

**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 81<sup>st</sup> Meeting of the Technical Review Committee (TRC) held on 16<sup>th</sup> October, 2023**

**Agenda 1. Review of export obligation for Special Economic Zones (SEZ) and Export Oriented Units (EOU) units engaged in import of ‘post-industrial or pre-consumer polyethylene wastes’ and ‘Polymethyl Methacrylate’ as per the Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2021.**

Ministry had amended the HOWM Rules, 2016, *vide* G.S.R. 47(E) dated 27<sup>th</sup> January, 2021. As per the amended notification:

- i. The import of ‘post-industrial or pre-consumer polyethylene wastes’ and ‘Polymethyl Methacrylate’ is permitted to units in Special Economic Zones (SEZ) and Export Oriented Units (EOU) notified by the Central Government.
- ii. The import of ‘post-industrial or pre-consumer polyethylene wastes’ shall be permitted with a requirement of at least 50% exports in terms of tonnage for 18 months from the date of the notification or till a decision is taken on the basis of review or audit undertaken to ascertain the effect of such import, whichever is later.

However, no review/audit undertaken to ascertain the effect of such import and to further decide the export obligation. Therefore, it has been decided in the Ministry that the matter may be referred to TRC for review. Accordingly, the matter was placed before the TRC in its 79<sup>th</sup> & 80<sup>th</sup> meeting. TRC after deliberation on the matter in 80<sup>th</sup> meeting recommended the following:

"After detailed deliberation upon the issue the committee recommended that KASEZ (KANDLA SEZ INDUSTRIES ASSOCIATION) may submit the following details for further deliberation/discussion:

- i. The Process and document used to verify that post-consumer waste is not mixed with the imported material.
- ii. Difference between your product and product from domestic recycling post-consumer waste and how that can be differentiate.
- iii. Copy of notification regarding export obligation of SEZ/EOU units. Till then, the matter is deferred."

KASEZ has submitted the requisite details. Accordingly, the matter is re-considered by TRC in its 81<sup>st</sup> meeting.

**Deliberation:** The committee deliberated upon the reply submitted by KASEZ. The Committee noted that the only few companies are able to fulfill the current export obligation of 50% in terms of tonnage. The Committee also took note of the SEZ Division, Department of Commerce letter dated 13th February, 2018 regarding export obligations of SEZs Units carrying on recycling of Plastic Scrap or Wastes in SEZs. As per the letter “To ensure the plastic reprocessing units in SEZ fulfill their export obligations, in addition to meeting their NFE obligation, all such units would be required to export not less than 35% of the total annual turnover.”

**Recommendation:** After detailed deliberation upon the issue, the committee recommended the current requirement of at least 50% exports in terms of tonnage from units in SEZ/ EOUs, may be reduced to 35% of the total annual turnover so as to align with the obligation mandated by Ministry of Commerce. The committee also recommended that necessary amendments may be done in the HOWM Rules, 2016.

**Agenda 2. Matter related to implementation of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 - representation by Central Pollution Control Board (CPCB).**

CPCB informed that a meeting with operators of Common Hazardous Waste Treatment, Storage and Disposal Facilities (TSDF) was held on 23<sup>rd</sup> August, 2022 to discuss issues related to effective operation and maintenance of TSDFs. Thereafter, a meeting with SPCBs/PCCs was held on 1<sup>st</sup> November, 2022 to discuss the suggestions and comments received during the meetings with operators of TSDFs. The key issues are as follows:

- a. One time registration to the units exempted from authorization, so as to track hazardous waste even in small quantities [Rule 6 (1A)]
- b. Extension in time period for storage of hazardous waste by small generators (beyond 90 days). [Rule 8(1)]
- c. Provision for the generation and reporting of incidental hazardous waste not specified in authorization. [Rule 6 and Form 2]
- d. Provision for the registration of Collection Centres which receives domestic hazardous waste in ULBs [New provision at Rule 6]
- e. Inclusion of residues generated from concentration or evaporation of industrial wastewater in Schedule I [at Sl. No. 35] of the Rules.
- f. Inclusion of Escrow account (as per the MoEF&CC O.M. dated 16/04/2009) for the post closure monitoring of the CHWTSDFs and occupiers of captive SLFs [Rule 16(4) and Rule 21 – Schedule VII- (4)]

CPCB requested that these issues may be referred to TRC for inputs/comments. The matter was last discussed in 80<sup>th</sup> TRC and the committee decided to discuss the matter in the next meeting.

