

**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 85<sup>th</sup> Meeting of the Technical Review Committee (TRC) held on 12<sup>th</sup> March, 2024.**

**Agenda.1. Gold recovered from exported Printed Circuit Boards (PCBs) to be considered for generation of EPR Certificates under E-Waste (Management) Rules, 2022 - matter referred by the Central Pollution Control Board.**

CPCB informed that Steering Committee constituted under E-Waste (Management) Rules, 2022 in its meeting held on 26.10.2023 discussed the issue of consideration of EPR Certificate for gold generated from exported printed Circuit Boards (PCBs) raised by the recycler's associations. Extract of relevant part of minutes of Steering Committee are as under:

- Material Recycling Association of India (MRAI) & Recycling and Environment Industry Association of India (REIAI) made joint submission w.r.t consideration of exported PCBs for generation of EPR certificates. As per the Recyclers Associations due to better recovery & profits and limited capability of gold recyclers in the country, PCBs are getting exported on the basis of NOC issued by MoEF&CC. For the fulfillment of gold obligations, Recyclers Associations requested for considering PCB recycling done in the foreign land and crediting of corresponding EPR certificates into the account of recyclers based on supporting documents such as export bills, recovery of foreign currency etc.
  - As per the committee, generation of EPR credits on exported PCBs will hinder the growth of gold recycling infrastructure in the country. Also CPCB has taken into consideration limitation of gold recycling while developing framework for generation of EPR certificates and have made provisions accordingly.
  - It was decided that CPCB will forward above request of recyclers associations to MoEF&CC for decision on the same.
2. In view of the above, CPCB has requested Ministry for consideration of the issue of generation of EPR Certificate from exported PCBs and give direction to CPCB for further action in this regard.
3. The same has been examined in the Ministry and decided to refer the matter to TRC for deliberation/decision.

*TRC in its 84<sup>th</sup> TRC meeting after detailed discussion/deliberation upon the issue recommended that CPCB may provide the details the actual achievement of the different producers in gold recovery, the quantities handled by the different recyclers, their plans for expansion of capacity may first be ascertained. Further, the views of recyclers and select producers may also be obtained.*

CPCB has provided the requisite information. Accordingly, the matter is placed before the TRC for deliberation/decision.

**Deliberation:** The committee discussed upon the issue and information provided by CPCB. Committee noted that as per the information provided by CPCB, presently there are 4932 producers registered on the EPR portal and their EPR Obligation for FY 2023-24 in terms of end product gold is 100.38 Kg (20% of total obligations). Further, Two hundred and five (205) numbers of E-Waste recyclers have been granted registration on the E-Waste EPR Portal. So far, Forty (40) numbers of E-Waste recyclers have recovered 144. 439270 kg of gold from E-waste. Twenty-two (22) numbers of E-Waste recyclers have generated 35.721655 kg of EPR Certificate in terms of gold as on 08-03-2024. Seventeen (17) numbers of E-Waste Recyclers have transferred 15.809466 kg of EPR Certificate in terms of gold and as on 08-03-2024, 19.912189 kg EPR Certificate in terms of gold is still available.

The Committee also heard the views of representative of REIAI who explained that in India around 10 lakh tons of E-Waste is generated yearly, out of which only 6% i.e. 60,000 MT is PCB and of which 4 MT of Gold can be recovered. As only 144 kg of gold is recovered, it shows that maximum quantity of PCBs is going to backyard recycling and is harmful for environment.

Representative of CPCB during the discussion apprised the Committee that MMTC-PAMP India Pvt. Ltd. has already setup e-waste recycling facility in Gurugram, Haryana which have processing/refining capacity of 4 MT of gold. Therefore, Committee suggested that a sub-committee comprising of Sh. Ashok Agarwal, Member, TRC, Sh. Anand Kumar, Director CPCB & Member TRC and representative of MoEFCC may visit MMTC-PAMP India Pvt. Ltd. Plant situated at Rojka Meo Industrial Estate, Tehsil Nuh, Mewat, Mewat, Haryana and submit a report for further consideration of the case.

