

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

(Updated on 25 December 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	September 2019			October 2019			November 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	12	12	0	31	31	0	14	14
1<E≤5	12	594	606	22	613	635	23	583	606
E≤1	942	4,953	5,895	935	5,066	6,001	1,001	5,262	6,263
Total	954	5,559	6,513	957	5,710	6,667	1,024	5,859	6,883
Maximum (mSv)	3.52	8.15	8.15	3.22	7.49	7.49	3.48	7.46	7.46
Average (mSv)	0.10	0.37	0.33	0.12	0.39	0.35	0.12	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 - October 2019			April 2016 - November 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	10	10	0	1	1
50<E≤75	0	157	157	0	163	163	0	6	6
20<E≤50	53	1,570	1,623	57	1,608	1,665	4	38	42
10<E≤20	133	2,155	2,288	135	2,165	2,300	2	10	12
5<E≤10	179	2,278	2,457	182	2,298	2,480	3	20	23
1<E≤5	564	4,513	5,077	568	4,542	5,110	4	29	33
E≤1	1,325	9,028	10,353	1,323	9,143	10,466	-2	115	113
Total	2,254	19,710	21,964	2,265	19,929	22,194	11	219	230
Maximum (mSv)	41.28	79.90	79.90	42.60	79.90	79.90	-	-	-
Average (mSv)	2.75	6.04	5.70	2.80	6.07	5.74	-	-	-

(*) 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 - October 2019			April 2019 - November 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	236	237	2	332	334	1	96	97
5<E≤10	22	653	675	27	723	750	5	70	75
1<E≤5	214	1,853	2,067	237	1,961	2,198	23	108	131
E≤1	1,085	5,062	6,147	1,083	5,124	6,207	-2	62	60
Total	1,322	7,804	9,126	1,349	8,140	9,489	27	336	363
Maximum (mSv)	11.66	19.27	19.27	12.06	19.42	19.42	-	-	-
Average (mSv)	0.62	1.71	1.55	0.70	1.88	1.71	-	-	-

(*). 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.