

(2) Status of Solid-Waste Management

The status of radioactive solid waste management in FY2001 was as below, and no nuclear facility stored an amount of radioactive solid waste that exceeded its own total storage capacity.

1) Commercial Nuclear Power Reactor Facilities

The amount of low-level radioactive solid waste generated at commercial nuclear power reactor facilities in FY2001 was equivalent to approximately 48,400 200-liter drums. Due to the amount of waste transported to the Low-Level Radioactive Waste Disposal Center and the volume-reducing effects of measures such as incineration, etc., the amount of cumulative stored waste increased by approximately 9,700 drums. As a result, at the end of FY2001 the amount of waste in solid waste storage at commercial nuclear power reactor facilities was equivalent to approximately 529,600 200-liter drums, representing 62.6% of the total storage capacity of approximately 845,600 drums.

A steam-generator storage facility is intended exclusively for the radioactive solid waste generated through processes including the replacement of steam generators and reactor vessel heads in pressurized water reactor (PWR) power plants. In FY2001 a total of four steam generators and 665 m³ of storage containers were generated as a result of the replacement of steam generators and reactor vessel heads at three power plants.

Spent control rods, channel boxes, spent resin, a portion of the waste generated by replacement of the shroud, etc., are stored in a spent-fuel pool, storage bunker, tank, etc.

In a solid-waste storage facility, radioactive solid waste is packed in drums, etc., 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 large-size equipment, etc., that do not fit in drums. The amount generated and amount of accumulated storage of this kind are indicated by the estimated equivalent number of 200-litre drums.

The “reduction within plant” amount is the sum of the amount of incinerated waste and the amount of volume reduction due to compression, while the “reduction outside plant” amount is the amount of waste transported to the Low-Level Radioactive Waste Disposal Center.

The amount of radioactive solid waste stored in steam-generator storage facilities is indicated by the number of steam generators removed and stored, as well as the volume of the storage containers.

2) Nuclear Power Reactor Facilities in the Research-and-Development Stage

The amount of low-level radioactive solid waste generated at the Fugen Nuclear Power Plant in FY2001 was equivalent to approximately 600 200-liter drums. Due to the volume-reducing effects of measures such as incineration, etc., the amount of cumulative storage increased by approximately 300 drums. As a result, the amount in storage at the end of FY2001 was equivalent to approximately 18,400 200-liter drums, compared to the 21,500-drum capacity of the storage facility. On the other hand, ion-exchange resin and filter sludge are stored in the tank, etc., and spent rods and neutron detectors, in the spent-fuel pool.

The amount of low-level radioactive solid waste generated at the Monju facility in FY2001 was equivalent to approximately 200 200-liter drums. As a result, the amount in storage at the end of FY2001 was equivalent to approximately 2,000 200-liter drums, compared to the 23,000-drum capacity of the storage facility.

3) Nuclear Fuel Fabrication Facilities

In FY2001 the amount of low-level radioactive solid waste generated at a total of six fabrication facilities (operated by five companies) was equivalent to approximately 2,700

200-liter drums. Due to the volume-reducing effects of measures such as incineration, etc., the amount of cumulative storage increased by approximately 900 drums.

As a result, the amount of low-level radioactive solid waste stored at the end of FY2001 was equivalent to approximately 36,200 200-liter drums, compared to the approximately 49,260-drum total capacity of the storage facilities.

4) Reprocessing Facilities

The amount of radioactive solid waste generated at the Tokai Works (reprocessing facility) of the Japan Nuclear Cycle Development Institute in FY2001 was equivalent to approximately 1,100 200-liter drums of low-level radioactive solid waste and 116 drums of high-level radioactive solid waste, in addition to 30 containers (120-liter containers) of vitrified waste. As a result, the amount of low-level radioactive solid waste stored at the end of FY2001 was equivalent to approximately 74,300 200-liter drums, compared to the approximately 92,140-drum capacity of the storage facility. The amount of high-level radioactive solid waste was equivalent to approximately 5,600 drums, compared to the approximately 10,300-drum capacity of the storage facility. The amount of vitrified waste (120-liter containers) was 127 containers, compared to the 420-container capacity of the storage facility.

The amount of low-level radioactive solid waste generated at the Reprocessing Plant (reprocessing facilities) of Japan Nuclear Fuel Ltd. in FY2001 was equivalent to approximately 700 200-liter drums. As a result, the amount of low-level radioactive solid waste stored at the end of FY2001 was equivalent to approximately 1,500 200-liter drums, compared to the approximately 11,350-drum capacity of the storage facility. On the other hand, high-level radioactive solid waste and vitrified waste have yet to be generated at the plant concerned.

5) Waste-Burial Facilities and Waste-Management Facilities

At the end of FY2001, in the Enrichment and Waste Burial Plant (waste-burial facility) of Japan Nuclear Fuel Ltd., approximately 134,000 drums of solidified waste were buried at the No. 1 waste-burial facility (capacity, approximately 200,000 200-liter drums) and approximately 7,900 drums of injected grout were buried at the No. 2 waste-burial facility (capacity, approximately 200,000 200-liter drums). No low-level radioactive solid waste was generated in association with the burial activities concerned.

Approximately 1,670 tons of solid waste associated with the dismantling of JPDR is already buried in the Tokai Research Establishment (waste-burial facility) of the Japan Atomic Energy Research Institute. No low-level radioactive solid waste was generated in association with the burial activities concerned.

The Reprocessing Plant (waste management facility) of Japan Nuclear Fuel Ltd. has, by the end of FY2001, received and managed 616 containers of vitrified waste, compared to the 1,440-container capacity of the management facility for high-level radioactive solid waste (vitrified waste). The amount of low-level radioactive solid waste generated in association with the management activities concerned was equivalent to approximately 40 200-liter drums. As a result, the amount of low-level radioactive solid waste stored at the end of FY2001 was equivalent to approximately 400 200-liter drums, compared to the approximately 1,200-drum capacity of the storage facility.

By the end of FY2001, the Oarai Research Establishment of the Japan Atomic Energy Research Institute (waste-management facility) has managed low-level radioactive solid waste equivalent to approximately 25,300 200-liter drums (including approximately 400 drums of low-level radioactive solid waste generated in association with the activities concerned), compared to the 35,870-drum capacity of the management facility.

The status of solid-waste management in each fiscal year since FY1992 is shown in Reference Document 5, and the amount of waste by fiscal year transported to the Low-Level Radioactive Waste Disposal Center is shown in Reference Document 6.