Dose Statistical Data Based on the Information Registered with the System of Registration and Management of Radiation Exposure Doses for Workers at Nuclear Power Plants and Nuclear Facilities (Fiscal 2015)

Radiation Dose Registration Center

1. Release of statistical data

The Radiation Dose Registration Center of the Radiation Effects Association (RADREC) assigns an individualized registration number in RADREC to each worker engaged in radiation work, at nuclear licensees' facilities, such as nuclear power plants and nuclear fuel fabrication facilities that are part of the System of Registration and Management of Radiation Exposure Doses for Nuclear Facilities (The Nuclear Registration and Management System), and then performs systematic regulatory control of the workers' radiation exposure doses. Thus, even if workers move to other nuclear power plants or nuclear facilities (collective referred to below as "nuclear sites") to engage in other radiation work, the system allows RADREC to track each worker's doses accurately, because the nuclear licensees who join the Nuclear Registration and Management System register workers' doses at all work sites.

Based on the registered data, RADREC has released statistical data that represent the radiation control status for workers engaged in radiation work at the nuclear sites.

As the doses of workers at TEPCO Fukushima Daiichi Nuclear Power Plant occupied a majority of the collective dose in statistical data categorized as normal work, the situation of exposure dose control for the other nuclear facilities were not immediately clear. Therefore, the dose data excluding those for Fukushima Daiichi Nuclear Power Plant were also compiled.

In addition to the statistics in the category of normal work, the dose data of emergency work for the accident of Fukushima Daiichi Nuclear Power Plant caused by the East Japan Earthquake and the subsequent tsunami on 11 March, 2011 were also released.

2. List of nuclear licensees that are part of the Nuclear Registration and Management System

The statistical data were based on the dose data registered by the following nuclear licensees in RADREC. Names of the nuclear sites are shown in parentheses.

① Japan Atomic Energy Agency (Nuclear Science Research Institute, Nuclear Fuel Cycle Engineering Labs, Oarai, Naka, Kansai, Takasaki, Tono, Ningyo-toge Fugen, Monju ,Mutsu)
② Japan Nuclear Fuel Ltd. (Enrichment and Disposal Plants, Reprocessing Plant)
③ Hokkaido Electric Power Co., Inc. (Tomari)
④ Tohoku Electric Power Co., Inc. (Onagawa, Higashidori)
⑤ Tokyo Electric Power Co. (Fukushima No. 1, Fukushima No. 2, Kashiwazaki-Kariwa)
⑥ Chubu Electric Power Co., Inc. (Hamaoka)
⑦ Hokuriku Electric Power Co. (Shiga))
⑧ The Kansai Electric Power Co., Inc.(Mihama, Takahama, Ooi)
⑨ The Chugoku Electric Power Co., Inc. (Shimane)
⑩ Shikoku Electric Power Co., Inc. (Ikata)
⑪ Kyushu Electric Power Co., Inc. (Genkai Sendai)
⑫ The Japan Atomic power Company (Tokai, Tokai No. 2, Tsuruga)
⑬ Nuclear Fuel Industries, Ltd. (Kumatori, Tokai)
⑭Sumitomo Metal Mining Co., Ltd. (Tokai)
⑯ Global Nuclear Fuel Co., Ltd. (Yokosuka)
⑰ Mitsubishi Nuclear Fuel (Tokai)
⑱ JCO Co. ,Ltd. (Tokai)

3. Data compilation method

The statistical data are based on doses of the workers engaged in radiation work of the nuclear licensees that have joined the Nuclear Registration and Management System compiled by RADREC.

(1) These statistical data are based on registered data provided by the nuclear licensees as of 1 Jun 2016.
(2) The doses compiled are the effective doses, i.e. the total of both external exposure doses and internal exposure doses.
(3) Doses of workers engaged in the emergency work at Fukushima Daiichi Nuclear Power Plant were registered by Tokyo Electric Power Co., Inc., and involves doses of all work carried out from 11 March 2011 to 30 November 2011 and the special work that followed this period. The special work was to maintain the function of cooling reactors or to maintain the function to control or prevent the release of radioactive materials.

(4) “Maximum dose,” “collective dose,” “ mean dose,” and “%” were calculated by rounding to one decimal place. This procedure may result in the totals in the tables not adding up or to total percent values other than 100%.

(5) The ages of the workers in the statistics were based on the Western style of calculating age, with day of birth as zero, as of 31 March 2016.

(6) The “Total number” of radiation workers were compiled based on distinct individuals, so that workers who worked at more than one nuclear site were only counted once.

【Exposure Dose Limits for workers】

1. Dose limits for normal work

The exposure dose limit for workers is set at 100 millisieverts (mSv) per five years and 50 mSv per one year (the dose limit for female workers (excluding those who are indicated with no possibility of pregnancy ,and those who are pregnant) is set at 5 mSv over 3 months beyond the dose limit conditions above). Five years refers to the statutory period that started on 1 April 2001 and has been renewed every subsequent five years.

2. Dose limits for emergency work related to the accident of Fukushima Daiichi Nuclear Power Plant

Regardless of the dose limits noted above for normal radiation work, dose limits for emergency workers are set at 100 mSv during a period of emergency work in the “Ordinance on Prevention of Ionizing Radiation Hazards,” etc. In the case of the accident of Fukushima Daiichi Nuclear Power Plant, special measures applied as follows:

(1) 14 March 2011

Dose limit changed from 100 mSv to 250 mSv the day after the “Declaration of a Nuclear Emergency Situation” (11 March 2011)

(2) From 1 November 2011

Dose limit restricted only to work designated by the Minister of Health, Labor and Welfare.

(3) From 16 December 2011

Dose limits for normal work have been applied in principle (100 mSv per five years and 50 mSv per one year). However, 100 mSv was set as the upper limit for special radiation work.[*1] For workers who possess specialized knowledge and experience, the dose limit was set at 250 mSv until 30 April 2012 as a transitional measure.[*2]

*1 Work to maintain the function of cooling reactors or to maintain the function to control or prevent the release of radioactive materials..

*2 Workers who were exposed to more than 100 mSv in emergency work through 12 December 2011. As they possess highly specialized knowledge and experience in special work, such as maintenance of the

cooling function of reactors, workers to take their place could not be found easily.

[Definition of terminology]

(1) Radiation Worker：Worker who is designated by nuclear licensees as a radiation worker based on the "Law for the Regulation of Nuclear Source Material, Nuclear Fuel Material, and Reactors" whose core occupation is in radiation control areas, excluding people who enter radiation control areas occasionally.

(2) Exposure doses：Exposure doses of workers engaged in nuclear facilities recorded in RADREC accumulated in one fiscal year(1 April to 31 March).

(3) Five-year exposure doses：Exposure doses accumulated in the statutory five-year period to control long-term dose limit. The first period started on 1 April 2001, with exposure doses accumulating every subsequent five years. Dose data for the present five-year period have been compiling from 2011 to 2015.

