

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

(By Video Conferencing)

Original Application No. 804/2017
(Earlier O.A. No. 36/2017)

Rajiv Narayan & Anr.

Applicant(s)

Versus

Union of India & Ors.

Respondent(s)

Date of hearing: 01.07.2020

Date of uploading of order 07.07.2020

**CORAM:HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE S. P. WANGDI, JUDICIAL MEMBER
HON'BLE Dr. SATYAWAN SINGH GARBYAL, EXPERT MEMBER**

ORDER

1. The matter has been put up for consideration of report filed by the Central Pollution Control Board ("CPCB") on 24.06.2020 in response to the directions of this Tribunal vide order dated 26.08.2019 on the subject of compliance of the Hazardous and Other Waste (Management and Transboundary Movement Rules, 2019 ("HOWM Rules").

2. Due to alarming situation created by generation and unscientific dumping of hazardous waste resulting in serious and irreversible damage to the environment and public health, the issue was considered by the Hon'ble Supreme Court *inter alia* in *Writ Petition No. 657/1995, The Research Foundation for Science, Technology and Natural Resource Policy Vs. Union of India & Ors.,(2005) 10 SCC 510*. Directions were issued for preparation of a comprehensive report on illegal hazardous waste dump

sites, inventory of generation of such waste, National Inventory for Rehabilitation of Hazardous Waste Dump Sites and Regulation of Import etc. The Hon'ble Supreme Court referred to Basel Convention and MARPOL Convention and also considered and accepted the recommendation of the High Powered Committee on the subject of handling of hazardous waste generated by the ship breaking process and also the waste oil or such other material. MoEF&CC was directed to consider making a provision for bank guarantee by the importers using used oil, furnace oil and zinc waste to regulate illegal transboundary movement of hazardous waste. Directions were also issued for publication of toxic inventory and community participation. Timelines were prescribed for twenty nine specified activities to be undertaken by MoEF&CC, CPCB, SPCBs/PCCs. The matter was disposed of vide judgment dated 06.07.2012 reported in (2012) 7 SCC 769 reiterating continued compliance of earlier directions with further directions for scientific handling of hazardous waste including ship breaking, banning import of hazardous waste and reviewing and revising Hazardous Waste (Management and Handling) Rules, 1989 to cover the aspects not satisfactorily dealt with and also to provide adequate protection to the workers and the public.

3. This Tribunal while considering the compliance of order dated 13.01.2015 in O.A. No. 36/2012 relating to pollution at Ghaziabad, vide order dated 29.08.2017 considered the issue of compliance of HOWM Rules seeking information with reference to the following questions:-

- “(a) As to what is the total generation of hazardous waste in their respective States.*
- (b) Which agencies have been authorized in terms of rules to collect, transport, disposed of and the process of the hazardous wastes.*

- (c) *What is the capacity of the plants which have been given due authorization for that purpose.*
- (d) *What happens and how the remnant hazardous waste is being dealt with.*
- (e) *The members who have been allotted any of the authorized plants and are not sending hazardous waste to those plants. What action the concerned authorities i.e. the State Government and the respective States and State Pollution Control Boards have taken so far, against such members. These details should be filed within one week from today.”*

4. The present Original Application was registered after considering the status of compliance. Vide order dated 30.07.2018, This Tribunal directed constitution of a Monitoring Committee by the CPCB to compile information about the status of compliance of the HOWM Rules. Further orders was passed on 05.12.2018 in the light of the order of the Hon’ble Supreme Court dated 18.07.2018 transferring consideration of prayers before the Hon’ble Supreme Court on the following issues:-

- “(a) Preparation of a National Inventory of Hazardous wastes;*
- (b) Complete identification and registration of Hazardous wastes generating units in the country;*
- (c) Construction of TSDF/Land fills;*
- (d) Hazardous Waste Dump Sites;*
- (e) Waste oil/used oil read with the order dated 23.10.2007;*
- (f) Setting up of laboratories at the dock/ports;*
- (g) Institutional Reforms in MoEF, CPCB, SPCB, PCC;*
- (h) National policy documents on Hazardous Wastes as well as cleaner technology;*
- (i) Regarding workers handling hazardous wastes.”*

5. CPCB constituted a Monitoring Committee on 09.08.2018 and issued following directions to all PCBs and PCCs:-

- “(a) Ensure that all the solvent recovery industries in the state have mandatory Authorisation for the same in compliance with the SOP and Checklist issued by CPCB for solvent recovery units, within one month. The said SOP and checklist have been circulated to all SPCBs/PCCs vide letter no. B29016/(SC)/1(55-IV)/17-18/WMII/18152-86 dated 08/3/2018 and is also available at CPCB website http://cpcb.nic.in/uploads/hwmd/utilizaionspent_solvent.pdf.*

(b) Ensure that these solvent recovery industries shall immediately follow the SOP, for safe and scientific spent solvent handling, processing and storage.

(c) Ensure that such solvent recovery units shall comply with the provisions of HOWM Rules, 2016, in terms of interstate transport of Hazardous waste and manifest document prescribed under Rule 18 and 19 of the HOWM Rules, 2016, with immediate effect. Stringent action be taken against the erring industries who are giving the spent solvent to such recycling industries without following the manifest systems.

(d) Conduct industry interaction programs within a month to create awareness and sensitization on HOWM Rules, 2016 with all the stakeholder industries of Spent Solvent generation/utilization.

(e) Prepare an inventory of such solvent recovery units and publish the same on their website for information of all, stakeholders within one month with copy to CPCB within one month.”

6. In the light of the interim report of the Monitoring Committee, the Tribunal passed order dated 12.04.2019 directing the Chief Secretaries of the States at the State level and Ministry of Environment, Forest and Climate Change (MoEF&CC) and CPCB at the national level to monitor the compliance of the recommendations. The Committee was directed to complete its remaining task within three months. The CPCB was to complete its report on the regime of compensation for violation of the HOWM Rules.

7. Thereafter, vide order dated 26.08.2019, the Tribunal considered the report of the Monitoring Committee dated 23.07.2019 and report of the CPCB dated 14.08.2019 under the following headings:-

- “(i) Contaminated Sites and Related Issues*
- (ii) Import and Export of Hazardous Wastes and Issues*
- (iii) Waste Reception Facilities for wastes generated from ships and issues*
- (iv) Impact of HW on Workers’ Health*
- (v) Status of compliance of issues with regard to orders of Hon’ble Supreme Court dated 14.10.2003.”*

8. The observation of the Monitoring Committee and action proposed have been extracted in the said order but to avoid long quotation, the table is separately appended to this Order as **Appendix - A**. The recommendations of CPCB in its report dated 14.08.2019 are appended to this Order as **Appendix - B**. The deficiencies in compliance noted by CPCB, recommendation by States/UTs Department, CPCB and response of the CPCB and further recommendations of CPCB are appended to this Order as **Appendix - B1**.

9. The Tribunal accepted the recommendations of the Committee and the CPCB and directed follow up action. The operative part of the directions is quoted below:-

“20. In the light of above, the States/UTs, CPCB/SPCBs/PCCs, the Central Board of Indirect Taxes and Customs (CBIC), the Port Authorities, the DGFT, the MoEF&CC, the Ministry of Shipping, Ministry of Labour and Employment and the Department of Labour of all the concerned States/UTs may take necessary steps in terms of the recommendations of the Committee within the timelines specified. If there is any default, the Tribunal may consider requiring environmental compensation to be paid by the defaulting parties. While doing so following specific steps may be ensured:

- i. Hazardous waste inventory be updated and verified by way of test checks to ensure that the same is credible, reliable and robust in terms of contents and scope, as already recommended in the interim report of the Monitoring Committee dated 29.01.2019 which was accepted by the Tribunal on 12.04.2019.***
- ii. Since it has been reported that State Boards/PCCs of Dadra & Nagar Haveli, Haryana, Daman & Diu, Manipur, Lakshadweep and Nagaland have not furnished the relevant data, the said States/UTs may furnish the data within one month to the CPCB, failing which they will be liable to pay a sum of Rs, 1 lakh per month with effect from 01.10.2019.***
- iii. As already directed, all the States which have not set up TSDF may do so and the States which fail to set up the same up to 31.03.2020, will be liable to pay environmental compensation of Rs. 10 lakh per month. However, with regard to States which may be categorized as small States, having regard to the quantum and nature of generation of hazardous***

waste, the liability to pay compensation will start from 01.01.2021. The categorization based on threshold limit of generation of hazardous waste be made by the CPCB within one month from today and placed on its website.

- iv. **126 sites which have already been identified as contaminated may be cleared of the hazardous waste within six months** so that remediation process may start. The remediation work may start at the 55 sites for which DPRs have been completed within the timelines specified in the DPRs. For the remaining 71 sites, DPRs may be completed expeditiously but not later than one year and thereafter remediation may be done as per the timelines in the DPRs.
- v. Failure to remove the waste from the 126 identified sites, will result in environmental compensation to be paid at the rate of Rs. 10 lakhs per site from 01.04.2020 by the concerned SPCBs/PCCs to the CPCB. Same rate will apply in respect of such of the 195 sites as are identified as contaminated with effect from 01.01.2021.
- vi. **With regard to 195 probable contaminated sites, the assessment may be completed within six months** and thereafter the waste may be removed within next six months from sites cleared by the CPCB to be contaminated.
- vii. **The clearance of site by way of disposal or transfer should be strictly as per the HOWM Rules, to be monitored by the CPCB.** The cost of removal of waste may be first paid out of the environment funds/consent funds available with the State PCBs/PCCs and thereafter recovered from the persons concerned.
- viii. Whenever any difficulty arises, the CPCB may, on being so satisfied, allocate funds from environment funds available with it, which may thereafter be recovered from the concerned defaulters.
- ix. The recommendations of the CPCB with regard to the compensation regime on the subject may be adopted, subject to further consideration of orders.
- x. The CPCB may oversee the compliance of these directions compile data from all quarters and furnish an interim compliance report before 15.04.2020 by email at judicial-ngt@gov.in.”

10. It is in the above background that the present report dated 24.06.2020 has been filed by the CPCB. In short, the report deals with the compliance status as to updating of Hazardous Waste (“HW”)

inventory, status of setting up of TSDFs, remediation of contaminated sites, completing the process of identification of remaining 'probably' contaminated sites and their remediation and recovery of compensation.

