


Table 5.7
Career External Dose (DDE) Distribution By Dose and Career Length At Reactor Facilities
Career Ending 2013

Career Length	Number of Persons in Dose Range (rems)															Grand Total
	No Meas.	.001 - .1	.1 - .5	.5 - 1	1 - 2	2 - 3	3 - 4	4 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 50	>=50	
<=30 days	2,145	283	55	1	-	-	-	-	-	-	-	-	-	-	-	2,484
31 days - 6 mos	1,290	483	168	7	-	-	-	-	-	-	-	-	-	-	-	1,948
6 mos - 1 yr	1,276	592	200	16	2	-	-	-	-	-	-	-	-	-	-	2,086
1 - 2 yrs	801	460	250	39	12	1	-	-	-	-	-	-	-	-	-	1,563
2 - 3 yrs	571	447	247	63	26	6	-	-	-	-	-	-	-	-	-	1,360
3 - 4 yrs	387	378	316	82	29	3	2	-	1	-	-	-	-	-	-	1,198
4 - 5 yrs	269	269	202	66	48	5	6	3	1	-	-	-	-	-	-	869
5 - 10 yrs	685	667	665	274	198	67	20	18	15	1	-	-	-	-	-	2,610
10 - 15 yrs	223	234	294	157	144	57	26	16	38	2	1	-	-	-	-	1,192
15 - 20 yrs	147	185	197	103	107	49	36	14	35	7	2	-	-	-	-	882
20 - 25 yrs	106	206	205	136	132	59	48	39	89	22	3	2	1	4	-	1,052
25 - 30 yrs	152	307	269	160	202	122	80	56	177	66	23	10	6	7	-	1,637
30 - 35 yrs	41	198	260	169	182	115	93	64	241	103	58	42	16	27	-	1,609
>= 35 yrs	15	56	97	53	73	40	51	33	109	51	46	31	18	42	3	718
Grand Total	8,108	4,765	3,425	1,326	1,155	524	362	243	706	252	133	85	41	80	3	21,208

14.27 yrs Average Career Length for Individuals with Measurable Career Exposure
1.81 rem Average Career Dose for Individuals with Measurable Dose

Scroll to the right for
source data 

16.48 yrs Average Career Length for Individuals with Measurable Career Exposure and Careers Lengths of at Least One Year
2.08 rem Average Career Dose for Individuals with Measurable Dose with Career Length of at Least One Year

Only individuals that ended monitoring in 2013 are included in this analysis.

For career length and dose bins, values that are equal to the maximum end of the range are assigned to the next higher bin (i.e., a dose of 0.1 would be assigned to the 0.1-0.5 dose bin).

2013					
DoseRange	CareerLen	NumPersons	DoseRange	CareerLen	NumPersons
1	1	2145	No Meas.	<=30 days	2,145
1	2	1290	No Meas.	31 days - 6 mos	1,290
1	3	1276	No Meas.	6 mos - 1 yr	1,276
1	4	801	No Meas.	1 - 2 yrs	801
1	5	571	No Meas.	2 - 3 yrs	571
1	6	387	No Meas.	3 - 4 yrs	387
1	7	269	No Meas.	4 - 5 yrs	269
1	8	685	No Meas.	5 - 10 yrs	685
1	9	223	No Meas.	10 - 15 yrs	223
1	10	147	No Meas.	15 - 20 yrs	147
1	11	106	No Meas.	20 - 25 yrs	106
1	12	152	No Meas.	25 - 30 yrs	152
1	13	41	No Meas.	30 - 35 yrs	41
1	14	15	No Meas.	> 35 yrs	15
2	1	283	.001 - .1	<=30 days	283
2	2	483	.001 - .1	31 days - 6 mos	483
2	3	592	.001 - .1	6 mos - 1 yr	592
2	4	460	.001 - .1	1 - 2 yrs	460
2	5	447	.001 - .1	2 - 3 yrs	447
2	6	378	.001 - .1	3 - 4 yrs	378
2	7	269	.001 - .1	4 - 5 yrs	269
2	8	667	.001 - .1	5 - 10 yrs	667
2	9	234	.001 - .1	10 - 15 yrs	234
2	10	185	.001 - .1	15 - 20 yrs	185
2	11	206	.001 - .1	20 - 25 yrs	206
2	12	307	.001 - .1	25 - 30 yrs	307
2	13	198	.001 - .1	30 - 35 yrs	198
2	14	56	.001 - .1	> 35 yrs	56
3	1	55	.1 - .5	<=30 days	55
3	2	168	.1 - .5	31 days - 6 mos	168
3	3	200	.1 - .5	6 mos - 1 yr	200
3	4	250	.1 - .5	1 - 2 yrs	250
3	5	247	.1 - .5	2 - 3 yrs	247
3	6	316	.1 - .5	3 - 4 yrs	316
3	7	202	.1 - .5	4 - 5 yrs	202
3	8	665	.1 - .5	5 - 10 yrs	665
3	9	294	.1 - .5	10 - 15 yrs	294
3	10	197	.1 - .5	15 - 20 yrs	197
3	11	205	.1 - .5	20 - 25 yrs	205
3	12	269	.1 - .5	25 - 30 yrs	269
3	13	260	.1 - .5	30 - 35 yrs	260
3	14	97	.1 - .5	> 35 yrs	97
4	1	1	.5 - 1	<=30 days	1
4	2	7	.5 - 1	31 days - 6 mos	7
4	3	16	.5 - 1	6 mos - 1 yr	16
4	4	39	.5 - 1	1 - 2 yrs	39

