# Exposure Dose Distribution of the Workers at Fukushima Daiichi Nuclear Power Station

provided by TEPCO As of 30 September 2013

### 1 Number of Workers (Later than 11 March 2011)

		Person	Increase	Emergency Workers(*)	Date Update
Total Workers		29,332	351	19,346	
TEPCO		3,880	20	3,391	31 Aug 13
	Contractor	25,452	331	15,955	

<sup>\*</sup>Tentative Number

## 2 Radiation Exposure Dose Distribution

# (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	13 Jun			13 Jul			13 Aug		
(E) 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>8</td><td>8</td><td>0</td><td>19</td><td>19</td></e<=20<>	0	7	7	0	8	8	0	19	19
5 <e<=10< td=""><td>6</td><td>88</td><td>94</td><td>1</td><td>104</td><td>105</td><td>2</td><td>122</td><td>124</td></e<=10<>	6	88	94	1	104	105	2	122	124
1 <e<=5< td=""><td>87</td><td>1,184</td><td>1,271</td><td>96</td><td>1,131</td><td>1,227</td><td>102</td><td>1,145</td><td>1,247</td></e<=5<>	87	1,184	1,271	96	1,131	1,227	102	1,145	1,247
E<= 1	932	3,724	4,656	892	3,740	4,632	721	3,696	4,417
Total	1,025	5,003	6,028	989	4,983	5,972	825	4,982	5,807
Maximum (mSv)	7.40	17.50	17.50	5.50	14.68	14.68	5.94	15.00	15.00
Average (mSv)	0.42	0.87	0.79	0.43	0.88	0.81	0.42	0.91	0.84

<sup>\*</sup> External exposure was measured by PAD. The exposure dose is subject to change due to the replacement of PAD-measured dose to glass badge-measured dose. The number of workers is also subject to change due to the addition of workers who wore only glass badges.

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

Effective Dose	March2011-July2013			March2	2011-Aug	ıst2013	Difference		
(E) 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>24</td><td>2</td><td>26</td><td>24</td><td>2</td><td>26</td><td>0</td><td>0</td><td>0</td></e<=200<>	24	2	26	24	2	26	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>242</td><td>91</td><td>333</td><td>246</td><td>95</td><td>341</td><td>4</td><td>4</td><td>8</td></e<=100<>	242	91	333	246	95	341	4	4	8
50 <e<=75< td=""><td>308</td><td>673</td><td>981</td><td>307</td><td>699</td><td>1,006</td><td>-1</td><td>26</td><td>25</td></e<=75<>	308	673	981	307	699	1,006	-1	26	25
20 <e<=50< td=""><td>611</td><td>3,832</td><td>4,443</td><td>613</td><td>3,895</td><td>4,508</td><td>2</td><td>63</td><td>65</td></e<=50<>	611	3,832	4,443	613	3,895	4,508	2	63	65
10 <e<=20< td=""><td>527</td><td>3,564</td><td>4,091</td><td>531</td><td>3,575</td><td>4,106</td><td>4</td><td>11</td><td>15</td></e<=20<>	527	3,564	4,091	531	3,575	4,106	4	11	15
5 <e<=10< td=""><td>419</td><td>3,392</td><td>3,811</td><td>417</td><td>3,425</td><td>3,842</td><td>-2</td><td>33</td><td>31</td></e<=10<>	419	3,392	3,811	417	3,425	3,842	-2	33	31
1 <e<=5< td=""><td>638</td><td>6,409</td><td>7,047</td><td>646</td><td>6,523</td><td>7,169</td><td>8</td><td>114</td><td>122</td></e<=5<>	638	6,409	7,047	646	6,523	7,169	8	114	122
E<= 1	966	7,136	8,102	971	7,216	8,187	5	80	85
Total	3,860	25,121	28,981	3,880	25,452	29,332	20	331	351
Maximum (mSv)	678.80	238.42	678.80	678.80	238.42	678.80	-	-	-
Average (mSv)	24.36	10.62	12.45	24.33	10.66	12.47	-	-	-

<sup>\*</sup>Number of New comer in August was 351.

