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

(Updated on 29 February 2016)

1 Number of Workers (Later than 11 March 2011)

		Persons	Increase	Emergency Workers(*)	Updated on
Total Workers		46,490	304	19,675	As of 31 January 2016
	TEPCO	4,687	7	3,636	(Obtained on 29
	Contractors	41,803	297	16,039	February)

^(*) As of November 2014; Including workers to whom emergency dose limits apply

2 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)

tumbers of workers who entered each area every month)										
Effective dose (E)	November 2015			December 2015			January 2016			
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>7</td><td>7</td><td>0</td><td>5</td><td>5</td><td>0</td><td>5</td><td>5</td></e<=20<>	0	7	7	0	5	5	0	5	5	
5 <e<=10< td=""><td>0</td><td>110</td><td>110</td><td>0</td><td>73</td><td>73</td><td>0</td><td>48</td><td>48</td></e<=10<>	0	110	110	0	73	73	0	48	48	
1 <e<=5< td=""><td>48</td><td>1,447</td><td>1,495</td><td>47</td><td>1,335</td><td>1,382</td><td>35</td><td>1,144</td><td>1,179</td></e<=5<>	48	1,447	1,495	47	1,335	1,382	35	1,144	1,179	
E<= 1	1,119	7,924	9,043	1,122	8,026	9,148	985	8,005	8,990	
Total	1,167	9,488	10,655	1,169	9,439	10,608	1,020	9,202	10,222	
Maximum (mSv)	4.96	13.88	13.88	2.70	13.50	13.50	3.02	16.44	16.44	
Average (mSv)	0.22	0.61	0.57	0.21	0.56	0.52	0.17	0.47	0.44	

^(*) 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 March 2011 (Internal and External)

Effective dose (E)	March 2011- December 2015			March 2	011- Januar	Difference			
mSv	TEPCO	Contractors	Total	TEPCO	Contractors	Total	TEPCO	Contractors	Total
250 <e< td=""><td>6</td><td>0</td><td>6</td><td>6</td><td>0</td><td>6</td><td>0</td><td>0</td><td>0</td></e<>	6	0	6	6	0	6	0	0	0
200 <e<=250< td=""><td>1</td><td>2</td><td>3</td><td>1</td><td>2</td><td>3</td><td>0</td><td>0</td><td>0</td></e<=250<>	1	2	3	1	2	3	0	0	0
150 <e<=200< td=""><td>26</td><td>2</td><td>28</td><td>26</td><td>2</td><td>28</td><td>0</td><td>0</td><td>0</td></e<=200<>	26	2	28	26	2	28	0	0	0
100 <e<=150< td=""><td>117</td><td>20</td><td>137</td><td>117</td><td>20</td><td>137</td><td>0</td><td>0</td><td>0</td></e<=150<>	117	20	137	117	20	137	0	0	0
75 <e<=100< td=""><td>314</td><td>270</td><td>584</td><td>316</td><td>279</td><td>595</td><td>2</td><td>9</td><td>11</td></e<=100<>	314	270	584	316	279	595	2	9	11
50 <e<=75< td=""><td>329</td><td>1,721</td><td>2,050</td><td>328</td><td>1,745</td><td>2,073</td><td>-1</td><td>24</td><td>23</td></e<=75<>	329	1,721	2,050	328	1,745	2,073	-1	24	23
20 <e<=50< td=""><td>633</td><td>6,357</td><td>6,990</td><td>633</td><td>6,410</td><td>7,043</td><td>0</td><td>53</td><td>53</td></e<=50<>	633	6,357	6,990	633	6,410	7,043	0	53	53
10 <e<=20< td=""><td>620</td><td>5,658</td><td>6,278</td><td>621</td><td>5,671</td><td>6,292</td><td>1</td><td>13</td><td>14</td></e<=20<>	620	5,658	6,278	621	5,671	6,292	1	13	14
5 <e<=10< td=""><td>496</td><td>5,371</td><td>5,867</td><td>496</td><td>5,405</td><td>5,901</td><td>0</td><td>34</td><td>34</td></e<=10<>	496	5,371	5,867	496	5,405	5,901	0	34	34
1 <e<=5< td=""><td>880</td><td>9,539</td><td>10,419</td><td>887</td><td>9,584</td><td>10,471</td><td>7</td><td>45</td><td>52</td></e<=5<>	880	9,539	10,419	887	9,584	10,471	7	45	52
E<= 1	1,258	12,566	13,824	1,256	12,685	13,941	-2	119	117
Total	4,680	41,506	46,186	4,687	41,803	46,490	7	297	304
Maximum (mSv)	678.80	238.42	678.80	678.80	238.42	678.80	-	-	-
Average (mSv)	22.43	11.59	12.69	22.44	11.61	12.70	1	-	-

^(*) Number of new comers in January 2016 was 304.