4	5	63
4	6	82
4	7	66
4	8	274
4	9	157
4	10	103
4	11	136
4	12	160
4	13	169
4	14	53
5	1	
5	2	
5	3	2
5	4	12
5	5	26
5	6	29
5	7	48
5	8	198
5	9	144
5	10	107
5	11	132
5	12	202
5	13	182
5	14	73
6	1	
6	2	
6	3	
6	4	1
6	5	6
6	6	3
6	7	5
6	8	67
6	9	57
6	10	49
6	11	59
6	12	122
6	13	115
6	14	40
7	1	
7	2	
7	3	
7	4	
7	5	
7	6	2
7	7	6
7	8	20
7	9	26
7	10	36
7	11	48

.5 - 1	2 - 3 yrs	63
.5 - 1	3 - 4 yrs	82
.5 - 1	4 - 5 yrs	66
.5 - 1	5 - 10 yrs	274
.5 - 1	10 - 15 yrs	157
.5 - 1	15 - 20 yrs	103
.5 - 1	20 - 25 yrs	136
.5 - 1	25 - 30 yrs	160
.5 - 1	30 - 35 yrs	169
.5 - 1	> 35 yrs	53
1 - 2	<=30 days	-
1 - 2	31 days - 6 mos	-
1 - 2	6 mos - 1 yr	2
1 - 2	1 - 2 yrs	12
1 - 2	2 - 3 yrs	26
1 - 2	3 - 4 yrs	29
1 - 2	4 - 5 yrs	48
1 - 2	5 - 10 yrs	198
1 - 2	10 - 15 yrs	144
1 - 2	15 - 20 yrs	107
1 - 2	20 - 25 yrs	132
1 - 2	25 - 30 yrs	202
1 - 2	30 - 35 yrs	182
1 - 2	> 35 yrs	73
2 - 3	<=30 days	-
2 - 3	31 days - 6 mos	-
2 - 3	6 mos - 1 yr	-
2 - 3	1 - 2 yrs	1
2 - 3	2 - 3 yrs	6
2 - 3	3 - 4 yrs	3
2 - 3	4 - 5 yrs	5
2 - 3	5 - 10 yrs	67
2 - 3	10 - 15 yrs	57
2 - 3	15 - 20 yrs	49
2 - 3	20 - 25 yrs	59
2 - 3	25 - 30 yrs	122
2 - 3	30 - 35 yrs	115
2 - 3	> 35 yrs	40
3 - 4	<=30 days	-
3 - 4	31 days - 6 mos	-
3 - 4	6 mos - 1 yr	-
3 - 4	1 - 2 yrs	-
3 - 4	2 - 3 yrs	-
3 - 4	3 - 4 yrs	2
3 - 4	4 - 5 yrs	6
3 - 4	5 - 10 yrs	20
3 - 4	10 - 15 yrs	26
3 - 4	15 - 20 yrs	36
3 - 4	20 - 25 yrs	48

7	12	80
7	13	93
7	14	51
8	1	
8	2	
8	3	
8	4	
8	5	
8	6	
8	7	3
8	8	18
8	9	16
8	10	14
8	11	39
8	12	56
8	13	64
8	14	33
9	1	
9	2	
9	3	
9	4	
9	5	
9	6	1
9	7	1
9	8	15
9	9	38
9	10	35
9	11	89
9	12	177
9	13	241
9	14	109
10	1	
10	2	
10	3	
10	4	
10	5	
10	6	
10	7	
10	8	1
10	9	2
10	10	7
10	11	22
10	12	66
10	13	103
10	14	51
11	1	
11	2	
11	3	
11	4	

