

Item No. 02

Court No. 1

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

(By Video Conferencing)

Original Application No. 400/2019

(With report dated 05.12.2022)

Social Action for Forest &
Environment (SAFE)

Applicant

Versus

Union of India & Ors.

Respondent(s)

Date of hearing: 07.11.2022

**CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER
HON'BLE PROF. A. SENTHIL VEL, EXPERT MEMBER**

Applicant: Mr. Sanjay Upadhyay, Advocate

Respondent(s): Mr. Raj Kumar, Advocate with Mr. Anand Kumar, Scientist E,
CPCB
Mr. Saurabh Kulkarni, Advocate for Association of Rubber & Tyre
Recycling Industries

ORDER

1. The issue for consideration is the absence of proper management of End-of-Life Tyres/Waste Tyres (ELTs) in accordance with the Environment (Protection) Act, 1986, Environment (Protection) Rules, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, CPCB Guidelines for Environmentally Sound Management of End of Life Vehicles, 2016 and Standard Operating Procedure (SOP) issued by the MoEF&CC on the subject.

2. The matter has been earlier considered and dealt with by several orders in the last three years, particularly orders dated 19.09.2019 and

25.10.2021. By order dated 19.9.2019, the Tribunal considered the CPCB report dated 30.07.2019 mentioning the data of such units and their compliance status. The report inter alia suggested that non complying units should take specified measures viz. those following 'batch process' should switch over to 'continuous process', feed to the continuous reactors should be in the form of tyre chips and mechanical feeding system should have air lock arrangements so that no air enters in the reactors. The units should install packed bed scrubber for control of gaseous emission and reduction of odour. The tyre pyrolysis units should strictly follow the Standard Operating Procedures (SOPs) issued by MoEF& CC for continuous process and the consent conditions issued by SPCBs/PCCs. Considering the report, the Tribunal directed remedial action against non-compliant units, including levy of compensation on 'Polluter Pays' principle.

3. Accordingly, CPCB issued directions dated 04.12.2019 and 30.12.2019 to the State PCBs/PCCs to close down non-compliant units, to maintain vigilance and to monitor compliance. It also initiated study through NEERI and IIT Delhi for further safeguards. Considering the matter, the Tribunal vide order dated 06.01.2020 directed further action and completion of pending study. The study report, alongwith further action taken report, was filed by CPCB before the Tribunal on 23.10.2021. Vide order dated 25.10.2021, the Tribunal directed acceptance of observations and recommendations in the report of CPCB which were as follows:-

“8.....xxx.....xxx.....xxx

7.0 RECOMMENDATIONS OR THE STUDY ON ADEQUACY OF TYRE PYROLYSIS PLANTS TO MEET ENVIRONMENTAL CONCERNS

- i. All the existing batch Tyre Pyrolysis Plants to install additional features like PLC based control arrangement, bypass arrangement for pyro gas from reactor door to primary condenser, installation of gas sensors, pressure, temperature gauges at reactor & storage tank, alarm system, flaring of entire pyro gas during emergency, arrangement for re-circulation of pyro gas for reactor's heating, provision for flaring of pyro gas, suction hoods over the gate of reactor and carbon black powder bagging area, water sprinkler system and mechanized arrangement for removal of carbon black powder and steel scrap and arrangement of Nitrogen(N₂) purging.**
- ii. Initial firing of reactor and heating of the reactor to be done either by using pyro gas generated by the plant itself or by use of purge water (oil mix water)/oil water emulsion, or by tyre pyrolysis oil or any other fuel approved by concerned SPCBs /PCCs. After generation of pyro gas, the same is to be used for the purpose of heating reactor. Plants to install adequate APCD for controlling flue gas emissions.**
- iii. Feed to tyre pyrolysis plants has to be full waste tyre or two piece cut waste tyre with steel for better operational control in existing batch tyre pyrolysis plant.**
- iv. It has been observed that unloading of steel scrap from the reactor results into spillage of carbon black around the reactor area and generates fugitive emission. Plants to ensure no such spillage occurs by using suitable trays with wheels for transporting the steel scrap within the premise from generation points to storage points. This operation can be made cleaner by use of vacuum cleaner after each batch operation.**
- v. Unloading of carbon black powder from the reactor should be done under controlled conditions through a pneumatic /screw conveyor system in such a manner that the contents of the reactor are not open to the atmosphere at any point of time. The end of the conveyor system shall be attached to a bagging plant where all the carbon black powder will be bagged in the HDPE bags with proper sealing.**
- vi. Suction hood to be installed above door of the reactor. Suction hood also to be installed at the transfer points across the work zone such as at carbon black powder bagging area etc. to control fugitive emissions. All suction hood to be connected to centralized bag filters /wet scrubber attached with stack of 30 m height (installed for control of flue gas emissions).**
- vii. Water sprinklers to be installed at the transfer points for arresting fugitives.**
- viii. Tyre Pyrolysis Plants to install ETP for proper treatment of waste water generated. Also plants to ensure that treated water be re-used in unit itself & there is zero effluent discharge in all the Tyre Pyrolysis Plants**
- ix. The transportation of Carbon Black and Tyre Pyrolysis Oil (TPO) should strictly be done in closed vehicles to**