11. We have heard Shri Raj Panjwani, Senior Advocate for the Applicant and Shri Rajkumar, Advocate for the CPCB.

12. The stand of the States PCBs/PCCs and States/UTs is already reflected in the report. Summary of status of compliance with reference to the directions of this Tribunal has been provided by the CPCB as follows:-

"The point wise action taken and status on the directions dated 26/08/2019 of the Hon'ble NGT is as below:

S. No.	Direction of Hon'ble NGT	Status of Compliance
i.	<i>Hazardous waste inventory be updated and verified by way of test checks to ensure that the same is credible, reliable and robust in terms of contents and scope, as already recommended in the interim report of the Monitoring Committee dated 29/01/2019 which was accepted by the Tribunal on 12.04.2019.</i>	<ul style="list-style-type: none"> • <i>CPCB has prepared guidelines for "Preparation of Inventory on Hazardous and Other Waste Generation and their Management" and circulated to all SPCBs/PCCs for preparation and submission of annual inventory vide letter dated 25/06/2019. Same is placed on CPCB website.</i> • <i>The above guidelines outline the methodology for preparation of inventory; identification of hazardous and other waste generating facilities; collection and interpretation of data; criteria for selection of units for random verification of hazardous and other waste generation and their management; etc.</i> • <i>With regard to Annual Inventory for 2018-19:</i> <ul style="list-style-type: none"> ✓ <i>Out of 35 SPCBs/PCCs, 33 SPCBs/PCCs (except Arunachal Pradesh and DDD&NH) submitted the inventory report.</i>

		<ul style="list-style-type: none"> ✓ Various gaps (such as mismatch in hazardous waste generated/ managed/ received/sent/no. of recyclers/utilizers, authorized capacity and quantity recycled/utilized) have been identified by CPCB in the said annual inventory of SPCBs/PCCs and same were communicated to respective SPCBs/PCCs. ✓ <i>Of 33, only 25 SPCBs/PCCs have submitted the revised annual inventory report, however, few gaps have still not been clarified</i> ✓ <i>Based on the information provided by 33 SPCBs/PCCs, CPCB has prepared National Inventory Report on Hazardous and Other Waste Generation and its Management (2018-19).</i> <p><i>Findings of National inventory on Generation and Management of Hazardous waste is appended as Appendix A and State-wise inventory report on generation and management of hazardous and other wastes is appended at Annexure- 2 of CPCB report -June, 2020.</i></p> <ul style="list-style-type: none"> ✓ CPCB is in the process of verification (random test checks) of annual inventory submitted by SPCBs/PCCs through government institutes/organisations
ii.	<p><i>Since it has been reported that State Boards/PCCs of Dadra & Nagar Haveli, Haryana, Daman & Diu, Manipur, Lakshadweep and Nagaland have not furnished the relevant data, the said States/UTs may furnish the data within one month to the CPCB, failing which they will be liable to pay a sum of Rs, 1 lakh per month with effect from</i></p>	<ul style="list-style-type: none"> ➤ <i>Except Lakshadweep, all the 04 SPCBs/PCCs (Haryana, Manipur, Nagaland and DDN&NH) submitted their reports within the timeline.</i> ➤ <i>However, in view of no response from Lakshadweep, CPCB vide its letter dated 04/10/2019 followed by reminder letter dated 19/12/2019 directed for submission of report and deposition of penalty of Rs. 03 lakhs (i.e. Rs 01 lakh per month w.e.f. 01/10/2019).</i>

	01.10.2019.	<ul style="list-style-type: none"> ➤ Lakshadweep vide its letter dated 25/12/2019 submitted its report along with penalty of Rs. 03 lakhs to CPCB.
iii.	<p>As already directed, all the States which have not set up TSDF may do so and the States which fail to set up the same up to 31.03.2020, will be liable to pay environmental compensation of Rs. 10 lakhs per month. However, with regard to States which may be categorized as small States, having regard to the quantum and nature of generation of hazardous waste, the liability to pay compensation will start from 01.01.2021. The categorization based on threshold limit of generation of hazardous waste be made by the CPCB within one month from today and placed on its website.</p>	<ul style="list-style-type: none"> ➤ CPCB has prepared a document on Categorization of States as small states based on Threshold Limit of Generation of Hazardous Waste and placed on the CPCB website The same has also been submitted to Hon'ble NGT on 26/09/2019. <p>“Conclusion/Recommendations of the document:</p> <ul style="list-style-type: none"> ➤ The development of common TSDF is a must for treatment and disposal of atleast for landfillable hazardous waste regardless of where the TSDF is located or going to be located; ➤ States/UTs generating 5000 MTA or more of the landfillable hazardous waste need to take immediate action for commissioning of common TSDF ➤ States/UTs generating more than 500 MTA or less than 5000 MTA of landfillable hazardous waste may be categorized as Small States for the purpose of taking of action proposed in the order of the Hon'ble NGT and ➤ States/UT generating less than 500 MTA of landfillable hazardous waste may be permitted for the inter-state transport of hazardous waste for its treatment and disposal and making sharing arrangement with the authorized common TSDF of the neighboring States/UT.” <p>The aforesaid document is appended at Annexure- 3 of CPCB report -June, 2020.</p> <ul style="list-style-type: none"> ➤ On the basis of aforesaid categorization, of the 17 States/UTs

		<p>(not having Common TSDF), Chhattisgarh and Assam to setup TSDF by 31/03/2020 and Delhi & Goa by 01/01/2021.</p> <p>➤ Assam and Chhattisgarh, both the States have identified the land. Further, Assam has to finalize Expression of Interest for inviting bids and Chhattisgarh to finalize the Bidder for award of work w.r.t setting up of TSDF.</p> <p>Status on Setting up of TSDF is appended at Appendix B and details provided in Chapter 2 of the CPCB report- June 2020.</p>
iv-viii	<p>Status of compliance on Contaminated sites is given below: (details may refer at page 225 at Chapter-8 of status report of CPCB)</p>	

Hon'ble NGT orders dated 26.08.2019 pertains to "Contaminated Sites" as reproduced below:

"..... iv. **126 sites** which have already been identified as contaminated may be cleared of the hazardous waste within six months so that remediation process may start. The remediation work may start at the **55 sites** for which DPRs have been completed within the timelines specified in the DPRs. For the **remaining 71 sites**, DPRs may be completed expeditiously but not later than one year and thereafter remediation may be done as per the timelines in the DPRs.

v. Failure to remove the waste from the **126 identified sites** will result in environmental compensation to be paid at the **rate of Rs. 10 lakhs per site from 01.04.2020 by the concerned SPCBs/PCCs to the CPCB. Same rate will apply in respect of such of the 195 sites as are identified as contaminated with effect from 01.01.2021.**

vi. With regard to **195 probable contaminated sites**, the **assessment may be completed within six months** and thereafter the waste may be removed within next six months from sites cleared by the CPCB to be contaminated.

vii. The clearance of site by way of disposal or transfer should be strictly as per the HOWM Rules, to be monitored by the CPCB. The cost of removal of waste may be first paid out of the environment funds/consent funds available with the State PCBs/PCCs and thereafter recovered from the persons concerned....."

In compliance to order of Hon'ble NGT dated 26.08.2019, actions initiated by CPCB:

(i)	CPCB communicated aforesaid order of Hon'ble NGT to 21 SPCBs/PCCs for taking necessary action and submission of Action taken reports on 'Assessment of Contaminated Sites'	letter dated 06.09.2019
(ii)	CPCB reminder along Guidance document on "Assessment and remediation of contaminated sites" issued by MoEF&CC was communicated to 21 SPCBs/PCC	03 letters and 06 e-mails
(iii)	To review the compliance to aforesaid directions of Hon'ble NGT, interactive meeting was organized with the officials of SPCBs/PCCs at CPCB Delhi	3rd - 4th February, 2020

In response to CPCB letters and email communications, 19 out of 21 SPCBs/PCC have submitted their information/Status Report on Action Taken/Initiated for "Assessment of contaminated sites" till 22.06.2020. However, no information received from Chhattisgarh & Rajasthan SPCBs.

State wise Compliance status on Action taken/initiated by SPCBs/PCCs is given at Section-C & D of Chapter 8 (pls refer page 228 of status report of CPCB).

Overall summary of contaminated sites in India

S. No.	Name of the States/UT	Total sites submitted before NGT in 2019	No. of active sites* till date	126 Contaminated Sites list submitted before Hon'ble NGT	
				55 sites (DPRs/ Remediation completed/on-going)	71 sites (DPR required)
1.	Andhra Pradesh (AP)	3	3*	1**	
2.	Assam (AS)	4	4		1
3.	Delhi (DL)	26	26		4
4.	Goa (GA)	2	2		1
5.	Gujarat (GJ)	23	23*	1***	7
6.	Haryana (HR)	17	17		3
7.	Himachal Pradesh	6	6		1
8.	Jharkhand (JH)	14	14		2
9.	Karnataka (KA)	25	25		5
10.	Kerala (KL)	13	10	4 (1## & 1###)	2
11.	Madhya Pradesh (MP)	20	20*	4 (1###)	2
12.	Maharashtra (MH)	5	6*	1***	1
13.	Odisha (OD)	31	32*	4(3##)	18
14.	Punjab (PB)	9	9		6
15.	Tamil Nadu (TN)	14	11	3 (2***)	3
16.	Telangana (TS)	9	9	1	1
17.	Uttar Pradesh (UP)	40	42*	8 (2*** & 2##)	10
18.	Uttarakhand (UK)	9	9		1
19.	West Bengal (WB)	35	7	27 (1**, 1## & 25###)	
20.	Chhattisgarh (CH)	5	5		2
21.	Rajasthan (RJ)	11	11	1	1
	Total	321	291	55	71

<p>Note:</p> <p>(a) Contaminated sites – 126 (55+71) sites (b) Probable sites – 195 sites (c) New sites* - 7 sites (AP-1, GJ-1, MH-1, MP-1, OD-1, UP-2) (d) De-listed – 37 sites (AP-1, KL-3, GJ-1, MP-1, TN-3, WB-28)</p>	<p>Till June, 2020 Total sites: 291 sites (PCS-175 and CS-116)</p>
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A. Summary of 55 sites:

** Remediation completed	2 sites: AP-1# & WB-1#
*** Remediation on-going	6 sites: GJ-1, MH-1, TN-2 & UP-2
## Remediation about to initiate	7 sites: KL-1, OD-3, UP-2 & WB-1
### Remediation not required	27 KL-1# , MP-1# & WB-25#
Assessment completed	1 site: RJ-1
DPR about to complete	3 sites: MP-3
Remediation work couldn't initiated due to court	1 site: TS-1
DPR prepared, remediation not yet initiated (#de-listed site)	8 sites: KL-2, OD-1, TN-1 & UP-4

Further, HW still lying at the sites (as per detailed investigation report/DPR prepared) **8 sites:** KL-1, MP-1, OD-4, TN-1 & UP 1

Wherein proposal for lifting and disposal of HW through TSDF/SLF by State/SPCBs/Responsible Party **5 sites:** MP-1, OD-3 & UP-1

B. Summary of 71 sites:

Preliminary Assessment done (#de-listed site)	41 sites: AS-1, GJ-7, HR-3, HP-1, KL-2 (1#), MP-2, OD-17, PB-3, TN-2 & UP-3
Preliminary Assessment on-going	1 site: JH-1
Only site inspection carried out, however sampling not done	15 sites: KA-5, MH-1, OD-1, TN-1 & UP-7
Remedial action initiated	1 site: JH-1
Remedial action proposed	1 site: TS-1
Information not received from SPCBs/PCC	12 sites: CH-2, DL-4, GA-1, PB-3 RJ-1 & UK-

Further as per preliminary assessment report, HW lifted/removed **2 sites:** GJ-01 & UP-1

HW not observed **11 sites:** HP-1, KA-1, TN-2 & UP-3

C. Summary of 195 Probable sites:

Preliminary Assessment done	95 sites: AP-1, AS-3, DL-9, GA-1, GJ-15, HR-14, HP-5, JH-3, KA-1, KL-4(1#), MP-14, OD-6, PB-1, TN-5 (3#), UP-8 & UK-5
Preliminary Assessment on-going	8 sites: JH-8

Only site inspection carried out, however sampling not done	66 sites: AP-1, DL-13, JH-1, KA-18, KL-3, TN-3, TS-7, UP-12 & WB-8 (2#)
Preliminary Assessment about to start	3 sites: MH-3
Remediation on-going	1 site: KA-1
Sampling not carried out as GPS location was not matched with the site	4 sites: OD-3 & UK-1
Information not received from SPCBs/PCC	18 sites: CH-3, PB-2, RJ-9, UP-2 & UK-2

Further as per preliminary assessment report, HW lifted/removed from the sites

4 sites: DL-1, GA-1, **GJ-1** & UP-1

HW not observed

33 sites: HR-8, HP-5, TN-1, TS-5 & UP-15

D. Status of 07 new sites (AP-1, GJ-1, MP-1, MH-1, OD-1 & UP-2):

<i>Preliminary Assessment done by CPCB</i>	1 site: UP-1
<i>Assessment on-going</i>	3 sites: AP-1, MP-1 & OD-1
<i>Only site inspection carried out, & HW lifted/ removed from the sites; however, sampling not done</i>	2 sites: MH-1 & UP-1
<i>No information from SPCB</i>	1 site: GJ-1

Observations:-

Action taken reports submitted by the SPCBs/PCC are examined by CPCB and following observations are made as below:

i. SPCBs/PCC have carried out only few sampling of limited matrices for most of the sites. Therefore, conclusion may not be drawn whether the site is contaminated or not, even if the concentrations levels reported within the standards/levels.

ii. Few SPCBs/PCC have carried out only site inspection. However, no sampling was done.

iii. Majority of the SPCBs/PCC, except AP, Assam, Gujarat, Haryana, HP, Kerala, MP & Odisha have not submitted proper inspection reports along with analysis results and site visit photographs for most of the sites.

iv. Few sites were found at/nearby Temples, residential colonies and where construction of flyover activities were already done, etc.

v. None of the states/UT, except Odisha has constituted Empowered Monitoring Committee (EMP) for monitoring of Remediation Plans.

Recommendations

<i>S. No.</i>	<i>Activity</i>	<i>Target</i>
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i.	<p>In case of Probable contaminated sites, SPCBs/PCC shall carry out.</p> <p>Preliminary site investigation as per “Reference document on Identification, Inspection and Assessment of Contaminated Sites” prepared by CPCB.</p> <p>Site investigation report as per prescribed format may be submitted to CPCB for further assessment.</p>	45 days
ii.	<p>In case of contaminated sites, SPCBs/PCC shall carry out detailed site investigation, as per “Reference document on Identification, Inspection and Assessment of Contaminated Sites” prepared by CPCB and “Guidance document on Assessment and Remediation of contaminated sites in India” issued by MoEF&CC.</p> <p>Detailed investigation report may be submitted to CPCB.</p>	3 months
	<p>If Remediation needed, SPCBs/PCC may take necessary and submit remediation plan to CPCB for further course of action.</p>	Within 45 days (after completion of investigation study)
iii.	<p>SPCBs shall ensure lifting of hazardous waste still accumulated at sites, wherein DPRs already prepared under NCEF Project.</p>	3 months
iv.	<p>SPCBs/PCCs to ensure that the hazardous waste accumulated/lying at all such identified sites/any new sites shall be disposed off either through TSDF or on-site SLF on priority to stop further contamination.</p> <p>Wherein, HW is lifted/removed from the site, SPCB/PCC shall carryout detailed investigation followed by remediation, if needed (as above ii)</p>	3 months
v.	<p>SPCBs/PCCs to ensure that the hazardous waste accumulated/lying at all such identified sites/any new sites shall be disposed off either through TSDF or on-site SLF on priority to stop further contamination.</p> <p>Wherein, HW is lifted/removed from the site, SPCB/PCC shall carryout detailed investigation followed by remediation, if needed (as above ii)</p>	1 month
vi.	<p>Financial supports for execution of project on remediation of the contaminated sites may be arranged to SPCBs/PCC so that the detailed investigation studies followed by remediation works can be undertaken on priority - By State/Central Govts.</p>	4 months

Note: Preliminary sites investigation/detailed investigation followed by Remediation may be carried out – By SPCBs/PCC by engaging reputed Remediation Consultants.

Way Forward:

- i) Need of National Policy on Management of contaminated sites.
- ii) Need to update Inventory of contaminated sites.
- iii) Immediate remedial actions for priority contaminated sites.
- iv) Remediation of orphan sites through funding from State/Central Govts.

v) Compliance status on Recommendations of the Monitoring Committee related to Contaminated sites are as below:

S. No.	Recommendations of the Committee	Compliance status
1.	Disposal of hazardous wastes accumulated at identified sites:	
	<p>(i) CPCB/SPCBs/PCCs to ensure that the hazardous waste accumulated at all such identified sites shall be disposed of either through Treatment, Storage and Disposal</p> <p>Facilities (TSDFs) or onsite secured landfilling (SLF) on priority to stop further contamination</p> <p>(CPCB/ SPCBs/PCCs: 06 months)</p>	<p>Detailed information is given at Section-C & D of Chapter 8 (page 228 to 308) for kind reference.</p>
2.	Guidelines for Identification and Assessment of Contaminated Sites:	
	<p>(i) For a consistent and uniform application and approach across the country, guidelines for identification and assessment of contaminated sites shall be published.</p> <p>(CPCB: 03 months)</p>	<p>Guidance document on Assessment and remediation of Contaminated Sites in India issued by MoEF&CC, communicated to 21 SPCBs/PCC. Based on this guidance document, a "Reference document on identification inspection and assessment of contaminated sites in India" has been prepared by CPCB is given at Annexure-XIII (page 421) for kind reference.</p>
3.	Assessment and remediation of Contaminated sites:	
	<p>(i) Capacity building program for officials of SPCBs/PCCs on the entire process of remediation,</p> <p>(CPCB: 06 months)</p> <p>(ii) Assessment of about 195 probable contaminated sites and any new additional sites recommended by CPCB/ SPCBs/PCCs shall be completed within period of 1 year after publication of such guidance document by CPCB.</p>	<p>(i) MoEF&CC sponsored "Five – Day International Seminar/workshop on Contaminated Sites; and Demonstration Sessions / Workshop on Environmental Subsurfa Investigations" was organized by IIT Delhi during 17-21 February, 2020 for the officials of MoEF&CC/CPCB/SPCBs, Academic, etc. is given at Annexure-XIV (page 458) for kind reference. CPCB has proposed a 3 separate training programs on identification and assessment of contaminated</p>
	Recommendations of the Committee	Compliance status

<p>(CPCB/SPCBs/PCCs: 1 year)</p> <p>(iii) For effective implementation of the remediation plan at State level, Empowered Monitoring Committee chaired by Principal Secretary Department of Environment having representatives from department of Industries, SPCB/PC, Groundwater development agency, etc. shall be constituted.</p> <p>(State Govt: 04 months)</p>	<p>Sites for the officials of SPCBs/PCCs for the financial year 2020-21.</p> <p>(i) Detailed progress on assessment of probable contaminated sites under taken by SPCBs/PCCs is given at Section-C of Chapter 8 for kind reference.</p> <p>(ii) Odisha SPCB has informed vide its letter dated 19.05.2020 that at State level Empowered Monitoring Committee (EMC) has been constituted.</p>
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<p>4. Financial Arrangements for remediation of contaminated sites:</p>	
<p>(i) Financial arrangements between Central-State Governments for the proposed remediation projects shall be resolved immediately so that the remediation works as proposed in DPRs can be undertaken on priority. These DPRs (2017-18 and 2018-19) may need to be revisited in no action is taken in a reasonable time for execution of remediation works.</p> <p>(ii) Govt. should take up on priority not only remediation projects at the sites where DPRs have been prepared but also the assessment of about 195 sites, besides any new addition of potentially contaminated site, if any.</p> <p>(MoEF&CC/State Govt.: 06 months)</p>	<p>It is humbly submitted that MoEF&CC has sanctioned central share under National Clean Energy Fund (NCEF) scheme of Rs. 15.5 crore for preparation of DPRs for 08 areas contaminated (containing 21 sites) for remediation.</p> <p>Further, it is humbly submitted that there is no funding for execution of remediation works, since NCEF scheme has been discontinued by Govt. of India. The DPRs along with templates of bidding have been forwarded to concerned State Govts and SPCBs with request to implement remediation works.</p>
<p>5. Networking of Academic and Research Institutes:</p>	
<p>(i) MoEF&CC/CPCB/ SPCBs/PCCs shall undertake action research and also promote academic courses on this subject in association with academic and research institutions.</p> <p>(MoEF&CC/CPCB/SPCBs/PCCs: 06 months)</p>	<p>(i) A project sponsored by MoEF&CC at IIT Delhi, a National Network of Experts and Resources for Subsurface Investigations and Remediation of Contaminated Sites (NERCS) has been formed. In this regard, Web page of NERCS is given at Annexure-XV (page 507) for kind reference.</p>

