

June 30, 2011

Tokyo Electric Power Company

Site Workers' Exposure Doses during Emergency Work at Fukushima Daiichi Nuclear Power Station

1. External exposure doses

External exposure doses are calculated by adding up the indicated values of the alarm personal dosimeter (APD) distributed to each worker on each work day. Currently, APDs have been provided to workers at J Village, a base approaching Fukushima Daiichi Nuclear Power Station, or at the Main Anti-Earthquake Building at the site. This time, we calculate the external exposure doses by adding up both of them.

In this calculation, the values are evaluated after adding external exposure doses during the stays inside the Main Anti-Earthquake Building and the travels to Fukushima Daiichi New Clear Power Station.

2. Internal exposure doses (Primary evaluation)

Radioactive materials absorbed by the human body are subject to decay over time (half-life), and simultaneously are expelled per the body's metabolism. The internal exposure doses are evaluated in accordance with: the results of the measurements with the whole-body counter (WBC); and the estimated amount of radioactive materials bodily absorbed based on when they were taken in and the amount of radioactive materials remaining inside bodies. The purpose of the hearing investigation is to specifically determine at what point in time the radiation substances were bodily absorbed. Internal exposure doses are computed by adding up effects arising from the radioactive materials remaining inside the bodies over the next 50 years.

In the phase of the primary evaluation, if we cannot conduct hearing investigations, an evaluation is conducted assuming that each worker absorbed all amounts of radioactive materials only on the date he started work at the site. The results of the primary evaluation will show the maximum values.

Subsequently, as for workers whose results of the primary evaluation indicate significant values, we'll carry out a reevaluation based on the exact dates when they took in radioactive materials, which will be determined at the hearing investigation. Moreover, workers whose results indicate relatively high values will be subjected to a more detailed WBC administered by the Japan Atomic Energy Agency.

In this instance, we have reported the results of the primary evaluation of workers who worked at the site in April and underwent a WBC before the end of June 25.

In addition, the values for April are from newly engaged workers in April. Therefore, the values for workers who have been engaged in emergency work since March are being subtracted.

3 . Combined values of external and internal exposure doses (Primary evaluation)

We've reported the combined values of external and internal exposure doses (primary evaluation) of workers who engaged in emergency work at the site in April and the completed evaluation of internal exposure.

In case that the evaluated values of workers exceed 200mSv, the workers shall be ordered to leave Fukushima Daiichi Nuclear Power Station. Moreover, if the values from the primary evaluation before the detailed measurement exceed 200mSv, the workers will also be ordered to leave the site until the detailed evaluation.

Also, in case that the actual radiation dose exceeds 250mSv, the workers will take medical examination at National Institute of Radiological Sciences while we will continue the evaluation with support from institutions with specialized expertise.

4. Scope of radiation dose control and counting

Since Fukushima Daiichi Nuclear Power Station collects and controls radioactive doses of each radiation worker inside or near its premise, the same coverage is applied to the collection and evaluation of both external radiation doses and internal radiation doses.

- Attachment : Distribution of external and internal exposure doses (Primary evaluation)

END

**Distribution of external exposure doses and internal exposure doses
(Primary evaluation)**

【Scope of counting】

Number of workers engaged in emergency work	External exposure	Internal exposure (Primary evaluation) (As for workers since April)		External exposure + Internal exposure (Primary evaluation)
From April: 4,325	4,325 in total ➡ Table 1	WBC before June 25	April: 2,242 ➡ Table 2	2,242 ➡ Table 3
		Later	April 2,083	2,083

(*)Workers who worked outside Fukushima Daiichi NPS are not counted.

1 . External exposure doses

Table 1 shows the distribution of external exposure doses ¹ (April 1to 30)for site workers engaged in emergency work in April.

¹ The external exposure doses do not include the exposure doses during the stays inside the Main Anti-Earthquake Building and the travels to Fukushima Daiichi Nuclear Power Station. (However, data such as glass badges may be included)

Table 1 .

Categories(mSv)	TEPCO employee	Workers of partner copanies	Total
Over 250	0	0	0
Over 200 ~ 250 or less	0	0	0
Over 150 ~ 200 or less	0	0	0
Over 100 ~ 150 or less	0	0	0

Over 50 ~ 100 or less	0	0	0
Over 20 ~ 50 or less	2	9	11
Over 10 ~ 20 or less	8	48	56
10 or less	555	3,703	4258
Total	565	3,760	4,325
Maximum (mSv)	22.29	40.59	40.59
Average (mSv)	0.85	1.59	1.14

2 . Internal exposure doses (Primary evaluation)

Table 2 below shows the distribution of the internal exposure doses (Primary evaluation ²⁾ of workers taken WBC measurement before June 25 out of all the workers engaged in emergency work.

² Primary evaluation: In case research was not conducted as to when workers took in radioactive material, an evaluation is conducted tentatively assuming that each worker absorbed all amounts of radioactive materials only on the date he started work at the site. The degree of exposure dose is assumed to be the maximum in such case.

The values exceeding 20mSv in this evaluation are re-evaluated based on behavior survey or evaluated by JAEA in detail.

Table 2 .

Categories (mSv)	TEPCO employee	Workers of partner companies	Total
Over 250	0	0	0
Over 200 ~ 250 or less	0	0	0
Over 150 ~ 200 or less	0	0	0
Over 100 ~ 150 or less	0	0	0
Over 50 ~ 100 or less	2	8	10
Over 20 ~ 50 or less	3	17	20
Over 10 ~ 20 or less	4	40	44
10 or less	375	1793	2168
Total	384	1858	2242

3 . Combined values of external and internal exposure doses (Primary evaluation)

As for the workers who were estimated as having received internal exposure doses (Primary evaluation) in the above Section 2, the distribution of the combined values of the external and internal exposure doses is shown in Table 3 below.

Table 3 .

Categories(mSv)	TEPCO employee	Workers of partner companies	Total
Over 250	0	0	0
Over 200 ~ 250 or less	0	0	0
Over 150 ~ 200 or less	0	0	0
Over 100 ~ 150 or less	0	1	1
Over 50 ~ 100 or less	2	7	9
Over 20 ~ 50 or less	7	29	36
Over 10 ~ 20 or less	7	86	93
10 or less	368	1735	2103
Total	384	1858	2242

End