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2008 Report on Occupational Radiation Exposures in Canada



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2008 Report on Occupational Radiation Exposures in Canada

Environmental and Radiation
Health Sciences Directorate

Healthy Environments and
Consumer Safety Branch

Abstract

The report provides statistics on occupational radiation exposures for use by regulatory authorities, organizations and private individuals. Out of a total of 153,133 monitored workers, 3 annual doses exceeded the regulatory limit of 50 mSv in 2007. Out of 71 specified job categories 30 had a smaller annual average in 2007 than in 2006, 27 had a higher average, and 14 had the same average rounded to 0.01 mSv. The average annual dose in the NDR was 0.33 mSv and the average positive annual dose 1.41 mSv.

The largest increase in average dose from 2006 to 2007 was 0.64 mSv for the mechanical technicians at particle accelerators. The largest decrease was 2.00 mSv for the fuel handlers at nuclear power stations.

Some marked decreasing 10-year trends were found in the following occupations: industrial radiographers, nuclear fuel processors, nuclear reactor workers – fuel handling, uranium mill maintenance workers, and uranium mine support workers. Substantial increasing trends were found for nuclear medicine technologists and for industrial radiographers in nuclear power stations.

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Introduction

The purpose of this series of reports is to provide statistics on occupational radiation exposures of monitored workers in Canada. The statistics are intended to assist regulatory authorities, organizations, and private individuals in comparing incurred occupational radiation exposures with national or provincial/territorial averages and trends in similar occupations. This report, as well as previous report, can be found on the web site of the National Dose Registry (NDR)⁽¹⁾ and downloaded. Earlier reports can be obtained from the author.

The information is based on the data in the NDR maintained by the Radiation Protection Bureau of Health Canada⁽¹⁾. The Registry is a centralized record-keeping system containing dose information on all monitored workers in Canada. It includes data submitted by nuclear power generating stations, Atomic Energy of Canada Ltd., uranium mines, and dosimeter processing companies.

Information for input into the NDR is received either via a direct link or by mail in computer readable form.

The report provides data on the two consecutive years prior to the year in which the data are extracted from the database. The data for the second (i.e. more recent) year will be close to complete at the time of data extraction. Some changes may still occur, for which the most frequent causes are: (1) a high dose to a dosimeter is judged to be non-personal after investigation; (2) a job category of a worker is updated; or, (3) dosimeters or data are returned late. The report therefore contains preliminary data on the second year (Table 1), and more complete data on the first year (Tables 2-6).

For a description and a guide to interpretation of the data, the reader is referred to the next section "General comments". The section "Comments specific to this report" has been included to address situations that do not recur from year to year.

General comments

The statistics include doses as they exist in the database at the time they are extracted for analysis, which in the case of this report is August 30, 2008. Doses are assigned to the year in which the dosimeter was issued, even though some of the dosimeters may actually have been worn during part of the subsequent year. As the statistics are determined in the same manner each year, the annual dose figures are based on a 12-month period, though not necessarily the strict calendar year.

Dose records submitted by all organizations such as nuclear power generating stations, uranium mines, and commercial processors, are included to the extent that they have been received. The doses are representative of the calendar year only if the fourth quarter records have been received by the time of analysis. When statistics are based on partial data, the fact is indicated in the section "Comments specific to this report".

All doses are in International System (SI) units and presented to the nearest hundredth of a millisievert (1 mSv = 100 mrem). For the external whole body doses various organizations have set reporting thresholds from 0 to 0.1 mSv. Doses below the threshold are reported to the NDR as 0. In calculating descriptive dose statistics all dose values have been used as reported, regardless of reporting threshold. In the parametric estimations of Table 4, reporting thresholds have been taken into account. In very low dose occupations such as dentists, this produces higher and more realistic estimates of the average dose than does the sample average.

