## 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 FY1981 "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 FY1972 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 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 exposure dose of personnel who have worked at both the Tokai Power Station and the Tokai Daini Power Station of the Japan Atomic Power Co., Ltd. has been calculated at these two plants through the process of double counting.

(3) According to these reports, the records of occupational exposure at commercial reactor facilities in FY1981 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, except for one case of skin radiation exposure at the Tokai Power Station of the Japan Atomic Power Co., Ltd.

The comparison between exposure records in FY1981 and periods of periodical inspections of the plants, etc., is shown in Table 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 countermeasures against stress-corrosion cracks (SCCs); work associated with inservice 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 work associated with steam generators, pumps, piping and valve inspection work, etc., for pressurized water reactor (PWR) facilities. However, the works associated with countermeasures against SCCs at BWRs are expected to decrease hereafter, since the majority of such work is nearly complete.

The annual collective doses from FY1972 to FY1981 are shown according to the types of reactors in Table 2, which indicates the same level or a slight decrease for each type in FY1981 compared 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 1982 there was the enrollment of 143,290 people with the issuance of 94,510 copies of the *Radiation Work Passport*.