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

(Updated on 30 September 2015)

1 Number of Workers (Later than 11 March 2011)

		Persons	Increase	Emergency Workers(*)	Updated on
Total `	Workers	44,851	314	19,675	As of 31 August 2015
	TEPCO	4,601	19	3,636	(Obtained on 30
	Contractors	40,250	295	16,039	September)

^(*) 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)	June 2015			July 2015			August 2015			
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>12</td><td>12</td><td>0</td><td>7</td><td>7</td><td>0</td><td>1</td><td>1</td></e<=20<>	0	12	12	0	7	7	0	1	1	
5 <e<=10< td=""><td>0</td><td>167</td><td>167</td><td>1</td><td>134</td><td>135</td><td>0</td><td>32</td><td>32</td></e<=10<>	0	167	167	1	134	135	0	32	32	
1 <e<=5< td=""><td>64</td><td>1,737</td><td>1,801</td><td>56</td><td>1,646</td><td>1,702</td><td>51</td><td>974</td><td>1,025</td></e<=5<>	64	1,737	1,801	56	1,646	1,702	51	974	1,025	
E<= 1	1,128	8,185	9,313	1,116	8,140	9,256	980	8,316	9,296	
Total	1,192	10,101	11,293	1,173	9,927	11,100	1,031	9,323	10,354	
Maximum (mSv)	3.90	11.50	11.50	5.10	10.72	10.72	3.38	10.65	10.65	
Average (mSv)	0.25	0.72	0.67	0.26	0.66	0.62	0.18	0.39	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 March 2011 (Internal and External)

Effective dose (E)	March 2011- July 2015			March 2	2011- Augus	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>301</td><td>219</td><td>520</td><td>301</td><td>225</td><td>526</td><td>0</td><td>6</td><td>6</td></e<=100<>	301	219	520	301	225	526	0	6	6
50 <e<=75< td=""><td>335</td><td>1,518</td><td>1,853</td><td>336</td><td>1,550</td><td>1,886</td><td>1</td><td>32</td><td>33</td></e<=75<>	335	1,518	1,853	336	1,550	1,886	1	32	33
20 <e<=50< td=""><td>628</td><td>6,110</td><td>6,738</td><td>627</td><td>6,137</td><td>6,764</td><td>-1</td><td>27</td><td>26</td></e<=50<>	628	6,110	6,738	627	6,137	6,764	-1	27	26
10 <e<=20< td=""><td>605</td><td>5,518</td><td>6,123</td><td>610</td><td>5,542</td><td>6,152</td><td>5</td><td>24</td><td>29</td></e<=20<>	605	5,518	6,123	610	5,542	6,152	5	24	29
5 <e<=10< td=""><td>498</td><td>5,198</td><td>5,696</td><td>497</td><td>5,200</td><td>5,697</td><td>-1</td><td>2</td><td>1</td></e<=10<>	498	5,198	5,696	497	5,200	5,697	-1	2	1
1 <e<=5< td=""><td>838</td><td>9,260</td><td>10,098</td><td>841</td><td>9,321</td><td>10,162</td><td>3</td><td>61</td><td>64</td></e<=5<>	838	9,260	10,098	841	9,321	10,162	3	61	64
E<= 1	1,227	12,108	13,335	1,239	12,251	13,490	12	143	155
Total	4,582	39,955	44,537	4,601	40,250	44,851	19	295	314
Maximum (mSv)	678.80	238.42	678.80	678.80	238.42	678.80	-	-	-
Average (mSv)	22.63	11.32	12.48	22.58	11.33	12.48	-	-	-

^(*) Number of new comers in August 2015 was 314.

^(*) 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)	Effective dose (E) April 2015 - July 2015			April 2	2015 - Augu	ıst 2015	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>64</td><td>64</td><td>0</td><td>95</td><td>95</td><td>0</td><td>31</td><td>31</td></e<=50<>	0	64	64	0	95	95	0	31	31
10 <e<=20< td=""><td>2</td><td>521</td><td>523</td><td>6</td><td>660</td><td>666</td><td>4</td><td>139</td><td>143</td></e<=20<>	2	521	523	6	660	666	4	139	143
5 <e<=10< td=""><td>29</td><td>1,324</td><td>1,353</td><td>37</td><td>1,428</td><td>1,465</td><td>8</td><td>104</td><td>112</td></e<=10<>	29	1,324	1,353	37	1,428	1,465	8	104	112
1 <e<=5< td=""><td>262</td><td>4,008</td><td>4,270</td><td>292</td><td>4,308</td><td>4,600</td><td>30</td><td>300</td><td>330</td></e<=5<>	262	4,008	4,270	292	4,308	4,600	30	300	330
E<= 1	1,165	7,092	8,257	1,161	6,993	8,154	-4	-99	-103
Total	1,458	13,009	14,467	1,496	13,484	14,980	38	475	513
Maximum(mSv)	11.82	34.05	34.05	12.48	35.71	35.71	-	-	-
Average(mSv)	0.79	2.31	2.16	0.89	2.50	2.32	-	-	-

^(*) 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	Jun. 2015	Jul. 2015	Aug. 2015	March 2011- August 2015
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>187</td></e<=100<>	0	0	0	187
50 <e<=75< td=""><td>0</td><td>0</td><td>0</td><td>236</td></e<=75<>	0	0	0	236
20 <e<=50< td=""><td>0</td><td>0</td><td>0</td><td>263</td></e<=50<>	0	0	0	263
10 <e<=20< td=""><td>0</td><td>0</td><td>0</td><td>187</td></e<=20<>	0	0	0	187
5 <e<=10< td=""><td>0</td><td>1</td><td>0</td><td>128</td></e<=10<>	0	1	0	128
1 <e<=5< td=""><td>55</td><td>48</td><td>45</td><td>145</td></e<=5<>	55	48	45	145
E<= 1	548	537	500	56
Total	603	586	545	1,203
Maximum (mSv)	3.90	5.10	3.38	102.69
Average (mSv)	0.37	0.38	0.25	36.29

- (*) 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 August 2015 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 August 2015 exceeded 100.