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

(Updated on 31 October 2014)

1 Number of Workers (Later than 11 March 2011)

		Persons	Increase	Emergency workers(*)	Updated on
Total Workers		38,454	714	19,346	As of 30 September,
	TEPCO	4,333	25	3,391	2014 (Obtained on 31
	Contractors	34,121	689	15,955	October)

^(*) As of the end of December 2011; Targeted workers are now being identified by closely examining the database.

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)

Effective dose (E)		July 2014		August 2014			September 2014		
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>49</td><td>49</td><td>0</td><td>9</td><td>9</td><td>0</td><td>16</td><td>16</td></e<=20<>	0	49	49	0	9	9	0	16	16
5 <e<=10< td=""><td>1</td><td>258</td><td>259</td><td>0</td><td>214</td><td>214</td><td>1</td><td>248</td><td>249</td></e<=10<>	1	258	259	0	214	214	1	248	249
1 <e<=5< td=""><td>39</td><td>1,728</td><td>1,767</td><td>39</td><td>1,338</td><td>1,377</td><td>41</td><td>1,540</td><td>1,581</td></e<=5<>	39	1,728	1,767	39	1,338	1,377	41	1,540	1,581
E<= 1	1,092	7,292	8,384	1,062	7,806	8,868	951	7,619	8,570
Total	1,132	9,327	10,459	1,101	9,367	10,468	993	9,423	10,416
Maximum (mSv)	5.40	18.69	18.69	3.40	17.13	17.13	5.08	16.37	16.37
Average (mSv)	0.27	0.89	0.82	0.25	0.72	0.67	0.22	0.77	0.72

^(*) 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.

(2) Combined Cumulative Effective Dose from March 2011 (Internal and External)

Effective dose (E)	March 2	2011-Augu	ıst 2014	March 20	11-Septen	nber 2014	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>25</td><td>2</td><td>27</td><td>25</td><td>2</td><td>27</td><td>0</td><td>0</td><td>0</td></e<=200<>	25	2	27	25	2	27	0	0	0
100 <e<=150< td=""><td>118</td><td>20</td><td>138</td><td>118</td><td>20</td><td>138</td><td>0</td><td>0</td><td>0</td></e<=150<>	118	20	138	118	20	138	0	0	0
75 <e<=100< td=""><td>281</td><td>160</td><td>441</td><td>281</td><td>163</td><td>444</td><td>0</td><td>3</td><td>3</td></e<=100<>	281	160	441	281	163	444	0	3	3
50 <e<=75< td=""><td>320</td><td>1,106</td><td>1,426</td><td>320</td><td>1,133</td><td>1,453</td><td>0</td><td>27</td><td>27</td></e<=75<>	320	1,106	1,426	320	1,133	1,453	0	27	27
20 <e<=50< td=""><td>619</td><td>4,928</td><td>5,547</td><td>620</td><td>5,035</td><td>5,655</td><td>1</td><td>107</td><td>108</td></e<=50<>	619	4,928	5,547	620	5,035	5,655	1	107	108
10 <e<=20< td=""><td>566</td><td>4,535</td><td>5,101</td><td>566</td><td>4,652</td><td>5,218</td><td>0</td><td>117</td><td>117</td></e<=20<>	566	4,535	5,101	566	4,652	5,218	0	117	117
5 <e<=10< td=""><td>466</td><td>4,412</td><td>4,878</td><td>476</td><td>4,462</td><td>4,938</td><td>10</td><td>50</td><td>60</td></e<=10<>	466	4,412	4,878	476	4,462	4,938	10	50	60
1 <e<=5< td=""><td>760</td><td>8,147</td><td>8,907</td><td>760</td><td>8,275</td><td>9,035</td><td>0</td><td>128</td><td>128</td></e<=5<>	760	8,147	8,907	760	8,275	9,035	0	128	128
E<= 1	1,146	10,120	11,266	1,160	10,377	11,537	14	257	271
Total	4,308	33,432	37,740	4,333	34,121	38,454	25	689	714
Maximum (mSv)	678.80	238.42	678.80	678.80	238.42	678.80	=	-	=
Average (mSv)	23.13	10.77	12.18	23.05	10.76	12.15	=	-	=

^(*) The number of new comers in August 2014 was 714.

⁽e.g., workers working only within a seismically isolated building)

^(*) 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 2014 (Internal and External)

Effective dose (E)	April 2014-August 2014			April 2014-September 2014			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>175</td><td>175</td><td>1</td><td>269</td><td>270</td><td>1</td><td>94</td><td>95</td></e<=50<>	0	175	175	1	269	270	1	94	95
10 <e<=20< td=""><td>7</td><td>786</td><td>793</td><td>10</td><td>998</td><td>1,008</td><td>3</td><td>212</td><td>215</td></e<=20<>	7	786	793	10	998	1,008	3	212	215
5 <e<=10< td=""><td>47</td><td>1,467</td><td>1,514</td><td>63</td><td>1,684</td><td>1,747</td><td>16</td><td>217</td><td>233</td></e<=10<>	47	1,467	1,514	63	1,684	1,747	16	217	233
1 <e<=5< td=""><td>430</td><td>4,254</td><td>4,684</td><td>478</td><td>4,540</td><td>5,018</td><td>48</td><td>286</td><td>334</td></e<=5<>	430	4,254	4,684	478	4,540	5,018	48	286	334
E<= 1	968	6,196	7,164	950	6,371	7,321	-18	175	157
Total	1,452	12,878	14,330	1,502	13,862	15,364	50	984	1,034
Maximum (mSv)	17.63	39.85	39.85	20.55	39.85	39.85	-	-	-
Average (mSv)	1.17	2.98	2.80	1.28	3.29	3.10	-	-	-

^(*) 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

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

Effective dose (E) mSv	Jul. 2014	Aug. 2014	Sep. 2014	March 2011-September 2014
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>170</td></e<=100<>	0	0	0	170
50 <e<=75< td=""><td>0</td><td>0</td><td>0</td><td>214</td></e<=75<>	0	0	0	214
20 <e<=50< td=""><td>0</td><td>0</td><td>0</td><td>255</td></e<=50<>	0	0	0	255
10 <e<=20< td=""><td>0</td><td>0</td><td>0</td><td>151</td></e<=20<>	0	0	0	151
5 <e<=10< td=""><td>1</td><td>0</td><td>1</td><td>123</td></e<=10<>	1	0	1	123
1 <e<=5< td=""><td>38</td><td>37</td><td>40</td><td>137</td></e<=5<>	38	37	40	137
E<= 1	585	576	522	43
Total	624	613	563	1,094
Maximum (mSv)	5.40	3.40	5.08	102.69
Average (mSv)	0.37	0.35	0.28	36.77

- (*) 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 September 2014 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
- (*) The results of re-evaluating committed doses in March 2011 reveal that maximum cumulative effective doses for the period between March 2011 and September 2014 exceeded 100.