

Exposure Dose Distribution of the Workers at Fukushima Daiichi Nuclear Power Plant

(Updated on 31 October 2019)

1 Radiation Exposure Dose Distributions

(1) The distribution of external exposure dose of the workers during the last 3 months

(Numbers of workers who entered each area every month)

Effective dose (E) mSv	July 2019			August 2019			September 2019		
	TEPCO	Contractors	Total	TEPCO	Contractors	Total	TEPCO	Contractors	Total
100<E	0	0	0	0	0	0	0	0	0
75<E≤100	0	0	0	0	0	0	0	0	0
50<E≤75	0	0	0	0	0	0	0	0	0
20<E≤50	0	0	0	0	0	0	0	0	0
10<E≤20	0	0	0	0	0	0	0	0	0
5<E≤10	0	10	10	0	6	6	0	9	9
1<E≤5	19	547	566	12	471	483	12	580	592
E≤1	964	5,048	6,012	1,006	5,037	6,043	941	4,963	5,904
Total	983	5,605	6,588	1,018	5,514	6,532	953	5,552	6,505
Maximum (mSv)	3.60	9.70	9.70	2.75	7.99	7.99	3.52	7.42	7.42
Average (mSv)	0.13	0.35	0.32	0.10	0.30	0.27	0.10	0.34	0.31

(*) Exposure doses and the number of workers are subject to change due to the replacement of accumulated doses measured using PAD with monthly doses measured using an integrating dosimeter and the reflection of values for workers wearing only an integrating dosimeter (e.g., workers working only within a seismically isolated building).

(2) Combined Cumulative Effective Dose from April 2016 (Internal and External)

Effective dose (E) mSv	April 2016 - August 2019			April 2016 - September 2019			Difference		
	TEPCO	Contractors	Total	TEPCO	Contractors	Total	TEPCO	Contractors	Total
100<E	0	0	0	0	0	0	0	0	0
75<E≤100	0	9	9	0	9	9	0	0	0
50<E≤75	0	128	128	0	140	140	0	12	12
20<E≤50	45	1,517	1,562	48	1,546	1,594	3	29	32
10<E≤20	135	2,129	2,264	137	2,140	2,277	2	11	13
5<E≤10	176	2,231	2,407	175	2,242	2,417	-1	11	10
1<E≤5	558	4,496	5,054	558	4,535	5,093	0	39	39
E≤1	1,325	8,855	10,180	1,326	8,921	10,247	1	66	67
Total	2,239	19,365	21,604	2,244	19,533	21,777	5	168	173
Maximum (mSv)	39.17	79.90	79.90	41.10	79.90	79.90	-	-	-
Average (mSv)	2.68	5.92	5.59	2.72	5.97	5.64	-	-	-

(*) Exposure doses and the number of workers are subject to change due to the replacement of accumulated doses measured using PAD with monthly doses measured using an integrating dosimeter and the reflection of values for workers wearing only an integrating dosimeter (e.g., workers working only within a seismically isolated building).

(3) Combined Cumulative Effective Dose from April 2019 (Internal and External)

Effective dose (E) mSv	April 2019 - August 2019			April 2019 - September 2019			Difference		
	TEPCO	Contractors	Total	TEPCO	Contractors	Total	TEPCO	Contractors	Total
100<E	0	0	0	0	0	0	0	0	0
75<E≤100	0	0	0	0	0	0	0	0	0
50<E≤75	0	0	0	0	0	0	0	0	0
20<E≤50	0	0	0	0	0	0	0	0	0
10<E≤20	1	83	84	1	141	142	0	58	58
5<E≤10	13	445	458	18	553	571	5	108	113
1<E≤5	174	1,585	1,759	188	1,777	1,965	14	192	206
E≤1	1,101	5,055	6,156	1,095	5,022	6,117	-6	-33	-39
Total	1,289	7,168	8,457	1,302	7,493	8,795	13	325	338
Maximum (mSv)	10.85	18.30	18.30	11.46	18.44	18.44	-	-	-
Average (mSv)	0.48	1.27	1.15	0.54	1.47	1.33	-	-	-

(*). Exposure doses and the number of workers are subject to change due to the replacement of accumulated doses measured using PAD with monthly doses measured using an integrating dosimeter and the reflection of values for workers wearing only an integrating dosimeter (e.g., workers working only within a seismically isolated building).

(4) Distribution of sum of external exposure dose and internal exposure dose of workers engaged in specified high-dose work*

(Specified high-dose work has not been performed since October 2015.)

Effective dose (E) mSv	March 2011- September 2015
100<E	1
75<E≤100	191
50<E≤75	233
20<E≤50	267
10<E≤20	186
5<E≤10	129
1<E≤5	145
E≤1	51
Total	1,203
Maximum (mSv)	102.69
Average (mSv)	36.49

(*). Workers engaged in work to which dose limit (100 mSv) during emergency work is applied in line with Article 7 of the Ordinance on Prevention of Ionizing Radiation Hazards.

Specifically, these workers are those who are engaged in work to maintain the functions of a nuclear reactor facility or spent fuel storage pool, or in work to maintain functions to suppress or prevent the possible release of a large amount of radioactive materials due to a failure of or damage to the nuclear reactor facility at a location around the nuclear reactor facility, steam turbine, or accessory facility where hourly dose may exceed 0.1 mSv.

It should be noted that only TEPCO employees have so far been engaged in specified high-dose work.

(*). Workers engaged in specified high-dose work in each month is the number of workers registered as workers engaged in specified high-dose work in that month.

However, the total of March 2011 to September 2015 includes workers released from specified high-dose work.

(*). Exposure doses and the number of workers are subject to change due to the replacement of accumulated doses measured using PAD with monthly doses measured using an integrating dosimeter and the reflection of values for workers wearing only an integrating dosimeter (e.g., workers working only within a seismically isolated building).

(*). The results of re-evaluating committed doses in March 2011 reveal that maximum cumulative effective doses for the period between March 2011 and September 2015 exceeded 100.