Developing Effective National PCB Strategies

National Project Case Study and Example - Japan

Yo Osada, Dr.

Technical Advisor for PCB Management
Japan Industrial Waste Management Foundation (WMF)

CONTENT

Regulatory Framework

Policy and Disposal

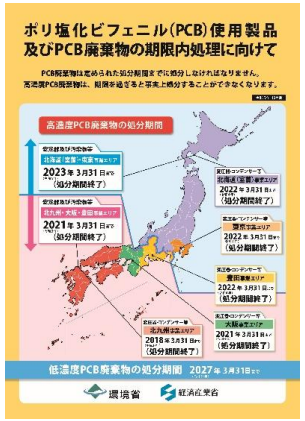
The Act on Special Measures concerning PCB Waste (PCB Special Measures Act) was enacted in 2001.

Key Points:

1. Disposal Deadline: The final deadline is March 31, 2027.
2. Reporting Requirements: PCB owners must report their storage and disposal status to local governments annually.
3. Restrictions on Transfer: To prevent illegal dumping, the transfer of PCB waste is, in principle, prohibited.

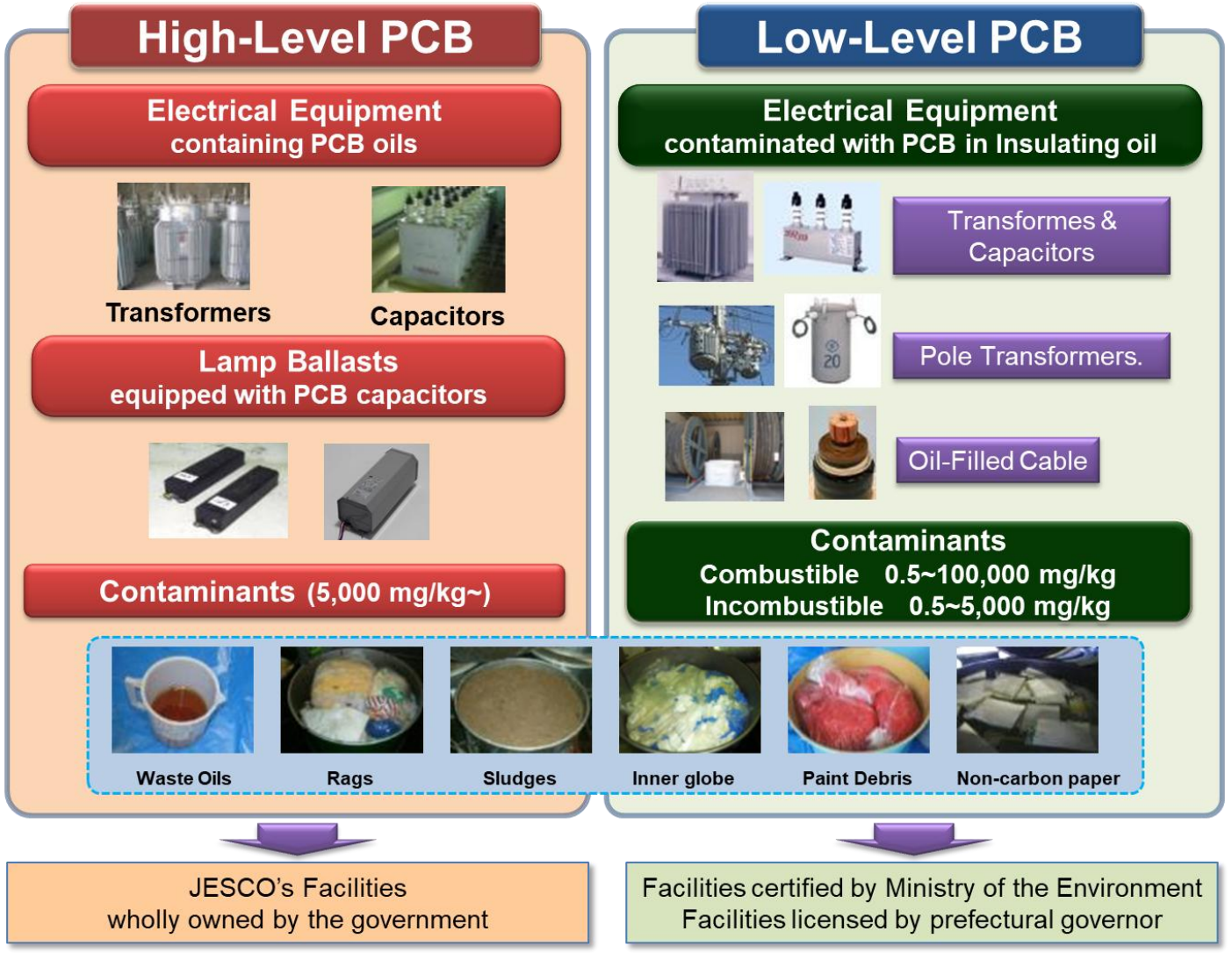
Supporting Measures

- Information Dissemination: Various guides and manuals have been created and distributed.
- Inventory: The government promotes PCB inventory and concentration measures for in-use or storage equipment through training and inspection by the officials.
- Subsidies: A program provides financial assistance to small and medium-sized enterprises and individuals.