Table-8.1 Summary of state wise site distribution as per action taken report submitted by SPCBs/PCC (Ref: **page 227** of CPCB status report)

S. No.	States/UTs	Status submitted before the Hon'ble NGT	Updated status as on June, 2020			Proposed De-listed sites	DPRs and Remediation completed	On-going Assessment/ Remediation works	HW still lying at the site (as per DPR prepared by CPCB)	HW not observed (as per site inspection by SPCBs)	HW removed/ lifted from the sites
			Total Sites (PCS +CS)	Total Sites*	Probable Sites						
1	Andhra Pradesh	3 (2+1)	3*	3	0	1	1	1			
2	Assam	4 (3+1)	4	2	2						
3	Chhattisgarh	5 (3+2)	5	3	2						
4	Delhi (NCR)	26 (22+4)	26	14	12						
5	Goa	2 (1+1)	2		2						1
6	Gujarat	23 (15+8)	23*	15	8	1		1			2
7	Haryana	17 (14+3)	17	13	4				8		
8	Himachal Pradesh	6 (5+1)	6	5	1				6		
9	Jharkhand	14 (12+2)	14	12	2			10			
10	Karnataka	25 (20+5)	25	19	6			1			
11	Kerala	13 (7+6)	10	6	4	3	4		1		
12	Madhya Pradesh	20 (14+6)	20*	16	4	1	4		1		1
13	Maharashtra	5 (3+2)	6*	3	3			1			1
14	Odisha	31 (9+22)	32*	9	23		4		4		
15	Punjab	9 (3+6)	9	3	6						
16	Rajasthan	11 (9+2)	11	9	2						
17	Tamil Nadu	14 (8+6)	11	5	6	3	1	2	1	3	
18	Telangana	9 (7+2)	9	7	2		1			5	
19	Uttar Pradesh	40 (22+18)	42*	17	25		7	2	1	18	3
20	Uttarakhand	9 (8+1)	9	8	1						
21	West Bengal	35 (8+27)	7	6	1	28	27				
Total		321 (195+126)	291*	175	116	37	48	18	8	40	8

Note:* including new 07 sites

ix.	<p>The recommendations of the CPCB with regard to the compensation regime on the subject may be adopted, subject to further consideration of orders.</p>	<p>----</p>
x.	<p>The CPCB may oversee the compliance of these directions compile data from all quarters (i.e. recommendations of Monitoring Committee) and furnish an interim compliance report...</p>	<p>In compliance of the aforesaid orders, CPCB has submitted “<i>Status Report on Compliance of Recommendations of the Monitoring Committee on Management of Hazardous Waste and Directions of the Hon’ble Tribunal</i>” on 24/06/2020. dated 30/01/2019 incase of Spent solvent recovery units on the basis of responses received from units on the basis of responses received from SPCBs/PCCs, the status is given at Appendix C and details provided in Chapter 4 of CPCB report- June 2020.</p> <p>Compliance of Recommendations in Interim Report:-</p> <p>> CPCB formulated a format (incorporating key indicators) and forwarded the same to all SPCBs/PCCs for submission of quarterly implementation status on the recommendations made by Monitoring Committee in its interim report.</p> <p>> Further, CPCB continuously followed up with the SPCBs/PCCs for submission of the quarterly information. On the basis of the information Submitted by SPCBs/PCCs, CPCB has compiled quarterly compliance status and submitted the same before Hon’ble NGT on 24/06/2020. The overall status is appended at Appendix D and details are provided in Chapter 5 of CPCB report- June 2020.</p> <p>Compliance of Recommendations in Final Report:</p> <p>> CPCB conducted two interactive meetings with various organizations viz., CBIC, DGFT, DG(S), SPCBs/PCCs, MoEF&CC, followed by field visits to two Ports & one Waste Oil Recycler in Maharashtra, besides forwarding questionnaire to the concerned organizations/departments for ensuring compliance with rigorous follow ups.</p>

	<p>> With regard to recommendations related to impact of hazardous wastes on workers' health and waste reception facility to deal with ship generated wastes progressive steps have been taken by the concerned organizations (viz., Ministry of Shipping Ministry of Environment, Forest and Climate Change and Ministry of Labour) to ensure compliance. Whereas, recommendations pertaining to SPCBs/PCCs, Port Authorities and Department of Labour of States/UT Government needs to be addressed on a continuous basis.</p> <p>With regard to import/export of hazardous wastes, further actions are required to be taken by Central Board of Indirect Taxes and Customs (CBIC), Directorate General of Foreign Trade (DGFT) and Port Authorities with review by Ministry of Environment, Forest and Climate Change on a regular basis to ensure compliance of the Hon'ble NGT dated 26.08.2019.</p> <p>>CPCB has constituted a National Expert Committee to devise National Hazardous Waste Management Policy covering the aspects related to strengthening of institutional framework of regulatory agencies and Research & Development initiatives including Clean Technology besides hazardous waste management issues.</p> <p>>On the basis of the information submitted by the concerned organizations, CPCB has prepared compliance status report and submitted the same before Hon'ble NGT on 24.06.2020. The overall compliance status of various organizations is appended at Appendix E and details are provided in Chapter 6 of CPCB report- June 2020.</p> <p>The way forward and recommendations based on the compliance status submitted by concerned stakeholders, have been given in Appendix F and also given in Chapter 7 of</p>
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13. Shri Panjwani has referred to certain parts of the report to show that timelines for remediation have not been given, information of land fill sites is not complete, ground water and soil testing have not been done and that there are huge gaps in compliance of the Rules but no adequate action has been taken against the violations in the form of

recovery and compensation or otherwise. He pointed out that, vide order dated 26.08.2019, this Tribunal had directed that States which do not set up TSDF by 31.03.2020 will be liable to pay compensation @ Rs. 10 lakh per month and in view of failure of the States of Assam and Chhattisgarh or any other State, CPCB may recover such compensation. He further submitted that the State PCB should carryout inspection and conduct chemical analysis tests on all parameter of soil, surface, ground water, sedimentation etc. of the contaminated sites and submit said reports within 4 weeks to the CPCB, failing which they should be liable to pay compensation. PCBs may also provide information about the quantum of waste removed from 126 contaminated sites and the cost incurred which may be recovered from the generators of such waste. PCBs may also provide information about DPRs for 71 confirmed contaminated sites. Compensation may also be recovered from the States who failed to clear the hazardous waste sites in terms of directions of this Tribunal. Further submission is that CPCB and PCBs/PCCs may invoke their powers under the Rules to recover compensation for improper handling and management of waste, prosecute defaulters, document non-compliances and update their websites giving (a) details of industries, (b) date of inspection including collection of effluent or other samples, (c) whether unit is compliant or not, (d) if non-compliant then action taken including the date of notice if any sent to defaulter. CPCB may develop framework for enforcement of the Rules. Let these aspects be looked into by CPCB and response included in next report.

14. We direct CPCB to take further steps for compliance by issuing appropriate directions and also to enforce its directions for recovery of compensation for the continuing damage to the environment on 'Polluter

Pays' principle. CPCB and PCBs/PCCs may not permit any new industry having potential to generate hazardous waste till facilities for disposal of such waste are ensured. Apart from this, following specific directions may be complied with:

- i. CPCB may set up a system to cross verify the status of hazardous waste generating industries (at least 10% in each State) and also direct SPCBs/PCCs to impose environmental compensation against delinquent industries.
- ii. **Regarding remediation of contaminated sites, immediately 5 sites should be taken for remediation and executed within a period of six months. Environmental damages caused by such sites and loss in terms of monetary resources may also be estimated .**

15. **We direct all the States/UTs and PCBs/PCCs to comply with observations and recommendations in the report and furnish their compliance reports by 31.10.2020 to the CPCB. The Chief Secretaries of the States at the State level and the Ministry of Environment, Forest and Climate Change (MoEF&CC) and the CPCB at the national level may monitor compliance. At the national level, coordination with Central Ministries may be involved which MoEF&CC may look into followed up by the CPCB. Further action taken report in the matter be furnished by CPCB after four months by 30.11.2020 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.**

List for further consideration on 08.12.2020.

Adarsh Kumar Goel, CP

S. P. Wangdi, JM

Satyawan Singh Garbyal, EM

July 07, 2020
Original Application No. 804/2017
A

Appendix – A

Sl. No.	Observations	Proposed Actions (Responsible Agency and timeline of action)
	I. CONTAMINATED SITES AND RELATED ISSUES	
1.	<p>Disposal of hazardous wastes accumulated at identified sites:</p> <p>(i) The Committee has observed that there are several contaminated dumpsites in various parts of country where hazardous and other wastes were dumped historically, which resulted in contamination of soil, groundwater and surface water thereby posing health and environmental risks.</p>	<p>(i) CPCB/SPCBs/PCCs to ensure that the hazardous waste accumulated at all such identified sites shall be disposed of either through Treatment, Storage and Disposal Facilities (TSDFs) or on-site secured land filling (SLF) on priority to stop further contamination</p> <p>(CPCB/ SPCBs/PCCs: 06 months)</p>
2.	<p>Guidelines for Identification and Assessment of Contaminated Sites:</p> <p>(i) The Committee notes that CPCB is working on standard uniform identification and assessment guidelines for the probable contaminated sites and any new additional sites, such guidelines will bring a consistency and uniformity in dealing with the contaminated sites issues.</p>	<p>(i) For a consistent and uniform application and approach across the country, guidelines for identification and assessment of contaminated sites shall be published.</p> <p>(CPCB: 03 months)</p>
3.	<p>Assessment and remediation of Contaminated sites:</p> <p>(i) The Committee has observed that there is a need of awareness and capacity building in SPCBs/PCCs on the entire remediation process including identification, detailed assessment, DPR preparation and execution of remediation.</p> <p>(ii) Further, the committee notes with regret that even today there are about 195 probable contaminated sites (329- 134) which needs a thorough assessment for its confirmation as contaminated site or otherwise. Though the DPRs of 17 sites out of 21 are prepared under NCEF Project and the same have</p>	<p>(i) Capacity building program for officials of SPCBs/PCCs on the entire process of remediation, which may include practical training on use of tools for soil and groundwater screening such as hand-held XRF instruments, Colorimeter, PID for VOCs/ SVOCs, hand operated augers, groundwater pumps, level meters, etc. shall be organized by CPCB.</p> <p>(CPCB: 06 months)</p> <p>(ii) Assessment of about 195 probable contaminated sites and any new additional sites recommended by CPCB/SPCBs/PCCs shall be completed within period of 1 year</p>

