Metallurgical industry engaged in extraction of rare metals Tantalum and Niobium from Ore.

Also, noted from the manufacturing process, Tantalum & Niobium compound are separated by solvent extraction process in acidic media where H2SO4 is generated, which further converted to Calcium Sulphate by using Calcium Hydroxide.

Further, separated Tantalum & Niobium compounds are reacted with Ammonium Hydroxide to mfg Tantalum Pentoxide & Niobium Pentoxide & in this process Ammonium Fluoride is generated</td></tr>
</table>

	Notification 2006, so does not require EC. **Deliberations:** Industry stated that the proposal was discussed before 1st Meeting of 2024-25 for By-Product & Hazardous Waste Categorization. Dtd., 20/06/2024 & it was decided to defer this claimed By-Products for next meeting, meanwhile industry shall carry out & submit detailed analysis report from IIT/NEERI/NCL showing concentration level of organic impurities along with; • Purity of the by-product with indicating its usability. • End use of the by -product followed by the manufacturing process involves thereof. • Last month invoices for by product indicating being sold to end consumer with commercial value. • Last month's statement of sale of by product to end user.	and during recovery process of Ammonium Hydroxide (which is one of the raw materials) from Ammonium Fluoride, Ammonium Sulphate/Calcium Sulphate is formed. The committee noted that the Calcium suplhate is formed in scrubber by reacting H2SO4 with Calcium Hydroxide. The industry has submitted the analysis reports of the Calcium Sulphate carried out from NCL Pune. However, the product Calcium Sulphate can be used as a raw material in cement industry. Therefore, the same cannot be considered as By-product. For the other claimed by-products products Sodium Fluoride (NaF), Calcium Fluoride – CaF2, industry has not specified the source of the generation, the detailed manufacturing process along with the mass balance, the percent of impurities and the details of end users.

		Therefore, the committee decided to defer the application & submit the above details before the committee.

Agenda Item No. 07

Project Name: **M/s. DRT-Anthea Aroma Chemicals Pvt Ltd.,**
Plot No. 51-A/1, Roth Budruk, Tal-Roha Dist. Raigad, Maharashtra

(iv) Application unique No.: MPCB-BY_PRODUCT- 0000000068.
(v) Environmental Clearance details: EC-2008/11/CR.1 was issued on 30/01/2010.
(vi) Consent details: Format1.0/CAC/UAN No. MPCB-CONSENT_AMMENDMENT-0000006908/CR/2402000010 dated 05/02/2024 which was valid up to 28/02/2024.

<table>
<tr><th colspan="4">Proposed inclusion of By-product</th><th>Industry submission and deliberation</th><th>Committee decision</th></tr>
<tr><td>Sr. No.</td><td>Name</td><td>Qty</td><td>Purity</td><td rowspan="2">Industry submission:
Industry stated that the proposal was discussed before 1st Meeting of 2024-25 for By-Product & Hazardous Waste Categorization. Dtd., 20/06/2024 & it was decided to defer this claimed By-Product for next meeting, meanwhile industry shall carry out & submit detailed analysis report from IIT/NEERI/NCL showing concentration level of organic impurities along with;
• Purity of the by-product with indicating its usability.
• End use of the by -product followed by the manufacturing process involves thereof.
• Last month invoices for by product indicating being sold to end consumer with commercial value.
• Last month's statement of sale of by product to end user.</td><td rowspan="2">Committee noted that the proposal was discussed before 1st Meeting of 2024-25 for By-Product & Hazardous Waste Categorization. Dtd., 20/06/2024 & it was decided to defer this claimed By-Product for next meeting.
Committee also noted that Industry has revised the application for incorporation of by-product namely Tops & High Boilers from the distillation operations of Anthamber, Dihydromyrcenol and Methyl Pentenone i.e. Anthamber Terpenes, Methyl Pentenone HF, Dihydromyrcenol Terpenes, Anthamber HB Terpenes,</td></tr>
<tr><td>1</td><td>Tops & High Boilers from the distillation operations of Anthamber, Dihydromyrcenol and Methyl Pentenone i.e. Anthamber Terpenes, Methyl Pentenone HF, Dihydromyrcenol Terpenes, Anthamber HB Terpenes, Dihydromyrcenol</td><td>2040 TPA</td><td>-</td></tr>
</table>

