

Initiatives for Long-term Healthcare of Emergency Workers at the TEPCO Fukushima Daiichi Nuclear Power Plant

Occupational Safety and Health Department,
Labour Standards Bureau,
Ministry of Health, Labour and Welfare

Exposure Dose Control for Workers at the TEPCO Fukushima Daiichi NPP

Approximately 31,000 workers have worked at the TEPCO Fukushima Daiichi NPP since the accident. **Six** of them were exposed to radiation **exceeding 250mSv**, and **173** were exposed to radiation **exceeding 100mSv**, due to emergency work. As some work even after the completion of Step 2 involves exposure to high doses, strict guidance shall be given continuously for reducing exposure doses.

● Radiation exposure of workers at the TEPCO Fukushima Daiichi NPP

Table 1. Cumulative doses of all workers since the disaster

Range of dose(mSv)	March 2011 to December 2013		
	TEPCO	Contractors	Total
251 and over	6	0	6
201 to 250	1	2	3
151 to 200	24	2	26
101 to 150	118	20	138
76 to 100	255	112	367
51 to 75	323	850	1,173
21 to 50	607	4,197	4,804
11 to 20	544	3,875	4,419
6 to 10	431	3,687	4,118
2 to 5	707	6,835	7,542
1 or less	1,070	7,717	8,787
Total	4,086	27,297	31,383
Maximum (mSv)	678.80	238.42	678.80
Average (mSv)	23.60	10.97	12.61

Over 250mSv
6 workers

Over 100mSv
173 workers

Over 50mSv
None

Table 2. Cumulative doses of workers in FY2013

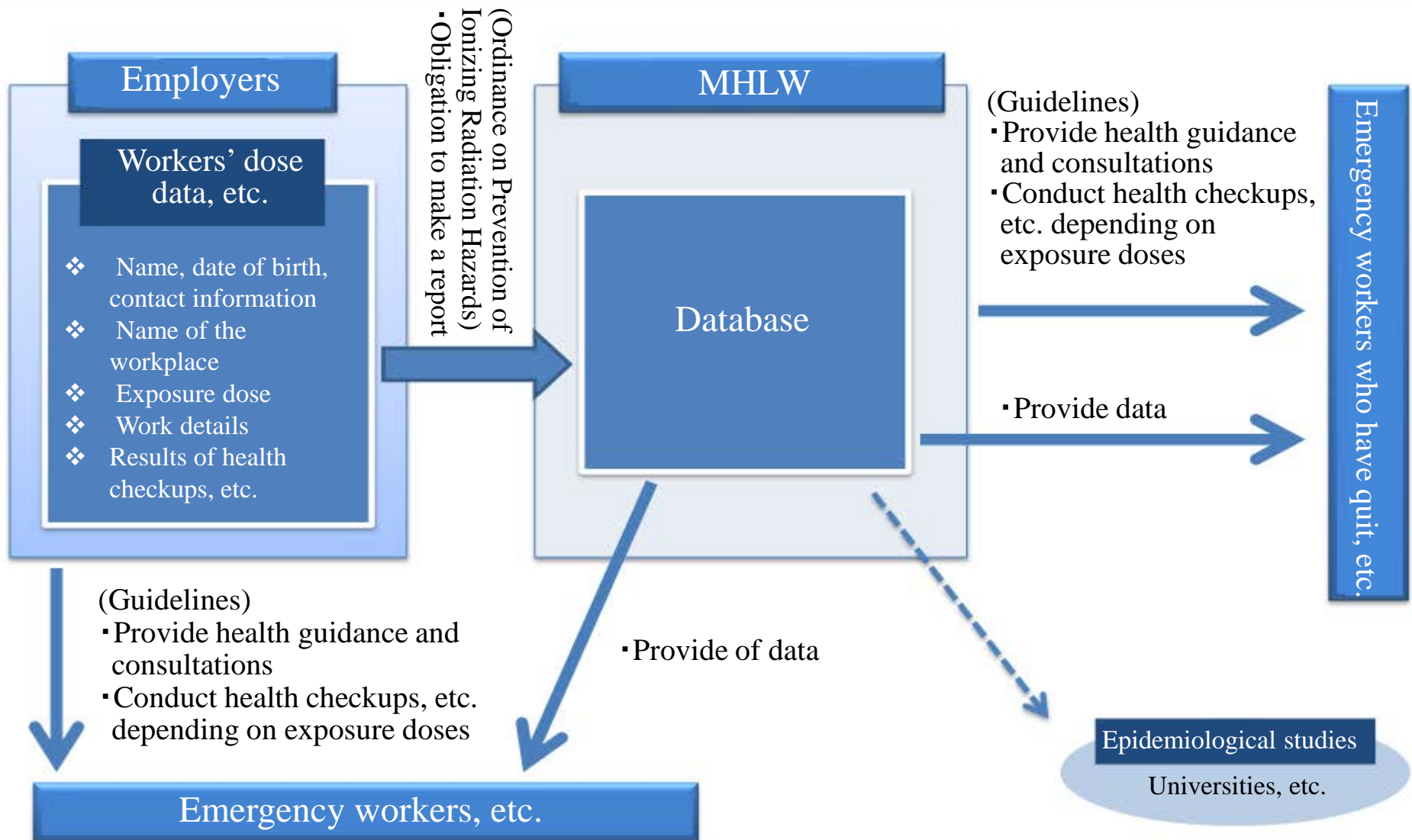
Range of dose (mSv)	April 2013 to December 2013		
	TEPCO	Contractors	Total
101 and over	0	0	0
76 to 100	0	0	0
51 to 75	0	0	0
21 to 50	19	377	396
11 to 20	54	1,370	1,424
6 to 10	157	1,592	1,749
2 to 5	643	3,284	3,927
1 or less	735	4,104	4,839
Total	1,608	10,727	12,335
Maximum (mSv)	34.70	39.70	39.70
Average (mSv)	2.61	4.69	4.42