**Recommendation:** After detailed deliberation on the issue the committee opined that since MMTC-PAMP India Pvt. Ltd. has already setup e-waste recycling facility in Gurugram, Haryana which have processing/refining capacity of 4 MT of gold. Committee suggested that a sub-committee comprising of Sh. Ashok Agarwal, Member, TRC, Sh. Anand Kumar, Director CPCB & Member TRC and representative of MoEFCC may visit MMTC-PAMP India Pvt. Ltd. Plant Mewat, Haryana and submit a report in this regard for further consideration of the case. Committee also recommended that other recycler associations & MMTC-PAMP India Pvt. Ltd. may also be invited in next meeting for considered view. Till then, the matter is deferred.

**Agenda.2. Request to import 30,000 MT of waste tires for their upcoming plant at Varle, Maharashtra in the FY 2024-25 by M/s Tinna Rubber and Infrastructure Limited.**

M/s Tinna Rubber and Infrastructure Limited vide letter dated 29.01.2024 requested Ministry to grant approval for import of 30,000 MT of waste tires for the FY 2024-25 for their upcoming plant at Varle, Maharashtra. Applicant has further stated in their letter that right now they have obtained CTE and in process to obtain CTO within few days.

2. M/s Tinna Rubber and Infrastructure Limited has informed that their greenfield plant is

situated in village Varle, Taluka Wada, Dist. Palghar, Maharashtra, and having capacity to process 60,000 tons of old used passenger car tires annually. Applicant further informed that this plant is an extension of their existing plant located in same area, just 5 km away. The investment of over Rs. 50 Crores in this new establishment is crucial to meet growing production demands and maintain our commitment to the circular economy. They have taken a funding of Rs 25.45 Crores from SBI (copy attached for reference) and the balance funding has been done from other sources. With state-of-the-art technology, the goal is to provide materials for the production of a wide range of products. These include tires, conveyor belts, rubber mats, insulation, brake pads, sports turf, auto components, and roads, all made using recycled materials. Our vision is to create a sustainable and eco-friendly future, revolutionizing tire recycling and promoting responsible waste management practices. The plant for material recycling is with full automation and zero discharge. Point wise responses to the Ministry's queries are as under:

3. M/s Tinna Rubber and Infrastructure Limited has further stated that in this state-of-the-art plant, they propose to process tires to produce steel-free crumb rubber, which will be further utilized to create crumb rubber modifiers for roads and various other applications. The recovered steel flakes will be sold to the industry, and the generated fiber will be processed in-house to produce Nylon 6 compound. Economic Benefits Include:

- i. The recycling unit will create direct employment opportunities for over 750 people.
- ii. By utilizing recycled materials, we contribute to saving foreign exchange reserves. The raw materials we make are substitutes for higher value imports like bitumen and natural rubber.
- iii. Our process adds value of up to 4-5X to recycled materials, enhancing their utility and marketability.
- iv. The high-quality recycled products have significant potential for export markets, contributing to economic growth and trade. Also, our recycled rubber is extensively used by various industries employing tens of thousands of people making rubber products for exports. Adding our products increases their competitiveness and enables them to compete with other origins like China, Thailand and Vietnam. A classic example of this is the rubber matting industry based in Kerala.

4. The same has been examined in the Ministry noted that as per the existing practice in case of application for import of waste tyre/rubber, the applicants who have started operation recently or have not been able to carry out production, an adhoc quantity of 1,500 MT of waste tyre/rubber is recommended. In view, it has been decided to refer the matter to TRC for deliberation/ decision.

**Deliberation:** The committee deliberated upon the issue and heard the view of representative of M/s Tinna Rubber and Infrastructure Limited who explained that for material recycling domestic scrap tires is not available adequately. On enquiring about the end product, the applicant informed that end main product will be crumb rubber which will be further used for making various product including CRMB for used in road construction.

The committee noted that since Waste Tyre EPR has been in force since 02 years, the actual achievement of the different producers in terms of their EPR obligation, the quantities of raw material handled by the different recyclers and the availability of domestic scrap tires may first be ascertained from CPCB.