	HB Terpenes (min 90%)			Industry has revised the application for incorporation of by-product namely Tops & High Boilers from the distillation operations of Anthamber, Dihydromyrcenol and Methyl Pentenone i.e. Anthamber Terpenes, Methyl Pentenone HF, Dihydromyrcenol Terpenes, Anthamber HB Terpenes, Dihydromyrcenol HB Terpenes mentioned as a by-product under hazardous waste in consent to operate dtd. 05/02/2024. Industry has uploaded • The source of said by-product i.e., from manufacturing of intended products Anthamber, methyl pentenone and Dihydromyrcenol, Tops & High Boilers from the distillation operations of Anthamber, Dihydromyrcenol and Methyl Pentenone i.e. Anthamber Terpenes, Methyl Pentenone HF, Dihydromyrcenol Terpenes, Anthamber HB Terpenes, Dihydromyrcenol HB Terpenes is generated. • Material balance along with manufacturing process of products Anthamber, Methyl pentenone and Dihydromyrcenol in which the claimed by-product is being generated in the chemical reaction. • Declaration regarding purity of by-product. • End use of by-products i.e. sold to end user directly. • Prefeasibility study and Safety data sheet.	Dihydromyrcenol HB Terpenes mentioned as a by-product under hazardous waste in consent to operate dtd. 05/02/2024. After due deliberations, it was decided to consider Tops & High Boilers from the distillation operations of Anthamber, Dihydromyrcenol and Methyl Pentenone i.e. Anthamber Terpenes, Methyl Pentenone HF, Dihydromyrcenol Terpenes, Anthamber HB Terpenes, Dihydromyrcenol HB Terpenes (min 90%) as By-Products after obtaining verification report of Regional Officer/Sub Regional Officer of the respective region of the end user industry located wrt the manufacturing process of end user industries that are using the claimed By-product as Raw material in their process and accordingly consent may be amended based on the report of respective RO/SRO with a condition that industry should

	• The industry has uploaded the analysis reports of the concentration of Tops & High Boilers from the distillation operations of Anthamber, Dihydromyrcenol and Methyl Pentenone i.e. Anthamber Terpenes, Methyl Pentenone HF, Dihydromyrcenol Terpenes, Anthamber HB Terpenes, Dihydromyrcenol HB Terpenes stating that the analysis reports metal contents in above mentioned by-products are found to be negligible and most of the metals are below detectable limits • Industry has presented year invoice for the months of last financial year by-product Anthamber, methyl pentenone and Dihydromyrcenol, Tops & High Boilers from the distillation operations of Anthamber, Dihydromyrcenol and Methyl Pentenone i.e. Anthamber Terpenes, Dihydromyrcenol Terpenes, Anthamber HB Terpenes, Dihydromyrcenol HB Terpenes is generated as by-product. as a proof for being sold to end consumer (disinfectant Industry- Metro Chemical Works PVT. LTD.) with commercial value. • The industry has also uploaded industry's details other than Metro Chemical Works Pvt. Ltd. which are also direct end users of said by-product.	submit, quarterly data of generation, utilization by various end users, to MPCB.

Agenda Item No. 08

Project Name: **M/s. DRT-Anthea Aroma Chemicals Pvt Ltd.,**
Plot No. 49,50,51A, Roth Budruk, Tal-Roha Dist. Raigad, Maharashtra

(i) Application unique No.: MPCB-BY_PRODUCT- 0000000072.
(ii) Environmental Clearance details: SEAC-2012/CR- 184/TC-2 was issued on 08.04.2015 by Government of Maharashtra for the total production capacity of 18060 TPA.
(iii) Consent details: Format1.0/CAC/UAN No. 0000091847/CO-2009000497 which was valid up to 31/01/2025.

