

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

(Updated on 28 February 2020)

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	November 2019			December 2019			January 2020		
	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	5	5	0	0	0
5<E≤10	0	13	13	0	33	33	0	56	56
1<E≤5	23	595	618	13	604	617	10	571	581
E≤1	1,024	5,255	6,279	967	5,212	6,179	951	5,220	6,171
Total	1,047	5,863	6,910	980	5,854	6,834	961	5,847	6,808
Maximum (mSv)	3.48	7.21	7.21	2.54	12.20	12.20	2.07	9.80	9.80
Average (mSv)	0.12	0.35	0.32	0.11	0.40	0.36	0.10	0.39	0.35

(*) 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 - December 2019			April 2016 - January 2020			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	11	11	0	12	12	0	1	1
50<E≤75	0	178	178	0	190	190	0	12	12
20<E≤50	58	1,634	1,692	59	1,667	1,726	1	33	34
10<E≤20	134	2,194	2,328	137	2,225	2,362	3	31	34
5<E≤10	185	2,329	2,514	182	2,368	2,550	-3	39	36
1<E≤5	579	4,542	5,121	591	4,538	5,129	12	-4	8
E≤1	1,316	9,196	10,512	1,306	9,257	10,563	-10	61	51
Total	2,272	20,084	22,356	2,275	20,257	22,532	3	173	176
Maximum (mSv)	43.25	79.90	79.90	44.58	79.90	79.90	-	-	-
Average (mSv)	2.83	6.14	5.81	2.87	6.20	5.87	-	-	-

(*) 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 - December 2019			April 2019 - January 2020			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	2	439	441	4	582	586	2	143	145
5<E≤10	32	781	813	41	834	875	9	53	62
1<E≤5	262	2,067	2,329	274	2,153	2,427	12	86	98
E≤1	1,067	5,144	6,211	1,053	5,124	6,177	-14	-20	-34
Total	1,363	8,431	9,794	1,372	8,693	10,065	9	262	271
Maximum (mSv)	12.22	19.53	19.53	12.72	19.53	19.53	-	-	-
Average (mSv)	0.77	2.10	1.92	0.84	2.30	2.10	-	-	-

(*) 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.