**Recommendation:** The issue was discussed and it was decided that the matter will be further taken up in the next TRC meeting.

**Agenda 3. Representation by M/s Aarti Industries Limited, Mumbai regarding adverse effects on business operations caused by HOWM Rules, 2016.**

M/s Aarti Industries Limited, Mumbai (AIL) specializes in specialty chemical and pharmaceutical intermediates. AIL has mentioned that they are facing following challenges on business operations which are caused by HOWM Rules, 2016:

**i. Interstate Movement of Hazardous Waste (HW) to Neighboring States:**

AIL has mentioned that presently interstate movement of HW requires specific documentation such as Rule 9 passbook and authorization amendment copy along with SOPs at end user. Since, SOPs are in process of being issued, so they are not able to transport spent HCL and spent H<sub>2</sub>SO<sub>4</sub> and requested to allow movement of HW till the SOPs are issued by CPCB.

**ii. Transforming byproducts/ waste into opportunities for a sustainable future:** AIL has mentioned that CPCB in its 33<sup>rd</sup> Technical Evaluation Committee (TEC) recommended that HW used for manufacturing products related to land applications, human consumption, animal feed and similar end use should obtain approval from such relevant authorities i.e. Department of Fertilizers, FSSAI, Pharmacopoeia Commission etc., which leads to following challenges:

- a. **Blanket Restriction:** SPCB using the recommendation of TEC as blanket restrictions in Environmental Permissions and this restriction disallow sales without considering due process.
- b. **Disallowing judicious use of by-products /waste:** The manufacturing of products like SSP, DCP and Magnesium Sulphate produced from spent sulphuric acid, DCP and Gelatine produced from HCL etc. from HW generated during operation are restricted unless SOPs are established.

AIL has requested to maintain the status quo by allowing the use of these materials as earlier.

**iii. Reclassification of waste/spent into products:**

AIL has mentioned that recently MoEF&CC has granted permission for spent HCL generated from chlor-alkali plants and production of chlorinated paraffin wax with purity 32% and above as by-product based on its adherence to the prescribed norms set by BIS. AIL has requested that their spent HCL and Sulphuric acid which meet BIS norms may be re-classified as products.

The matter was last discussed in 80<sup>th</sup> TRC and the committee decided to discuss the matter in the next meeting. Accordingly, the matter is re-considered by TRC in its 81<sup>st</sup> meeting.

**Deliberation:** The committee deliberated upon the issue and heard the views of representative of M/s Aarti Industries Limited (AIL).

**Recommendation:** The committee recommended that the request of AIL to allow movement of HW till the SOPs are issued by CPCB and maintain the status quo may not be considered and CPCB may be requested to expedite the process of issuance of SOPs. The Committee also recommended that the applicant may furnish the details of the process and types of contamination in HCL which also include percentage of acid, CO and TOC content. Till then the matter is deferred.

