

Collection of Mercury Waste discharged from Households

Background

Requirement of the Minamata Convention on Mercury

Under Article 11 of the Minamata Convention on Mercury, each Party is required to take appropriate measures so that mercury waste is managed in an environmentally sound manner.

The Convention identifies three categories of mercury wastes:

- (1) wastes consisting of mercury or mercury compounds,
- (2) wastes containing mercury or mercury compounds and
- (3) wastes contaminated with mercury or mercury compounds.

Environmentally Sound Management (ESM) of waste mercury products (e.g., waste fluorescent lamps and batteries) is a common challenge for all developing countries, since mercury and its compounds are used in various products for our daily lives. Developing mechanisms for source separation and collection of mercury waste discharged from households is essential for the implementation of the Convention.



Source: UNEP "Practical Sourcebook on Mercury Waste Storage and Disposal"

Overview of the Technology

Due to increasing social concern about mercury since the outbreak of Minamata Disease, Japan has formulated and incrementally developed a collection system for waste mercury-added products generated from households.

In Japan, the local governments are responsible for collecting mercury waste generated from households. The system comprises of utilizing the existing collection system, including door-to-door collection and curbside collection, suited to the characteristics of the locality. Collection boxes are placed at various points where consumers visit frequently; for example at consumer-electronics retailer shops for waste fluorescent lamps/batteries and pharmacies for used thermometers, ensuring that an efficient collection system is in place.

Companies licensed by the local municipalities are contracted to recycle and dispose of mercury waste discharged from households that is collected by the municipality, in an environmentally sound manner.

Example of Collection System of Waste Fluorescent Lamps disposed from Households in Japan



Mercury Technology Bulletin Series: Advantages/Strengths

Measures to prevent breakage during disposal and transportation

Waste mercury-added products such as thermometers or fluorescent lamps are fragile and there is a possibility of mercury spilling and scattering, resulting in the pollution to the environment. Furthermore, the appropriate treatment methods vary according to different types of products and it is essential to take appropriate measures to ensure that mercury waste is not mixed with other waste.

The specific measures in practice include using containers suited to the shape, size and quantity of the waste to ensure the prevention of breakage, which improves the waste collection rate as well as pollution prevention.



Awareness raising among local governments and citizens

For segregation and collection of municipal waste to be carried out effectively, it is crucial that the stakeholders cooperate and have a clear and common understanding of pertinent issues. In Japan, an effective collection system has been established through institution building while simultaneously raising awareness of stakeholders.

The MOEJ has developed guidelines with examples of the actual cases and good practices of mercury waste collection by municipality, along with other awareness raising pamphlets. Additionally, seminars for local governments are also organized occasionally.



Applicability

Japan has developed one of the most effective waste segregation and collection systems of mercury waste in the world. This has been possible due to the cooperation and understanding of the public.

Establishing such system will be challenging, but the Japanese approach can be a good reference and the know-hows can be applied to the establishment of similar approach in other countries. Furthermore, the Japanese experience of policy formulation, carrying out awareness raising activities, and carrying out the collection system by local governments can provide valuable information for establishing segregation and collection systems for mercury wastes in other countries.



Further Reading

MOEJ, Collection Methods of Waste Mercury-added Products discharged from Households (English DVD)
MOEJ, Guidelines for Separation and Collection of Mercury Containing Waste discharged from Households (Japanese only) (http://www.env.go.jp/recycle/waste/mercury-disposal/h2712_guide1.pdf)

Published in:
Edited and published by:



June, 2018
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