	<p>been forwarded to respective State Governments and State Boards. However, no remediation efforts have been initiated at such sites.</p>	<p>after publication of such guidance document by CPCB.</p> <p>(CPCB/SPCBs/PCCs: 1 year)</p> <p>(III) For effective implementation of the remediation plan at State level, Empowered Monitoring Committee chaired by Principal Secretary, Department of Environment having representatives from department of Industries, SPCB/PCC, Ground water development agency, etc. shall be constituted.</p> <p>(State Govt: 04 months)</p>
4.	<p>Financial Arrangements for remediation of contaminated sites:</p> <p>(i) The Committee while taking note of public trust doctrine read with provisions of section 9 of E (P) Act, it is the duty of the Govt. both Central and State to protect environment by taking remedial measures irrespective of the financial arrangements which seems to be a matter of ongoing deliberations.</p>	<p>(i) Financial arrangements between Central-State Governments for the proposed remediation projects shall be resolved immediately so that the remediation works as proposed in DPRs can be undertaken on priority. These DPRs (2017-18 and 2018-19) may need to be revisited if no action is taken in a reasonable time for execution of remediation works.</p> <p>(ii) Govt. should take up on priority not only remediation projects at the sites where DPRs have been prepared but also the assessment of about 195 sites, besides any new addition of potentially contaminated site, if any. (MoEF&CC/State Govt.: 06 months)</p>
5.	<p>Networking of Academic and Research Institutes:</p> <p>(i) Execution of remediation program would require necessary interdisciplinary expertise at the SPCBs/PCCs. The CPCB/SPCBs/PCCs may find it difficult to work on these aspects unilaterally and therefore there has to be coordination and information sharing among these agencies beside developing a network of academic and research institutes which can help in creating an "Expertise Pool".</p> <p>(ii) The committee also notes that a part of such capacity building efforts</p>	<p>(i) MoEF&CC/CPCB/SPCBs/PCCs shall undertake action research and also promote academic courses on this subject in association with academic and research institutions. (MoEF&CC/CPCB/ SPCBs/PCCs: 06 months)</p>

	<p>specific action research programs can be initiated by these agencies and more particularly professional courses on remediation and restoration can be sponsored at academic/research institution which will help to create a critical mass of expertise in this subject.</p>	
II. IMPORT AND EXPORT OF HAZARDOUS WASTES AND ISSUES		
<p>5.</p>	<p>Disposal of illegally imported consignments:</p> <p>(i) In case of confiscated items, responsibility to dispose lies with Customs. CBIC vide Circular No.31/2004-Cus, dated 26-4-2004 has referred to the orders of the Hon'ble Supreme Court in the matter of WP(C) 657/1995 for disposal of hazardous waste. The committee observed that the above circular needs to be amended for disposal of hazardous waste including allocation of fund by the concerned agency for bearing the cost of disposal.</p> <p>(ii) The committee observed that in case of unclaimed/uncleared consignments (where the claimants of the goods/wastes are non traceable), disposal is to be carried out by port authorities/ ICDs (custodian of the unclaimed/uncleared consignments) in consultation with customs and considerable delay in clearing those consignments lying in ICDs/CFSs is a major concern as also referred in the CAG Report.</p>	<p>(i) The customs circular dated 26-4-2004 requires amendment by Central Board of Indirect Taxes and Customs (CBIC) and it is recommended that CBIC to also devise policy framework for speedy disposal and bearing the cost of disposal of confiscated consignments (illegal / banned and non-conformity to the specifications of the products as applicable / as per Schedule V of HOWM Rules, 2016).</p> <p style="text-align: center;">(CBIC: 03 months)</p> <p>(ii) Port authorities/ICDs may also devise a policy, if necessary, in consultation with customs, to ensure HW disposal and its cost so as to expedite the disposal all the unclaimed cargo lying at various ports (and CFSs)/ICDs in a time bound manner.</p> <p style="text-align: center;">(Port Authorities: 03 months)</p>
<p>6.</p>	<p>Laboratory Upgradation in Ports/Docks:</p> <p>(i) For upgradation and setting up of laboratories at various docks/ports to prevent entry of hazardous waste, Customs have informed that the revenue laboratories at 05 zones (Chennai, Delhi, Kandla, Kolkata and Mumbai) were identified for upgradation for testing of Hazardous waste as per the directions of the Hon'ble Supreme Court on</p>	<p>(i) The committee is of the opinion that list of equipments as provided by CBIC for upgradation shall also be provided at major ports, with import and export facilities by CBIC. However, at other ports, arrangements for analysis of relevant parameters with EPA/NABL accredited laboratories having minimum requisite laboratory infrastructure/equipment can be</p>

	11.06.2004. Process of replacing nonfunctional equipments required for testing of Hazardous Waste is being further undertaken with the latest configuration/specification and technology. Further details of the laboratory facilities available in customs for analysis of hazardous materials in those five locations were also provided by customs.	put in place in advance by CBIC. (CBIC: 03 months)
7.	Bank Guarantee procedure: (i) Para 2.35 of Foreign Trade Policy 2015-20 stipulates that wherever any duty free import is allowed or where otherwise specifically stated, importer shall execute, Legal undertaking (LUT) / Bank Guarantee (BG) / Bond with the customs authority, as prescribed, before clearance of goods. However, execution of the same has not been clarified by DGFT and Customs.	(i) Applicability of bank guarantee for the list or category of items and procedure of executing BG by importer/PSIAs, as applicable, need to be specified by DGFT. (DGFT: 03 months) (ii) Procedure of executing bank guarantee by PSIAs and importer in case of import of restricted items (including hazardous wastes specified under Schedule III and VIII) and other items respectively, be devised and mandated by DGFT. (DGFT: 03 months)
8.	Verification of documents for HW in Part D: (i) Schedule VIII of HOWM Rules, 2016 lays down list of documents for verification by customs for import of other wastes (specified in Part D of Schedule III of the said Rules). For instance, in the CAG report, it has been reported that 49 consignments of restricted goods viz., steel sheets, steel melting scrap etc. were cleared by Customs in four ICDs (viz., Chennai, Marmagoa, Ahmedabad and Shillong) for importation without proper documents such as clearance from MoEF, conditions as specified in Schedule 1 and 2 of ITC(HS) policy etc.	(i) CBIC shall strengthen their Risk Management System (RMS) for improved vigilance while verifying documents for import of other wastes (Part D of Schedule III of HOWM Rules, 2016) especially those goods/wastes that are similar to hazardous wastes (regulated or banned/prohibited for import), as there is a possibility that prohibited wastes are imported under the other wastes category. (CBIC: immediate)
9.	RMS system: (i) The customs authorities use the risk management system (RMS) to enable low risk consignments to be cleared based on the acceptance of	(i) There is need to synchronize Basel code and HS codes to cover all scheduled items as per HW rules in customs verification and control more effectively.

	<p>the importer's self-assessment and without examination. Roughly 30 percent of containers covered under risk management out of which 10 percent are physically verified. There are different types of waste streams which have not been integrated in the RMS. There is a need to review the import/export data of various waste streams and include them in RMS. Further, waste streams in Schedule III – Parts A, B and D and Schedule VI that are often mis-declared by importers need to be identified and added to the RMS.</p> <p>(ii) RMS has to be made robust so as to cover all the hazardous goods or consignments listed with HS code classification in accordance with ITC (HS) policy, 2017 for complete verification and testing of the consignments.</p>	<p>(MoEF&CC, Custom and Port Authorities: 06 months)</p> <p>(ii) In order to tackle illegal import of HW consignments (misdeclaration) and those similar to unrestricted items without HS code, such items need to be identified and classified with HS code and brought under the ambit of RMS for stringent verification and testing procedure (for example 'other' waste oil, 'other' oils, furnace oil, Rubber/Tyre oil, Lead / Zinc scrap etc. with hazardous characteristics beyond the limits specified in the HOWM Rules, 2016 be classified with HS Code).</p> <p>(CBIC and DGFT: 06 months)</p> <p>(iii) This process is a continuous process and the monitoring committee recommends that this compliance be reviewed jointly by MoEF&CC and Customs in their coordination meetings.</p> <p>(MoEF&CC, Custom authority: on a regular basis)</p>
10.	<p>DGFT license in public domain:</p> <p>(i) Details of licenses issued to import restricted items not placed on DGFT website, which may require to be communicated to the concerned agencies such as Customs and MoEF&CC.</p>	<p>(i) Details of licenses issued to import restricted items be placed on DGFT website so as to keep the concerned agencies such as Customs and MoEF&CC informed.</p> <p>(DGFT: 03 months)</p>
11.	<p>Harmonization of 'other' category in line with HWM Rules, 2016:</p> <p>(i) Harmonization of Basel codes with ITC (HS codes): The Ministry (MOEF) provides permission on the basis of Basel codes while DGFT uses HS codes. There is a need to synchronize the two codes to avoid confusion.</p> <p>(ii) Import of items under 'other' waste oil (ITC code: 2710 99 00) are restricted, however these items are not clearly specified. As the item 'other' (ITC code: 2710 19 90) along</p>	<p>(i) Items that require to be provided with HS code under the classification of oils be specified categorically under the 'other' class in consultation with MoEF&CC.</p> <p>(DGFT: 06 months)</p> <p>(ii) HS code for all the hazardous and other wastes listed in Part A, Part B and Part D of Schedule III of the Rules be specified by DGFT and Customs. The Committee recognizes that notifying HS code is an elaborate and time consuming procedure which requires</p>