Classification

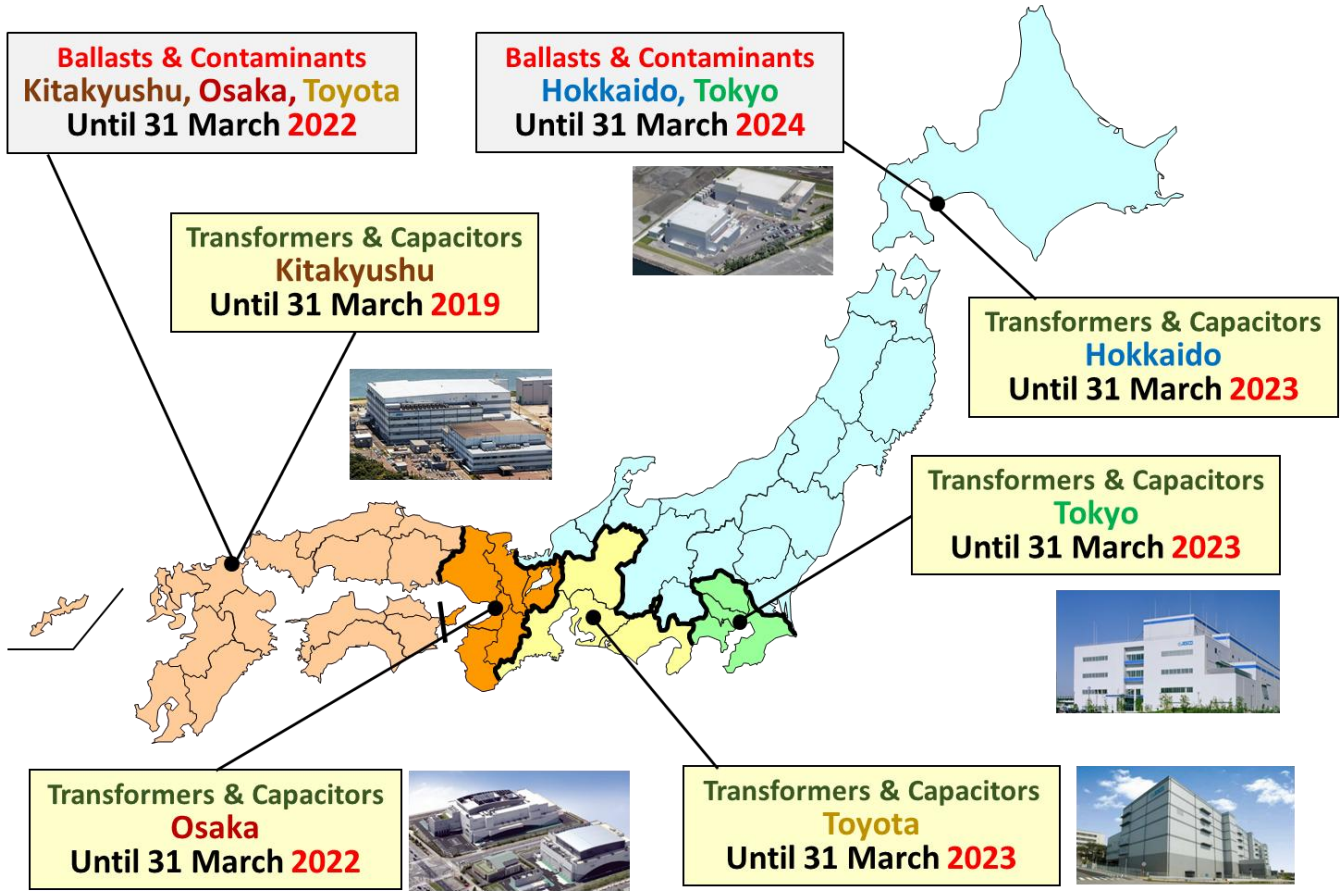
- Japan's approach classifies PCB waste into two categories: High-level and Low-level PCB according to their concentration.