The words "dose" and "exposure" are used interchangeably in this report. Doses of different types of radiation are expressed in mSv and added to give the effective dose stated in the report. The following dose types may be included:

- External whole body gamma.
- External whole body high energy beta.
- External whole body X-ray.
- External whole body neutron.
- Internal whole body tritium, as determined by urinalysis.
- Radon progeny exposures, converted from WLM values (see below).

All types of exposure are given in one total. In Table 5, the percentage contribution of radon progeny and tritium components are indicated. Skin doses and extremity doses are not included in the report but are recorded in the database.

In the NDR database, radon progeny exposures are expressed in Working Level Months (WLM), which are in most cases calculated by the mines on the basis of area monitoring⁽²⁾. In the report the radon progeny exposures are converted to equivalent doses (in mSv). The value used in this report is 5 mSv/WLM, in accordance with the radiation protection regulations⁽³⁾ under the *Nuclear Safety and Control Act*.

Job category designations are based on a standard list provided by the Registry and are updated when the Registry is notified. The job category is selected by the organization from a standard list maintained by the NDR. The NDR keeps the most recent job category that an organization submits for a worker in a given year. However, a worker who has been monitored by more than one organization, can have records under more than one job category for the same year. Some organizations have their own job classifications schemes, and translate them into the Registry's standardized list prior to submission of the records.

In this report, the data are tabulated as follows:

2007: Preliminary analysis

Table 1:

Table 1 gives the annual dose distributions by job category.

2006: Final Analysis

Table 2:

Table 2 contains dose statistics by job category and province or territory.

Table 3:

Table 3 contains dose statistics by age and sex. In this table job categories have been grouped into "job sectors".

Table 4:

Table 4 contains various dose statistics by job category. The table also shows the parameters of the statistical distribution applied to the doses, as determined by maximum likelihood estimation. From that information, model estimates and confidence intervals for these statistics have been calculated. For a more detailed discussion the reader is referred to the Appendix and reference [5].

Table 4 lists statistics for annual doses and for doses over fixed and rolling five year blocks, for use in comparing doses with various regulatory limits. New fixed five year blocks start in 2001, 2006, and so on. New rolling five year blocks start each calendar year.

Table 5:

Table 5 lists collective annual doses for job categories with percentages of tritium and radon progeny exposures.

Table 6:

Table 6 shows 10 year trends in number of workers and average dose for the various job categories.

It should be noted that in the tables, a worker is counted more than once if he (she) works in more than one job category, in more than one province, or in more than one job sector in the same year. For this reason the totals and subtotals in the Tables may appear to be inconsistent.

Comments specific to this report

Dose distributions are described with statistical models defined by a set of four parameters. A method for obtaining point estimates for model statistics is outlined in the Appendix and in more detail in reference [5]. A method for obtaining confidence intervals is described in reference [5] only. Starting with the 2006 Annual Report, Table 4 compares model statistics and their confidence intervals with observed statistics. This gives some indication of the usefulness of the fit for estimating statistics that are not listed in this report and for predictive purposes. The statistical models work quite well for job categories in nuclear power production, uranium mining, and particle accelerator research, less so for medicine and industry. It is to be noted that no literature exists on statistical models as applied to doses accumulating in 5 year blocks. Generally, they do not seem to perform as well as models of annual doses. More analyses need to be run in subsequent annual reports so that clearer patterns emerge from which firmer conclusions can be drawn.

Starting with this report, the job category 'student', previously part of "Miscellaneous/Unknown" will be reported separately. Although no particular type of work can be inferred, the number of workers in this category has become too large to ignore. The job category will be included in the sector previously called 'Administration' which has been renamed to 'Shared among all sectors'.

The dose statistics over the fixed 5-year blocks 2006-2010 have not been calculated separately as they are the same as the annual doses for 2006.

The shortcut to the NDR's web site is no longer available. See the bibliography for information.

References

1. The National Dose Registry's Web site is found at:

www.hc-sc.gc.ca

Click on English, A-Z Index, N, and National Dose Registry.