Proposed inclusion of By-product				Industry submission and deliberation	Committee decision
Sr. No.	**Name**	**Qty**	**Purity**		
1	Tops and High Boilers from distillation operations of Anthamber, Anthamber CR, Dihydromyrcenol, Geraniol, Nerol, Linalool, Methyl Pentenone and Dihydromyrcene (i.e. Anthamber Terpenes, Methyl Pentenone HF, Dihydromyrcenol Terpenes, Anthamber HB	3540 TPA	-	**Industry submission:** During the presentation the industry has submitted that claimed by-products Tops & High Boilers from the distillation operations of Anthamber, Anthamber CR Dihydromyrcenol, Methyl Pentenone, Terpene Alcohols, and Dihydromyrcene (i.e. Anthamber Terpenes, Methyl Pentenone HF, Dihydromyrcenol Terpenes, Anthamber HB Terpenes, Dihydromyrcenol HB Terpenes, Geraniol Terpenes, Nerol Terpenes, Linalool Terpenes, Geraniol HB Terpenes, Nerol HB Terpenes, Linalool HB Terpenes and Dihydromyrcene HB Terpenes) were mentioned as a by-product under hazardous waste in consent to operate dated 09.09.2020 and Acetic Acid (generating from new product Neryl Acetate applied in CIPM application) was mentioned under hazardous waste as per change in product mix application dated 01.06.2024.	After due deliberations, it was decided to consider Tops & High Boilers from the distillation operations of Anthamber, Anthamber CR Dihydromyrcenol, Methyl Pentenone, Terpene Alcohols, and Dihydromyrcene (i.e. Anthamber Terpenes, Methyl Pentenone HF, Dihydromyrcenol Terpenes, Anthamber HB Terpenes, Dihydromyrcenol HB Terpenes, Geraniol Terpenes, Nerol Terpenes, Linalool Terpenes, Geraniol HB Terpenes, Nerol HB Terpenes, Linalool HB Terpenes and Dihydromyrcene HB

	Terpenes, Dihydromyrcenol HB Terpenes, Geraniol Terpenes, Nerol Terpenes, Linalool Terpenes, Geraniol HB Terpenes, Nerol HB Terpenes, Linalool HB Terpenes and Dihydromyrcene HB Terpenes)			Industry stated that the said by-product i.e., Tops & High Boilers from the distillation operations of Anthamber, Anthamber CR Dihydromyrcenol, Methyl Pentenone, Terpene Alcohols, and Dihydromyrcene (i.e. Anthamber Terpenes, Methyl Pentenone HF, Dihydromyrcenol Terpenes, Anthamber HB Terpenes, Dihydromyrcenol HB Terpenes, Geraniol Terpenes, Nerol Terpenes, Linalool Terpenes, Geraniol HB Terpenes, Nerol HB Terpenes, Linalool HB Terpenes and Dihydromyrcene HB Terpenes) are being generated from manufacturing of intended products Anthamber, Anthamber CR, Geraniol, Nerol, Linalool, Methyl Pentenone, Dihydromyrcenol and Dihydromyrcene. The said By-product Acetic Acid is generated from the manufacturing of intended product Neryl Acetate which is a newly added product in change in product mix application. Industry has uploaded • Material balance along with manufacturing process of products Anthamber, Anthamber CR Dihydromyrcenol, Methyl Pentenone, Terpene Alcohols, and Dihydromyrcene and Neryl Acetate (newly added product as per CIPM application) from which the claimed by-products are being generated in the chemical reaction. • Declaration regarding purity of by-products.	Terpenes) as By-Products after obtaining verification report of Regional Officer/Sub Regional Officer of the respective region of the end user industry located wrt the manufacturing process of end user industries that are using the claimed By-product as Raw material in their process and accordingly consent may be amended based on the report of respective RO/SRO with a condition that industry should submit, quarterly data of generation, utilization by various end users, to MPCB. **Acetic Acid:** After due deliberations, it was decided that Recovered dilute Acetic Acid cannot be considered as By-Product, as it is a spent acid as per the Schedule-I of Hazardous & Other Wastes (M & TM) Rules, 2016, however it can be utilized as a raw material at their sister concern unit, only after obtaining the Authorization under Rule 9 of
2	Acetic Acid	780 TPA	-		

	• End use of by-products i.e. sold to end user directly. • Prefeasibility study and Safety data sheet. • The industry has uploaded the analysis reports of the concentration of Tops & High Boilers (90%-99%) & and Acetic acid (Around 30.1%) & stated that from the analysis reports metal contents in above mentioned byproducts are found to be negligible and most of the metals are below detectable limits. • Industry has also presented invoice for the months of last financial year for by-product Tops & High Boilers from the distillation operations as a proof for being sold to end consumer (Disinfectant Industry- Metro Chemical Works Pvt. Ltd.) with commercial value.	Hazardous & Other Wastes (M & TM) Rules, 2016 by user industry, till that time it should be considered as hazardous waste as per consent and shall be disposed at CHWTSDF or sale to the Authorized recycler having Authorization under Rule 9 of Hazardous & Other Wastes (M & TM) Rules, 2016.