**Agenda 4. Representation from Tyre and Rubber Recyclers Association of India (TRRAI) for amendment in grant of permission of import of 50,000 MT/Annum of used tyre scrap for M/s Finster Black Private for manufacturing of recovered carbon black.**

In 76<sup>th</sup> Meeting of TRC, the committee after detailed deliberation upon the issue recommended that the permission for import of 50000 MT of Used tyre scrap in baled/multicut form for production of Recovered Carbon Black (RCB) which will replace the virgin Carbon Black in manufacturing Industry, may be granted initially for a period of 3 years on pilot basis with following conditions to be levied while granting permission:

- i. The process should be result in a yield of RCB comparable to the yields being obtained in other well established plants for manufacture of RCB. 100% of the RCB produced by the units should be sold to manufacturer for replacing the virgin carbon black. The recovered other byproducts during the process should conform to relevant specifications and no part of the recovered carbon should go for energy recovery or any other use or to landfill.
- ii. The units should have commensurate electricity consumption.
- iii. The sale to the manufacturing units shall be verified through GST paid and other supporting evidence.
- iv. The permission will be issued only after verification from CPCB which will be carried out annually.
- v. Fresh Investment of minimum Rs. 25 crore from 1.4.2022 onwards.
- vi. Minimum land area of 5 acres of the unit.
- vii. The process should be completely automated and environment friendly with zero emission of carbon black particle in environment.
- viii. The RCB end product should be in the form of granule to check the dispersion in the environment.
- ix. Whole process of production of RCB form waste/scrap tyre should be completed in the same premises.

The above recommendation of TRC was approved by the competent authority in the Ministry. Subsequent to the above decision, TRRAI vide letter dated 6<sup>th</sup> April, 2023 has raised their concerns on the recommendations of TRC and requested Ministry to revisit the decision of TRC w.r.t. to the following points: -

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- i. Fresh Investment of minimum Rs. 25 crores from 1.4.2022 onwards.
- ii. Minimum land area of 5 acres of the unit.
- iii. Whole process of production of RCB from waste/scrap tyre should be completed in the same premises.

TRRAI has further requested that no permission for import of waste tyre for production of Recovered Carbon Black (RCB) should be granted till the decision on the above points.

*The committee in its 78<sup>th</sup> Meeting, after detailed deliberation on the issue recommended that TRRAI may submit the basis for their representation to revisit the above policy, especially regarding requirement of fresh investment of minimum Rs. 25 crores, minimum land of 5 acres and the whole process of production of RCBs from waste/scrap tyre should be completed in the same premises for further deliberation on the matter. The Committee also recommended that regarding the presence of Silica content in the Indian tyres, Automotive Tyre Manufacturers Association (ATMA) may be asked to provide the details. Till then, the matter is deferred. Certain other issues raised by the TRRAI do not pertain to policy and may be referred to the appropriate authorities.*

TRRAI has submitted the details. Accordingly, the matter was placed before the TRC in 80<sup>th</sup> Meeting for deliberation/decision. The matter was last discussed in 80<sup>th</sup> TRC and the committee decided to discuss the matter in the next meeting.

**Recommendation: The issue was discussed and it was decided that the matter will be further taken up in the next TRC meeting.**

**Agenda 5. Consideration of Mixed Salt from ZLD Plant as non-hazardous solid waste or by- product as per the provisions of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 - M/s Grasim Industries Limited.**

M/s Grasim Industries Limited has mentioned that they have commissioned Zero Liquid Discharge (ZLD) Plant in Staple Fibre Division at Nagda, Madhya Pradesh. The ZLD Plant is purely water and salt recovery plant and not an effluent treatment plant. The ZLD plant, implemented with State-of-the Art technologies, is the World's first ZLD plant in the Viscose Staple Fibre Industry.

They have further stated that, in the ZLD plant, they are able to recover water and good quality of sodium sulphate salt (first of its kind technology). However, around 40 TPD of mixed salt is also generated from ZLD plant. In view of this, they have following submissions as under:

1. Mixed salt is not a waste as it mainly contains around 75-90 % sodium sulphate Analysis report of mixed salt is provided.
2. The mixed salt is generated in ZLD plant. The ZLD plant is purely a water/salt recovery plant and not an effluent Treatment Plant. Hence, mixed salt is not falling under any category of Schedule-I of Hazardous & Other Wastes Rules, 2016.