2. ICRP publication 65, "Protection against Radon-222 at home and at work", Annals of the ICRP 23(2), p. 4 (1993).

3. Regulations of the *Nuclear Safety and Control Act, Canada Gazette*, June 21, 2000, part 2. For more information see the Web site of the CNSC:

www.cnsc-ccsn.gc.ca

4. Kumazawa, S. and Numakunai, T. "A new theoretical analysis of occupational dose distributions indicating the effect of dose limits", Health Physics 41(3) pp. 465-475 (1981).

5. Sont, W.N. "A family of statistical distributions for modelling occupational radiation doses in low dose occupations", Radiat Prot Dosimetry 121(3) pp. 275-283 (2006).

2007 Preliminary Analysis

Table 1
Breakdown of annual doses by job category for all of Canada

Job Category	Distribution of workers over dose intervals							Number of Workers	Avg. Dose (mSv)	Avg. of Positive Doses
	0 mSv	>0-1 mSv	>1-2 mSv	>2-5 mSv	>5-20 mSv	>20-50 mSv	>50 mSv			
Shared among all sectors										
Administrator	473	195	3	1	0	0	0	672	0.11	0.36
Office staff	2942	375	17	8	0	0	0	3342	0.04	0.36
Safety officer	303	73	2	4	1	0	0	383	0.10	0.48
Student	14430	842	55	38	8	1	0	15374	0.03	0.49
Industry and Research										
Aircrew	11	2	3	0	0	0	0	16	0.26	0.85
Ground transportation	41	37	6	10	3	0	0	97	0.74	1.29
Industrial radiographer	1207	517	250	446	422	6	0	2848	2.06	3.58
Instructor (non-medical)	306	35	0	1	0	0	0	342	0.04	0.38
Instrument technician	1490	543	34	29	8	0	0	2104	0.17	0.58
Laboratory technician (industrial)	1968	649	69	59	12	0	0	2757	0.21	0.73
Nuclear fuel processor	229	343	86	71	27	0	0	756	0.86	1.24
Scientist/Engineer (field)	785	668	80	35	11	0	0	1579	0.34	0.68
Scientist/Engineer (laboratory)	3299	524	15	7	4	0	0	3849	0.04	0.30
Security	198	18	0	0	0	0	0	216	0.02	0.19
Tradesmen	112	44	2	2	0	0	0	160	0.10	0.32
Well logger	696	1193	160	78	8	0	0	2135	0.40	0.59
Medicine										
Chiropractor	1056	72	3	1	1	0	0	1133	0.03	0.43
Dental assistant	13698	388	9	1	3	0	0	14099	0.01	0.28
Dental hygienist	9837	245	3	1	3	1	0	10090	0.01	0.44
Dental therapist/nurse	138	12	0	0	0	0	0	150	0.01	0.18
Dentist	7505	287	5	2	3	0	0	7802	0.01	0.36
Gynaecologist	9	1	0	0	0	0	0	10	0.01	0.12
Laboratory technician (medical)	2426	287	30	35	2	1	0	2781	0.10	0.76
Medical physicist	384	40	3	2	0	0	0	429	0.04	0.40
Medical radiation technologist	10515	2821	124	111	10	0	0	13581	0.09	0.40
Nuclear medicine technologist	362	446	379	536	72	0	0	1795	1.60	2.00
Nurse	6059	1373	97	46	7	0	0	7582	0.08	0.42
Physician	2314	609	72	66	34	6	0	3101	0.30	1.19
Radiation therapist	1284	355	4	2	1	1	0	1647	0.08	0.34

