

**Decision of Ministry of Environment, Forest and Climate Change with respect to discussion on issues pertaining to clarifications sought on Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016, as approved by the Competent Authority on the basis of recommendation of the 88th Meeting of the Technical Review Committee (TRC) held on 20<sup>th</sup> August, 2024.**

**Venue: Narmada Conference Hall (Hybrid Mode)**

**PROCEEDINGS**

**Opening Remarks of the Chairman:** The Chairman extended welcome to members and other participants.

The Committee deliberated in detail on various technical issues for clarifications sought under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. Agenda-wise details of deliberation and corresponding recommendations of the committee are as given below:

**Agenda.1. Request for permitting the use of Spent Sulphuric Acid for manufacturing of Single Super Phosphate (SSP) by M/s Gujarat Dyestuff Manufacturers Association (GDMA) and Ankleshwar Industries Association (AIA)**

M/s Gujarat Dyestuff Manufacturers Association GDMA and AIA *vide* letters dated 16<sup>th</sup> April, 2024 & 18<sup>th</sup> April, 2024 has requested to consider Spent Sulphuric acid, a common by- product of the chemical industry which plays a critical role in the manufacturing process of phosphate fertilizers like SSP. However, it is categorized as hazardous under Hazardous & Other Waste Rules, 2016.

2. They further stated that recently CPCB conducted 23<sup>rd</sup> Technical Evaluation Committee meeting, proposing that manufacturers intending to use hazardous waste like spent sulfuric acid in land applications, human consumption, animal feed, drugs or similar end uses should seek approvals from relevant authorities such as the Department of Fertilizers, FSSAI, Pharmacopoeia commission and others. This approval process has hindered manufacturer' ability to utilize spent sulfuric acid, posing a significant challenge to SSP production.

3. They informed that during FY23, the total annual production capacity of SSP plants was 12.250 million MT. Two new SSP plants were commissioned in Gujarat during the same period. In India, there are 102 SSP plants out of which 93 were operational in FY 2023. Based on the usage pattern of various zones in India viz. East, West, North & South, 61 % of SSP is produced using spent sulphuric acid route, so any restriction will result in supply gap of 3,443 KT of SSP. This may also increase in the import demand of both pure Sulphuric acid/Sulphur and Di-ammonium Phosphate (DAP) as a substitute leading to higher carbon footprint.

4. The utilization of spent acid in the manufacturing of SSP plays a vital role in promoting circularity and reducing carbon foot print. If spent acid is not used in manufacturing so alternative disposal mechanism needs to be identified, other than in cement industry as the amount generated is much higher than the demand in the cement industry.

*The matter was discussed in 87<sup>th</sup> TRC and the committee deliberated upon the issue,*

*SOP issued by the CPCB and heard the views of the representative of GDMA and AIA. The Committee recommended that the applicant may be asked to provide list of the processes from which Spent Sulphuric Acid is generated and analysis report of the same. Further, the applicant may also provide quality control lab reports for SSP manufactured using Spent Sulphuric Acid. CPCB may also provide inputs regarding the decision of Technical Evaluation Expert Committee (TEC) Meeting in respect to using Spent Sulphuric Acid. In view of the aforesaid, the Committee felt that the matter may be taken after the receipt of required information.*

Now the applicant has provided the details. Accordingly, the matter is placed before the TRC for deliberation/decision.

**Agenda 2: Request to amend the Classification of Spent Sulphuric acid generated from LABSA process as “Hazardous Waste” to “By product” in new SOP issued by CPCB – Representation from M/s Indian Phosphate Limited, Udaipur**

Indian Phosphate Limited, Udaipur has requested for amendment in the new SOP issued by CPCB for Classification of Spent Sulphuric acid generated from LABSA process as “Hazardous Waste” to “By product”. They have mentioned various concerns/observations which arise due to classification of Spent Sulphuric acid (from LABSA Process) as Hazardous Waste instead of By-Product.

2. It is mentioned that the raw material used for manufacturing process of LABSA are (a) Linear Alkyl Benzene (LAB) & (b) Sulphuric acid (98 %). During the process LABSA is produced alongwith dilute sulphuric acid after completing the reaction. This dilute acid is having similar product characteristics that of strong sulphuric acid with only difference that the dilution varies from 70% to 80%.

