

VII-2 Status of Occupational Exposure Dose Equivalent Management at Commercial Reactor Facilities

- Licensees for the construction of reactors are obligated to control the dose equivalent levels of personnel engaged in radiation work not to exceed the dose equivalent limit prescribed by the Nuclear Reactor Regulation Law.

The occupational exposure dose equivalent at commercial reactor facilities in FY1999 was lower than the limit at all nuclear plants.

Individual dose equivalent limits of personnel engaged in radiation work is 50 mSv per year, with an additional 13 mSv per three months for the abdominal region of female personnel (except for those diagnosed as infertile or during pregnancy).

- Each licensee for the construction of commercial reactor facilities implements occupational exposure dose equivalent management for each facility. However, in cases where personnel engaged in radiation work have shifted between more than one nuclear facility it was difficult to completely know their exposure histories. Therefore, it became necessary to establish a system that could carry out nationwide occupational exposure management for individuals in a centralized manner.

Given such circumstances, the Occupational Exposure Central Registration Center was established at the Radiation Effects Association in November 1977, and has since registered and managed the occupational exposure doses and stored its records in a centralized manner.

Licensees for the construction of reactors check to confirm that personnel engaged in radiation work are registered at the Central Registration Center and look into their previous exposure histories, etc., at other nuclear facilities, thereby ensuring that correct radiation control is implemented.

- The dose equivalent distribution in FY1999 is shown in (1), the quarterly dose equivalent distribution is shown in (2) and the three-month dose equivalent distribution for female workers (except those diagnosed as infertile) in (3).

The annual dose equivalents of personnel engaged in commercial reactor facilities since FY1989 are provided in a reference document.

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 dose equivalent” values for “employees” and “others” were rounded to two decimal number. For some data, the sum of “employees” and “others” does not correspond with the “total,” which is an error arising from the calculation method described above.
- 3) The “average dose equivalent” values were rounded to one decimal place.
- 4) The “maximum exposure dose equivalent” is based on records at the power plant concerned.
- 5) The number of personnel engaged in radiation work and dose equivalents have been collected since the institution of control zones.
- 6) The dose equivalent of personnel who worked at both the Tokai Power Station and the Tokai Daini Power Station of the Japan Atomic Power Company Co., Ltd., was calculated by dividing the value that was indicated on the film badge into proportions based on the measurements of the electronic dosimeters at these two plants.