(4) Number of engaged sites in a year： Number of engaged sites in a year means the number of nuclear sites where workers were engaged in radiation work during the period (fiscal year) when the statistical data were compiled. The total number of engaged sites in Fiscal 2015 was 37. Even if a worker was engaged in radiation work at one nuclear site in several times in a year, that counted as only one engaged site.

(5) Number of engaged sites in five years：Number of engaged sites in five years means the number of nuclear sites where workers were engaged in radiation works during the period of statistical data compilation (fiscal years 2011 to 2015). The number of engaged sites from fiscal 2011 through Fiscal 2015 was 37.

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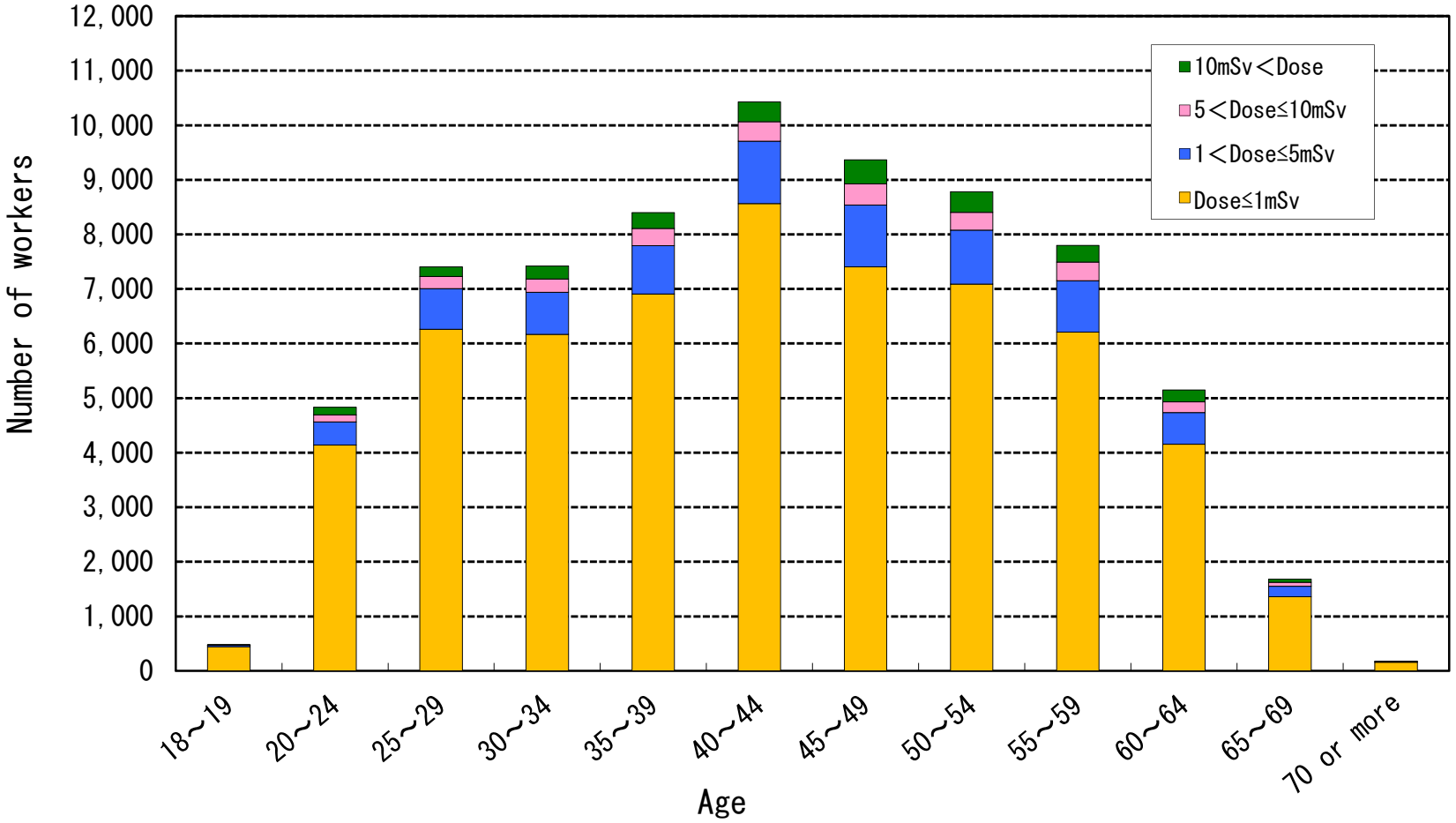
1. Dose Distribution of Workers by Age {Fiscal 2015}

Age \ Dose (mSv)	Number of workers												Total no. of wokers		Dose		
	Dose≤1	1＜Dose ≤2.5	2.5＜Dose ≤5	5＜Dose ≤7.5	7.5＜Dose ≤10	10＜Dose ≤15	15＜Dose ≤20	20＜Dose ≤25	25＜Dose ≤30	30＜Dose ≤40	40＜Dose ≤50	50＜ Dose		(%)	Collective dose (person・mSv)	Mean (mSv)	Max (mSv)
18～19	443	10	17	1	4	3	0	0	0	0	0	0	478	(0.7)	188.3	0.4	13.6
20～24	4,139	248	174	77	54	77	33	12	11	5	0	0	4,830	(6.7)	4,584.1	0.9	37.6
25～29	6,259	434	313	134	89	98	50	13	5	10	0	0	7,405	(10.3)	6,827.0	0.9	37.9
30～34	6,167	470	301	153	89	138	62	16	12	14	0	0	7,422	(10.3)	8,026.2	1.1	37.4
35～39	6,907	544	343	192	125	163	79	21	16	9	1	0	8,400	(11.7)	9,592.5	1.1	43.2
40～44	8,565	707	438	240	117	178	105	34	23	20	0	0	10,427	(14.5)	12,015.7	1.2	38.6
45～49	7,407	699	432	227	159	218	111	50	25	37	0	0	9,365	(13.0)	13,867.7	1.5	38.4
50～54	7,090	594	395	188	134	175	109	42	26	29	0	0	8,782	(12.2)	11,980.1	1.4	38.2
55～59	6,207	599	343	226	118	150	78	29	22	24	0	0	7,796	(10.8)	10,510.8	1.3	38.6
60～64	4,152	334	248	112	83	101	52	31	15	22	0	0	5,150	(7.2)	7,197.1	1.4	38.1
65～69	1,360	119	72	47	28	21	15	3	6	9	0	0	1,680	(2.3)	2,174.6	1.3	38.6
70 or more	157	9	2	1	0	0	1	0	0	0	0	0	170	(0.2)	64.6	0.4	19.0
Total no. of wokers (%)	58,853 (81.8)	4,767 (6.6)	3,078 (4.3)	1,598 (2.2)	1,000 (1.4)	1,322 (1.8)	695 (1.0)	251 (0.3)	161 (0.2)	179 (0.2)	1 (0.0)	0 (0.0)	71,905	(100.0)	—	—	—
Collective Dose (person・mSv)	5,240.1	7,928.8	11,046.3	9,884.3	8,667.8	16,311.0	11,801.7	5,596.6	4,405.9	6,102.9	43.2	0.0	—		87,028.5	1.2	43.2

[Notes on the table]

- How to read the table entries:The number "434" in the box for the age row of "25～29" and the dose column of "1<Dose≤2.5" means that there were 434 workers between age 25 and 29 inclusive whose radiation doses were in the range of greater than 1 and less than or equal to 2.5 millisieverts in Fiscal 2015.
- The workers' ages are based on the Western style of calculating age as 31 March 2016.
- Dose data of the emergency workers at Fukushima Daiichi Nuclear Plant are not included.

