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 87th Meeting of the Technical Review Committee (TRC) held on 20th May, 2024.

Agenda.1. Request to import 30,000 MT of waste tires for their upcoming plant at Varle, Mahrashatra 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 and it is noted that as per the existing practices, 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 and permission issued after CPCB visit stating compliance of SoP. In view, it was to refer the matter to TRC for Deliberation.

The matter was discussed in 85th TRC meeting held on 12th March, 2024 and it was decided 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.

The matter was again discussed in 86th TRC meeting held on 3rd April, 2024 and it was decided that CPCB may suggest policy based on gradation system referring investment in plant and machinery capacity w.r.t. setting up of new plant/unit by the existing company considering other parameters viz. 03 to 05 years track record of the existing unit, electricity connected load, domestic usage of waste tyre etc. Committee felt that more discussion on the subject is required for considered view/decision.

Now, CPCB has provided/submitted requisite details. Accordingly, the matter is placed before TRC for further deliberation/decision.

Deliberation: The committee deliberated upon the issue and the criteria suggested by the CPCB with factors *viz.* mesh size, consented capacity, electric power installed, production of end products, actual domestic usage, track record of the unit etc. The data and information submitted by applicant was also considered. It was felt that there is need to incentivize expansion of Companies with proven track record and also to have safeguards against unscrupulous applicants. The committee agreed that additional quantity for new units may be allowed with strict conditions.

Recommendation: In view of the above deliberations, the committee decided that in case of new waste tyre recycling units established by the existing recycling companies, higher quantity of waste tyre, in excess of the existing ad-hoc policy of allowing quantity of 1,500 MT, may be allowed for import with following conditions:

i) The new waste tyre recycling unit produces micronized rubber powder (crumb rubber) with particle size finer than 80 mesh.

ii) The consented capacity of the new unit is 50,000 MTA and above.

iii) The installed Electric power/connected load of the new unit is above 1,250 KVA.

iv) The new unit is capable of producing at least two distinct end products such as crumb rubber, crumb rubber modifier, crumb rubber modified bitumen or reclaimed rubber.

v) The new unit will utilize at least 25% of domestic waste in

its total production.

vi) **The company owning the new unit has proven track record, recycled the waste tyres for at least five years or more and it has processed minimum 20,000 tonnes of waste tyres per year for any three years out of last five years though its other units, of the size 80 mesh or finer.**

vii) **The ad-hoc quantity allowed as per the above policy will be 1/3rd of the consented capacity of the unit, subject to a maximum of 20,000 tonnes. Above permission will be only for initial year of production of new unit, for once, thereafter, permission will be given as per the prevailing policy.**

In all other cases of new units, existing policy of ad-hoc quantity of 1,500 tonne will continue. Policy may be reviewed on the basis of outcomes after one year.

Agenda.2. 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)

GDMA and AIA *vide* letters dated 16th April, 2024 & 18th 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 23rd 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.

Accordingly, the matter is placed before TRC for deliberation/decision.

Deliberation: The committee deliberated upon the issue, SOP issued by the CPCB and heard the views of the representative of GDMA and AIA.

Recommendation: **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.**

Agenda.3. Request to permit import of scrap tyre for pyrolysis – Representation from All India Rubber & Tyre Recyclers Association (AIRTRA).

AIRTRA has requested to allow import of scrap tyres for pyrolysis plants. They have mentioned that all categories of manufacturers should be allowed to import scrap tyres as long as they are meeting the norms of state pollution control board and import SOP. Since the import is restricted for pyrolysis, so there is no advancement in technology as entrepreneurs are not investing huge amount due to lack of raw material assurance.

2. Further, they have suggested that Ministry should impose stricter environmental norms such as installation of thermal oxidizer, dust collector and continuous monitoring system. It is therefore requested that above suggestion of permitting import for pyrolysis be considered for the growth of India Economy, the recycling sector, saving foreign Exchange and Technological advancement.

Accordingly, the matter is placed before TRC for deliberation/decision.

Deliberation: The committee deliberated upon the issue and heard the views of the representative of AIRTRA and TRRAI and discussed on the quality parameters of tyre pyrolysis oil.

Recommendation: **The committee noted that tyre pyrolysis poses significant challenges regarding flue gas treatment, handling of char and possible presence of rubber additive derived contaminants in the tyre pyrolysis oil. The committee also noted that import of waste is allowed only for resource/ material recovery and it is for these reasons, import of waste tyres for pyrolysis has not been hitherto considered. The committee however took note of the applicants' argument that pyrolysis oil will substitute for imported fuel, and tyre pyrolysis saves on the energy consumption and carbon emissions inherent in crude refining. The Committee recommended that the applicant may be asked to provide detailed information on standards, technologies and pollution control measures of tyre pyrolysis oil used elsewhere in the world. The applicants may specifically explain why tyre pyrolysis has not become a widely acceptable form of tyre disposal in several parts of the world. The Committee also noted that in the waste treatment hierarchy, material recovery in the form of crumb stood higher compared to pyrolysis. While taking note of the applicants' submission that eventually the downcycled rubber products have to be subjected to pyrolysis to avoid dumping into landfills, the committee requested the applicants to provide their detailed views on the same. In view of the aforesaid, the Committee felt that the matter may be taken after the receipt of required information. CPCB may**

also be requested to provide its further inputs on this issue

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