3 - 4	25 - 30 yrs	80
3 - 4	30 - 35 yrs	93
3 - 4	> 35 yrs	51
4 - 5	<=30 days	-
4 - 5	31 days - 6 mos	-
4 - 5	6 mos - 1 yr	-
4 - 5	1 - 2 yrs	-
4 - 5	2 - 3 yrs	-
4 - 5	3 - 4 yrs	-
4 - 5	4 - 5 yrs	3
4 - 5	5 - 10 yrs	18
4 - 5	10 - 15 yrs	16
4 - 5	15 - 20 yrs	14
4 - 5	20 - 25 yrs	39
4 - 5	25 - 30 yrs	56
4 - 5	30 - 35 yrs	64
4 - 5	> 35 yrs	33
5 - 10	<=30 days	-
5 - 10	31 days - 6 mos	-
5 - 10	6 mos - 1 yr	-
5 - 10	1 - 2 yrs	-
5 - 10	2 - 3 yrs	-
5 - 10	3 - 4 yrs	1
5 - 10	4 - 5 yrs	1
5 - 10	5 - 10 yrs	15
5 - 10	10 - 15 yrs	38
5 - 10	15 - 20 yrs	35
5 - 10	20 - 25 yrs	89
5 - 10	25 - 30 yrs	177
5 - 10	30 - 35 yrs	241
5 - 10	> 35 yrs	109
10 - 15	<=30 days	-
10 - 15	31 days - 6 mos	-
10 - 15	6 mos - 1 yr	-
10 - 15	1 - 2 yrs	-
10 - 15	2 - 3 yrs	-
10 - 15	3 - 4 yrs	-
10 - 15	4 - 5 yrs	-
10 - 15	5 - 10 yrs	1
10 - 15	10 - 15 yrs	2
10 - 15	15 - 20 yrs	7
10 - 15	20 - 25 yrs	22
10 - 15	25 - 30 yrs	66
10 - 15	30 - 35 yrs	103
10 - 15	> 35 yrs	51
15 - 20	<=30 days	-
15 - 20	31 days - 6 mos	-
15 - 20	6 mos - 1 yr	-
15 - 20	1 - 2 yrs	-

11	5	
11	6	
11	7	
11	8	
11	9	1
11	10	2
11	11	3
11	12	23
11	13	58
11	14	46
12	1	
12	2	
12	3	
12	4	
12	5	
12	6	
12	7	
12	8	
12	9	
12	10	
12	11	2
12	12	10
12	13	42
12	14	31
13	1	
13	2	
13	3	
13	4	
13	5	
13	6	
13	7	
13	8	
13	9	
13	10	
13	11	1
13	12	6
13	13	16
13	14	18
14	1	
14	2	
14	3	
14	4	
14	5	
14	6	
14	7	
14	8	
14	9	
14	10	
14	11	4

15 - 20	2 - 3 yrs	-
15 - 20	3 - 4 yrs	-
15 - 20	4 - 5 yrs	-
15 - 20	5 - 10 yrs	-
15 - 20	10 - 15 yrs	1
15 - 20	15 - 20 yrs	2
15 - 20	20 - 25 yrs	3
15 - 20	25 - 30 yrs	23
15 - 20	30 - 35 yrs	58
15 - 20	> 35 yrs	46
20 - 25	<=30 days	-
20 - 25	31 days - 6 mos	-
20 - 25	6 mos - 1 yr	-
20 - 25	1 - 2 yrs	-
20 - 25	2 - 3 yrs	-
20 - 25	3 - 4 yrs	-
20 - 25	4 - 5 yrs	-
20 - 25	5 - 10 yrs	-
20 - 25	10 - 15 yrs	-
20 - 25	15 - 20 yrs	-
20 - 25	20 - 25 yrs	2
20 - 25	25 - 30 yrs	10
20 - 25	30 - 35 yrs	42
20 - 25	> 35 yrs	31
25 - 30	<=30 days	-
25 - 30	31 days - 6 mos	-
25 - 30	6 mos - 1 yr	-
25 - 30	1 - 2 yrs	-
25 - 30	2 - 3 yrs	-
25 - 30	3 - 4 yrs	-
25 - 30	4 - 5 yrs	-
25 - 30	5 - 10 yrs	-
25 - 30	10 - 15 yrs	-
25 - 30	15 - 20 yrs	-
25 - 30	20 - 25 yrs	1
25 - 30	25 - 30 yrs	6
25 - 30	30 - 35 yrs	16
25 - 30	> 35 yrs	18
30 - 50	<=30 days	-
30 - 50	31 days - 6 mos	-
30 - 50	6 mos - 1 yr	-
30 - 50	1 - 2 yrs	-
30 - 50	2 - 3 yrs	-
30 - 50	3 - 4 yrs	-
30 - 50	4 - 5 yrs	-
30 - 50	5 - 10 yrs	-
30 - 50	10 - 15 yrs	-
30 - 50	15 - 20 yrs	-
30 - 50	20 - 25 yrs	4

SQL used to extract data:

```
SELECT MyTbl.DoseRange, MyTbl.CareerLen, Count(*) AS NumPersons FROM MyTbl WHERE (((Year([MaxMon]))<=[LastYearOfWork])) GROUP BY MyTbl.DoseRange, Tbl.CareerLen;
```

```
SELECT Round(Avg(DateDiff('d',[MinMon],[MaxMon])/365),2) AS AvgCareerLen, Round(Avg([TotDDE]),2) AS AvgCareerDose FROM MyTbl WHERE (((MyTbl.DoseRange)>1) AND ((Year([MaxMon]))<=[LastYearOfWork]) AND ((MyTbl.CareerLen)>=[OneYear]));
```

```
SELECT Round(Avg(DateDiff('d',[MinMon],[MaxMon])/365),2) AS AvgCareerLen, Round(Avg([TotDDE]),2) AS AvgCareerDose FROM MyTbl WHERE (((MyTbl.DoseRange)>1) AND ((Year([MaxMon]))<=[LastYearOfWork]));
```

CareerLen is determined by establishing the difference between the last Monitoring_End_Date and the first Monitoring_Begin_Date.