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

(Updated on 30 March 2018)

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)	December 2017			January 2018			February 2018			
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>0</td><td>0</td></e≤20<>	0	1	1	0	1	1	0	0	0	
5 <e≤10< td=""><td>0</td><td>18</td><td>18</td><td>0</td><td>23</td><td>23</td><td>0</td><td>46</td><td>46</td></e≤10<>	0	18	18	0	23	23	0	46	46	
1 <e≦5< td=""><td>22</td><td>578</td><td>600</td><td>24</td><td>614</td><td>638</td><td>36</td><td>785</td><td>821</td></e≦5<>	22	578	600	24	614	638	36	785	821	
E≤1	976	6,683	7,659	922	6,444	7,366	911	6,349	7,260	
Total	998	7,280	8,278	946	7,082	8,028	947	7,180	8,127	
Maximum (mSv)	2.60	10.31	10.31	4.14	10.60	10.60	3.73	9.72	9.72	
Average (mSv)	0.14	0.32	0.30	0.13	0.35	0.32	0.17	0.41	0.38	

(*) 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)	April 2016 - January 2018			April 2016 - February 2018			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>13</td><td>13</td><td>0</td><td>16</td><td>16</td><td>0</td><td>3</td><td>3</td></e≤75<>	0	13	13	0	16	16	0	3	3
20 <e≤50< td=""><td>4</td><td>823</td><td>827</td><td>7</td><td>876</td><td>883</td><td>3</td><td>53</td><td>56</td></e≤50<>	4	823	827	7	876	883	3	53	56
10 <e≦20< td=""><td>86</td><td>1,581</td><td>1,667</td><td>88</td><td>1,657</td><td>1,745</td><td>2</td><td>76</td><td>78</td></e≦20<>	86	1,581	1,667	88	1,657	1,745	2	76	78
5 <e≦10< td=""><td>124</td><td>1,869</td><td>1,993</td><td>127</td><td>1,894</td><td>2,021</td><td>3</td><td>25</td><td>28</td></e≦10<>	124	1,869	1,993	127	1,894	2,021	3	25	28
1 <e≦5< td=""><td>477</td><td>4,508</td><td>4,985</td><td>492</td><td>4,497</td><td>4,989</td><td>15</td><td>-11</td><td>4</td></e≦5<>	477	4,508	4,985	492	4,497	4,989	15	-11	4
E≤1	1,211	7,840	9,051	1,195	7,867	9,062	-16	27	11
Total	1,902	16,634	18,536	1,909	16,807	18,716	7	173	180
Maximum (mSv)	23.35	61.95	61.95	23.65	63.55	63.55	-	-	-
Average (mSv)	1.85	4.40	4.14	1.93	4.53	4.26	-	-	-

(*) 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).

(*) As a new 5-year dose period began in April 2016, the 5-year accumulated dose will be described in April 2017 or later.

Effective dose (E)	April 2017 - January 2018			April 2017 - February 2018			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>65</td><td>65</td><td>0</td><td>68</td><td>68</td><td>0</td><td>3</td><td>3</td></e≤50<>	0	65	65	0	68	68	0	3	3
10 <e≤20< td=""><td>5</td><td>828</td><td>833</td><td>12</td><td>984</td><td>996</td><td>7</td><td>156</td><td>163</td></e≤20<>	5	828	833	12	984	996	7	156	163
5 <e≤10< td=""><td>59</td><td>965</td><td>1,024</td><td>69</td><td>1,007</td><td>1,076</td><td>10</td><td>42</td><td>52</td></e≤10<>	59	965	1,024	69	1,007	1,076	10	42	52
1 <e≦5< td=""><td>286</td><td>3,280</td><td>3,566</td><td>289</td><td>3,380</td><td>3,669</td><td>3</td><td>100</td><td>103</td></e≦5<>	286	3,280	3,566	289	3,380	3,669	3	100	103
E≤1	1,157	6,803	7,960	1,148	6,730	7,878	-9	-73	-82
Total	1,507	11,941	13,448	1,518	12,169	13,687	11	228	239
Maximum (mSv)	13.80	29.57	29.57	15.24	29.57	29.57	-	-	-
Average (mSv)	0.92	2.46	2.29	1.02	2.66	2.48	-	_	-

(3) Combined Cumulative Effective Dose from April 2017 (Internal and External)

(*) 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*

Effective dose (E) mSv	March 2011- September 2015					
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 colspan="6">267</td></e≤50<>	267					
10 <e≤20< td=""><td colspan="5">186</td></e≤20<>	186					
5 <e≤10< td=""><td colspan="5">129</td></e≤10<>	129					
1 <e≦5< td=""><td colspan="5">145</td></e≦5<>	145					
E≤1	51					
Total	1,203					
Maximum (mSv)	102.69					
Average (mSv)	36.49					

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

(*) 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.