

### XVI-3-3 Report on Environmental Radiation Management in the Third Quarter

We received the report on environmental radiation management involved in reprocessing facilities in the third quarter of FY2007, and we hereby release it according to the prescription in Section 2 of Article 72-3 of the “Law for the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors.”

- At the reprocessing plant of Japan Atomic Energy Agency, Tokai Research and Development Center, Nuclear Fuel Cycle Engineering Laboratories, concentration by kind of radioactive material or density of radioactive material on the surface involved in seawater, sea-bottom soil, marine organisms, fishing equipment, and other objects specified in the Safety Regulations in the sea area around the sea discharge outlet in the third quarter of FY2007 (from October to December 2007) is shown in Appendix 1. Although the air dose rate was over the maximum value in the past three years, it is within in the mean value  $\pm 3\sigma$ . As for other items, there were no measured values over normal fluctuation ranges around the plant excluding the areas for comparison.
  
- At the reprocessing plant of Japan Nuclear Fuel Limited, Reprocessing Plant, concentration by kind of radioactive material or density of radioactive material on the surface involved in seawater, sea-bottom soil, marine organisms, fishing equipment, and other objects specified in the Safety Regulations in the sea area around the sea discharge outlet in the third quarter of FY2007 (from October to December 2007) is shown in Appendix 2. Although 2 kBq/m<sup>3</sup> (mean value for one hour: twice), 3 kBq/m<sup>3</sup> (mean value for one hour: twice), and 4 kBq/m<sup>3</sup> (mean value for one hour: once) of gaseous beta radioactivity concentration in air (Kr-85) due to the influence of the reprocessing plant were measured for comparison with the normal fluctuation range (ND: minimum determination limit to lower than [2 kBq/m<sup>3</sup>]), the values were quite low compared with the concentration limit specified in the notification. The release of Kr-85 in this quarter in gaseous radioactive waste released from the reprocessing plant is quite low compared with the target annual release control value of the same nuclei specified in the Safety Regulations. It was verified, therefore, that there was no problem. 0.46 Bq/Kg dry of Am-241 concentration in lake-bottom soil was measured for comparison with the normal fluctuation range (0.34 to 0.42 Bq/kg dry). This is considered to be due to natural fluctuation since no alpha ray nuclei were detected in radioactive waste released from the reprocessing plant. 0.25 to 0.26 Bq/g of C-14 concentration in milled rice was measured for comparison with the normal fluctuation range (0.23 to 0.25 Bq/g carbon); the release in the growing period of rice is quite low compared with the target annual release control value of the same nuclei specified in the Safety Regulations. It was verified, therefore, that there was no problem. 0.26 Bq/g carbon of C-14 concentration in milled rice was measured in FY1995. (\*) As for other items, there were no measured values over normal fluctuation ranges around the plant.

(\*) Measured according to the “Environmental radiation monitoring plan around Rokkasho Reprocessing Facility” (decided at Nuclear Safety Commission on January 30, 1995).