2. Dose Distribution of Workers by Age {Fiscal 2015}



＊ This figure is based on the data in the Table 1 "Dose Distributin of Workers by Age {Fiscal 2015}.

＊ Dose data of the emergency workers at Fukushima Daiichi Nuclear Power Plant are not included.

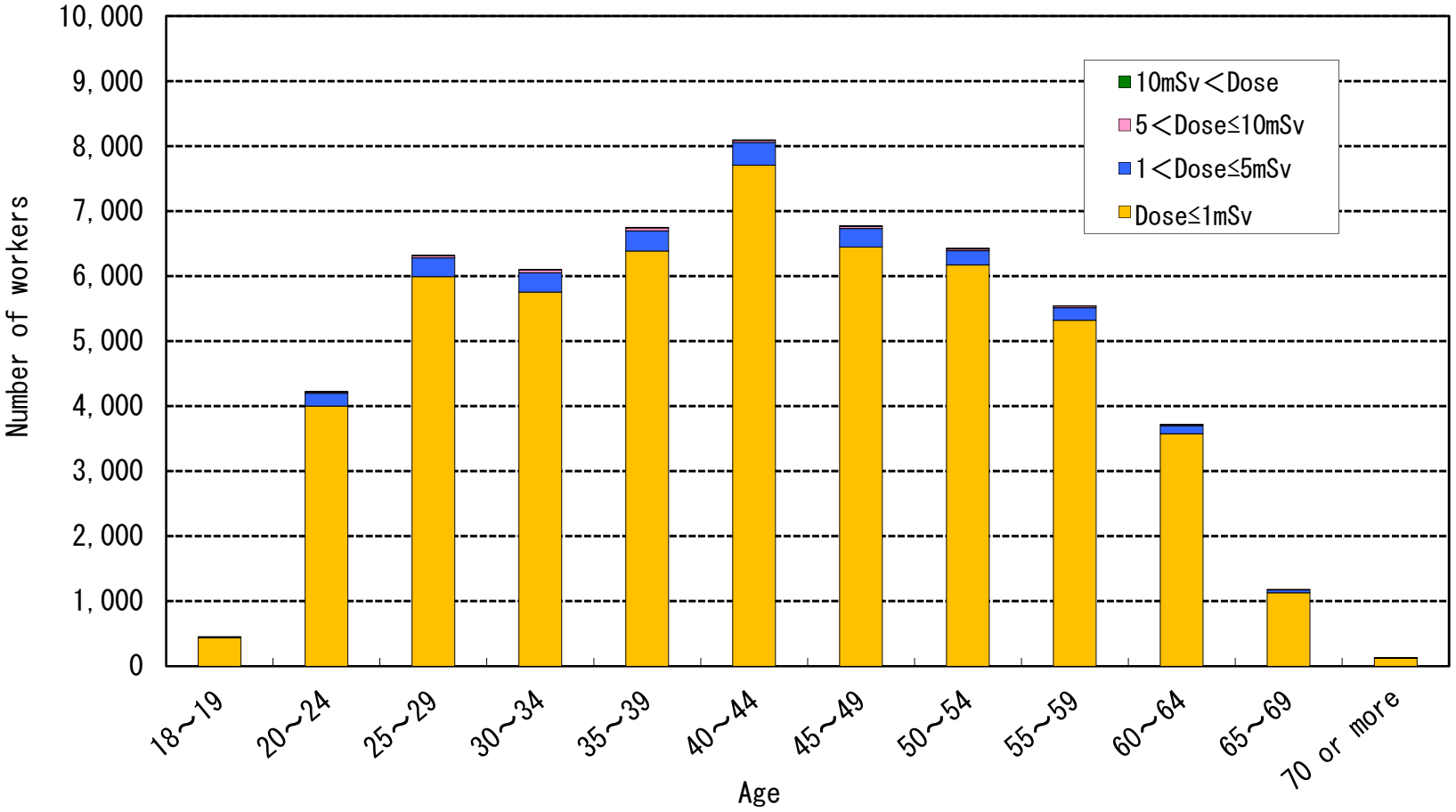
3. Dose Distribution of Workers by Age{Fiscal 2015}
(Excluding the Data for Fukushim Daiichi Nuclear Power Planet)

Age \ Dose (mSv)	Number of workers												Total no. of wokers		Dose		
	Dose≤1	1<Dose ≤2.5	2.5<Dose ≤5	5<Dose ≤7.5	7.5<Dose ≤10	10<Dose ≤15	15<Dose ≤20	20<Dose ≤25	25<Dose ≤30	30<Dose ≤40	40<Dose ≤50	50<Dose		(%)	Collective Dose (person・mSv)	Mean (mSv)	Max (mSv)
18～19	436	5	7	1	1	0	0	0	0	0	0	0	450	(0.8)	74.6	0.2	9.4
20～24	4,002	140	54	19	6	3	0	0	0	0	0	0	4,224	(7.6)	916.9	0.2	11.5
25～29	5,992	203	87	25	8	3	0	0	0	0	0	0	6,318	(11.3)	1,300.8	0.2	12.6
30～34	5,753	212	88	31	13	4	0	0	0	0	0	0	6,101	(11.0)	1,369.2	0.2	13.4
35～39	6,386	228	81	30	17	7	0	0	0	0	0	0	6,749	(12.1)	1,438.8	0.2	13.2
40～44	7,705	257	95	22	6	9	0	0	0	0	0	0	8,094	(14.5)	1,456.1	0.2	13.4
45～49	6,445	213	76	20	11	7	1	0	0	0	0	0	6,773	(12.2)	1,310.1	0.2	15.8
50～54	6,171	158	61	22	6	9	1	0	0	0	0	0	6,428	(11.5)	1,082.2	0.2	15.3
55～59	5,319	151	41	23	6	3	0	0	0	0	0	0	5,543	(10.0)	872.6	0.2	12.8
60～64	3,575	95	27	11	6	1	0	0	0	0	0	0	3,715	(6.7)	553.0	0.1	10.3
65～69	1,130	28	14	7	0	0	0	0	0	0	0	0	1,179	(2.1)	207.8	0.2	7.1
70 or more	125	2	0	1	0	0	0	0	0	0	0	0	128	(0.2)	14.5	0.1	5.2
Total no. of wokers (%)	53,039 (95.2)	1,692 (3.0)	631 (1.1)	212 (0.4)	80 (0.1)	46 (0.1)	2 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	55,702	(100.0)	—	—	—
Collective Dose (person・mSv)	3,178.0	2,706.2	2,181.7	1,275.5	689.0	535.2	31.0	0.0	0.0	0.0	0.0	0.0	—		10,596.6	0.2	15.8