	<p>with certain list of oils are allowed freely, so there is a possibility of import of used/waste oil under the garb of oil under the 'other' category.</p> <p>(iii) No HS code has been specified categorically for any of the hazardous and other wastes except for metal scrap and waste oil.</p>	<p>international deliberations and confirmation and therefore the committee recommends to strengthen the RMS which can provide an expeditious alternative safeguard mechanism.</p> <p>(DGFT and Customs: 03 months)</p>
12.	<p>Pre-Shipment Inspection Agency (PSIAs) for certain category of oils as per Annexure 13 of the ASG Report:</p> <p>(i) Pre-shipment Inspection Agencies (PSIA) notified by DGFT are available for metal scrap wastes only and there is a need for pre-shipment inspection for certain category of oils (i.e. list of oils suggested for pre-shipment inspections certificate for imports in the Recommendations of the former ASG, Sh Gopal Subramaniam.</p>	<p>(i) Initiatives similar to that of metallic scrap wastes be taken by DGFT for notifying PSIAs for certain category of oils suggested for pre-shipment inspections certificate for imports in the Recommendations of the former ASG, Sh Gopal Subramaniam.</p> <p>(ii) Once the PSIAs procedure are specified, the same must be shared with MoEF&CC, CPCB/SPCBs/PCCs and other regulatory authorities.</p> <p>(DGFT: 06 months)</p>
13.	<p>Penal Action against the defaulters in case illegal import:</p> <p>(i) Section 135 of Customs Act lays down provisions for prosecution of importer for the offences such as mis-declaration of value or fraudulent evasion or attempt at evasion of any duty or any prohibition, where the person is liable to be punished with imprisonment for a term exceeding up to seven years and with fine. Violations with regard to prohibited goods, namely, hazardous and other wastes are not categorically notified under section 135.</p>	<p>(i) As a means to improve traceability of importers, the Customs authorities could make the registration process of importers more stringent as there have been cases where importers have never been able to be traced when their illegal imports were intercepted. All incidences of illegal import of HW shall be immediately reported to MoEF& CC as per provisions of the Rules.</p> <p>(MoEF&CC, DGFT, Custom and Port authorities: 03 months)</p> <p>(ii) In case of illegal import of hazardous wastes, MoEF&CC may consider delegation of power vested under section 19 of the Environment (Protection) Act, 1986 to CBIC, to enable them to take credible action against such violators under the E(P) Act, 1986.</p> <p>(MoEF&CC: 06 months)</p>
14.	<p>Re-export of illegal consignments</p>	<p>(i) As of now, DGFT can take action against the erring importers as per</p>

	<p>after confiscation:</p> <p>(i) With regard to re-export of illegally imported items DGFT has referred to a recent order of Hon'ble High Court of Kerala, where in the case pertaining to import of Multifunctional Devices (MFDs) without permission/license from DGFT, the Hon'ble High Court had directed that the powers to direct importers to re-export lies with the DGFT under FT (D&R) Act, 1992 and not with the customs authorities.</p>	<p>the provisions of Foreign Trade (Development & Regulation) Act, 1992, since the feasibility of delegating such powers to the Customs Authorities is being examined in DGFT. The committee recommends to expedite the process in a time bound manner (preferably within 3 months) so as to ensure speedy disposal of consignments lying in ICDs/CFSSs.</p> <p>(DGFT: within 03 months)</p>
15.	<p>Clearance of Waste Oil/Sludge from Ships:</p> <p>(i) Used/ Waste Oil generated from ships are collected by the reception facilities of various ports without authorization by concerned SPCBs/PCCs.</p> <p>(ii) Therefore, Waste oils may get disposed illegally in the garb of waste oil from ships under the obligation of MARPOL.</p>	<p>(i) Used/ Waste Oil generated from ships collected by the reception facilities of various ports shall be covered under Authorisation by SPCBs/PCCs for its designated disposal and facilitate tracking of waste under HOWM Rules, 2016.</p> <p>(Port Authorities/ SPCBs/PCCs: Immediate)</p>
16.	<p>Findings of CAG Report:</p> <p>(i) Findings and recommendations of Report No. 16 of 2018 of the Comptroller and Auditor General of India on 'Performance Audit of Inland Container Depots (ICDs) and Container Freight Stations (CFSS)' needs to addressed by concerned agencies such as port authorities and customs.</p>	<p>(i) CBIC shall prepare annual inventory of the illegally imported consignments stored in Ports/ICDs/CFSSs and submit the same to CPCB and MoEF&CC by 30th September of every year and publish on its website.</p> <p>(ii) Wherever importer of illegally imported consignments is traceable, importer shall not be allowed to import/export, directly or indirectly any material until illegally imported consignments is safely disposed off scientifically as per HOWM Rules, 2016.</p> <p>(Customs, Port Authorities and DGFT: 03 months)</p>
17.	<p>Authorization under HWM Rules, 2016 from concerned SPCB/PCC:</p> <p>(i) Custom and Port authorities have not obtained requisite authorization for handling, storage, transportation, recycling, utilization, offering for</p>	<p>(i) Necessary authorization for handling, storage, transportation, recycling, utilization, offering for sale, transfer or disposal, as the case may be obtained by Customs and Port authorities to deal with the</p>

	sale, transfer or disposal, as the case may be, from the State Pollution Control Board.	hazardous wastes that are confiscated and waste from ships respectively. (Port authorities and Customs: Immediate)
18.	Collaboration between regulating authorities: (i) The committee observed that regulatory agencies such as Ministry of Environment, Forest and Climate Change, CPCB, SPCBs/PCCs, customs and ports authorities do not interact on a regular basis.	(i) Regular interaction between the Ministry of Environment, Forest and Climate Change, CPCB, SPCBs/PCCs, customs and ports authorities should take place with frequent consultative meetings and trainings in order to avoid working in silos. (MoEF&CC, CPCB, SPCBs/PCCs, customs and ports authorities: On a regular basis)
III. WASTE RECEPTION FACILITIES IN PORTS TO DEAL WITH WASTES GENERATED FROM SHIPS (MARPOL)		
19.	Availability of Waste Reception Facilities at ports: (i) In accordance with the orders of the Hon'ble SC, the Ministry of Shipping has to notify availability of reception facilities as per MARPOL Convention. No clear information could be received from DG(shipping) who represented Ministry of Shipping in the interactions with the committee. (ii) According to notification dated 07th Jan 2010 of Department of Shipping the Central Government is required to determine the types of facilities required for the purpose of provision of reception facilities at each cargo loading and unloading port, terminal and ship repair port and notify the organization thereof.	(i) Ministry of Shipping needs to urgently prescribe requirement of reception facilities at each cargo loading and unloading port, terminal and ship repair ports preferably within 06 months, if not done earlier, and such reception facilities shall be provided by such authorities within a period of one year thereafter. (Ministry of Shipping: 06 months and 01 year)
20.	Authorization for the waste reception facilities and ports: (i) The committee observed that Port authorities have not obtained authorization under HW rules for waste reception facilities in ports to deal with wastes generated from ships. The annual report of wastes generated and disposed are not	(i) State Pollution Control Boards shall enforce provisions of HW Rules, 2016 for grant of authorisation and manifest submissions at such waste reception facilities as well as port operations. SPCBs shall ensure that the HW handled at such facilities and ports should be covered in the

	reported to concerned SPCBs/PCCs. Concerned SPCBs/PCCs need to enforce provisions of HOWM Rules, 2016.	Annual report to be prepared as per HOWM Rules, 2016. (SPCBs/PCCs and Port Authority: with immediate effect)
21.	Swachhsagar portal: (i) DG(S) has developed Centralized port reception facility portal: Swachhsagar which is an online system to facilitate early information sharing of waste category and quantity by ships to the port authorities. The committee was informed that this online information management system is not widely and regularly used at several ports.	(i) The committee recommends Ministry of Shipping to ensure that all the major and non-major ports utilize the Swachhsagar online portal immediately which will ensure better HW management. The MoEF&CC/CPCB/SPCBs should also have an access to this portal for enforcement purpose. (Ministry of Shipping: 03 months)
IV. IMPACT OF HW ON WORKERS' HEALTH		
22.	Coverage of all workers under ESI act, 1948: (i) The Special Committee constituted by Apex Court has recommended all workers (covered under ESI Act, 1948 and not covered under ESI Act, 1948) to get medical benefits and compensation under ESI Act, 1948. However, the recommendations of the Report of the Special Committee, May 2004 has not been implemented.	(i) The committee recommends that all the workers engaged in HW handling, storage, transport, preprocessing, utilisation and disposal (covered under ESI Act, 1948 and not covered under ESI Act, 1948) need to get medical benefits and compensation under ESI Act, 1948 as per the recommendations of the Report of the Special Committee, May 2004 and the same be implemented on priority. (Ministry of Labour & Employment: 03 months)
23.	Implementation of Rule 5(2) of HOWM Rules, 2016: (i) The committee regrets to note that most of the State Labour Departments are not fully aware of the responsibility cast upon them under Rule 5(2) of HW Rules, 2016 and have not complied with.	(i) The committee recommends Hon'ble Tribunal to direct Chief Secretaries of States to ensure effective and urgent implementation of the provisions of the rules as stipulated under Rule 5(2) of HOWM Rules, 2016 by Department of Labour. (Department of Labour, Respective State/UT Government: Immediate)
24.	Unauthorized industries be brought under the ambit of ESI Act, 1948: (i) It is a known fact that there are several unauthorized industries involved in hazardous waste	(i) Ministry of Labour need to devise a scheme similar to the provisions of ESI Act, 1948 to cover the workers employed in unorganized sector. (Ministry of Labour & Employment : 06 months)

