

V-2 Status of Occupational Radiation Exposure Management

- (1) Licensees for the construction of commercial reactor facilities 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 FY1986 "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.

According to these reports, the records of occupational radiation exposure at commercial reactor facilities in FY1986 were lower than the limit at all nuclear plants.

The annual exposure records of personnel engaged in commercial reactor facilities since FY1977 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 into proportions based on the dosimeter of the thermo luminescence dosimeters at these two plants.
- 7) The number of personnel engaged in radiation work in the table on the "total of BWRs" and the table on the "total of PWRs" includes those who worked at both Unit 1 and Unit 2 of the Tsuruga Power Station of the Japan Atomic Power Co., Ltd., and are therefore counted twice.

- (3) According to these data, the records of occupational exposure at commercial reactor facilities in FY1986 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 FY1986 and periods of periodic inspections of the plants, etc., is shown in Table V-1, which indicates that most of radiation exposure took place in association with out-of-service works such as periodic inspections, etc. Among the works carried out during periodic 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 works, etc., for boiling-water reactor (BWR) facilities; and inspection and maintenance works associated with steam generators, reactor vessel-related work, pump and valve inspection works, etc.; for pressurized-water reactor (PWR) facilities.

The total exposure dose and average exposure dose decreased in FY1986 relative to the preceding fiscal year, and both demonstrated the tendency to decrease each 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 1987 there was the enrollment of 211,114 people with the issuance of 165,178 copies of the *Radiation Work Passport*.