- ensure that there is no spillage of carbon black or TPO during their transportation*
- x. All Tyre Pyrolysis Plants to carry out annual health check-up of all the employees working in the unit & submit its report to concerned SPCBs/PCCs on annual basis.*
 - xi. SPCBs/PCCS to carry out vigilance & randomly inspect Tyre Pyrolysis Plants @ 25% of total Tyre Pyrolysis Plants per annum in their respective States/UTs and submit their compliance reports quarterly and annually to CPCB.*
 - xii. SPCBs/PCCs while granting consent to establish & operate a new Tyre Pyrolysis Plants only after assessing the area of the plant premises where unit is proposed. The area of the plant premises carry more weightage as the emission from tyre pyrolysis unit does not affect far away community, instead it is the immediate neighborhood that is affected. Black carbon, being large size particle is accidentally spilled over in the plant premises during its handling and therefore cannot travel to larger distance under the influence of wind. Odor remains a nuisance to the nearby residential and industrial area. In case of existing plants seeking expansion of processing capacity, the same may also be granted only after plant area is found sufficient. CPCB will issue guidelines on area of the plant premises accordingly within ten months.*
 - xiii. CPCB to revise SoP and prepare guidelines for both existing batch and continuous tyre pyrolysis plant and its process within ten months.”*

4. In response to the above, the Applicant made further suggestions for remedial action with reference to compiling relevant data, implementation of Hazardous Waste Rules 2016, monitoring of information provided by the occupiers, ban/regulation of Pyrolysis Plants, extended producer's responsibility on the manufacturers of tyres and guidelines for alternative environment friendly uses of ELTs based on global best practices. The Tribunal directed further study on related issues and necessary action for ensuring compliance of norms. The operative part of the order is reproduced below:-

*“11. Accordingly, further remedial action be taken by the CPCB in coordination with the State PCBs/PCCs for **compliance of environmental norms, consistent with the Water and Air Acts, HOWM Rules and safety aspects to prevent accidents and for protection of public health. There is need for further studies***

on the subject of siting criteria, threshold limit of a plant, carrying capacity, standards for effluents, emissions and hazardous or other waste and monitoring mechanism, preferably with larger samples size which may preferably be 10% of the total plants. The monitoring needs to be more extensive and prompt with reference to the category of the Tyre pyrolysis units – Red, Orange, Green or White. In the light of such further study, appropriate SOP needs to be issued promptly in view of potential for damage to the environment from the hazardous activities in question.

12. Accordingly CPCB may, apart from initiate prompt remedial action in the light of above recommendations, require the Committee to undertake further study on above aspects with liberty to co-opt any other expert/institution. The same may be completed within three months. The report of the Committee with comprehensive recommendations be filed before the Tribunal within four months by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF. The same may also be placed on the website of the CPCB for comments of any stakeholders within two weeks thereafter for consideration of this Tribunal.