	<p>handling like E-Waste processing, battery recycling, solvent reuse etc., which employ significant number of workers. It is necessary that all such industries need to be regulated by concerned SPCB/State labour department so that the workers employed therein are brought under the ambit of health and other social support scheme similar to the provisions of ESI Act, 1948.</p>	
25.	<p>Implementation of provisions of statute for safety and health of all workers handling HW:</p> <p>(i) The scope of Rule 5(2) of Hazardous Waste (Management and Transboundary Movement) Rules, 2016 is restricted to only workers involved in Recycling, Preprocessing and other utilization activities. As per recommendations of Expert Committee constituted by Apex court, the scope of such health related considerations need to be for all persons handling hazardous waste.</p>	<p>(i) The Monitoring committee is of the view that even at HW generating industry/activity, the workers involved in HW handling including storage and transportation and also in-plant reuse/ recycle/ reutilization will also be exposed to similar environmental health risks. Therefore, the committee recommends that MoEF&CC may examine the same and may consider amendment of the ambit of Rule 5(2) of HOWM Rules, 2016.</p> <p>(MoEF&CC: 06 months)</p>
26.	<p>DISPLAY OF INFORMATION OUTSIDE THE FACTORY GATE:</p> <p>(i) The committee notes with regret that many of the SPCBs/PCCs have not responded to the correspondence of CPCB in this regard.</p> <p>(ii) The committee has also observed non-compliances with regard to display of information outside the factory gate in most of the States/UTs inspected by CPCB.</p>	<p>(i) Considering the orders of the Hon'ble Apex court and also the need of information sharing with the local community the committee recommends that the SPCBs need to ensure the compliance of the directions of the Hon'ble Apex court on regular basis rather than a onetime compliance.</p> <p>(ii) The verification of the updation of display board should be an integral part of any inspection carried out by CPCB/SPCBs/PCCs without exception. In case of noncompliance the concerned officer should be subjected to departmental actions.</p> <p>(CPCB/SPCBs/PCCs: Immediate)</p>
27.	<p>INSTITUTIONAL REFORMS:</p> <p>(i) The committee is of the opinion that there is an urgent need to develop an appropriate and sound institutional framework at SPCBs</p>	<p>(i) Capacity building in CPCB and SPCBs/PCCs and other agencies (viz., trained adequate manpower, laboratory, budget etc.) shall be expedited as recommended in the</p>

	<p>consisting sound policies, trained and experienced manpower, necessary infrastructure including the laboratories besides having proper enforcement protocol at the State and Central Board level for the effective enforcement of the HW rules.</p> <p>(ii) The committee is of the opinion that there is a need of impetus for action research specifically in the areas of green chemistry, cleaner technology, waste minimization, circular economy and LCA by SPCB/CPCB. It is also necessary that findings of such research shall be shared among all the stakeholders so that there can be environmental benchmarking of the relevant processes across the country.</p>	<p>orders of Hon'ble NGT dated 12.04.2019.</p> <p>(CPCB, SPCBs/PCCs, MoEF&CC and State/UT Government: Immediate)</p> <p>(ii) The committee recommends that CPCB/SPCBs/PCCs shall take efforts similar to that of the State of Gujarat where a separate institution named Gujarat Cleaner Production Centre (GCPC) which conducts such action research supported by adequate information dissemination program and advocacy programs for promoting the cleaner technology.</p> <p>(iii)CPCB/SPCBs/PCCs shall proactively engage in research and development activities by supporting research in clean technology and cleaner production and also, awareness program for the purpose.</p> <p>(CPCB and SPCBs/PCCs: Immediate)</p>
28.	<p>NATIONAL POLICY:</p> <p>(i) HW management is a complex technical and scientific subject which require a multidisciplinary approach for the effective management and enforcement of HOWM Rules, 2016. There is a continuously improving understanding and knowledge about the impacts of Hazardous material at the national and international level. India is also an important stakeholder in many international treaties and conventions in the field of Hazardous chemicals and wastes besides other environmental issues. There is a need of further documentation as well as policy framework for promotion of Clean Technology, financial incentives and research.</p>	<p>(i) MoEF&CC can examine the need of having specialized HW policy which can be appropriately aligned with the National Environment Policy (NEP), 2006 which will promote use of Clean Technology and also ensure sufficient financial allocations for technology research and information sharing resulting into improved HW management.</p> <p>(MOEF&CC: 06 months)</p>

Appendix – B

Recommendations of CPCB of its report dated 14.08.2019

1. *It is recommended that SPCBs/PCCs (namely Assam, Bihar, Delhi, Haryana, Jammu & Kashmir, Lakshadweep, Manipur, Tripura, Uttar Pradesh, Uttarakhand and DDD&NH) may be directed to submit the compliance status on the directions issued by CPCB as the same has not received from these SPCBs/PCCs*
2. *SPCBs/PCCs of Goa, Karnataka, Maharashtra and Odisha, to ensure that that all the authorized solvent recovery units in States are verified for compliance to CPCB's SOP.*
3. *It is recommended that SPCBs of Andhra Pradesh, Goa, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Telangana and West Bengal to ensure enforcement of manifest system as per the provisions of HOWM Rules, 2016 and initiate action against the erring units.*
4. *SPCBs of Himachal Pradesh, Madhya Pradesh and Rajasthan to immediately prepare inventory of Spent Solvent Recovery Unit available in their States and publish the same on their website. Further, all the SPCBs/PCCs having Spent Solvent recovery units to ensure updation and publishing of the inventory at their website on regular basis.*
5. *It is recommended that SPCBs/PCCs of Rajasthan, Odisha, Goa and Punjab, shall immediately conduct interaction programs to create awareness and sensitization on HOWM Rules, 2016 with stakeholders of Spent Solvent generation/utilisation.*

Appendix – B1

Deficiencies in compliance noted by the CPCB

“4.1. BY STATE/UT DEPARTMENTS

- I. *Recommendation No. 6.4: It is necessary that the Hon’ble NGT orders dated 30/07/2018 with regard to setting up of TSDF and taking imitate actions against erring units be strictly complied with by the concerned State/UT Government and SPCBs/PCCs. (State/UT Governments and SPCBs/PCCs: immediate).*
- II. *Recommendation No. 7.5: In case of the contaminated sites where the polluter is not identified, the State/UT Government would be required to finance remediation of such sites to safeguard the people living in contaminated areas from adverse health effects, in terms of their constitutional responsibility to protect and improve the environment. (States/UTs Government and SPCBs/PCCs)*
- III. *Recommendation no. 10.3: SPCBs/PCCs and CPCB needs capacity building in terms of qualified and experienced manpower and also, tools and techniques for effective governance. Committee is informed about steps being taken by SPCBs and would review the same in detail. (MoEF&CC, State/UT Government, CPCB and SPCBs / PCCs: Immediate)*
- IV. *Recommendation no. 11.1: There is need to sensitize State/UT Govts. about duties required to be performed by the concerned department/agency as stipulated under Rule 5(1), 5(2), 5(3) and Schedule VII of the HOWM Rules, 2016. Hon’ble NGT may issue appropriate directions in this regard. (All State/UT Govts.: Immediate)*

4.2. BY CENTRAL POLLUTION CONTROL BOARD (CPCB)

- I. *Recommendation no. 1.1: There is a need to urgently prepare guidelines or protocol on how to decide the by-product on specific criteria. This can be done based on chemical process involved in order to bring consistency in approach. (MoEF&CC and CPCB: 06 months)*
- II. *Recommendation no. 1.4: Pan India IT based solution is suggested for tracking HW. Such integrated data handling and management solution is under implementation by CPCB which the committee would like to review in next phase.*
- III. *Recommendation no. 3.1: Standard guidelines and protocol based on scientific fundamentals for preparation of inventory should be prepared by CPCB and strictly followed by the SPCBs/PCCs to*

ensure reliable and credible inventory. (SPCBs/PCCs and CPCB/inventory of 2018-19 onwards).

- IV. *Recommendation no. 3.5: The timelines for inventory preparation as envisaged in Rules be strictly complied with by SPCBs/PCCs. Preparation of country's inventory by CPCB is dependent on such timely submission by SPCBs/PCCS. (SPCBs/PCCs and CPCB).*
 - V. *Recommendation no. 4.1: SPCBs/PCCs shall invoke the powers conferred under clause 23(1) and (2) of the Rules, related to all damages caused to the environment or third party due to improper handling and management of the hazardous and other wastes, and non-compliance respectively. CPCB has already issued guidelines for Liability assessment, for invoking clause 23(1) and (2) of HW Rules. CPCB shall also take consequential actions under clause 23 (1) as per the said guidelines noticing environmental damages. (SPCBs/PCCs and CPCB: Immediate).*
 - VI. *Recommendation no. 4.4: Urgent updation of concerned websites of SPCBs/PCCs/CPCB with respect to all enforcement actions along with details of industries and action taken. (SPCBs/PCCs/ CPCB: Immediate).*
 - VII. *Recommendation no. 4.5: There is need to have an enforcement framework for effective enforcement of Rules based on principle of proportionality and also, precautionary principle. Such framework will remove ambiguity in regulatory actions and bring transparency, predictability and consistency in enforcement for actions. (SPCBs/PCCs/CPCB: within 06 months).*
 - VIII. *Recommendation no. 8: SPCBs/PCCs and CPCB need to take cognizance of these aspects (i.e. HW resulting from enforcement of other regulations) while enforcing the relevant rules and also, preparation of HW inventory and other interventions. (SPCBs/PCCs and CPCB).*
 - IX. *Recommendation no. 10.3: SPCBs/PCCs and CPCB needs capacity building in terms of qualified and experienced manpower and also, tools and techniques for effective governance. Committee is informed about steps being taken by SPCBs and would review the same in detail. (MoEF&CC, State/UT Government, CPCB and SPCBs / PCCs: Immediate)*
- 1.3. BY STATE POLLUTION CONTROL BOARDS/ POLLUTION CONTROL COMMITTEES (SPCBS/PCCS)**
- I. *Recommendation No. 1.2: Other waste is presently missing from all the regulatory actions, including inventory. It is necessary to bring*

such waste in regulatory domain, as envisaged in the rules (SPCBs/PCCs: inventory of 2018-19 onwards)