Note 1 The legally defined dose limit in a normal situation is 50mSv per 1 year and 100mSv per 5 years, or 100mSv in an emergency (for emergency work).

Note 2 On 14 March, 2011, a special ordinance was enforced to raise the emergency exposure limit from 100mSv to 250mSv at the TEPCO Fukushima Daiichi NPP.

Note 3 This special ordinance was abolished upon completion of Step 2 work on 16 December 2011, and the exposure limit in a normal situation (50mSv per 1 year and 100mSv per 5 years) was resumed in principle (the emergency exposure limit (100mSv) continues to apply to workers engaged in such work as the cooling of the reactors, (approx. 500 workers, all of whom are employees of TEPCO)).

Overall View of Long-term Healthcare




Initiatives for Long-term Healthcare of Workers at the TEPCO Fukushima Daiichi Nuclear Power Plant

(i) As the exposure limit was temporarily raised to 250mSv for emergency workers (approx. 20,000 workers), the MHLW will provide them with long-term healthcare based on the guidelines (publicized on 11 October 2011).

1. Development of a database

- Personal identification information (name, affiliation, address, etc.)
- Exposure dose, work details
- Results of health checkups and other information
- Information on health consultations and guidance, etc.
- Other items necessary for healthcare (daily habits, etc.)

Submission
(Managed as a
database)



MHLW

- Operation and management of the database
- Administrative work concerning health consultations and health checkups, etc.
- Referrals for data

2. What to do for healthcare of workers

Build a database and conduct health checkups, etc. depending on exposure doses^(*1)

How to conduct health checkups, etc.

❖ Cover all emergency workers

- Conduct health checkups based on laws and regulations (general health checkups [98.1%*3], ionizing radiation medical examination [98.8%*3], etc.)
- Provide health consultations and guidance, including those for mental healthcare

❖ For emergency workers exposed to radiation exceeding 50mSv^(*2)

- Conduct cataract tests, in addition to the above [68.3%*3]

❖ For emergency workers exposed to radiation exceeding 100mSv^(*2)

- Conduct thyroid gland tests and cancer screening (stomach, lungs, bowel), in addition to the above [94.7%*3]

*1 Cost for health checkups is borne by employers. However, the national government will bear the cost for emergency workers exposed to radiation exceeding 50mSv: (i) when the worker is not engaged in radiation work after changing jobs; (ii) when the worker continues to be employed by the same company (limited to a SME) as the one at the time of engaging in emergency work but does not engage in radiation work at present; or (iii) when the worker is unemployed at present.

*2 Effective doses that these workers were exposed to during the period when they engaged in emergency work.

*3 Surveyed by the MHLW on 9 August 2013.

Issue a notebook after application is made (including dose data; to be used as a certificate upon receiving health checkups)

Issue a database registration certificate (to be used as a certificate in referrals for data)

(ii) Workers other than emergency workers (approx. 11,000 workers engaged in work on 16 December 2011)

- Conduct health checkups based on laws and regulations (general health checkups, ionizing radiation medical examinations, etc.)
- Provide health consultations and guidance based on laws and regulations