

Chapter VII

Other Wastes

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Besides Municipal Solid Waste and Bio-Medical Waste, other wastes are also being generated, the management of which are discussed in this Chapter.

7.1 Hazardous Waste

Hazardous Waste⁶⁸ means any waste which by reason of any of its physical, chemical, reactive, toxic, flammable, explosive or corrosive characteristics cause danger or is likely to cause damage to health or environment, whether alone or when in contact with other wastes. Assam produced more than 15,000 MT of hazardous waste every year during the period from 2010-11 to 2014-15. Year-wise production can be seen in the following table:

Table No: 7.1
Total Quantity of Hazardous Waste generated during 2010-15

Year	Landfiabile Hazardous Waste (MT)	Recyclable Hazardous Waste (MT)	Incinerable Hazardous Waste (MT)	Total Hazardous Waste (MT)
2010-11	5307.657	7298.408	2.950	12609.015
2011-12	3101.006	12276.199	72.002	15449.207
2012-13	4325.910	10691.530	8.002	15025.442
2013-14	4178.370	14042.860	268.600	18489.830
2014-15	5039.370	14539.210	325.600	19904.180
Total	21952.313	58848.207	677.154	81477.674

Source: Information furnished by PCBA

As per Rule 5 of the Hazardous Wastes (Management, Handling and Trans-boundary Movement) Rules, every person who is engaged in generation, processing, treatment, package, storage, transportation, use, collection, destruction, conversion, offering for sale, transfer of hazardous waste shall require to obtain an authorisation from the PCBA, which shall maintain a register containing particulars of the conditions imposed for management of hazardous waste, and it shall be open for inspection to any person interested or affected or a person authorised by him on his behalf. The Rules further prescribe that every generator, recycler, of hazardous waste shall prepare an annual return containing the specified details and submit the same to the PCBA.

⁶⁸ Source: The Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008.

Further, as per Rule 22 (3) of the Hazardous Wastes (Management, Handling and Trans-boundary Movement) Rules, 2008, PCBA shall prepare an inventory of the hazardous waste within its jurisdiction and compile other related information like recycling of the hazardous waste, its treatment and disposal based on the returns filed by the respective occupier and operator of the facility.

If in inspection the body is found at fault, then PCBA can take action as per the Environment Protection Act.

It was observed in Audit that:

- The PCBA had identified 243 hazardous waste generating industries in the State up to the year 2014-15, but had issued authorisation to only 58 units.
- No details of conditions imposed while granting authorisation to any agency for management of hazardous waste was being maintained by the PCBA.
- The PCBA did not have any information about the disposal or recycling of hazardous waste generated.
- There was no Common Treatment, Storage and Disposal Facility (TSDF) in the State.
- During 2014-15, only 18 out of 58 industries who had obtained authorisation had submitted the annual returns. The PCBA had not initiated any action against the defaulters for non-submission of annual return.

7.2 Plastic Waste

‘Plastic⁶⁹’ means material which contains as an essential ingredient a high polymer and which at some stage in its processing into finished products can be shaped by flow. ‘Plastic Waste’ means any plastic product such as carry bags, pouches or multilayered plastic pouch or sachet, etc., which have been discarded after use or after their intended life is over.



Plastic mixed with MSW

As per Rule 5 of the Plastic Waste (Management and handling) Rules, 2011, no person shall manufacture, stock, distribute or sell any carry bag made of virgin or recycled or compostable plastic, which is less than 40 microns in thickness. Also, as per the Rule 9 (c) no person shall manufacture plastic carry bags etc., without obtaining registration certificate from the PCBA prior to the commencement of its production. Further, as per Rule 6 (c) of the Plastic Rules, the Municipal Authority

⁶⁹ Source: The Plastic Waste (Management and Handling) Rules, 2011.

shall be responsible for setting up, operationalisation and co-ordination of the waste management system such as safe collection, storage, segregation, transportation, processing and disposal of plastic waste, setting up of collection centres for plastic waste involving manufacturers, ensuring its channelization to recyclers and creating awareness among all stakeholders about their responsibilities.

As per section 15 of the Environment (Protection) Act, 1986, whoever fails to comply with any provisions of the Act or the rules made thereunder, shall in respect of each such failure, be punishable with imprisonment for a term which may extend to five years or with fine which may extend to one lakh rupees or with both, and in case the failure continues, with additional fine which may extend to five thousand rupees for every day during such failure.

It was noticed in Audit that:

- The Guwahati Development Department had banned (June 2012) sale of plastic carry bags of less than 40 microns of thickness. Penal action viz. fines had been prescribed in the ban order. However, plastic carry bags of less than 40 microns were being sold/used openly despite the ban. The District Administration had not taken any follow up action on the ban.
- There were 15 unregistered plastic manufacturing/ recycling units. The PCBA had not taken any action against the defaulters under the Environment (Protection) Act, 1986.
- GMC had not set up any proper segregation system and as a result of which plastic wastes were mixed up with municipal solid waste (MSW) and transported to dumping sites at Boragaon, Guwahati. Further, neither was there any recycling plant set up in Guwahati, nor was any awareness campaign carried out by the GMC.

7.3 Battery Waste

‘Battery⁷⁰’ is a source of electrical energy and contains lead. The lead used in batteries is hazardous and requires proper handling at all stages to avoid emission of lead in atmosphere as also discharge of acid into open areas and sewages. Concentration of lead in blood above the threshold levels (from 2.33 µg/dl to 27.4 µg/ dl) can induce hypertension in adults and inhibit development of intelligence in children. Therefore, disposal and recycling



Unauthorised person disposing lead/acid into the drain at Sharb-bhatti

⁷⁰ Source: The Batteries (Management and Handling) Rules 2001.

of batteries, wherever required, should be done in units possessing environmentally sound technology.