[Notes on the table]

- This table was compiled by excluding the data for Fukushima Daiichi Nuclear Power Plant. The exposure dose data of workers at Fukushima Daiichi Nuclear Power Plant are shown in website of Tokyo Erectric Power Co.,lnc.
- How to rad the table entries:The number "203" in the box for the age row of "25～29" and the dose column of "1<Dose≤2.5" means that there were 203 workers between age 25 and 29 inclusive whose radiation doses were in the range of greater than 1 and less than or equal to 2.5 millisieverts in Fiscal 2015.
- The workers' ages are based on the Western style of calculating age as 31 March 2016.
- Dose data of the emergency workers at Fukushima Daiichi Nuclear Power Plant are not included.

4. Dose Distribution of Workers by Age{Fiscal 2015}
(Excluding the Data for Fukushima Daiichi Nuclear Power Plant)



* This figure is based on the data in the Table 3 "Dose Distribution of Workers by Age{Fiscal 2015}(Excluding the data for Fukushima Daiichi Nuclear Power Plant)."

* Dose data of the emergency workers at Fukushima Daiichi Nuclear Power Plant are not included.

5. Dose Distribution of Workers by Gender{Fiscal 2015}

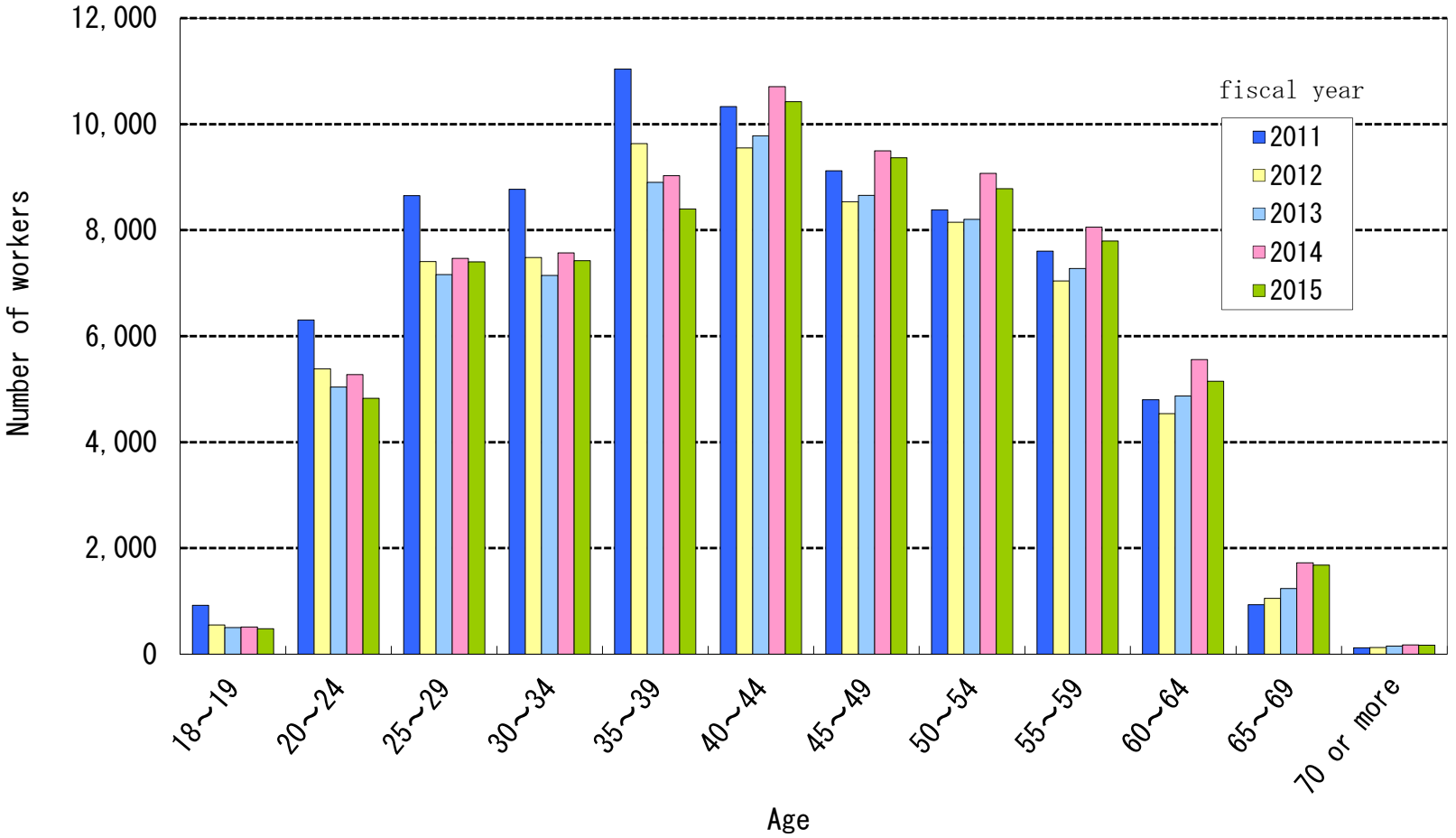
No. of workers / Dose(mSv)	Man (%)	Femal (%)	Total no. of wokers (%)	Collective dose (person･mSv) (%)
Dose ≤1	58,093 (81.7)	760 (99.6)	58,853 (81.8)	5,240.1 (6.0)
1< dose ≤2.5	4,764 (6.7)	3 (0.4)	4,767 (6.6)	7,928.8 (9.1)
2.5< Dose ≤5	3,078 (4.3)	0 (0.0)	3,078 (4.3)	11,046.3 (12.7)
5< Dose ≤7.5	1,598 (2.2)	0 (0.0)	1,598 (2.2)	9,884.3 (11.4)
7.5< Dose ≤10	1,000 (1.4)	0 (0.0)	1,000 (1.4)	8,667.8 (10.0)
10< Dose ≤15	1,322 (1.9)	0 (0.0)	1,322 (1.8)	16,311.0 (18.7)
15< Dose ≤20	695 (1.0)	0 (0.0)	695 (1.0)	11,801.7 (13.6)
20< dose ≤25	251 (0.4)	0 (0.0)	251 (0.3)	5,596.6 (6.4)
25< Dose ≤30	161 (0.2)	0 (0.0)	161 (0.2)	4,405.9 (5.1)
30< Dose ≤40	179 (0.3)	0 (0.0)	179 (0.2)	6,102.9 (7.0)
40< Dose ≤50	1 (0.0)	0 (0.0)	1 (0.0)	43.2 (0.0)
50< Dose	0 (0.0)	0 (0.0)	0 (0.0)	0.0 (0.0)
Total no. of wokers (%)	71,142 (100.0)	763 (100.0)	71,905 (100.0)	87,028.6 (100.0)
Total no. of wokers Ratio of man and famel(%)	71,142 (98.9)	763 (1.1)		
Mean dose (mSv)	1.2	0.0	1.2	
Collective dose (person・mSv)	87,015.2	13.3	87,028.5	
Max dose (mSv)	43.2	1.4	43.2	

[Notes on the table]

- How to read the table entries : The number ″4,764 ″ in the box of the dose row ″1 < Dose ≤2.5 mSv″ and the ″man″ column means that there were 4,764 man workers whose radiation doses were in the range of greater than 1 and less than or equal to 2 millisieverts in Fiscal 2015.