^(*) There has been no significant internal exposure reported since October 2011.

^(*) 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 2015 (Internal and External)

Effective dose (E)	April 2015 - December 2015			April 2	2015 - Janua	ry 2016	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>2</td><td>388</td><td>390</td><td>4</td><td>437</td><td>441</td><td>2</td><td>49</td><td>51</td></e<=50<>	2	388	390	4	437	441	2	49	51
10 <e<=20< td=""><td>30</td><td>1,438</td><td>1,468</td><td>35</td><td>1,599</td><td>1,634</td><td>5</td><td>161</td><td>166</td></e<=20<>	30	1,438	1,468	35	1,599	1,634	5	161	166
5 <e<=10< td=""><td>97</td><td>1,962</td><td>2,059</td><td>106</td><td>2,042</td><td>2,148</td><td>9</td><td>80</td><td>89</td></e<=10<>	97	1,962	2,059	106	2,042	2,148	9	80	89
1 <e<=5< td=""><td>425</td><td>5,076</td><td>5,501</td><td>450</td><td>5,125</td><td>5,575</td><td>25</td><td>49</td><td>74</td></e<=5<>	425	5,076	5,501	450	5,125	5,575	25	49	74
E<= 1	1,088	6,534	7,622	1,057	6,614	7,671	-31	80	49
Total	1,642	15,398	17,040	1,652	15,817	17,469	10	419	429
Maximum(mSv)	21.13	38.61	38.61	21.31	38.97	38.97	-	-	-
Average(mSv)	1.48	3.80	3.58	1.58	3.97	3.75	-	-	-

^(*) 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) Combined Cumulative Effective Dose of Workers to Whom Emergency Dose Limits Apply*

Effective dose (E) mSv	Nov. 2015	Dec. 2015	Jan. 2016	March 2011- January 2016
100 <e< td=""><td>0</td><td>0</td><td>0</td><td>1</td></e<>	0	0	0	1
75 <e<=100< td=""><td>0</td><td>0</td><td>0</td><td>191</td></e<=100<>	0	0	0	191
50 <e<=75< td=""><td>0</td><td>0</td><td>0</td><td>233</td></e<=75<>	0	0	0	233
20 <e<=50< td=""><td>0</td><td>0</td><td>0</td><td>267</td></e<=50<>	0	0	0	267
10 <e<=20< td=""><td>0</td><td>0</td><td>0</td><td>186</td></e<=20<>	0	0	0	186
5 <e<=10< td=""><td>0</td><td>0</td><td>0</td><td>129</td></e<=10<>	0	0	0	129
1 <e<=5< td=""><td>0</td><td>0</td><td>0</td><td>145</td></e<=5<>	0	0	0	145
E<= 1	0	0	0	51
Total	0	0	0	1,203
Maximum (mSv)	-	-	-	102.69
Average (mSv)	=	-	=	36.50

- (*) Workers under the application of the emergency dose limit (100mSv) shown in Article 7 of the Ordinance on Prevention of Ionizing Radiation Hazards.
 - Specifically, they are workers engaged in work to maintain the function of cooling reactors or spent fuel tanks or to maintain the function to control or prevent the release of a huge amount of radioactive material due to trouble or a breakdown at a reactor facility, in an area where radiation dose rates exceed 0.1 mSv/h, around any reactor facilities, steam turbines and related facilities, and the vicinity thereof in the NPP. Until now, all designated workers have been TEPCO employees.
- (*) The monthly number of workers to whom emergency dose limits apply is the number of workers who have filed applications as such. However, the cumulative number for the period between March 2011 and January 2016 includes those whose designation was removed.
- (*) 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 January 2016 exceeded 100.