

## VII-1 Status of Radioactive Waste Management at Commercial Reactor Facilities

(1) For the release of radioactive gaseous and liquid waste, licensees for the construction of commercial light-water nuclear power reactor facilities are obliged to determine emission control target levels to achieve the target dose level in accordance with the "Guide for Dose Objectives around Light-Water Nuclear Power Reactor Facilities," and to make efforts not to exceed such target levels. Moreover, radioactive solid waste is required to be encapsulated in drums, etc., and stored at the prescribed solid-waste storage facility, etc. In addition, spent control rods, etc. are stored in the spent fuel pool, storage banker, etc.

(2) This document has been compiled from the FY1997 "Report on Radiation Management, Etc.," as submitted by licensees for the construction of commercial reactor facilities in accordance with the Law for the Regulations of Nuclear Source Material, Nuclear Fuel Material and Reactors (hereinafter referred to as the "Nuclear Reactor Regulation Law") and the "Report on Dose Equivalent, Etc., of Radiation Workers," etc., in accordance with an administrative notification.

According to these reports, the released amount of radioactive gaseous and liquid waste was lower than the target emission levels at all nuclear plants.

The annual release records of radioactive gaseous and liquid waste and the status of radioactive solid waste management at commercial reactor facilities since FY1988 are provided in the appendix for reference purposes.

(3) In compiling the status of radioactive waste management of the plants that possess commercial reactor facilities, the annual release records and the annual emission control levels of radioactive gaseous waste and radioactive liquid waste have been demonstrated for each reactor facility.

Additionally, the amount of the radioactive solid waste brought out to the Low-Level Radioactive Waste Disposal Center (Japan Nuclear Fuel Ltd.) in Rokkasho-mura, Aomori Prefecture, has been demonstrated, as has the amount annually generated and brought into solid waste storage and amount of its accumulated storage.

(4) The following are the explanations of the items, etc., given in the tables to indicate the operational situation of commercial reactor facilities and the status of radioactive waste management:

1) Capacity Factor

$$\text{Capacity Factor (\%)} = \frac{\text{Electric energy generated}}{\text{Licensed output} \times \text{Calendar time}} \times 100$$

The capacity factor has been given only for the facilities that operated during the year concerned.

2) The radioactivity values of radioactive gaseous and liquid waste have been obtained from the total  $\beta$ -radioactivity counting method, the total  $\gamma$ -radioactivity counting method, the liquid scintillation method and the  $\gamma$ -spectrometry method, etc.

3) The number of the drums of radioactive solid waste 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.

4) Regarding the radioactive solid waste generated through the replacement of steam generators and reactor vessel heads, which was carried out at pressurized water-cooled nuclear power stations, the number of steam generators replaced and stored and the capacity of radioactive solid waste containers are given.

- 5) The N.D. in the tables indicates a value below the limit of detection at any time of measurement.