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

(Updated on 24 December 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)	September 2020			October 2020			November 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>1</td><td>1</td><td>0</td><td>2</td><td>2</td></e≤20<>	0	1	1	0	1	1	0	2	2
5 <e≤10< td=""><td>0</td><td>32</td><td>32</td><td>1</td><td>31</td><td>32</td><td>0</td><td>44</td><td>44</td></e≤10<>	0	32	32	1	31	32	0	44	44
1 <e≤5< td=""><td>13</td><td>496</td><td>509</td><td>11</td><td>510</td><td>521</td><td>25</td><td>594</td><td>619</td></e≤5<>	13	496	509	11	510	521	25	594	619
E≤1	1048	5001	6049	1007	5127	6134	969	5040	6009
Total	1061	5530	6591	1019	5669	6688	994	5680	6674
Maximum (mSv)	2.70	10.51	10.51	6.99	10.50	10.50	4.84	10.32	10.32
Average (mSv)	0.10	0.34	0.30	0.11	0.37	0.33	0.13	0.41	0.37

- (*) 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 - October 2020			April 2016 - November 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>38</td><td>38</td><td>0</td><td>42</td><td>42</td><td>0</td><td>4</td><td>4</td></e≤100<>	0	38	38	0	42	42	0	4	4
50 <e≤75< td=""><td>1</td><td>299</td><td>300</td><td>2</td><td>308</td><td>310</td><td>1</td><td>9</td><td>10</td></e≤75<>	1	299	300	2	308	310	1	9	10
20 <e≤50< td=""><td>81</td><td>1933</td><td>2014</td><td>80</td><td>1959</td><td>2039</td><td>-1</td><td>26</td><td>25</td></e≤50<>	81	1933	2014	80	1959	2039	-1	26	25
10 <e≤20< td=""><td>148</td><td>2352</td><td>2500</td><td>151</td><td>2377</td><td>2528</td><td>3</td><td>25</td><td>28</td></e≤20<>	148	2352	2500	151	2377	2528	3	25	28
5 <e≤10< td=""><td>195</td><td>2478</td><td>2673</td><td>196</td><td>2488</td><td>2684</td><td>1</td><td>10</td><td>11</td></e≤10<>	195	2478	2673	196	2488	2684	1	10	11
1 <e≤5< td=""><td>596</td><td>4614</td><td>5210</td><td>602</td><td>4654</td><td>5256</td><td>6</td><td>40</td><td>46</td></e≤5<>	596	4614	5210	602	4654	5256	6	40	46
E≤1	1380	9980	11360	1398	10046	11444	18	66	84
Total	2401	21694	24095	2429	21874	24303	28	180	208
Maximum (mSv)	56.34	87.30	87.30	57.81	87.35	87.35	-	-	-
Average (mSv)	3.09	6.73	6.36	3.11	6.78	6.41	-	-	-

(*) 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 - October 2020			April 2020 - November 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>1</td><td>329</td><td>330</td><td>4</td><td>427</td><td>431</td><td>3</td><td>98</td><td>101</td></e≤20<>	1	329	330	4	427	431	3	98	101
5 <e≤10< td=""><td>14</td><td>737</td><td>751</td><td>17</td><td>813</td><td>830</td><td>3</td><td>76</td><td>79</td></e≤10<>	14	737	751	17	813	830	3	76	79
1 <e≤5< td=""><td>187</td><td>1536</td><td>1723</td><td>210</td><td>1716</td><td>1926</td><td>23</td><td>180</td><td>203</td></e≤5<>	187	1536	1723	210	1716	1926	23	180	203
E≤1	1031	4934	5965	1050	4902	5952	19	-32	-13
Total	1233	7536	8769	1281	7858	9139	48	322	370
Maximum (mSv)	10.59	18.47	18.47	11.65	19.07	19.07	-	-	-
Average (mSv)	0.54	1.92	1.73	0.62	2.13	1.92	-	-	-

- (*) 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.)

March 2011 - September 2015					
1					
191					
233					
267					
186					
129					
145					
51					
1203					
102.69					
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 mSy.
 - 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.