13. The concerned State PCBs/PCCs may inspect the compliance status of all such units in terms of availability of requisite consent and status of compliance of the environmental norms and take such remedial action as may be found necessary in accordance with law. They may give their action taken report to the CPCB by 28.2.22 for preparing a consolidated status report.”

5. In pursuance of above, further report dated 05.11.2022 has been filed by CPCB compiling the status based on information furnished by the State PCBs. Extracts from the report are as follows:-

“In compliance to the above directions, CPCB has taken following actions:

- i. CPCB vide its letter dated 25.11.2021 asked concerned SPCBs (where TPO units exists) to ensure compliance of NGT's order and also carry out inspection of all tyre pyrolysis units in the State/UT to inspect their compliance status in terms of availability of requisite consent and status of compliance of the environmental norms. CPCB provided format for submission of the compliance report.*
- ii. CPCB convened meetings with all SPCBs/PCC to review status of compliance of Hon'ble NGTs order on 13.01.2022.*
- iii. In compliance to Hon'ble NGT order, CPCB prepared a study format and circulated amongst concerned SPCBs for carrying out detailed study in at least 10% of the operational TPO units in their respective states.*

- iv. *CPCB convened meeting with concerned SPCBs through video conference (VC) on 04.07.2022 to review status of compliance in carrying out studies in 10% of the TPO units.*
- v. *Studies have been carried out for 70 TPO units through SPCBs/PCCs. CPCB has done compilation and assessment of these studies for establishing the conclusion as arrived through earlier studies of 07 TPO units.*
- vi. *In consultation with expert members from NEERI & IIT-Delhi, CPCB has revised the existing SoPs w.r.t "Recycling of Waste Tyre Scrap for production of Tyre Pyrolysis Oil in line with various concern raised. While revising the SoPs, CPCB has studied the existing guidelines of SPCBs w.r.t TPO units, detailed study of 07 TPO units carried out by CPCB, study of 70 TPO units carried out with the help of concerned SPCBs and also the recommendations of the petitioner i.e. Social Action for Forest & Environment(SAFE).*
- vii. *The SOP has been revised and aligned with the Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2022 notified on 21-07-2022. The draft of revised SOP was placed on the web site of CPCB and also circulated among stakeholder for seeking suggestions and comments. The last date of submission of comments was 31-10-2022. The comments are being compiled for finalising the draft. The finalised SOP will be forwarded to MoEF & CC for their concurrence.*

3. Outcomes:

Following are the outcomes of CPCB's actions taken in compliance to Hon'ble NGT's order dated 25.10.2021:

- i. *CPCB has compiled compliance report of 17 states where TPO units are existing presently. The compliance report along with CPCB's observations on the same are attached at **Annexure-I.***
- ii. *CPCB has complied the detailed study of 70 TPO units w.r.t. study of 10% units. Compiled reports along with outcome arrived from these studies is attached at **Annexure-II.***
- iii. *In consultation with expert members from NEERI & IIT-Delhi, CPCB has developed SoPs w.r.t "Recycling of Waste Tyre Scrap for production of Tyre Pyrolysis Oil. CPCB has studied the existing guidelines of SPCBs w.r.t TPO units, detailed study of 07 TPO units carried out by CPCB, study of 70 TPO units carried out with the help of concerned SPCBs and also the recommendations of the petitioner i.e. Social Action for Forest & Environment (SAFE).*
- iv. *The SOP has been revised and aligned with the Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2022 notified on 21-07-2022. The notification is at **Annexure —III.** The draft of revised SOP was placed on the web site of CPCB and also circulated among stakeholder for seeking suggestions and comments. The last date of submission of comments was 31-10-2022. The comments are being compiled for finalising the draft. The finalised version of SOP will be forwarded to MoEF & CC for their concurrence”*