**Recommendation:** After detailed deliberation on the issue the committee recommended that CPCB may provide details such as actual achievement of the different producers in terms of their EPR obligation, the quantities of raw material handled by the different recyclers and the availability of domestic scrap tyres. Committee also asked the applicant to provide the details w.r.t. (i) Electricity Connection load, (ii) proposed energy consumption, (iii) details of Equipment/Machinery installed, (iv) details of Pollution Control Equipment, (v) plant processing capacity in tons per hour or tons per 8 hour shift and (vi) processing capacity for each equipment. Till then the matter is deferred.

**Agenda.3. Consideration of Hydrochloric Acid as by-product/co-product as per the provisions of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.**

**i. Request for consideration of Hydrochloric Acid (HCL with purity 32% and above) (Category: Schedule-II (B 15)) 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.

*The matter was discussed in 81<sup>st</sup> TRC and the committee recommended CPCB may be requested to prepare analysis report in respect of each case which includes Characteristics of waste & how it is different from Chlorinated Paraffin Wax (CPW). CPCB will also verify the extent of contamination coming from the organic process/residue and give a report. Till then the matter is deferred.*

CPCB has provided the requisite information. Accordingly, the matter is placed before the TRC for deliberation/decision.

**Deliberation:** The committee deliberated upon the issue and heard the views of representatives of GFL and the presentation made by the CPCB representatives. The committee discussed on the different grades of HCL as per BIS Standards and characterization report of the samples.

CPCB pointed out the generation of HCl per ton of product and The committee noted that the quantity of HCl acid generated is very high at 10MT per ton of product in the case of Benzyl Alcohol. CPCB also gave the chemical analysis of the HCl generated. The HCl generated has a strength of 30- 32 per cent. It has TOC less than 40 mg per ?? ,but the acid generated in the manufacture of BTC has strong color. The committee noted that currently the applicants are sending their spent acid under Rule 9 & to the only those utilizers who have authorization under Rule 9.

HCl obtained during the manufacture of above mentioned products is inconsistently classified sometimes as by product and sometimes as hazardous waste. The committee recognized that some of this HCL may not have ready market as there is lack of demand for spent HCL which may affect the production itself. But committee also expressed concern about the ability of the buyer to properly use the waste HCl and the proper tracking /monitoring during transfer or transportation if declared as a by-product.

The representatives of the applicant stated that a blanket classification of this product as a hazardous waste would restrict its use only by authorized recyclers or users, thereby restricting its sale to many users, and almost entirely preventing exports. The applicant agreed that the spent acid as by-product too may be under manifest system, transportation tracking system with proper storage record.

TRC while discussing on the issue in its meeting held on 12th March, 2024 observed that Ministry after recommendation of TRC and approval of competent authority in the Ministry vide OM dated 23rd February, 2023 allowed that the HCl 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 the following:

- (i) Type of equipment/technology used by the producer and the ability to produce HCl with purity of 32 per cent and above.
- (ii) Sales to be made only to end users and no sales to be allowed to traders.
- (iii) Submission of details of end users to whom the HCl is to be supplied and verification by the SPCB/PCC of the requirement of such end users, especially their capacity to use the HCl sought to be bought.
- (iv) The movement of HCl from Producer to End User under GPS tracking.
- (v) Quarterly report of HCl produced and supplied by a unit to end user should be submitted to the concerned SPCBs/PCCs.

**Recommendation:** The Committee after detailed discussion upon the issue 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. Committee felt the need to know impact and compliance of its earlier decision on HCl. Till then the matter was deferred.

**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 export 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.

**Deliberation:** The committee deliberated upon the issue and heard the views of representatives of M/s Anaven LLP stating that Hydrochloric Acid generated from manufacturing of Monochloroacetic acid (MCA) as product will be utilized by many users like pharma companies and for export. The HCL generated is a cleaner acid almost near to the technical grade HCl with 30% purity and is invariably classified by SPCBs as a by-product.

**Recommendation:** The Committee after detailed discussion upon the issue 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. Committee felt the need to know impact and compliance of its earlier decision on HCL. Till then the matter was deferred.

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