

Cause of Ring Badge and γ/β APD Disuse During Measure Implementation for the Underwater Reservoirs

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Tokyo Electric Power Company

During the work related to contaminated water leakage from the underground reservoirs at Fukushima Daiichi Nuclear Power Station, **some workers were found to have not been wearing ring badge and γ/β APD. The incident was reported to Tomioka Labor Standards Office today (May 10).**

■ **Overview** (Previously announced)

April 8 AM: A TEPCO employee confirmed that 14 cooperative company workers had not been wearing a ring badge.

April 8 PM: TEPCO directed cooperative companies to make sure the workers wear a ring badge and γ/β APD. The workers who did not have a ring badge borrowed one from TEPCO and went back to work.

April 15: As a result of confirming the APD records among workers engaged in work at that time, some workers were found to have not been wearing a γ/β APD during the period from April 6 to 8 (6 out of 14 workers mentioned above).

April 19: Received an instruction card from Tomioka Labor Standards Office.

■ **Cause (Disuse of ring badge)**

- Though safety instructions, etc. must be reviewed to see if they fulfill the requirements given in the specifications, etc. before starting work, the safety instructions for April 6 and 7 were not confirmed by TEPCO since the work plan and protection instruction for these two days had not been created. Thus, the incorrect judgment given by the cooperative company personnel in charge of radiation control that ring badge is not necessary could not be pointed out and corrected.
- The ring badge was judged to be unnecessary considering the low atmosphere dose at the work site and short work hours although the cooperative company personnel in charge of radiation control was aware of the possibility of radiation exposure on distal body parts during water sampling.
- As for the work to turn on the pumps, it was judged by the cooperative company personnel in charge of radiation control that the ring badge is not necessary in accordance with the radiation control specification, preliminary survey results, etc. as the work does not involve direct contact with accumulated water. However, according to the internal regulations, the work requires ring badge as it is considered to be an operation to open the tanks, etc. in the β ray control area where accumulated water is stored. The incorrect judgment is considered to have been made since the contents of the radiation control specification were misleading.

Recurrence Prevention of Ring Badge and γ/β APD Disuse and Radiation Dose Evaluation Results

■ Cause (γ/β APD Disuse)

- Though the site manager (field representative for underground reservoir installation) was aware that γ/β APD is required for the work, he forgot to give workers instruction to wear γ/β APD and check with the personnel in charge of radiation control in the midst of implementing emergency measures.
- Some workers who headed to work site directly from J-Village during emergency work wore a γ APD.
- Though a direction was given from the cooperative company to workers to wear a γ/β APD on April 6, the direction was not announced to everyone. It was judged that it is safer to finish work soon.

■ Recurrence prevention

- The disuse of ring badge and γ/β APD could have been prevented if the workers had been instructed to wear a γ/β APD and a ring badge (if they engage in water sampling) before starting work. Radiation protection measures will be thoroughly reviewed between TEPCO and the company in charge of work in prior to work implementation even in the case of emergency.
- Since the radiation control specification is misleading, the statements in the specification will be revised in accordance with the internal regulations with concrete examples to facilitate understanding.
- The following will be informed and thoroughly implemented at all cooperative companies.
 - (1) The radiation protection measures necessary for certain work tasks must be discussed with TEPCO and a radiation protection plan must be developed, informed and implemented in prior to work even in the case of emergency.
 - (2) Proper implementation of radiation protection measures in accordance with the radiation protection plan must be confirmed at the site during work.

■ Dose evaluation (reevaluation)

| Equivalent dose (skin) | Effective dose |
|---|---|
| April 6, 7 and 8 (per day): 0.02mSv- 0.20mSv | April 6, 7 and 8 (per day): 0.01mSv-0.06mSv |
| Total of April 6, 7 and 8 (AM): 0.02mSv- 0.35mSv | Total of April 6, 7 and 8 (AM): 0.01mSv -0.12mSv |

Before correction: 0.11mSv (pointing to 0.20mSv)

Before correction: 0.17mSv (pointing to 0.35mSv)

Before correction: 0.02mSv (pointing to 0.01mSv)