6. The Annexure to the report gives the compliance status in the country as follows:-

Compliance Status of Tyre Pyrolysis Units (TPO Units) in the country

- i. There are 757 Tyre Pyrolysis units (TPO Units) situated in 17 states of the country. Maximum number of units are in the state of UP (148) followed by Haryana (101), Rajasthan (95) and Maharashtra (85).
- ii. Out of 757 units, 349 units are complying with consent conditions and SOP of MoEF &CC, 216 units are non-complying.
- iii. Actions against non-complying units like closure directions/show cause notices have been issued. Many of the non-complying units have been closed.
- iv. Around 192 TPO units are closed. Most of the closed units are closed in compliance of CPCB's directions dated 04.12. 2019.
- v. Out of total 757 units, 749 units are operating on batch process and 08 units are based on continuous process.
- vi. Most of the SPCBs/PCCs have categorized TPO units under Red Category except for the States of Chhattisgarh, Haryana, J& K, U.P and Uttarakhand. In the States of Haryana & U.P, TPO units have been categorized under "Orange" category, while in the States of Chhattisgarh & Uttarakhand, some of the units are categorized under red and some are categorized under orange. In J&K while 05 units have been categorized under red category and one unit has been categorized under green.

The compliance status is summarized in the table below:

S.No	Name of State	Number of TPO units	Compliance Status		Closed/Self closed	Remarks
			Complying	Non-Complying		
1.	Andhra Pradesh State Pollution Control Board	39	21	18	-	Closure directions issued to 16 units and 02 units are self-closed
2.	Assam State Pollution Control Board	06	05	01	-	Closure Notice has been issued
3.	Chhattisgarh Environment Conservati on Board	29	15	06	08	Closure direction issued to all the 06 units
4.	Haryana State Pollution Control Board	101	51	42	08	Closure directions issued to non-complying units
5.	J & K State Pollution Control Board	06	-	02	04	04 units are non-operational and self-closed. Actions initiated against the non-complying units
6.	Jharkhand State Pollution Control Board	13	05	04	04	-
7.	Karnataka State Pollution Control Board	34	12	19	03	-
8.	Kerala State Pollution Control Board	01	01	-	-	-
9.	Maharashtra State Pollution Control Board	85	32	24	29	-
10.	Madhya Pradesh State Pollution Control Board	64	26	11	27	Non-complying units have been issued notices.
11.	Odisha State Pollution Control Board	13	06	04	03	Actions initiated against non-complying units
12.	Punjab State Pollution Control Board	18	11	04	03	Actions initiated against non-complying units
13.	Rajasthan State Pollution Control Board	95	28	07	60	Actions initiated against non-complying units. Out of 60 closed, 35 units are closed by Board and 25 units are self-closed
14.	Tamil Nadu State Pollution Control	25	20	03	02	Actions initiated against non-complying unit
15.	Telangana State Pollution Control Board	61	43	07	11	Status of 02 units is not provided. Actions initiated non-complying units
16.	Uttar Pradesh State Pollution Control Board	148	71	53	24	ECC of Rs 1,23,37,185/-imposed on 15 units. Actions initiated against non-complying units
17.	Uttarakhand Pollution Control Board	19	02	11	06	-

	<i>Total</i>	<i>757</i>	<i>349</i>	<i>216</i>	<i>192</i>	<i>-</i>
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7. We have heard learned Counsel for the parties and given further consideration to the issue in the light of above material.

8. It is seen that action has been taken against number of non-complaint units but there still remains gap in the units which are non-compliant and units against whom action has been taken to close them till compliance. Such gaps need to be bridged at the earliest in the interest of rule of law and environmental good governance. Tyre Pyrolysis Oil Units (TPOs) need to follow 'Zero Liquid' and 'Zero Emission' norms. Further, carbon produced during the process needs to be utilized in cement industries. Carbon material should not be simply transported to landfills.

9. Accordingly, we direct that non-compliant units be closed till compliance expeditiously. CPCB may finalize the classification of the units so that application norms can be enforced. Revised SOP may be finalized by the CPCB and MoEF&CC in light of discussion in today's hearing and above observations within one month. SOP may also provide for certifying the fuel quality standards of pyro-oil as per norms of the Petroleum Ministry.

The application is disposed of.

A copy of this order be forwarded to CPCB, MoEF&CC, State PCBs/PCCs by e-mail for compliance.

Adarsh Kumar Goel, CP

Sudhir Agarwal, JM

Prof. A. Senthil Vel, EM

November 07, 2022
Original Application No. 400/2019
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