- Dose data of the emergency workers at Fukushima Daiichi Nuclear Power Plant are not included.

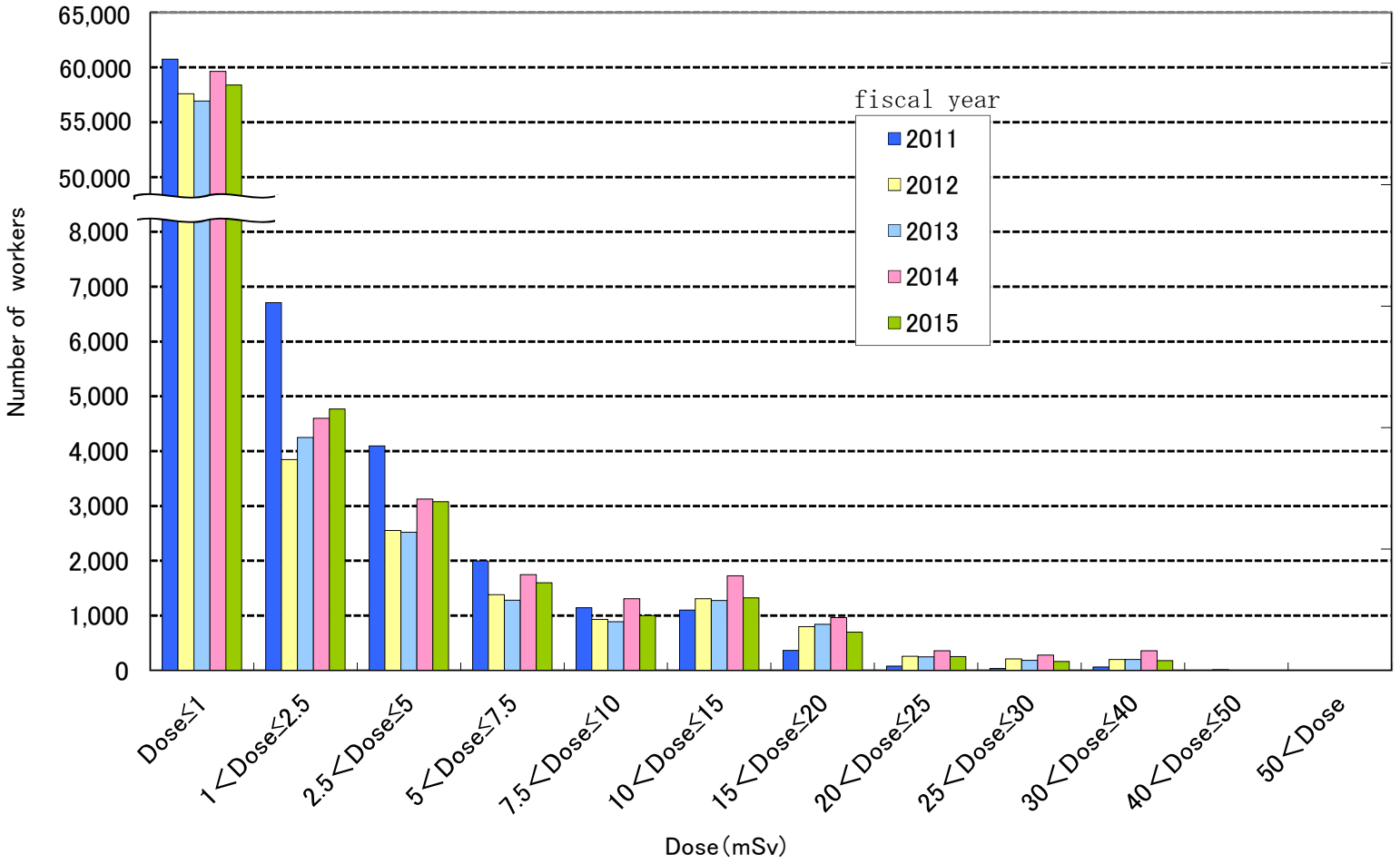
6. Annual Trends of Number of Workers by Age{Fiscal 2011－2015}



＊ This figure is based on the data in the Table 5 "Dose Distribution of Workers by Gender{Fiscal 2015} and those of the latest four years {Fiscal 2011－2014}.

＊ Dose data of the emergency workers at Fukushima Daiichi Nuclear Power Plant are not included.

7. Annual Trends of Number of Workers by Dose Range{Fiscal 2011-2015}



* This figure is based on the data in the Table 5 "Dose Distribution of Workers by Gender{Fiscal 2015}and those of the latest four years {Fiscal 2011－2014}.
* Dose data of the emergency workers at Fukushima Daiichi Nuclear Power Plant are not included.

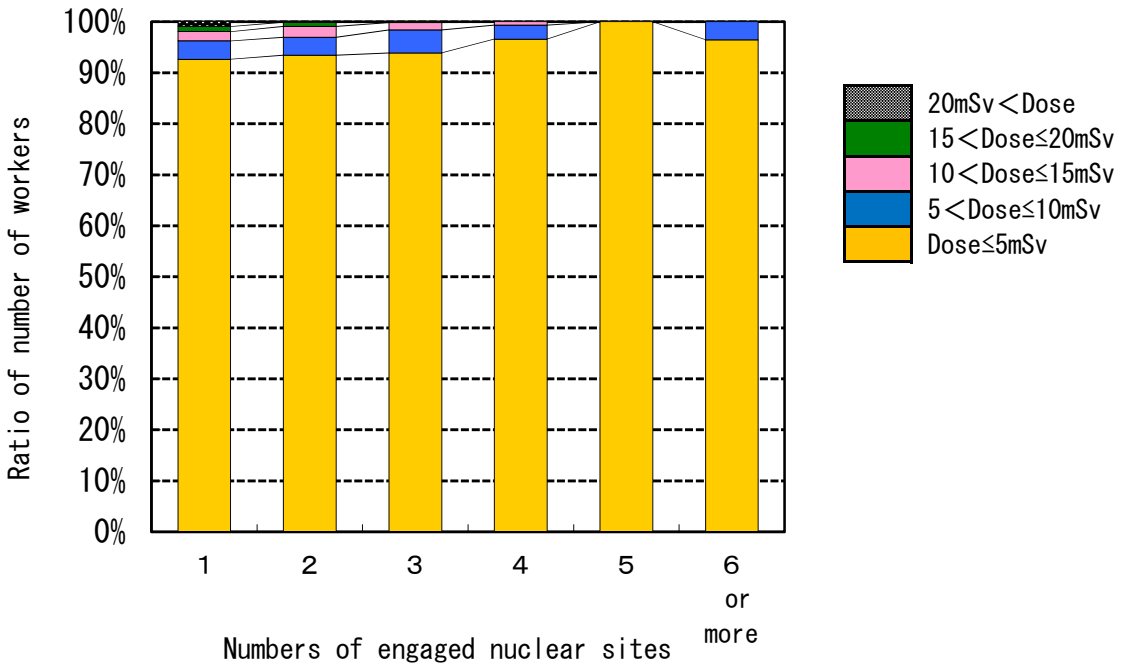
8. Dose Distribution of Workers by Number of Engaged Sites {Fiscal 2015}

