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

(Updated on 29 January 2021)

- 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)	October 2020			November 2020			December 2020		
mSv	TEPCO	Contractors	Total	TEPCO	Contractors	Total	TEPCO	Contractors	Total
100 <e< td=""><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></e<>	0	0	0	0	0	0	0	0	0
75 <e≤100< td=""><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></e≤100<>	0	0	0	0	0	0	0	0	0
50 <e≤75< td=""><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></e≤75<>	0	0	0	0	0	0	0	0	0
20 <e≤50< td=""><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></e≤50<>	0	0	0	0	0	0	0	0	0
10 <e≤20< td=""><td>0</td><td>1</td><td>1</td><td>0</td><td>2</td><td>2</td><td>0</td><td>0</td><td>0</td></e≤20<>	0	1	1	0	2	2	0	0	0
5 <e≤10< td=""><td>1</td><td>31</td><td>32</td><td>0</td><td>48</td><td>48</td><td>0</td><td>30</td><td>30</td></e≤10<>	1	31	32	0	48	48	0	30	30
1 <e≤5< td=""><td>11</td><td>510</td><td>521</td><td>25</td><td>579</td><td>604</td><td>36</td><td>515</td><td>551</td></e≤5<>	11	510	521	25	579	604	36	515	551
E≤1	1007	5127	6134	1039	5056	6095	975	5207	6182
Total	1019	5669	6688	1064	5685	6749	1011	5752	6763
Maximum (mSv)	6.99	10.50	10.50	4.84	11.00	11.00	2.29	8.88	8.88
Average (mSv)	0.11	0.37	0.33	0.12	0.42	0.37	0.13	0.33	0.30

^(*) 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 €	April 2016 - November 2020			April 2016 - December 2020			Difference		
mSv	TEPCO	Contractors	Total	TEPCO	Contractors	Total	TEPCO	Contractors	Total
100 <e< td=""><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></e<>	0	0	0	0	0	0	0	0	0
75 <e≤100< td=""><td>0</td><td>42</td><td>42</td><td>0</td><td>50</td><td>50</td><td>0</td><td>8</td><td>8</td></e≤100<>	0	42	42	0	50	50	0	8	8
50 <e≤75< td=""><td>2</td><td>307</td><td>309</td><td>2</td><td>313</td><td>315</td><td>0</td><td>6</td><td>6</td></e≤75<>	2	307	309	2	313	315	0	6	6
20 <e≤50< td=""><td>81</td><td>1961</td><td>2042</td><td>83</td><td>1972</td><td>2055</td><td>2</td><td>11</td><td>13</td></e≤50<>	81	1961	2042	83	1972	2055	2	11	13
10 <e≤20< td=""><td>150</td><td>2378</td><td>2528</td><td>152</td><td>2414</td><td>2566</td><td>2</td><td>36</td><td>38</td></e≤20<>	150	2378	2528	152	2414	2566	2	36	38
5 <e≤10< td=""><td>195</td><td>2484</td><td>2679</td><td>197</td><td>2486</td><td>2683</td><td>2</td><td>2</td><td>4</td></e≤10<>	195	2484	2679	197	2486	2683	2	2	4
1 <e≤5< td=""><td>601</td><td>4653</td><td>5254</td><td>612</td><td>4685</td><td>5297</td><td>11</td><td>32</td><td>43</td></e≤5<>	601	4653	5254	612	4685	5297	11	32	43
E≤1	1400	10049	11449	1398	10138	11536	-2	89	87
Total	2429	21874	24303	2444	22058	24502	15	184	199
Maximum (mSv)	57.81	87.40	87.40	58.07	87.50	87.50	-	-	-
Average (mSv)	3.10	6.78	6.41	3.14	6.81	6.45	-	-	-

^(*) 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 2020 (Internal and External)

Effective dose (E)	April 2020 - November 2020			April 2020 - December 2020			Difference		
mSv	TEPCO	Contractors	Total	TEPCO	Contractors	Total	TEPCO	Contractors	Total
100 <e< td=""><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></e<>	0	0	0	0	0	0	0	0	0
75 <e≤100< td=""><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></e≤100<>	0	0	0	0	0	0	0	0	0
50 <e≤75< td=""><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></e≤75<>	0	0	0	0	0	0	0	0	0
20 <e≤50< td=""><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></e≤50<>	0	0	0	0	0	0	0	0	0
10 <e≤20< td=""><td>4</td><td>427</td><td>431</td><td>5</td><td>523</td><td>528</td><td>1</td><td>96</td><td>97</td></e≤20<>	4	427	431	5	523	528	1	96	97
5 <e≤10< td=""><td>17</td><td>811</td><td>828</td><td>32</td><td>851</td><td>883</td><td>15</td><td>40</td><td>55</td></e≤10<>	17	811	828	32	851	883	15	40	55
1 <e≤5< td=""><td>211</td><td>1711</td><td>1922</td><td>228</td><td>1893</td><td>2121</td><td>17</td><td>182</td><td>199</td></e≤5<>	211	1711	1922	228	1893	2121	17	182	199
E≤1	1049	4909	5958	1047	4912	5959	-2	3	1
Total	1281	7858	9139	1312	8179	9491	31	321	352
M aximum (mSv)	11.65	19.07	19.07	12.98	19.29	19.29	-	-	-
Average (mSv)	0.62	2.14	1.93	0.71	2.29	2.07	-	-	-

^(*) 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)	March 2011 - September 2015						
mSv	•						
100 <e< td=""><td>1</td></e<>	1						
75 <e≤100< td=""><td>191</td></e≤100<>	191						
50 <e≤75< td=""><td>233</td></e≤75<>	233						
20 <e≤50< td=""><td>267</td></e≤50<>	267						
10 <e≤20< td=""><td>186</td></e≤20<>	186						
5 <e≤10< td=""><td>129</td></e≤10<>	129						
1 <e≤5< td=""><td>145</td></e≤5<>	145						
E≤1	51						
Total	1203						
Maximum (mSv)	102.69						
Average (mSv)	36.49						

(As specified high-dose work has not been performed since October 2015, the table shows the data up to September 2015.)

- (*) 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.
- (*) The number of workers engaged in specified high-dose work is that of workers who were registered as such at least once during the period between March 2011 and September 2015.
- (*) 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.