

## V-2 Status of Occupational Radiation Exposure Management

- (1) Licensees for the construction of reactors, etc., are obligated to control the exposure levels of personnel engaged in radiation work so as not to exceed the exposure limit prescribed by the Nuclear Reactor Regulation Law.

This document has been compiled from the FY1982 and FY1983 "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.

The annual exposure records of personnel engaged in commercial reactor facilities since FY1974 are provided in the appendix for reference purposes.

- (2) The following are notes for the tables:

- 1) The "total" number of personnel engaged in radiation work is the sum of all the numbers recorded at each nuclear facility. Therefore, workers who have worked at more than one facility are counted more than once.
- 2) The "total exposure dose" values for "employees" and "others" have been rounded to the nearest whole number. For certain data the sum of "employees" and "others" does not correspond to the "total," which is an error due to the above-described calculation method.
- 3) The "average dose" values were rounded to two decimal places.
- 4) Reactors have been included in the "unit number of reactors" only after reaching the first critical state.
- 5) The number of personnel engaged in radiation work and exposure doses have been collected since the institution of control zones.
- 6) The exposure dose of personnel who have worked at both the Tokai Power Station and the Tokai Daini Power Station of the Japan Atomic Power Company Co., Ltd. has been calculated by dividing the value indicated on the film badge into proportions based on the dosimeter of the thermo-luminescence dosimeters at the two plants.

- (3) According to these reports, the records of occupational exposure at commercial reactor facilities in FY1982 and FY1983 were lower than the exposure limit (3 rems per 3 months) prescribed by a notification based on the Nuclear Reactor Regulation Law at all nuclear plants.

The comparison between exposure records in FY1982 and FY1983 and periods of periodical inspections of the plants, etc., is shown in Table V-1, which indicates that most of the radiation exposure took place in association with out-of-service work such as periodical inspections, etc.

Among the works carried out during periodical inspections, the major ones with relatively high records of radiation exposure are the work associated with in-service inspections (ISIs); work associated with control rod drive mechanism, pump and valve inspection work, etc., for boiling-water reactor (BWR) facilities; and inspection and maintenance works associated with steam generators, reactor vessel-related work, pump and valve inspection work, etc., for pressurized-water reactor (PWR) facilities.

The annual total exposure doses since FY1974 are shown according to the types of reactors in Table V-2, which indicates a decrease in total exposure dose and average exposure dose in FY1982 and FY1983 relative to the preceding fiscal year.

- (4) Regarding occupational radiation exposure, the Occupational Exposure Central Registration Center of the Radiation Effects Association has registered and managed the data of occupational exposure doses, etc., in a centralized manner since November 1977, and has promoted the Radiation Work Passport System, thereby advancing the management of occupational radiation exposure.

As of the end of March 1984 there was the enrollment of 174,560 people with the issuance of 128,157 copies of the *Radiation Work Passport*.