Japan's Mercury Emission Inventory (FY 2018)

Source Category	Emission Source			Emission (ton-Hg/year)[1] FY2018
Sources listed in Annex D of the Minamata Convention	Coal-fired power plants			1.2
	Coal-fired industrial boilers			0.21
	Smelting and roasting processes used in the production of non-ferrous metals			1.4
	Waste incineration facilities	Municipal solid wastes		1.5
		Industrial wastes		2.4
		Sewage sludge[2]		1.5
		Facilities that recover mercury from mercury-containing recyclable resources and industrial wastes subject to mandatory mercury recovery (limited to facilities that have a heating process during recovery)[2]		0.0045
	Cement clinker production facilities			5.4
Other sources	Iron and steel production facilities	Primary iron production	Sintering furnace (including pellet firing furnace)	2.4
			Others (from blast furnace by-product gas, coke oven by-product gas)	0.14
		Secondary iron production	Electric furnace	0.51
	Oil refining facilities			0.11
	Oil and gas production facilities			0.000050
	Combustion of oil and other fuels	Oil-fired power plants		0.0026
		LNG-fired power plants		0.0012
		Oil-fired industrial boilers		0.0019
		Gas-fired industrial boilers		0.00077
	Facilities that use mercury or mercury compounds in production processes[3]			N.O.
	Waste treatment facilities for wastes containing mercury[4]	Facilities that do not have a heating process [among the above, fluorescent lamp collection and crushing facilities]		< 0.000047 [0.0000038]
		Facilities that have a heating process during mercury recovery		0.000015
	Manufacturing facilities for mercury-added products	Batteries[5]		N.E.
		Switches and relays		< 0.0000012
		Lamps[6]		0.0036
		Soaps and cosmetics[7]		N.O.
		Pesticides and biocides (agricultural chemicals)[7]		N.O.
		Sphygmomanometers[8]		N.E.
		Thermometers[7]		N.O.
		Dental amalgam[7]		N.O.
		Thimerosal[7]		N.O.
		Vermillion		0.0000046
	Others[9]	Lime products		0.045
		Pulp and paper manufacturing (black liquor)		0.041
		Carbon black manufacturing		0.092
		Cremation		0.073
		Transportation[10]		0.059
		Biomass-fired power and heat production facilities		0.016
		Ferroalloy manufacturing facilities		0.21
Natural sources	Volcanoes			> 1.4
Total (figure in parentheses excludes natural sources)				18.6 (17.3)

Note 1: Data from FY 2018 (April 2018 to March 2019) is used for information on the activity levels.

Note 2: Emissions for each source are indicated with two significant figures, and the total is indicated to the first decimal.

1. "N.E." stands for "Not Estimated" (existence of the emission source is unknown, or emission sources exist but no estimation has been done). "N.O." stands for "Not Occurring" (emission sources do not exist, or there is a source but no mercury is emitted to the atmosphere due to the manufacturing process or structure of the facility).
2. Some facilities not falling under the category of waste incineration facilities under the Waste Management and Public Cleansing Act are also categorized as waste incineration facilities in the inventory.
3. Mercury is not used in any of the following facilities in Japan (confirmed in FY2012).
   Chlor-alkali production facility, vinyl chloride monomer production facility, polyurethane production facility, sodium methylate production facility, acetaldehyde production facility, vinyl acetate production facility
4. Except for those facilities subject to Annex D of the Convention.
5. In Japan, mercury is only used for the production of button batteries. It has been reported that equipment used in the production process does not lead to the emission of mercury to the atmosphere. However, it has been treated as N.E., as the detailed process flow is not available.
6. "Lamps" include fluorescent lamps for general use, cold cathode fluorescent lamps and high-intensity discharge lamps.
7. It has been confirmed in the following years that there are no sources of emission for the manufacture of: soaps and cosmetics, pesticides and biocides (FY2012); mercury thermometers, mercury amalgam for dental use (FY2013); and thimerosal (FY2016).
8. It was confirmed to be difficult in FY2016 to measure the mercury concentration from the outlet due to the structure of the facility, and therefore impossible to estimate the emissions.
9. Sources that had not been addressed in the past inter-governmental negotiation but are likely to emit mercury into the atmosphere
10. Fuel consumption of gasoline and diesel (for business use)