The PCBA identified 21 battery handlers (manufacturer: one, recycler: four, bulk consumer: 14, dealer: one and auctioneer: one) in the entire State since the Battery Rules became effective in the year 2001. The Batteries (Management & Handling) Rules 2001 stipulated that it shall be the responsibility of a dealer to ensure that the used batteries are collected back as per the following Schedule against new batteries sold.

Table No.: 7.2
Schedule- collection of Used Batteries against New Batteries

Sl. No.	Year of Implementation of Battery Rules 2001	Percentage of used batteries to be collected back
1.	During first year of implementation	50% of new batteries sold
2.	During second year of implementation	75% of new batteries sold
3.	After second year of implementation	90% of new batteries sold

Further, the Rules also stipulate that (i) dealer has the responsibility to get registered with the PCBA for five years and a provision of cancellation for failure in collection of the required number of used batteries as per the said Rules and/or non-submission of timely half yearly returns to the PCBA, and (ii) renewal of the registration shall be as per the compliance status.

It was observed in Audit that:

- During 2010-11 to 2014-15, the sole dealer⁷¹ sold 19.17 lakh new batteries against which 13.31 lakh (69 per cent) used batteries were collected back instead of 17.25 lakh batteries (90 per cent). Though the dealer had not collected the required number of used batteries as per schedule prescribed in the Rules, the PCBA had not taken any action as stipulated and mentioned above. On being pointed out, the PCBA agreed with the observation and stated (September 2015) that the unit had been directed to clarify the reasons for not-collecting of required batteries. The PCBA further stated (April 2016) that the reply furnished by the dealer did not reflect the proper justification on non-compliance with provision and reminder letter was issued to the dealer regarding above matter for further replies from them since as per the Act the delayers should be given an opportunity to be heard.
- Out of 21 identified battery handlers, very few (2012-13: 12, 2013-14: six and 2014-15: 12) had submitted the returns to the PCBA. The PCBA had not taken any action against defaulters for non-submission of returns under the Environment Protection Act. On being pointed out, the PCBA stated

⁷¹ M/s Exide Industry Ltd. (the database of PCBA contains name of only one battery dealer)

(August 2015) that notices had been issued (August 2015) to the manufacturers, registered recyclers of batteries including dealers, bulk consumers and auctioneer, etc. for submission of returns. Further development was awaited.

But the fact remained that section 15 of the Environment (Protection) Act, 1986, provides that whoever fails to comply with any provisions of the Act or the rules made thereunder, shall in respect of each such failure, be punishable with imprisonment for a term which may extend to five years or with fine which may extend to one lakh rupees or with both, and in case the failure continues, with additional fine which may extend to five thousand rupees for every day during such failure. But no action in this regard has been taken by PCBA.

7.4 E- Waste

'E- Waste'⁷² means waste relating to electrical and electronic equipment, whole or in parts or rejects from their manufacturing and repair process which are intended to be discarded. E-Waste contains toxic substances such as Cadmium, Lead, mercury etc., and if discarded in the open, these toxic substances can cause severe hazard on environment and human health. Audit observed the following:

- As per the e-waste (Managements & Handing) Rules 2011, PCBA has the duty to prepare inventorisation of e-waste. However, after lapse of more than three years from the enactment of Rules, the PCBA had not prepared the inventorisation of manufacturers, collection centres, bulk consumer, dismantlers, recyclers or of the quantity of e-waste generated and handled.
- There were only four authorised collection centres in Assam as of March 2015. Out of the four centres, one centre had collected only 1.5 MT e-waste during the year 2012-13 but PCBA had no record regarding details of their disposal. On being pointed out, the PCBA stated (August 2015) that preparation of a comprehensive inventory in the State of Assam was in progress. Further development was awaited.
- The Rules also stipulate that, in case of transportation of e-wastes for dismantling or for recycling in a State other than the State where the waste is generated or collected, the transporters shall give prior intimation to the



E-waste

⁷² Source: The E- Waste (Management and Handling) Rules, 2011.

State Pollution Control Board concerned and of the State(s) of transit. It was observed in Audit that during 2013-14, 20.046 MT of e-waste were collected by five producers/bulk consumers and transported to other States for dismantling/recycling. However, the transporters had not given prior intimation to the PCBA in this regard. On being pointed out, the PCBA stated (August 2015) that the PCBA was communicating with the identified recyclers/producers and directing them to intimate the PCBA in case of further transportation of e-waste generated in the State of Assam to recyclers located in other States.

In a further reply, the PCBA stated (April 2016) that the Board had issued notices to e-waste dismantling/recycling facilities to give prior intimation to the Board regarding transportation of e-waste outside the State.

7.5 Recommendations

- *The PCBA should maintain updated information of all hazardous waste generating industries, recyclers, etc. and details of disposal of such waste.*
- *In order to ensure scientific disposal of hazardous waste, the PCBA should insist on installation of Common Treatment, Storage and Disposal Facility.*
- *The PCBA should take action against the unregistered plastic manufacturers in the State and ensure that carry bags less than 40 micron are not sold in the market.*
- *All handlers of batteries may be brought under the PCBA's registration network and strict monitoring of collection of used batteries ensured.*