No. of engaged sites / Dose (mSv)	1	2	3	4	5	6 or more	Total no. of wokers (%)
Dose ≤ 5	58,727	6,472	1,119	283	70	27	66,698 (92.8)
5< Dose ≤10	2,292	243	54	8	0	1	2,598 (3.6)
10< Dose ≤15	1,157	146	17	2	0	0	1,322 (1.8)
15< dose ≤20	636	57	2	0	0	0	695 (1.0)
20 <Dose ≤25	245	6	0	0	0	0	251 (0.3)
25< Dose ≤30	160	1	0	0	0	0	161 (0.3)
30< Dose ≤40	178	1	0	0	0	0	179 (0.2)
40< Dose ≤50	1	0	0	0	0	0	1 (0.0)
50< Dose	0	0	0	0	0	0	0 (0.0)
Total no. of wokers (%)	63,396 (88.2)	6,926 (9.6)	1,192 (1.7)	293 (0.4)	70 (0.1)	28 (0.0)	71,905 (100.0)
Mean dose (mSv)	1.2	1.1	1.1	0.8	0.5	0.5	1.2

[Notes on the table]

- How to read the table entries : The number "70" in the box for the dose row of "Dose≤5" and the number of engaged sites of "5" column means that there were 70 workers who were engaged in five engaged sites and whoes radiation doses were less than 5 millisievert in Fiscal 2015.
- Dose data of the emergency workers at Fukushima Daiichi Nuclear Power Plant are not included.

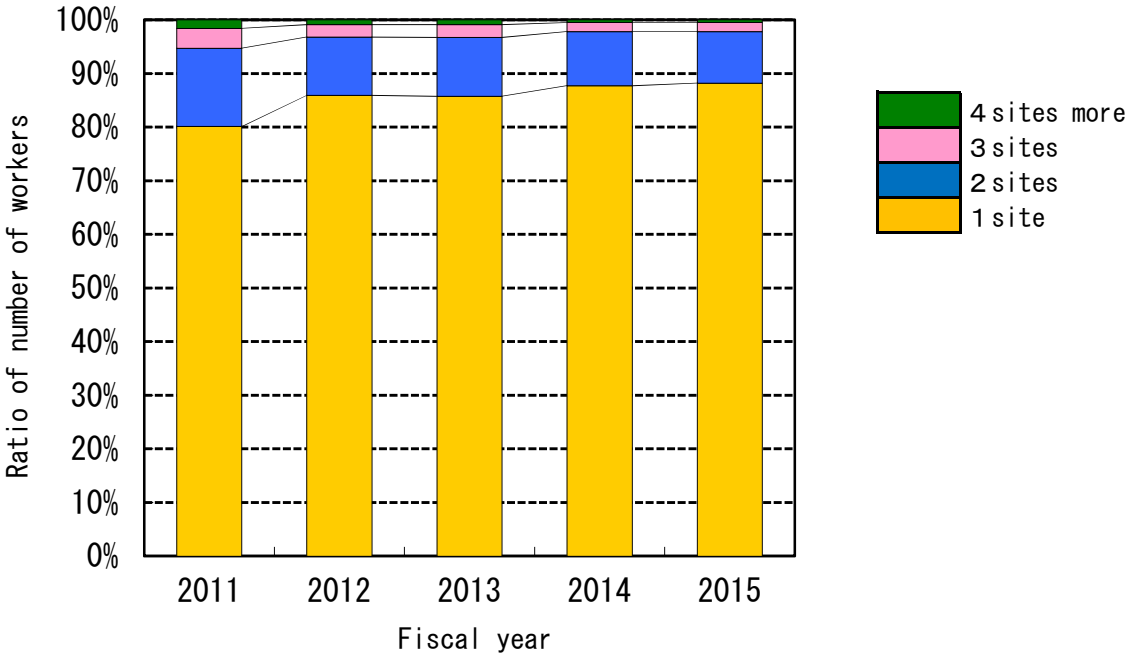
9. Ratio of Number of Workers by Number of Engaged Sites {Fiscal 2015}



* This figure is based on the data in the Table 8 "Dose Distribution of Workers by Number of Engaged Sites{Fiscal 2015}".

* Dose data of the emergency workers at Fukushima Daiichi Nuclear Power Plant are not included.

10. Annual Trends of Ratio of Workers by Number of Engaged Sites {Fiscal 2011-2015}



* This figure is based on the data in the Table 8 "Dose Distribution of Workers by Number of Engaged Sites [Fiscal 2015] and those of the latest four years

* Dose data of the emergency workers at Fukushima Daiichi Nuclear Power Plant are not included.

11. Dose Distribution of Workers by Number of Engaged Sites {Fiscal 2015}
(Excluding The Data for Fukushima Daiichi Nuclear Power Plant)

