

<Provisional Translation>

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Industrial Health Division
Department of Industrial safety and health
Labour Standards Bureau

Results of Re-evaluation of Internal Radiation Exposure Dose to Emergency Workers¹ in the TEPCO Fukushima Daiichi Nuclear Power Plant

1. The Ministry of Health, Labour and Welfare (MHLW) has noticed that there was significant discrepancy between internal dose estimates of emergency workers made by TEPCO and those reported by primary contractors, doses which were reported to MHLW in April 2013. MHLW conducted re-evaluation of internal dose assessments from May 2013, and concluded that a part of internal dose assessments should be readjusted. The overview of the re-evaluation is as follows.

Overview of Re-evaluation of Internal Dose Assessments

- 1 Purpose and Principle
 - (1) MHLW made a comparison between internal dose assessments made by TEPCO and those by primary contractors, and investigated the cause of discrepancy; and readjusted internal doses if necessary.
 - (2) In the process of the re-evaluation, MHLW promoted standardization of methodologies of internal dose assessments to avoid underestimates of doses as much as reasonably achievable.
- 2 Readjustment of internal doses of 479 workers (2.5% of 20,000 Emergency Workers)
 - (1) Readjustment of internal doses based on the standardized method
 - a) Based on the standardization of methods of estimation of intake date, intake scenario, and estimation of I-131 exposure, etc. in accordance with TEPCO employed methodologies determined in August 2011.
 - b) Readjusted 450 internal doses
 - Increased doses: 431 workers (Max. 48.9mSv, Ave. 5.0mSv)

¹ Worker who were applied emergency exposure dose limits (100mSv:current, 250mSv: March 14 to December 16, 2011)

- Decreased doses: 19 workers (Min. -9.2mSv, Ave. -2.1mSv)

(2) Correction of miscalculated internal doses

- a) Miscalculations and errors were found such as incorrect-input of coefficients, mix-up of data, transmission of data to wrong a contractor, and forgetting input to database of revised data transmitted from TEPCO, etc.
- b) Corrected 29 internal doses in 7 contractors (Range from -3.5mSv to 18.1mSv)

2. MHLW demanded TEPCO and primary contractors to employ the standardized methodologies for internal dose assessments; and strictly instructed prevention of recurrence of miscalculations and errors of internal doses.

Furthermore, in accordance with the readjusted internal dose, MHLW will carry out the health care of the emergency worker based on a minister's guidelines.

Supplement Data

(1) Increased number of emergency workers who are exposed by 50mSv to 100mSv

- 12 workers in 2 contractors (1.7% increase compared with 723 worker prior to the readjustment)
- Range: 36.2mSv to 3.2mSv (internal dose), average 13.4mSv
- Readjusted effective dose: 65.19mSv to 51.4mSv
- Reason: Change of intake date and intake scenario

(2) Increased number of emergency workers who are exposed by more than 100mSv

- 6 workers (3 in TEPCO and 3 in contractors) (3.6% increase compared with 167 prior to the readjustment)
- Range: 48.91mSv to 7.39mSv (internal dose), average 21.3mSv
- Revised Effective Dose: 148.78mSv to 101.83mSv
- Reason: Change of intake date