3. In India, since many decades the dilute acid produced from LABSA process (generation of approx. 8 lac MT/year is being used in manufacturing of SSP Fertilizer). As per Fertilizers association of India, Ministry of Chemicals & Fertilizers, during 2022-23 the total production of SSP was 56 lakh MT approx. out of which 16 lakh MT was produced using dilute acid from LABSA process.

4. The compliance of new SOP will restrict the SSP industries to buy dilute sulphuric acid which may lead to closure of the LABSA industries. Therefore, they have requested to amend the Classification of Spent Sulphuric acid generated from LABSA process as “Hazardous Waste” to “By product” in new SOP issued by CPCB.

In view of the above, the matter is placed before the TRC for deliberation/decision.

**Deliberation & recommendation of TRC with respect to Agenda Item 1 & 2**

**Deliberation:** The committee deliberated upon the issue and heard the views of the representative of CPCB. From the applicants side no technical person joined the meeting and also the person joined the meeting could not explained the case properly.

The committee also noted that the Spent Sulphuric acid is a highly acidic chemical, widely used and produced in stoichiometric proportions during the production of other chemicals by different manufacturing process. The

quantity of Spent Sulphuric acid produced is not yet linked to its demand available in the market resulting in its mishandling. Classifying it as a by-product in a case where there is no demand would only facilitate unregulated disposal of a hazardous chemical. On the other hand, classifying it as a waste would prevent its legitimate use in the industry. The vigilance by the SPCBs and CPCB and especially the gap between the reported production from different manufacturing process and utilization of respective Spent Sulphuric acid needs to be expeditiously reconciled.

**Recommendation:** The committee noted that there is already a committee constituted in each SPCB to decide whether a particular product is a waste or by product. Further, very recently, after a prolonged study, on request of some applicant, CPCB has come out with a detailed SOP under Rule 9 of HOWM Rules for use of sulfuric acid in the superphosphate industry. The representative of the applicant could not explain what exactly was the issue being agitated before the TRC, but presumably they would like sulfuric acid to be classified uniformly as a by-product.

Committee felt that more discussion is required regarding the grading of the spent sulphuric acid, equipment/technology, demand & supply ratio, tracking of movement etc. Committee also desires to have the views of some of the SPCBs and have technically knowledgeable persons present the case on behalf of the applicants. Therefore committee recommended to defer the case for further discussion in the next meeting.

**Agenda 3: Consideration of Hydrochloric Acid as by-product/ co-product as per the provisions of Hazardous & Other Waste Rules, 2016**

- i. **Request for consideration of Hydrochloric Acid (HCL with purity 32 % and above) (Category: Schedule-II (B15)) as by-product produced from consented/permitted Benzyl products i.e. Benzyl Chloride, Benzaldehyde and Benzyl Alcohol - M/s KLJ Organics Limited (Unit II), Jhagadia, Gujarat**

M/s KLJ Organics Limited, Jhagadia, Gujarat has requested for consideration of Hydrochloric Acid (HCL with purity 32 % and above) (Category: Schedule -II (B 15)) as by- product from Benzyl products i.e. Benzyl Chloride, Benzaldehyde and Benzyl Alcohol.

They have mentioned that in Environment Clearance (EC) and Consent to Establish (CTE), HCL produces having purity 32% and above were obtained as By Product /Co-product from Product Benzyl Chloride, Benzaldehyde & Benzyl Alcohol but in subsequent CC&A Amendment it is produced as Hazardous Waste. They have submitted the following documents:

- Equipment /technology available to get HCL with Purity 32% and above Analysis Reports for said purity of HCL issued by NABL and MoEFCC approved laboratory
- Certificate issued by Institute of Chemical Technology (Mumbai) stating that produced HCL (32% and above) by M/s KLJ Organic Limited (Unit II)

is not falling under Hazardous waste category in Schedule I, III, IV & VI of Hazardous

& Other Waste (Management & Trans Boundary Movement) Rules, 2016 and it is a By- Product.

- List of End users to whom the HCL is to be supplied along with MoU

**ii. Request for consideration of Hydrochloric Acid as by-product produced from manufacturing process of Benzo Trichloride (BTC) & Vinylidene Difluoride (VDF) - M/s Gujarat Fluorochemicals Limited, Bharuch, Gujarat**

The applicant has mentioned that HCL produced during the manufacturing process are not hazardous but SPCB recognized HCL as hazardous waste due to which their supplies to end user industries are getting badly affected due to protocol for these industries to not to use any hazardous waste in their process and the high economy loss is tuned. They have further requested to consider the HCL as by-product.