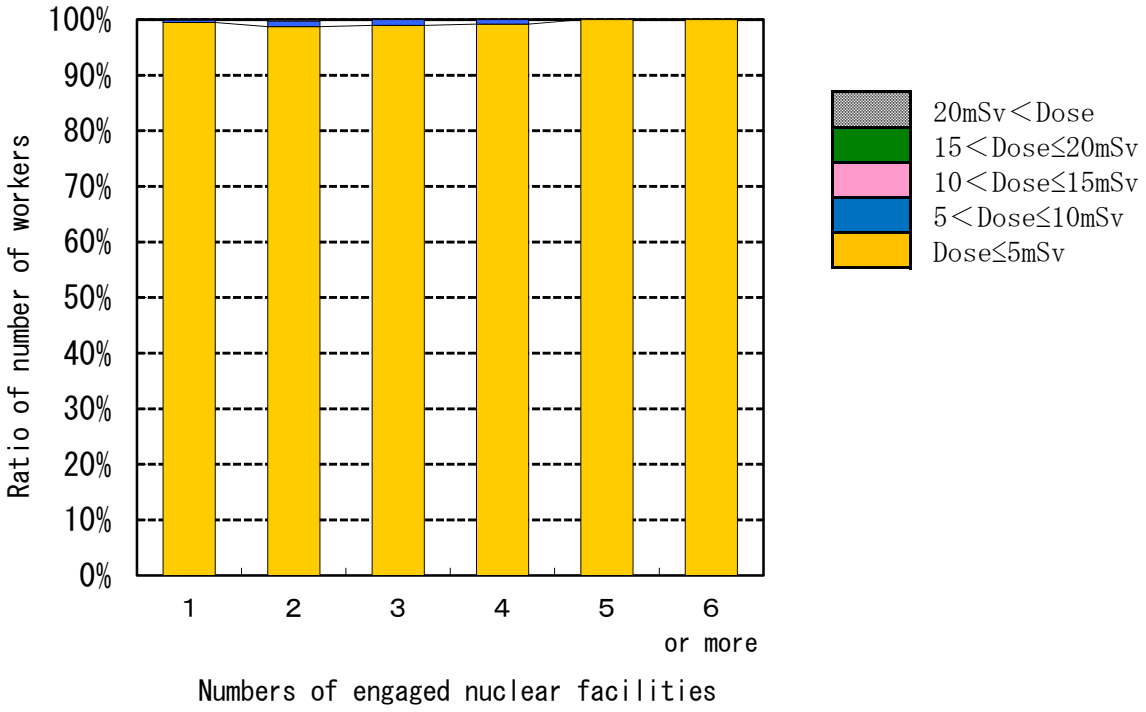
No. of engaged sites / Dose (mSv)	1	2	3	4	5	6 or more	Total no. of wokers (%)
Dose ≤ 5	48,478	5,571	981	249	59	24	55,362 (99.4)
5< Dose ≤10	220	60	10	2	0	0	292 (0.5)
10 < Dose ≤15	36	10	0	0	0	0	46 (0.1)
15< Dose ≤20	1	1	0	0	0	0	2 (0.0)
20< Dose ≤25	0	0	0	0	0	0	0 (0.0)
25< Dose ≤30	0	0	0	0	0	0	0 (0.0)
30< Dose ≤40	0	0	0	0	0	0	0 (0.0)
40< Dose ≤50	0	0	0	0	0	0	0 (0.0)
50 < Dose	0	0	0	0	0	0	0 (0.0)
Total no. of wokers (%)	48,735 (87.5)	5,642 (10.1)	991 (1.8)	251 (0.5)	59 (0.1)	24 (0.0)	55,702 (100.0)
Means dose (mSv)	0.2	0.4	0.4	0.4	0.5	0.1	0.2

[Notes on the table]

- This table was compiled by excluding the data for Fukushima Daiichi Nuclear Power Plant. The dose data of workers at Fukushima Daiichi Nuclear Power Plant are shown in HP of Tokyo Electric Power Co., Inc.
- How to read the table entries : The number "59" in the box for the dose row of "Dose≤5" and the number of engaged sites of "5" column means that there were 59 workers who were engaged in five nuclear sites and whoes radiation doses were less than 5 millisievert in Fiscal 2015.
- Dose data of the emergency workers at Fukushima Daiichi Nuclear Power Plant are not included.

12. Dose Distribution of Workers by Number of Engaged Sites {Fiscal 2015}

(Excluding The Data for Fukushima Daiichi Nuclear Power Plant)



* This figure is based on the data in the Table 11 "Dose Distribution of Workers by Number of Engaged Sites {Fiscal 2015}".

* Dose data of the emergency workers at Fukushima Daiichi Nuclear Plant are not included.

13. Transitinal Dose Distribution of Workers by Number of Engaged Sites in Five Years {Fiscal 2011-2015}

No. of egaged sites in five years / Dose (mSv)	1	2	3	4	5	6	7	8 or more	Total no. of wokers (%)
Dose ≤5	83,850	16,667	5,347	2,302	1,031	494	208	191	110,090 (83.8)
5< Dose ≤10	4,364	1,617	802	507	262	128	72	35	7,787 (5.9)
10< Dose ≤15	2,237	809	450	288	158	74	42	20	4,078 (3.1)
15< Dose ≤20	1,493	518	286	170	123	45	31	18	2,684 (2.0)
20< Dose ≤25	1,013	314	158	110	61	25	16	7	1,704 (1.3)
25< Dose 300	714	233	118	64	39	18	11	7	1,204 (0.9)
30< Dose ≤40	1,036	343	182	97	47	19	10	4	1,738 (1.3)
40< Dose ≤50	588	192	110	47	24	14	2	1	978 (0.7)
50< Dose ≤60	389	108	55	19	16	4	2	0	593 (0.5)
60< Dose ≤70	220	43	32	8	6	4	0	0	313 (0.2)
70< Dose ≤80	115	12	9	5	3	2	0	0	146 (0.1)
80< Dose ≤90	5	3	2	2	0	0	0	0	12 (0.0)
90< Dose ≤100	0	0	0	0	0	0	0	0	0 (0.0)
100< Dose	0	0	0	0	0	0	0	0	0 (0.0)
Total no. of wokers	96,024	20,859	7,551	3,619	1,770	827	394	283	131,327
(%)	(73.1)	(15.9)	(5.7)	(2.8)	(1.3)	(0.6)	(0.3)	(0.2)	(100.0)
Mean dose (mSv)	2.8	4.1	6.0	6.8	7.9	7.6	7.9	5.5	3.4

[Notes on the table]

- The exposure dose limits for workers are set at 100 millisievert per five years and 50 millisievert per one year. Five years means the statutory period that began 1 April 2001 renewed every subsequent five years.
- How to read the table entries : The number "262" in the box for the dose row of "5< Dose ≤10" and in column of the no. of engaged sites in five years "5" means that there were 262 workers who engaged in radiation works at five engaged sites in five years and whose radiation doses were greater than 5 andless than or equql to 10 millisieverts from 2011 to 2015(fiscal).
- Dose data of the emergency workers at Fukushima Daiichi Nuclear Power Plant are not included.

