

(2) Status of Solid Radioactive Waste Management

1) Commercial Nuclear Power Reactor Facilities

The amount of solid low-level radioactive waste generated at commercial nuclear power reactor facilities in FY2003 was equivalent to 55,100 200-liter drums. The amount of cumulative stored waste decreased by 1,180 drums, mainly due to the amount of waste transported to the Low-Level Radioactive Waste Burial Center and the volume-reducing effects of measures such as incineration. Accordingly, at the end of FY2003, the amount of waste in solid waste storage at commercial power reactor facilities is roughly equivalent to 527,700 200-liter drums, which is 62.4% of the total storage capacity of approximately 845,600 200-liter drums.

A steam generator is a storage facility exclusively for the radioactive solid waste generated by the replacement process of steam generators and the upper lids of the reactor in the pressurized water reactor (PWR) power plants. No replacement work for steam generators or upper lids of reactor vessels was performed during FY2003, and accordingly no solid waste related to these processes was generated.

Used control rods, channel boxes, used resin and a part of waste generated by the replacement of the shroud are stored in the spent fuel pool, storage banker, tank, etc.

In a solid storage facility, radioactive solid waste is packed in drums and stored.

The amount of radioactive solid waste in drums is expressed as the equivalent number of 200-liter drums. Other types of radioactive solid waste are oversized equipment, etc., which do not fit in drum cans. The amount generated and amount of accumulated storage of waste of this kind is indicated by the equivalent number of 200-litre drums.

The amount of waste reduced in the power plants is the sum of the amount of waste reduced by the incineration of combustible waste, compression to pack into drums, etc. The amount of waste reduced outside the power plants is the amount of waste transported to the low-level radioactive waste burial centers.

The amount of radioactive solid waste stored in steam generator storage facilities is shown by the number of stored steam generators and the volume of the storage containers.

2) Nuclear Power Reactor Facilities in a Research and Development Stage

The amount of low-level radioactive solid waste generated at the Fugen Power Station in FY2003 was equivalent to roughly 400 200-liter drums. The amount of cumulative storage was increased by only 300 drums due to volume-reducing efforts such as incineration. Accordingly, the amount in storage at the end of FY2003 was equivalent to roughly 19,006 200-litre drums compared to the approximate 21,500-drum capacity of the storage facility. Ion-exchange resins and filter sludge are stored in tanks, while spent control rods and neutron detectors are stored in spent fuel pools.

The amount of low-level radioactive solid waste generated at the Monju facility in FY2003 was equivalent to roughly 200 200-liter drums. Accordingly, the amount in storage at the end of FY2003 was equivalent to roughly 2,476 200-litre drums compared with the approximate 23,000-drum capacity of the storage facility.

3) Nuclear Fuel Fabrication facilities

In FY2003, the amount of low-level radioactive solid waste generated at a total of six fabrication facilities, which are operated by five companies, was equivalent to roughly 3,100 200-liter drums. The amount of cumulative storage was increased by only 570 drums due to volume-reducing efforts such as incineration. Accordingly, the amount of low-level radioactive solid waste stored at the end of FY2003 was equivalent to roughly 37,000 200-litre drums compared with the approximate 51,360-drum total capacity of the storage facilities.

4) Reprocessing Facilities

The amount of low level radioactive solid waste generated at JNC Tokai Works (reprocessing facility) in FY2003 was equivalent to roughly 900 200-liter drums. The amount of cumulative storage was slightly decreased due to volume-reducing efforts such as incineration. Accordingly, the amount of low-level radioactive solid waste stored at the end of FY2003 was equivalent to roughly 74,300 200-litre drums compared with the approximate 92,140-drum capacity of the storage facility. The amount of high-level radioactive solid waste generated was equivalent to 147 200-litre drums, and no vitrified waste (120-litre containers) was generated. Accordingly, the amount of high-level radioactive solid waste stored at the end of FY2003 was equivalent to roughly 5,900 200-litre drums compared with the approximate 10,320-drum capacity of the storage facility. The amount of vitrified waste (120-litre containers) stored is 130 compared to the 420-capacity of the storage facility.

The amount of low-level radioactive solid waste generated at the reprocessing plant (reprocessing facilities) of the JNFL in FY2003 was equivalent to roughly 3,900 200-liter drums. Accordingly, the amount of low-level radioactive solid waste stored at the end of FY2003 was equivalent to roughly 7,200 200-litre drums compared to the approximate 11,350-drum capacity of the storage facility. High-level radioactive solid waste and vitrified waste have not been generated at the JNFL Reprocessing Center.

5) Radioactive Waste Burial and Waste Management Facilities

At the end of FY2003, in the enrichment and burial plant of JNFL, solidified waste equivalent to roughly 136,000 drums is buried at the No.1 waste burial facility (capacity: approx. 200,000 200-liter drums); injected grout equivalent to roughly 26,000 drums is buried at the No. 2 waste burial facility (capacity: approx. 200,000 200-liter drums). No low-level radioactive solid waste was generated in association with burial activities.

Roughly 1,670 tons of solid waste generated by the dismantling work of JPDR is already buried at the Tokai Research Plant (waste burial facility) of the Japan Atomic Energy Research Institute (JAERI). No low-level radioactive solid waste was generated in association with burial activities.

The amount of low level radioactive solid waste generated in association with management activities at the waste management facility of the JNFL Reprocessing Plant in FY2003 was equivalent to roughly 50 200-liter drums.

Accordingly, the amount of low-level radioactive solid waste stored at the end of FY2003 was equivalent to roughly 500 200-litre drums compared with the approximate 1,200-drum capacity of the storage facility. At the end of FY2003, roughly 900 containers of high-level radioactive solid waste (returned vitrified waste) was received and managed in the management storage facility which has a capacity of roughly 1,440 containers.

At the end of FY2003, low-level radioactive waste equivalent to roughly 26,000 200-liter drums, which includes approximately 500 drums of low-level radioactive solid waste generated in association with the activities of the research institute, is managed at the waste management facility of the JAERI Oarai Research Establishment, which has a capacity equivalent to 42,800 drums.

The status of solid waste management every fiscal year since FY1994 is shown in reference document 5; the amount of waste by fiscal year transported to the low-level radioactive waste burial center is shown in reference document 6. Trends in the burial amount of radioactive waste at the waste burial facilities of the JNFL Enrichment and Burial plant is shown in reference document 7. The management status of high-level radioactive

waste (returned vitrified waste) by fiscal year at the management facility of the JNFL Reprocessing Plant is shown in reference document 8.