### (3) Combined Cumulative Effective Dose from April 2013(Internal and external)

Effective Dose	April 2013-July 2013			April 20	13-Augus	t 2013	Difference		
(E) 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>35</td><td>35</td><td>2</td><td>59</td><td>61</td><td>2</td><td>24</td><td>26</td></e<=50<>	0	35	35	2	59	61	2	24	26
10 <e<=20< td=""><td>16</td><td>308</td><td>324</td><td>25</td><td>461</td><td>486</td><td>9</td><td>153</td><td>162</td></e<=20<>	16	308	324	25	461	486	9	153	162
5 <e<=10< td=""><td>47</td><td>776</td><td>823</td><td>69</td><td>972</td><td>1,041</td><td>22</td><td>196</td><td>218</td></e<=10<>	47	776	823	69	972	1,041	22	196	218
1 <e<=5< td=""><td>442</td><td>2,600</td><td>3,042</td><td>475</td><td>2,805</td><td>3,280</td><td>33</td><td>205</td><td>238</td></e<=5<>	442	2,600	3,042	475	2,805	3,280	33	205	238
E<= 1	776	3,737	4,513	753	3,746	4,499	-23	9	-14
Total	1,281	7,456	8,737	1,324	8,043	9,367	43	587	630
Maximum(mSv)	18.40	32.02	32.02	22.18	37.05	37.05	-	-	-
Average(mSv)	1.43	2.38	2.24	1.64	2.77	2.61	-	-	ı

<sup>\*</sup> External exposure was measured by PAD. The exposure dose is subject to change due to the replacement of PAD-measured dose to glass badge-measured dose. The number of workers is also subject to change due to the addition of workers who wore only glass badges.

<sup>\*</sup>Effective dose has been changed due to the re-evaluation of internal exposure dose in July 2013.

<sup>\*</sup>There has been no significant internal exposure reported since October 2011. A part of internal exposure data is under review, and subject to change.

<sup>\*</sup>External exposure was measured by PAD. The exposure dose is subject to change due to the replacement of PAD-measured dose to glass badge-measured dose. The number of workers is also subject to change due to the addition of workers who wore only glass badges.

### (4) Combined Cumulative Effective Dose of Emergency Dose Limits Applied Workers\*

Effective Dose (E) mSv	13 May	13 June	13 July	March 2011-Jul 2013
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>138</td></e<=100<>	0	0	0	138
50 <e<=75< td=""><td>0</td><td>0</td><td>0</td><td>196</td></e<=75<>	0	0	0	196
20 <e<=50< td=""><td>0</td><td>0</td><td>0</td><td>233</td></e<=50<>	0	0	0	233
10 <e<=20< td=""><td>0</td><td>0</td><td>0</td><td>102</td></e<=20<>	0	0	0	102
5 <e<=10< td=""><td>5</td><td>1</td><td>2</td><td>77</td></e<=10<>	5	1	2	77
1 <e<=5< td=""><td>77</td><td>92</td><td>93</td><td>81</td></e<=5<>	77	92	93	81
E<= 1	387	476	408	38
Total	469	569	503	866
Maximum	7.40	5.50	5.94	102.69
(mSv)				
Average (mSv)	0.63	0.60	0.53	39.87

<sup>\*</sup> The workers are under application of Emergency dose limit (100mSv) shown in "Ordinance on Prevention of Ionizing Radiation Hazards, chapter 7." Specifically, it means the workers who engaged in work to maintain the function of cooling reactors or spent fuel tanks or work to maintain the function to control or prevent the release of a huge amount radioactive material due to trouble or break of the reactor facility, at the area where the radiation dose rate exceed 0.1 mSv/h around reactor facilities, steam turbines and related facilities and surrounding area in the NPP. Until now, all designated workers are TEPCO Employees.

<sup>\*</sup> External exposure was measured by PAD. The exposure dose is subject to change due to the replacement of PAD-measured dose to glass badge-measured dose. The number of workers is also subject to change due to the addition of workers who wore only glass badges.