Agenda Item No. 09

Project Name: **M/s. Lona Industries Ltd.,**
At Ladivali,Post Gulsunde,Tal Panvel, Dist Raigad.

(i) Application unique No.: MPCB-BY_PRODUCT-0000000062
(ii) Environmental Clearance details: Industry has obtained Environmental Clearance for expansion vide No. F.No. IA-J-11011/84/2018-IA-II(I), Date. 03.12.2021.
(iii) Consent details: a) Consent to Operate under Red/LSI category, vide No. Format1.0/CC/UAN No.0000167553/CR/2308001545, dated 23/08/2023 which is valid up to 30/04/2027. b) Consent to Establish for Expansion vide No. Format1.0/CC/UAN No.0000133479/CE/2211001976, dated 24/11/2022.

Proposed inclusion of By-product				Industry submission and deliberation	Committee decision
Sr. No.	**Name**	**Qty**	**Purity**	**Industry submission:** Industry is engaged in manufacturing organic pigments, mainly Phthalocyanines and Quinacridones. Industry has claimed to identify Ammonium Sulfate, Ammonium Chloride, Dicalcium Phosphate and Copper Sulfate as Products & Hydrochloric Acid solution, Aluminum Chloride solutions, Sulfuric Acid and Sodium Hypochlorite solution as By-products. Industry has made detailed presentation on manufacturing process along with Chemical reaction & Material Balances of each product mentioning generation of said byproducts and submitted following details;	**Hydrochloric acid (30%), Aqueous Sulfuric acid:** After due deliberations, it was decided that the claimed by-product Hydrochloric acid (30%), Dil. Sulfuric acid are spent acids as per the Schedule-I of Hazardous & Other Wastes (M & TM) Rules, 2016 and cannot be considered as by-Product, it should be considered as hazardous waste as per consent and shall be disposed at CHWTSDF or sale to the Authorized recycler having Authorization under Rule 9 of Hazardous & Other Wastes (M & TM) Rules, 2016.
1	Hydrochloric acid (30%)	2160 MT/A			
2	Aqueous Sulfuric acid	14400 MT/A			
3	$AlCl_3$ (PAC) Solution (7-10% as Al_2O_3) (as per existing consent) as	36000 MT/A			

	a. Source of by-products b. Material Balance along with mfg. process of products in which the claimed by-Product is being generated, along with chemical reactions. c. End use of the By product d. Prefeasibility study, Environmental & Health Impact and Risk Assessment Studies, Safety Data Sheets. **Deliberations:** Industry claims that the claimed by-product Ammonium Sulphate/Ammonium Chloride, Copper Sulfate, and Dicalcium Phosphate are inorganic products & intentionally produced by the industry. Industry has stated that they have provided dedicated plant infrastructure for the process of the Ammonium Sulphate/ Ammonium Chloride, Copper Sulfate are already installed in the premises & therefore requested to consider above as Products. Industry further states that the remaining claimed By-products are **not produced intentionally** in the pigment production. They are not listed in schedules (III), (IV), (VI) and (I) of HOWM rules 2016. Analytical results for all By-product show that their purity is greater than 96 %. The by-products have proven end uses and demand.	**AlCl3 (PAC) Solution:** After due deliberations, it was decided that the claimed by-product AlCl3 (PAC) Solution is generated after recovery of copper from mother liquor which is listed in schedule as 28.1 Process residue & as per Hazardous & Other Wastes (M & TM) Rules, 2016 and cannot be considered as by-Product, it should be considered as hazardous waste as per consent and shall be disposed at CHWTSDF or sale to the Authorized recycler having Authorization under Rule 9 of Hazardous & Other Wastes (M & TM) Rules, 2016.

	The sales history of these By-products to actual end users proves that they are useful and can be used as raw materials without adversely affecting the health and environment.	

The meeting ended with vote of thanks to Chair.

(Nandkumar Gurav)
Assistant Secretary (Technical)

(Dr. Avinash Dhakne, IAS)
Member Secretary & Chairman of the Technical Committee