Developing National Disposal Capacities

High-level PCB Wastes

- Disposal is handled by a national government-funded facility called JESCO, ensuring a safe and secure process of dechlorination and Plasma melting.
- Japan does not have a capacity-based standard for the waste and categories.
- “Open Applications” like lamp ballasts or paints are also designated for disposal.

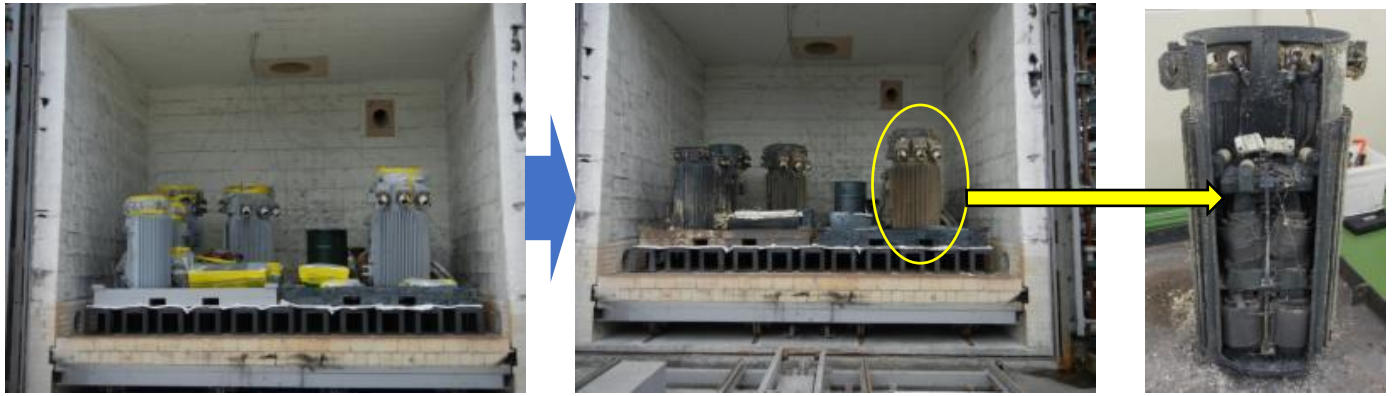


Low-level PCB wastes

- Japan's limit value for PCB content is 0.5 mg/kg, which is 100 times stricter than the international standard, but the concentration is generally well below 50 mg/kg.
- Contamination is often due to unintentionally present PCBs in recycled insulating oil.
- These wastes are treated at certified or licensed private disposal facilities by incineration or washing.

Fixed Bed type Furnace

- Carcasses are heated in a fixed bed type furnace with the temperature maintained above 850℃ for 4 hours.
- Vaporized PCBs are transferred to secondary combustion zone of main incinerator and then decomposed.



