

VI-1 Status of Radioactive Waste Management

(1) The management of radioactive waste requires that licensees for the construction of nuclear reactors take the necessary measures on waste disposal, etc., 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). Moreover, regarding the release of radioactive gaseous and liquid waste from commercial light-water nuclear power reactor facilities, the “Guide for Dose Objectives around Light-Water Nuclear Power Reactor Facilities” prescribes the target dose level intended to ensure the minimum exposure of the public living in the vicinity.

(2) For the release of radioactive gaseous and liquid waste, licensees for the construction of commercial nuclear power reactor facilities not exclusive to light-water reactors are obliged to determine the emission control target levels so as to achieve the target dose level prescribed in the aforementioned guide, and to make efforts so that these target levels are not exceeded.

Moreover, radioactive solid waste is required to be packed in drums, etc., and stored at the prescribed solid-waste storage facility, etc.

This document has been compiled from the FY1980 “Report on Radiation Management, Etc.,” as submitted by licensees for the construction of commercial reactor facilities in accordance with the Nuclear Reactor Regulation Law, and the “Report on Exposure Dose, Etc., of Radiation Workers,” etc., in accordance with an administrative notification.

(3) In compiling the status of radioactive waste management, the annual release records and the annual emission control levels of radioactive gaseous waste and radioactive liquid waste for all reactor facilities have been demonstrated, as have the amount of radioactive solid waste annually generated and brought into solid-waste storage and the amount of accumulated storage.

Additionally, the annual release records at commercial reactor facilities since FY1971 have been provided in the appendix for reference purposes.

The following are the explanations of the items, etc., given in the tables that indicate the status of each plant:

- 1) The values of radioactive noble gases in radioactive gaseous waste and radioactive materials (excluding tritium) in radioactive liquid waste have been obtained through the total β -radioactivity counting method, the total γ -radioactivity counting method and the γ -spectrometry method, etc.
- 2) The values of radioactive iodine (^{131}I) in radioactive gaseous waste have been obtained through the γ -spectrometry method.
- 3) The values of tritium in radioactive liquid waste have been obtained through the liquid scintillation method.
- 4) The number of 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 the amount of accumulated storage of this kind are indicated by the estimated equivalent number of 200-liter drums.
- 5) The N.D. in the tables indicates a value below the limit of detection.

(4) According to these reports, the released amount of radioactive gaseous and liquid waste were lower than the target emission levels at all plants.

The status of radioactive waste release in FY1980 indicates an increase in radioactive gaseous waste at some power plants (i.e., an increase in association with the shutdown of the Tokai Daini Power Station and an increase in association with the resumption of the operation of the Mihama Power Station Unit 1). However, the released amounts were sufficiently lower than the emission-control target levels and largely remained at the same level or showed the tendency for a gradual decrease at all nuclear plants, compared to the preceding fiscal year.

Furthermore, annual transitions showed no tendency toward a conspicuous increase in the release of radioactive waste, presumably due to the effects of the measures taken for equipment such as the switch to new types of fuel, the installation of hold-up devices for noble gases and the improvement of liquid-waste processing facilities.