

F. No.23-61/2015-HSMD  
Government of India  
Ministry of Environment & Forest & Climate Change  
HSM Division

2nd Floor, Jal Block

7384  
Dy.No..... Indira Paryavaran Bhawan  
Jor Bagh Road, Aliganj  
Date..... 4.12.2015 New Delhi - 110003

Date: 24<sup>th</sup> November, 2015

**OFFICE MEMORANDUM**

**Subject: Standard Operating Procedures (SOPs) with regard to recycling from Waste Pneumatic Tyres, used PET Bottle Scrap, lead scrap/used lead batteries and recovery of TPO from tyre scrap -reg.**

The matter herein pertains to Standard Operating Procedures (SOPs) with respect to recycling of:

- (i) Waste Pneumatic Tyres/ tyre Scrap
- (ii) Used PET Bottle Scrap
- (iii) Lead scrap/used lead batteries
- (iv) Recovery of Tyre Pyrolysis Oil (TPO) from tyre scrap.

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The aforesaid SOPs have been finalized on the basis of recommendations of the Technical Review Committee constituted under Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008. The SOPs indicate the technical requirement with respect to environmentally sound operation of such units and import of such waste for the purpose of recycling and recovery.

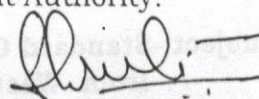
2. In this reference undersigned is directed to convey that State Pollution Control Board (SPCB)/ Pollution Control Committee (PCC) shall ensure compliance with these SOPs before issuing any authorization under Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008 or Consent to Operate (CTO) under Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974. Compliance with these SOPs shall be certified by SPCB/PCC on the basis of inspection. The certificate shall accompany the CTO and Authorization as inspection report for all purposes.

3. Existing authorization and CTO for such units shall also be reviewed and such inspection certificate of compliance to SOP shall be provided to these units, if requested for.

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4. As far as import of tyre scrap for pyrolysis purpose is concerned, no such application for import will be considered in the Ministry, until accompanied by inspection certificate indicating compliance of the unit with the prescribed SOP. These SOPs are available on Ministry's website (<http://www.moef.nic.in/division/importexport>). CPCB is requested to upload SOPs on their website.

This issues with the approval of the Competent Authority.



(Dr. Shruti Rai Bhardwaj)  
Joint Director/ Scientist D

To:

1. Member Secretary , State Pollution Control Boards/ Pollution Control Committee ( as per the list enclosed)

Copy to:

2. Shri S.M. Bhatnagar, Joint Secretary (Customs), Central Board of Excise and Customs, North Block, New Delhi-110001
3. Joint Director General of Foreign Trade, DGFT, Udyog Bhawan, H Wing Gate No. 2, Maulana Azad Road, New Delhi-110011
4. The Under Secretary, Ministry of Petroleum and Natural Gas, Supply Section, ShastriBhawan, New Delhi-110001
5. Member Secretary, Central Pollution Control Board (CPCB), PariveshBhawan, East Arjun Nagar, Delhi-110032