- II. *Recommendation No. 1.3: SPCBs/PCCs need to take steps to ensure closing of the manifests received and reconcile the HW handling data. This work is humungous and need support in terms of software and online submissions. (SPCBs/PCCs)*
- III. *Recommendation No. 1.5: The pre-processing and recycling/utilisation facilities need to be treated as critical environmental infrastructure facilities for sound environmental management of hazardous waste so as to ensure enhanced level and frequency of enforcement and environmental monitoring. Elaborate protocols are needed to be developed. (SPCBs/PCCs: continuous activity)*
- IV. *Recommendation No. 1.6: According to Rules, the identification and quantification of the hazardous waste generation is to be done at the authorization stage itself and therefore, it is necessary that SPCBs shall adopt the scientific principles as enumerated for such identification and quantification of HW. (SPCB/PCCs: Immediate)*
- V. *Recommendation No. 2.1: Uniform format for visits and inspections of HW handling facilities is necessary to ensure comprehensive inspections as per the provisions of the Rules. A format is proposed by the Committee.*
- VI. *Recommendation No. 2.2: The authorization document should clearly stipulate respective mode of management (such as common or captive incineration/secured landfilling or pre-processing or recycling or utilization or export or captive storage, as applicable) for each category of HW being generated. (SPCBs/PCCs: immediate)*
- VII. *Recommendation No. 3.2: SPCBs/PCCs shall verify and scientifically validate the HW data and facilities before grant or renewal of authorization. (SPCBs/PCCs: inventory of 2018-19 onwards)*
- VIII. *Recommendation No.3.3: There is an emergent need to develop sectoral process based reasonable HW generation range to have uniformity in assessing the HW generation from industries and benchmarking the same with its peers, rather than solely depending on industry data. (SPCBs/PCCs: continuous activity)*
- IX. *Recommendation No. 3.4: All occupiers who have authorizations shall submit the Annual report and in case of non-compliance, action needs to be taken by SPCB/PCC. (SPCBs/PCCs: inventory of 2018-19 onwards)*

- X. *Recommendation No. 4.1: SPCBs/PCCs shall invoke the powers conferred under clause 23 (1) and (2) of the Rules, related to all damages caused to the environment or third party due to improper handling and management of the hazardous and other wastes, and non-compliance respectively. CPCB has already issued guidelines for Liability assessment, for invoking clause 23(1) and (2) of HW Rules. CPCB shall also take consequential actions under clause 23 (1) as per the said guidelines wherever directions under section 5 of the E(P) Act have been issued by CPCB, noticing environmental damages. (SPCBs/PCCs and CPCB: Immediate)*
- XI. *Recommendation No. 4.2: The habitual and serious defaulters shall be prosecuted under provisions of the Environment (Protection) Act, 1986. Other alternative regulatory actions including refusal and revocation of Authorization can also be explored following the due process. (SPCBs/PCCs: Immediate)*
- XII. *Recommendation No. 4.3: Non-compliance to be documented while processing authorization for renewal or inspections in order to invoke powers of refusal or revocation of Authorization as per Rules. (SPCBs/PCCs: Immediate)*
- XIII. *Recommendation No. 4.4: Urgent updation of concerned websites of SPCBs/PCCs/CPCB with respect to all enforcement actions along with details of industries and action taken. (SPCBs/PCCs/ CPCB: Immediate)*
- XIV. *Recommendation No. 4.5: There is need to have an enforcement framework for effective enforcement of Rules based on principle of proportionality and also, precautionary principle. Such framework will remove ambiguity in regulatory actions and bring transparency, predictability and consistency in enforcement for actions. (SPCBs/PCCs/CPCB: within 06 months)*
- XV. *Recommendation No. 5.1: The inventory data needs to be verified and validated before accepting the same. The states shall adopt the proposed guidelines immediately while preparation of HW inventory. (SPCBs/PCCs: Immediate)*
- XVI. *Recommendation No. 5.2: There is emergent need of consistent approach in recycle and utilisation of HW in terms waste management hierarchy mandated in the rules across all the States in order to ensure the level playing field for the industry. This can be achieved by advocacy programme such as concept of waste exchange banks, know your waste programme, circular economy, documentation of the success stories along with regulatory interventions wherever required. (SPCBs/PCCs)*

- XVII. *Recommendation No. 5.3: It is also necessary to develop certain benchmarks/guidelines for the possibilities of HW recycle/utilisation on case to case basis. For example, for co-processing at Cement plants the Thermal Substitution Ratio (TSR) can be an objective criterion to decide the potential to use HW for utilization purpose. The range of TSR at different cement plants can be collated to develop a database for sound co-processing practices. (SPCBs/PCCs)*
- XVIII. *Recommendation No. 5.4: The concept of environmental benchmarking among the similar industries generating HW can be useful to ensure consistency and uniformity. The emerging trend of circular economy would be a key intervention for rationalizing the HW generation and reuse/utilization. (SPCBs/PCCs: continuous activity)*
- XIX. *Recommendation No. 6.1: The practice of returning the HW consignment needs to be immediately stopped and the consignment needs to be stored within the TSDF with information to the waste generator and also the concerned SPCB. The TSDF shall take appropriate measures to dispose this waste at the risk and cost of the waste generator under due information to the SPCB immediately on priority. Though the present guidelines prescribed that the waste shall be sent back to the waste generators, this practice needs to be immediately discontinued in view of non-accounting of the waste once it is out of manifest protocol and the associated environmental risks. (SPCBs/PCCs/TSDFs: immediate)*
- XX. *Recommendation No. 6.2: SPCBs/PCCs shall conduct environmental audit including the site selection criteria, design and layout for the TSDFs in next one year. They can engage expert institutes for the purpose and seek CPCB's technical advice on the ToR of the study, if required. (SPCBs/PCCs: 01 year)*
- XXI. *Recommendation No. 6.3: All the Common SLF shall disclose the mandatory amount deposited in Escrow Account annually to SPCB/PCC, CPCB and display on their website. SPCB/PCC to take action in case of non-compliance (SPCBs/PCCs: immediate)*
- XXII. *Recommendation No. 6.4: It is necessary that the Hon'ble NGT orders dated 30/07/2018 with regard to setting up of TSDF and taking imitate actions against erring units be strictly complied with by the concerned State/UT Government and SPCBs/PCCs. (State/UT Governments and SPCBs/PCCs: immediate)*
- XXIII. *Recommendation No. 8.0: SPCBs/PCCs and CPCB need to take cognizance of these aspects while enforcing the relevant rules*

and also, preparation of HW inventory and other interventions. (SPCBs/PCCs and CPCB)

XXIV. Recommendation No. 10.1: Each of the SPCBs/PCCs/Custom/TSDF, as listed in report, need to have at least one laboratory where all HW parameters as required under the Rules can be analysed. (SPCBs/PCCs/Custom/TSDF: 06 months).

Recommendation No. 10.3: SPCBs/PCCs and CPCB needs capacity building in terms of qualified and experienced manpower and also, tools and techniques for effective governance. Committee is informed about steps being taken by SPCBs and would review the same in detail (MoEF&CC, State/UT Govt., CPCB and SPCBs/PCCs: Immediate).

Recommendations of the CPCB to rectify above deficiencies are:

“6.1. RECOMMENDATIONS:

- 1. It is recommended that 05 SPCBs/PCCs (namely Dadar Nagar Haveli& Daman & Diu; Haryana; Lakshadweep; Manipur and Nagaland) directed to submit the status on implementation of recommendations made by the Monitoring Committee in its interim report, as CPCB has not received any information from these SPCBs/PCCs.*
- 2. SPCBs/PCCs need to implement 25 action points, out of which 11 action points needs to be implemented immediately and other 14 in regular and non immediate manner. It is recommended that SPCBs/PCCs which are not complying with the recommendations made by Monitoring Committee should submit the status report to CPCB immediately.*
- 3. It is recommended that till National Hazardous Waste Tracking System (NHWTS) which is being developed by CPCB is made functional, SPCBs/PCCs may be directed to ensure and verify reconciliation of manifest.*
- 4. SPCBs/PCCs shall strictly follow the guidelines for inventorization of hazardous and other waste issued by CPCB and ensure verification and validation of the annual returns submitted by the occupiers/recycler/pre-processor/utilizer/coprocessor operator of disposal facilities including submission of the annual inventory to CPCB within the stipulated time period.*
- 5. It is recommended that SPCBs/PCCs (namely Himachal Pradesh, Sikkim, Punjab, Kerala and Jharkhand) which have reported non-compliance but not taken any action shall be directed to take action against such violators as per provisions of HOWM Rules, 2016.*

Further, it is also recommended that SPCBs/PCCs may be directed to initiate actions against all such units which are violating one or other provisions of HOWM Rule, 2016 including non-compliance to the documenting submission such annual returns, manifest document, etc.

6. *It is recommended that the timeline provided by the SPCBs/PCCs with regard to adopting waste management hierarchy (as stipulated in the HOWM Rules) to ensure the level playing for the industries shall be strictly adhere to.*

Further, SPCBs/PCCs shall also initiate development of certain benchmarks/guidelines for the possibility of hazardous waste recycling/ utilization on case to case to basis as most of the SPCBs/PCCs have not taken any initiative on the same.

7. *It is recommended that SPCBs/PCC may be directed to initiate development of sectoral process based HW generation range to have uniformity in assessing the HW generation from industries and benchmarking the same.*
8. *It is recommended that SPCBs/PCCs of (Karnataka, Maharashtra, Rajasthan, Kerala and Uttarakhand) having Common TSDF to immediately open the Escrow Account as per O.M of MoEF&CC including deposition of mandatory amount.*

Further, SPCBs/PCCs of Gujarat, Jharkhand, Karnataka, Odisha, Rajasthan, Tamil Nadu and West Bengal shall take action against the Common TSDF(s) for not displaying the details of mandatory amount deposited in the Escrow Account on their website.

9. *SPCBs/PCCs may be directed to expedite conducting of environment audit of the Common/Captive SLFs in the time bound manner as specified in the Interim Report of the Monitoring Committee Report.*
10. *SPCBs/PCCs have reported that out of 30 SPCBs/PCCs only 19 are having laboratory facilities for analysis of all hazardous waste parameters as required under HOWM Rules, 2016. Therefore, it is recommended that all the remaining 11 SPCBs/PCCs (Andaman and Nicobar Islands, Arunachal Pradesh, Delhi, Goa, Jammu & Kashmir, Jharkhand, Meghalaya, Odisha, Puducherry, Sikkim and Uttarakhand) should be equipped with all the facilities for analysis of all hazardous waste parameters as required under HOWM Rules, 2016.*
11. *It is recommended to direct States/UTs (namely Andaman and Nicobar Islands, Assam, Arunachal Pradesh, Bihar, Chhattisgarh, Chandigarh, Delhi, Goa, Jammu & Kashmir, Lakshadweep, Manipur, Meghalaya, Mizoram, Nagaland, Puducherry, Tripura and*

Sikkim) where common TSDF is not available to immediately set up adequate number/capacity of Common TSDFs in such States/UT.

- 12. All the Chief Secretaries of the States/UTs may be directed to submit biannually compliance report to CPCB by collecting information from the State Government/ Departments like Labour/Industries/ Environment and SPCBs/PCCs.*