

## (2) Status of Solid-Waste Management

### 1) Commercial Nuclear Power Reactor Facilities

The amount of low-level radioactive solid waste generated at commercial nuclear power reactor facilities in FY2002 was equivalent to approximately 42,700 200-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 decreased by approximately 700 drums. As a result, at the end of FY2002 the amount of waste in solid-waste storage at commercial nuclear power reactor facilities was equivalent to approximately 528,800 200-liter drums, representing 62.5% 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 FY2002 no replacement of steam generators or reactor vessel heads was made; therefore, no radioactive solid waste was generated.

Spent control rods, channel boxes, spent resin, a portion of the waste generated through the replacement of the shroud, etc., are stored in the 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-liter drums.

The “reduction within plant” amount is the sum of the amount of incinerated combustible waste and the amount of volume reduction through the compressed packaging of waste into drums, etc., 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 FY2002 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 only about 300 drums. As a result, the amount in storage at the end of FY2002 was equivalent to approximately 18,700 200-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 are stored in the spent-fuel pool.

The amount of low-level radioactive solid waste generated at the Monju facility in FY2002 was equivalent to approximately 200 200-liter drums. As a result, the amount in storage at the end of FY2002 was equivalent to approximately 2,300 200-liter drums, compared to the 23,000-drum capacity of the storage facility.

### 3) Nuclear Fuel Fabrication Facilities

In FY2002 the amount of low-level radioactive solid waste generated at a total of six fabrication facilities (operated by five companies) was equivalent to approximately 2,400 200-liter drums. Due to the volume-reducing effects of measures such as incineration, etc., the amount of cumulative storage increased by only about 300 drums. As a result, the amount of low-level radioactive solid waste stored at the end of FY2002 was equivalent to

approximately 36,500 200-liter drums, compared to the approximately 51,560-drum capacity of the total storage facilities.

#### 4) Reprocessing Facilities

The amount of low-level radioactive solid waste generated at the Tokai Works (reprocessing facility) of the Japan Nuclear Cycle Development Institute in FY2002 was equivalent to approximately 900 200-liter drums. On the other hand, the amount of its cumulative storage decreased slightly due to the volume-reducing effects of measures such as incineration, etc. As a result, the amount of low-level radioactive solid waste stored at the end of FY2002 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 generated was equivalent to 154 200-liter drums, and the amount of generated vitrified waste was three containers (120-liter containers). As a result, in FY2002 the amount of stored high-level radioactive solid waste was equivalent to approximately 5,800 drums, compared to the approximately 10,300-drum capacity of the storage facility, and the amount of stored vitrified waste (120-liter containers) was 180 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 the Japan Nuclear Fuel Ltd. in FY2002 was equivalent to approximately 1800 200-liter drums. As a result, the amount of low-level radioactive solid waste stored at the end of FY2002 was equivalent to approximately 3,300 200-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 FY2002, in the Enrichment and Waste Burial Plant (waste-burial facility) of Japan Nuclear Fuel Ltd., approximately 135,000 drums of solidified waste were buried at the No. 1 waste burial facility (capacity, approximately 200,000 200-liter drums) and approximately 16,000 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 amount of low-level radioactive solid waste generated in FY2002 at the Reprocessing Plant (waste-management facility) of Japan Nuclear Fuel Ltd. in association with the management activities concerned was equivalent to approximately 100 200-liter drums. As a result, the amount of low-level radioactive solid waste stored at the end of FY2002 was equivalent to approximately 500 200-liter drums, compared to the approximately 1,200-drum capacity of the storage facility. For high-level radioactive solid waste (returned vitrified waste), by the end of FY2002 the plant had received and managed approximately 600 containers of vitrified waste, compared to the 1,440-container capacity of the management facility for high-level radioactive solid waste.

By the end of FY2002 the Oarai Research Establishment of the Japan Atomic Energy Research Institute (waste-management facility) had managed low-level radioactive solid waste equivalent to approximately 25,900 200-liter drums (including approximately 400 drums of low-level radioactive solid waste generated in association with the activities concerned), compared to the 42,800-drum capacity of the management facility.

The status of solid-waste management for each fiscal year since FY1993 is shown in Reference Document 5. The amount of waste by fiscal year transported to the Low-Level Radioactive Waste Disposal Center is shown in Reference Document 6. Trends in the burial amount of radioactive waste at the Enrichment and Waste Burial Plant (waste-burial facility) of Japan Nuclear Fuel Ltd. are shown in Reference Document 7. The management status of high-level radioactive waste (returned vitrified waste) by fiscal year at the Reprocessing Plant (waste-management facility) of Japan Nuclear Fuel Ltd. is shown in Reference Document 8.