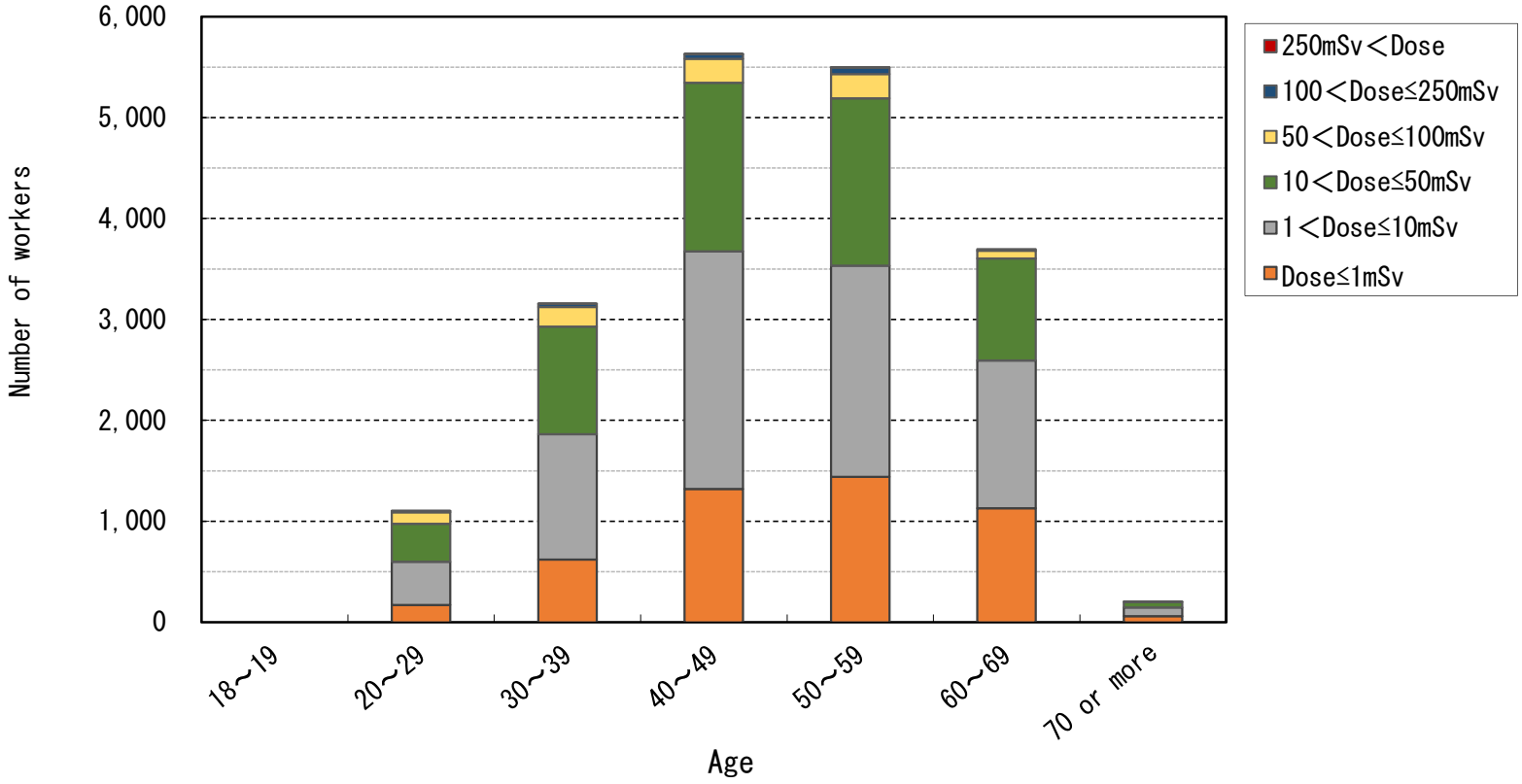
14. Dose Distribution of Workers Engaged in The Emergency Works by Age{Fiscal 2010-2015}

Dose (mSv) / Age	No. of workers											Total no. of wokers		Dose		
	Dose ≤1	1< Dose ≤5	5< Dose ≤10	10< Dose ≤30	30< Dose ≤50	30< Dose ≤70	70< Dose ≤100	100< Dose ≤150	150< Dose ≤200	200< Dose ≤250	250<Dose	人	(%)	Collective dose (person・mSv)	Mean (mSv)	Max (mSv)
18～19	0	0	0	0	0	0	0	0	0	0	0	0	(0.0)	0.0	0.0	0.0
20～29	170	265	164	316	59	42	74	8	3	0	2	1,103	(5.7)	20,676.3	18.7	477.0
30～39	621	790	451	862	206	97	96	26	1	3	1	3,154	(16.4)	46,770.0	14.8	311.0
40～49	1,321	1,467	887	1,350	321	123	113	39	8	0	2	5,631	(29.2)	70,653.9	12.5	678.8
50～59	1,440	1,336	758	1,278	380	138	100	52	14	0	1	5,497	(28.5)	71,912.7	13.1	353.1
60～69	1,128	946	518	794	217	59	19	12	2	0	0	3,695	(19.2)	35,680.1	10.1	197.0
70 or more	60	62	25	45	9	0	3	0	0	0	0	204	(1.1)	1,710.3	8.4	89.5
Total no. of wokers	4,740	4,866	2,803	4,645	1,192	459	405	137	28	3	6	19,284	(100.0)	—	—	—
(%)	(24.6)	(25.2)	(14.5)	(24.1)	(6.2)	(2.4)	(2.1)	(0.7)	(0.2)	(0.0)	(0.0)					
Collective dose (person･mSv)	1757.0	12663.4	20826.7	81230.6	45658.0	27013.5	33334.7	16598.5	4790.2	704.6	2826.2	—		247,403.2	12.8	678.8

[Notes on the table]

- How to read the table entries : The number "316" in the box for the dose row of "10 < Dose ≤30" and column of age of "20～29" means that there were 316 workers between ages 20 and 29 inclusive at the end of Fiscal 2015 and whoes radiation doses were greater than 10 and less than or equal to 30 millisieverts.
- The workers' ages were based on the Western style of calculating age,with day of birth as zero,as 31 March 2016.

15. Dose Distribution of Workers Engaged in The Emergency Works by Age{Fiscal 2010-2015}



* This figure is based on the data in the Table 14 "Dose Distribution of Workers Engeged in The Emergency Works by Age{Fiscal 2010-2015}"

16. Annual Trends of Dose Distribution of Workers in The Emergency Works {Fiscal 2010-2015}

fiscal year / Dose(mSv)	No. of workers					
	2010	2011	2012	2013	2014	2015
Dose ≤ 50 (%)	3,569 (89.90)	17,384 (99.00)	651 (99.85)	795 (100.00)	758 (100.00)	673 (100.00)
50< Dose ≤ 100 (%)	294 (7.41)	166 (0.95)	1 (0.15)	0 (0.00)	0 (0.00)	0 (0.00)
100< Dose ≤ 250 (%)	101 (2.50)	1 (0.01)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
250< Dose (%)	6 (0.16)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
Total no. of wokers (%)	3,970 (100.00)	17,551 (100.00)	652 (100.00)	795 (100.00)	758 (100.00)	673 (100.00)

[Notes on the table]

- Radiation doses of workers engaged in the emergency works from 2010 to 2015(each fiscal year) were compiled.
- How to read the table entries : The number "294" in the box for the dose row of "50<Dos ≤100"in fiscal 2010 means that there were 294 workers who engaged in the emergency works whoes radiation doses were greater than 50 and less than 100 millisieverts in this fiscal year.