**iii. Request for consideration of Hydrochloric Acid as by-product produced from manufacturing process of R-22 & R -142b - M/s Gujarat Fluorochemicals Limited, Panchmahal, Gujarat**

The applicant has mentioned that HCL produced during the manufacturing process are not hazardous but SPCB recognized HCL as hazardous waste due to which their supplies to end user industries are getting badly affected due to protocol for these industries to not to use any hazardous waste in their process and the high economy loss is tuned. They have further requested to consider the HCL as by-product.

**Agenda.4. Consideration of Hydrochloric Acid generated from manufacturing of Monochloroacetic acid (MCA) as product/ by-product/ co-product as per the provisions of Hazardous & Other Waste Rules, 2016 by M/s Anaven LLP, Valsad, Gujarat**

M/s Anaven LLP, a joint venture company of Atul and Nouryon (erstwhile known as Akzonobel), Netherland is the largest manufacturer of Monochloroacetic acid (MCA) in India. The Company manufactures MCA using Nouryon's state-of-the-art proprietary technology involving the reaction of acetic acid with chlorine. MCA is presently imported largely from China and it is used for manufacturing of pharmaceuticals like Ibuprofen, agrochemicals, liquid soaps, detergent and other cleaning products.

2. The plant is having valid Environment Clearance (EC) no. J-11011|286|2018 |IA II (I) dated August 11, 2020 and valid Consent to Operate (CTO) no. AWH 119535 dated July 27, 2022. Later we also received an EC EC22A021GJ120716 dated December 03, 2022 and subsequently CTO amendment no. WH 131858 respectively for the expansion in the capacity from 32,000 TPA to 38,400 TPA. MoEFCC has given HCL as a product in both the ECs granted. Also the analysis report in this regard from NABL and MoEF certified laboratories are provided by the applicant.

3. Despite all the above approvals and documents submitted to GPCB for consideration of Hydrochloric Acid generated from manufacturing of Monochloroacetic acid (MCA) as product/ by-product/ co-product as per the provisions of Hazardous & Other Waste Rules, 2016, GPCB granted HCL as a waste making whole predicated

business calculations wrong as it cannot be sold in open market neither can be exported though company invested Rs. 4.5 Cr for the purification of HCL. This investment apart from the recurring cost is in vein.

4. GPCB are additionally asking for the recommendation letter issued from the HSM division to consider HCL as a product. Therefore, applicant requested Ministry to consider the same for decision.

*The above Agenda Items (Agenda Item 3 & 4) were first discussed in 85<sup>th</sup> TRC meeting held on 12<sup>th</sup> March, 2024. During the meeting the Committee felt the need to know impact and compliance of its earlier decision on HCL. Accordingly, TRC recommended that details about application received, processed, NOC given and subsequent details w.r.t. quarterly report of HCL produced and supplied by a unit to end user etc. should be obtained from GPCB/CPCB for considering the instant matter.*

*GPCB/CPCB had provided all the details. Accordingly, matter was considered by TRC in its 86<sup>th</sup> meeting held on 03<sup>rd</sup> April, 2024 for further deliberation/decision.*

*The above Agenda Items (Agenda Item 3 & 4) were further discussed in 86<sup>th</sup> TRC meeting held on 03<sup>rd</sup> April, 2024. During deliberation the committee noted that as per the report of CPCB and GPCB, units are not complying with the consent conditions for movement of hazardous waste and conditions stipulated in Ministry's OM dated 23<sup>rd</sup> February, 2023 allowing that the HCL generated from manufacturing of Chlorinated Paraffin Wax (CPW) with purity 32% and above may be considered as product/by-product by the respective SPCBs (state of origin), to be supplied to end user only subject to certain condition. Therefore, TRC recommended that the HCL generated from manufacturing of CPW should be treated as hazardous waste and the units must follow consent conditions for movement of hazardous waste and all the norms as per the provisions of Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016 as amended from time to time till the final decision taken up by GPCB for declaring HCL as product/by-product and submit report to Ministry.*