They also have following submissions that:

1. They have made provisions for safe & secured storage of mixed salt in a scientific manner as per the guidelines given in Hazardous & Other Wastes Rules, 2016
2. They are closely working with other Industries to explore the best usage of mixed salt in other industries to avoid land filling.

In view of the above, they have requested to consider the mixed salt, produced from ZLD plant, as non-hazardous or by-product.

*The matter was considered in 74<sup>th</sup> TRC meeting on the issue the committee recommended that in first instance, requisite number of samples may be collected/ drawn by CPCB and analyzed for parameters given in schedule II of HOWM Rules, 2016. On receipt of the analysis result from CPCB, the matter will be reconsidered.*

CPCB vide letter dated 6<sup>th</sup> September, 2023 has forwarded the analysis report carried out by Regional Directorate Bhopal-CPCB. Accordingly, the matter is re-considered by TRC in its 81<sup>st</sup> meeting.

**Deliberation:** The committee deliberated upon the report submitted by CPCB and heard the views of M/s Grasim Industries Limited regarding possible recovery of useful salts from mixed MEE. As per the CPCB, Regional Directorate Bhopal-CPCB has carried the sampling and analysis of Mixed Salt. Total 08 samples (each of 500 gms) of Mixed Salt were collected and mixed again to form composite sample. The analysis result with respect to the relevant heavy metals listed at Schedule-I of HOWM rules, 2016 have been analysed following the TCLP leaching method. The analysis results of mixed MEE salt indicates that the leachable concentration of constituents does not exceed the limits prescribed under Schedule of HOWM Rules, 2016. As per the CPCB, even if the results of TCLP test for heavy metals are within limits, the toxicity of MEE salt when disposed in unscientific manner may result in contamination of soil or water resources. Hence, the mixed MEE salt is required to be stored, handled and managed in an environmentally sound manner as may be prescribed by SPCBs. CPCB further recommended that considering the above facts and the principles of circular economy along with need for conservation of resources, the proponent may submit a proposal for possible recovery of useful salts from mixed MEE salt, for which CPCB may develop SOPs for such utilization. Further, M/s Grasim Industries Limited informed the committee that they have used mixed MEE salt in paver blocks.

**Recommendation:** After detailed deliberation, and considering the findings of CPCB, the committee advised that the views of CPCB in regard to applicability of Entry 35.3 of Schedule 1 read with the foot note of HOWM Rules to this waste may specifically be obtained. The Committee further recommended that M/s Grasim Industries Limited may submit a

**proposal to CPCB along with details of possible recovery of useful salts from mixed MEE, possible uses of mixed MEE salt and its prospective user/ buyers for further deliberation/discussion by TEC constituted in CPCB and development of SOPs by CPCB for such utilization.**

**Agenda 6. 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 (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.

**Deliberation: The committee deliberated upon the issue. The committee also discussed the matter with CPCB representatives.**

**Recommendation: The committee recommended that 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.**

**The committee also noted that caustic soda and PVC capacity in the country have to move in tandem as PVC is the biggest user of chlorine produced in caustic manufacture. There is an imbalance in the caustic/ pvc capacity in our country, which is causing a surplus of chlorine/hydrochloric acid in the country leading to a serious disposal problem. The same may be brought to the notice of concerned ministries in an appropriate manner.**

**Agenda 7. Import of Brass Scrap as per ISRI Lace, Lark, Lamb (Discharged Cartridges made of Brass 70:30, 90:10 of all bores and sizes) - representation by M/s Mittal Appliances Limited, MP, India.**

M/s Mittal Appliances Limited has mentioned that they been importing Copper Scrap and Brass Scrap under "Birch, Druid, Cliff, Berry, Candy, Cobra, Clove, Cocoa, Barley, and Honey" without any licensing requirements.

