

The results of the survey on the conduct of radiation dose control at the TEPCO Fukushima Daiichi
Nuclear Power Plant
(Overview)

1. Objectives

This survey was conducted, in response to improper radiation dose measurement at the TEPCO Fukushima Daiichi Nuclear Power Plant, to investigate if any similar cases exist, and to survey the conduct of radiation dose control by primary contractors and subcontractors.

2. Survey Results

- (1) No intentional improper cases like the case with the lead plate covering the PAD (personal alarm dosimeter) were identified, however, some unintentional improper cases were found; e.g. dose data that were incorrect, and a case where no PAD was worn when waiting/working in the high dose area in a seismically isolated building.
- (2) Cases requiring improvement in terms of radiation dose control were identified; e.g. PADs with a too high alarm set point; shared use, instead of individual use of PADs; personal cumulative dosimeters (hereinafter referred to as "glass badges") only under self-control; no comparison made between dose readings of PADs and glass badges; and no written notification form for radiation exposure dose.
- (3) The current employment situation was confirmed; e.g. the number of workers is currently sufficient and workers get a job transfer to conventional construction work when their radiation dose has reached the upper limit.

3. Issues and Actions

Based on the survey results, the Ministry of Health, Labour and Welfare provided the following instructions to TEPCO and its primary contractors, with emphasis on preventing recurrence of similar cases.

- (1) Improvement of radiation exposure dose data management method
The radiation exposure dose data management method should be reviewed and measures should be taken to prevent the recurrence of improper measurements, in order to avoid oversight in required data correction and missing data.
- (2) Improvement of PAD measurement management method
The following measures should be taken: promoting personally-allocated use of PADs; facilitating use of protecting clothing with a clear window on the chest (the Tyvek suit), and questioning of workers with unnaturally low dose at the time of returning their PADs.

(3) Improvement of glass badge management

The accuracy of dose measurements should be improved by restricting the wearing of the glass badge to the time during work.

(4) Improvement of handling of dose measurement results

While the measured dose obtained by the glass badge should in principle be recorded, the measured dose by the PAD should be recorded when the PAD reading is a somewhat higher level than the glass badge reading.

(5) Improvement of warning level setting point

A warning level should be set that is close to the daily maximum allowable dose.

(6) Improvement of radiation dose notification method

The dose notification should be given in writing to the workers.

(7) Improvement of measures for workers possibly reaching their dose limits

Rotation of task assignments among low dose work and high dose work should be implemented, and communication should be enhanced between the manager and workers whose radiation dose is approaching the upper limit.