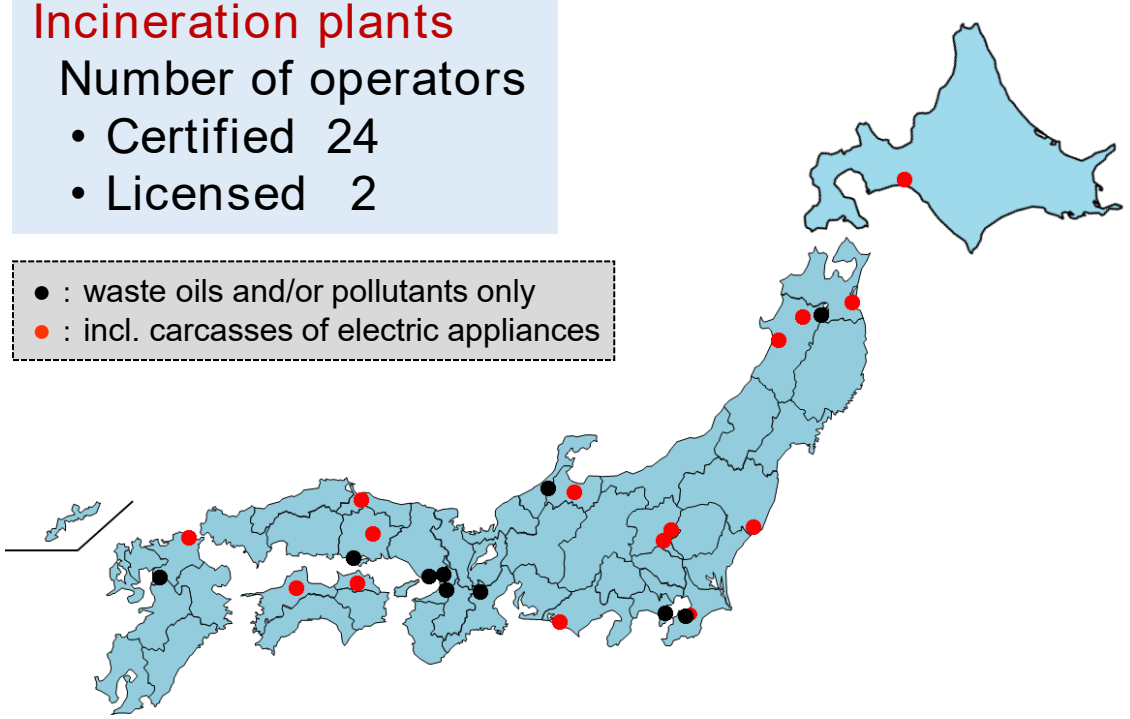
Low-level PCB WasteTreatment Facilities

Incineration plants

Number of operators

- Certified 24
- Licensed 2

● : waste oils and/or pollutants only
● : incl. carcasses of electric appliances

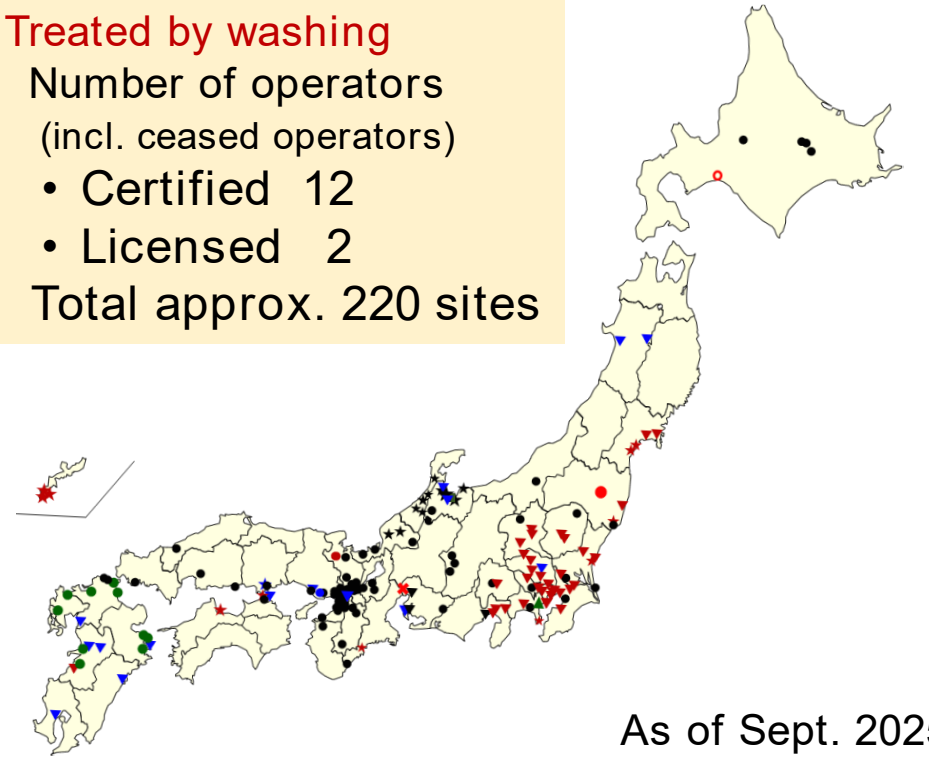


Treated by washing

Number of operators
(incl. ceased operators)

- Certified 12
- Licensed 2

Total approx. 220 sites



As of Sept. 2025

Disposal Progress

As of March 2025

High-level PCB wastes*		Low-level PCB wastes	
Transformers	approx. 16,000 units	Electrical Carcasses	approx. 826,000 units
Capacitors	approx. 379,000 units	Contaminated Oils	approx. 164,000 tons
Ballasts & Pollutants	approx. 21,000 tons	Pollutants	approx. 158,000 tons

* 99% of the planned volume has been processed.

Conclusions – Lessons Learnt

High-level PCBs

1. Strong Initiative by the national government
2. Repetitive and sincere explanation to build public consensus
3. Thorough investigation based on reliable reference lists provided by the supplier
4. “Carrot and stick policy” – subsidies and penalties

Low-level PCBs

1. Full dissemination of the necessity of elimination to all stakeholders
2. Installation of various types of treatment plants
3. Reduction of measurement and treatment costs

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THANKS!

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