However, when they have applied for permission for import of Brass Scrap as per ISRI Lace, Lark, Lamb (Discharged Cartridges made of Brass 70:30, 90:10 of all bores and sizes), DGFT asked to submit permission from MOEF&CC.

Further, they have mentioned that in HOWM Rules, 2016, Brass Scrap is not mentioned anywhere in the Schedule III except at the footnote of Part 'B'. Unlike other forms of brass scrap, the imported item is not contaminated with any impurity; it is pure brass. Just the shape makes it difficult to deal with. As the aforementioned brass scrap (Lace, Lake, Lamb, Lark) consists of rejected and empty cartridges of various rifles, it is made of pure Brass. It is a hollow shell rejected during quality checks. It is an empty cartridge devoid of any explosive material.

*The applicant has requested to clarify whether the MoEF&CC permission is required for the import of Brass Scrap as per ISRI Lace, Lark, Lamb (Discharged Cartridges made of Brass 70:30, 90:10 of all bores and sizes) or not?*

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**Deliberation:** The committee deliberated upon the issue and noted that Brass Scrap is an alloy of Copper and Zinc. Brass Scrap is not specifically mentioned in the HOWM Rules, 2016. However, mixed non-ferrous metal, heavy fraction scrap, containing metals having Basel No. B1050 falls under Part 'D' of Schedule III of HOWM Rules, 2016.

**Recommendation:** The committee recommended that Brass scrap as per ISRI: Lace, Lake, Lamb, Lark having Basel No. B1050 falls under Part 'D' of Schedule III of HOWM Rules, 2016 and applicable for import & export without permission from Ministry of Environment, Forest and Climate Change subject to the condition that Import permitted in the country to the actual user or to the trader for use of the actual users authorised by State Pollution Control Board on one-time basis and subject to verification of documents specified in Schedule VIII of these rules by the Custom Authority.

**Agenda 8. Request for Import of Polysiloxane Wastage Solid, Semi-Solid or Liquid (Basel No. B3010) for manufacture of Silicone Monomers- representation by M/s Silicone International Products, Raigad, Maharashtra.**

M/s Silicone International Products has stated that they are in operation since May 2003 and specialise in reprocessing off-spec Silicone streams into industrial grade medium viscosity Silicone Fluid, widely used in textile, rubber & tyre, foundry and chemical processing industries. The correct chemical name for Silicone Fluid is Dimethyl Polysiloxane (DMPS), and is organo-inorganic in nature. It is colourless liquid at ambient conditions, non-toxic, non-corrosive, non-flammable, bio-compatible, and immiscible with water. While there are very few Silicone reprocessing units in the world, they have mentioned that they are the only integrated one in India with mission is to recover over 90% Silicone present in input streams into industrial grade medium viscosity Silicone Fluid in an environmentally friendly and commercially viable way. The consumption of Silicones in India has been rising at the rate of 2X of the growth in GDP over last decade, but India's current annual requirement of 30,000 MT falls way short of standard greenfield Chlorosilane plant capacity of 150,000 MT/year that requires handling of hazardous chemicals such as methanol, chlorine, hydrochloric acid, etc. besides huge capital investment of over USD 1 billion. This has actually hampered growth in consumption in India.

They have mentioned that they have been granted import permission till 2015. However, the item has now been moved to prohibited category under Schedule VI of HOWM Rules, 2016. The applicant has requested to shift Polysiloxane Waste (B 3010) for Reprocessing from "prohibited" to "restricted" category as before.

**Deliberation:** The committee deliberated upon the issue. The committee noted that Polysiloxanes waste (Solid Plastic Waste) having Basel No. B3011 falls under Schedule VI of HOWM Rules, 2016 and prohibited to import.

**Recommendation:** The committee recommended that the details of the process through which this waste is generated, the sources of import and the process of recovery may be indicated. The Committee also desires to know from the applicant basis of claim that the above compound should be treated differently from other solid plastic waste prescribed under Schedule VI. Till then, the matter is deferred.

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