Now, GPCB vide letter dated 22<sup>nd</sup> July, 2024 informed the following:

- (i) Application of KLJ Organics Limited-Unit II was again put up before the state level committee constituted to discuss application for consideration of hazardous waste as a by-product in line of HoWM Rules, 2016. However, the submission of unit w.r.t end users is not in line with MoEFCC letter dated 23<sup>rd</sup> February, 2023 and hence the same was again sought from the unit and the decision on the application could not be taken.
- (ii) Further, it is also mentioned that their office is in receipt of representations from M/s Gujarat Fluorochemicals Limited {Agenda no. 3(ii) and 3(iii)} and M/s Anaven LLP (Agenda no. 4). It is inferred that their applications are w.r.t. HCL generated from manufacturing of different refrigerants and Monochloro acetic acid respectively and not from CPW (Chlorinated Paraffin Wax).

In this regard GPCB has forwarded both the matters to the Ministry for consideration by TRC separately.

In view of the above, the matter is placed before TRC for deliberation/discussion.

### **Deliberation & recommendation of TRC with respect to Agenda Item 3 &4**

**Deliberation:** The committee deliberated upon the issue and found that GPCB is still in process to take the final decision on M/s KLJ Organics Ltd, Unit-II by state level committee.

**Recommendation:** The committee is of the opinion that non-compliance of the condition stipulated in Ministry's OM dated 23<sup>rd</sup> February, 2023 allowing that the HCL generated from manufacturing of Chlorinated Paraffin Wax (CPW) with purity 32% and above may be considered as product/by-product by the respective SPCBs (state of origin), to be supplied to end user only subject to certain condition is still a matter of high concern as its impact on the environment is irreversible.

In the instant cases wherein HCL is generated from the process other than the manufacturing of CPW, its grading and comparison of its purity must be analyzed. Committee felt that more discussion is required in the matter. Therefore, committee recommended that views/comments from CPCB/SPCB may be obtained for further discussion/deliberation on the issue. Till then, the matter is deferred.

#### **Agenda 5: Clarification on categorization of ETP sludge as hazardous or non-hazardous - Representation by M/s United Breweries Limited (UBL)**

United Breweries Limited (UBL), a subsidiary of Heineken NV, is India's largest beer company and a market leader. The applicant has mentioned that in the month of January, 2024 UBL had approached the Hon'ble Madras High Court, challenging orders of Tamil Nadu Pollution Control Board (TNPCB) seeking to immediately close the operations in their breweries. During the proceedings, the Hon'ble High Court had appointed National Environmental Engineering Research Institute (NEERI) to conduct inspection.

2. Now, as per NEERI inspection report dated June 5, 2024, the ETP sludge has been found to be non-hazardous. However, observing the fact that there is a difference in the opinion between UBL and TNPCB regarding the hazardous nature of the ETP Sludge, NEERI recommended the matter to be referred to the TRC for clarification on categorization of the waste as hazardous or non-hazardous.

In view of the above, the matter is placed before TRC for deliberation/discussion

**Deliberation:** The committee deliberated upon the issue and noted that NEERI while recommending the matter to be referred to the TRC for clarification on categorization of the waste as hazardous or non-hazardous also stated that the Industry has got the ETP sludge tested through a NABL accredited laboratory. Which categorizes the waste as Non-Hazardous? Under these circumstances, CSIR-NEERI is of the opinion that the industry should get a detailed scientific study done on assessment of the ETP sludge through a reputed organization / institute and refer the matter to the Technical Review Committee constituted by Ministry of Environment, Forest and Climate change for the clarification on categorization of the wastes as

Hazardous or Non-hazardous. Until then, the current practice on the disposal of ETP sludge in the TSDF landfill after pre-treatment is advisable.

Committee further noted that M/s UBL have engaged the services of Vimta Labs Limited and SGS India Private Limited (laboratories empaneled by Ministry of Environment, Forest and Climate change) for testing of ETP sludge and report is still awaiting.

**Recommendation:** After deliberation on the issue the committee recommended that M/s UBL have to submit the ETP sludge test report tested by Vimta Labs Limited and SGS India Private Limited as suggested by NEERI. The committee also recommended that there are many breweries in the country and the present practice being followed by different SPCBs may be ascertained by CPCB and also give its views/ comments. Accordingly, committee defers the case till the receipt of requisite document/report.

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