**STANDARD OPERATING PROCEDURE**  
**Import and Recycling of Waste Pneumatic Tyres**

**1. Background**

- 1.1 As per UNEP guidelines, used pneumatic tyre is defined as a tyre that has been subjected to any type of use and/or wear. Those used, partly worn tyres can be re-used without further treatment i.e. direct re-use which may include (i.) Tyre fitted to second-hand vehicles that are sold, or obtained from vehicles that are scrapped; (ii.) Old (out-of-date) tyres that are used for less demanding applications; and (iii.) Tyres that are exchanged for reasons other than that of having reached the end of their life, such as the vehicle owner's fitting a set of high performance tyre or new wheels.
- 1.2 Further, as per UNEP guidelines, waste pneumatic tyre is defined as a tyre that cannot be used for its original intended use any further. However, such waste pneumatic tyres may be re-treaded for further use or can be recovered by being cut, shredded and then used in several applications, such as footwear, sports ground surfaces and carpets. They can also be used in the form of tyre-derived fuel for energy recovery.
- 1.3 As per HWM Rules, 2008, 'waste pneumatic tyres' are listed at item no B-3140 of Schedule-III can be imported into the country only for the purpose of resource recovery, recycling or 'direct re-use'. Since the tyres for 'direct re-use' are also included in this definition, both 'waste pneumatic tyres' and 'used pneumatic tyres' come under item B-3140 of schedule-3 part-B of the HWM Rules, 2008 - thus require prior permission from Ministry of Environment would be necessary for import. However, as per the OM No: F. No.23-4/2009-HSMD dated 24/11/2014 issued by MoEF, import of used tyres for direct re-use has been prohibited in the country.
- 1.4 Used pneumatic tyres have not been categorized as hazardous wastes as per Schedule-I and II of HW Rules, 2008. Provisions under HWM Rules, 2008 may only apply in case of import of waste pneumatic tyres.
- 1.5 The main constituents of used tyres are steel, rubber and fibre in varied proportions depending upon the duty of the tyre. The environmental and safety concerns in the recycling arise due to fire hazard, emission of fibre and fine carbon particles and odour nuisance.

## **2. Import of Waste Pneumatic Tyres**

2.1 Permission for import of waste pneumatic tyres may be permitted to actual users having requisite permissions and adequate facilities as recycling waste pneumatic tyres for resource recovery or utilization. Import may be permitted for following applications;

- (a) Crumb rubber and downstream products
- (b) Utilization/Co-processing in Cement Kilns
- (c) Tyre Pyrolysis Oil

### **2.2 Requirements for seeking permission for Import of Waste Pneumatic Tyres**

A person desirous to import waste pneumatic tyres shall comply with following documentary requirement;

2.2.1 He should be an actual user

2.2.2 Shall possess valid consent to establish granted by the State Pollution Control Boards/Pollution Control Committees (SPCBs/PCCs) under the Water (Prevention and Control of Pollution) Act, 1974 (25 of 1974) and Air (Prevention and Control of Pollution) Act 1981 (21 of 1981);

2.2.3 The applicant unit should possess 'consent to operate' issued by concerned State Pollution Board under the Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act 1981

2.2.4 Certificate of fire clearance form concerned authorities.

2.2.5 Documents showing proof of compliance with the minimum facilities in the form of photographs, video, documents etc.

2.2.6 Should possess valid IEC certificate issued by office of the DGFT

## **3. Minimum required facilities and operating practices**

### **3.1.1 (a) Production of Crumb rubber/ reclaimed rubber**

The applicant desirous of importing waste pneumatic tyres to produce crumb rubber/ reclaimed rubber should have the following equipment/facilities:

- i. De-beading machine without manual intervention or with safety guards wherever manual intervention is involved, to ensure safety of workers.
- ii. Strip cutter and chip making machines should have safety guards to ensure safety of workers.
- iii. The Cracker/ Shredder should have adequate arrangement for capturing fibre and fugitive particulates leading to cyclone separator/bag filters. The cracker/shredder should also have magnetic separators to remove any iron particles. For controlling the noise from these machines they should have acoustic enclosure.
- iv. The grinder/ pulveriser which further reduces the crumb size should necessarily have adequate arrangements to extract fibres and fine particles through suction and bag filters.
- v. All the conveyors, vibrating screens and transfer points including packing, should be covered and fitted with suction system connected to bag filters.
- vi. The whole process area should have proper ventilation system.
- vii. Adequate fire fighting arrangements in terms of fire hydrants have to be installed in the premise of the units in such a way that it should cover all the areas of the plot.
- viii. All workers should have personal protective equipment/gadgets such as safety apron, masks, shoes, gloves, goggles, helmet and earplugs.

### **3.1.2: Production of Reclaimed Rubber**

In addition to the above requirement the following environmental safeguards should be provided during the process of converting the crumb rubber into reclaimed rubber:

- i. Guards should be provided on machines where manual feeding is involved;
- ii. Adequate ventilation system should be provided in the process area in view of the high temperature environment and generation of fumes.

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Shankar