Table 1 (Cont'd)**Breakdown of annual doses by job category for all of Canada**

Job Category	Distribution of workers over dose intervals							Number of Worker	Avg. Dose (mSv)	Avg. of Positive Doses
	0 mSv	>0-1 mSv	>1-2 mSv	>2-5 mSv	>5-20 mSv	>20-50 mSv	>50 mSv			
Radiologist (diagnostic)	1552	355	27	21	18	8	1	1982	0.33	1.51
Radiologist (therapeutic)	167	18	7	4	4	0	0	200	0.27	1.66
Veterinarian	2873	278	3	1	0	0	0	3155	0.02	0.24
Veterinary technician	3808	277	8	1	0	0	0	4094	0.02	0.26
Ward aid/orderly	813	87	10	1	0	0	0	911	0.04	0.37
Nuclear Power										
Reactor - administration	2943	270	53	44	32	0	0	3342	0.16	1.33
Reactor - chemical and radiation control	240	283	103	117	150	0	0	893	2.04	2.79
Reactor - construction	763	260	70	114	49	0	0	1256	0.72	1.84
Reactor - control technician	241	135	40	37	3	0	0	456	0.50	1.07
Reactor - electrical maintenance	619	355	127	146	45	0	0	1292	0.87	1.68
Reactor - fuel handling	28	26	19	12	8	0	0	93	1.37	1.96
Reactor - general maintenance	997	356	85	173	125	0	0	1736	1.03	2.42
Reactor - health physics	69	38	6	1	0	0	0	114	0.20	0.50
Reactor - industrial radiographer	15	12	10	23	6	0	0	66	1.90	2.45
Reactor - mechanical maintenance	511	378	157	297	254	0	0	1597	2.11	3.11
Reactor - operations	1089	675	262	262	178	0	0	2466	1.14	2.04
Reactor - scientific/professional	2914	482	67	72	35	0	0	3570	0.20	1.06
Reactor - training	81	23	2	1	0	0	0	107	0.14	0.57
Reactor - visitor	4328	657	290	462	669	2	0	6408	1.19	3.68
Particle Accelerators										
Accelerators - Administration	30	12	1	0	0	0	0	43	0.05	0.18
Accelerators - Control technicians	18	10	1	1	0	0	0	30	0.26	0.65
Accelerators - Designers	7	7	1	1	2	0	0	18	0.86	1.41
Accelerators - General Maintenance	4	7	3	3	1	0	0	18	1.30	1.67
Accelerators - Machinists	20	4	0	0	1	0	0	25	0.30	1.49
Accelerators - Mechanical technicians	27	21	10	11	7	0	0	76	1.39	2.16
Accelerators - Operations	9	18	7	9	1	0	0	44	1.23	1.54
Accelerators - Scientific/professional	181	105	4	7	3	0	0	300	0.20	0.50
Accelerators - Visitors	70	41	0	0	0	0	0	111	0.02	0.07
Uranium Mining										
Uranium mine electrician	10	7	0	0	0	0	0	17	0.11	0.26
Uranium mine mill maintenance	115	264	71	51	1	0	0	502	0.71	0.92
Uranium mine mill worker	24	158	79	51	1	0	0	313	1.05	1.13

Table 1 (Cont'd)**Breakdown of annual doses by job category for all of Canada**

Job Category	Distribution of workers over dose intervals							Number of Worker	Avg. Dose (mSv)	Avg. of Positive Doses
	0 mSv	>0-1 mSv	>1-2 mSv	>2-5 mSv	>5-20 mSv	>20-50 mSv	>50 mSv			
Uranium mine nurse	6	15	0	0	0	0	0	21	0.13	0.18
Uranium mine office staff	180	257	6	0	0	0	0	443	0.17	0.29
Uranium mine support worker	9	54	28	53	11	0	0	155	1.98	2.10
Uranium mine surface maintenance	261	474	31	0	2	0	0	768	0.21	0.33
Uranium mine surface miner	46	107	16	4	0	0	0	173	0.37	0.50
Uranium mine surface personnel	188	207	20	3	0	0	0	418	0.20	0.36
Uranium mine surface support worker	862	629	43	13	1	0	0	1548	0.15	0.33
Uranium mine underground maintenance	20	95	54	18	0	0	0	187	0.89	0.99
Uranium mine underground miner	13	98	75	127	43	0	0	356	2.43	2.53
Uranium mine underground personnel	17	43	31	13	0	0	0	104	0.89	1.06
Uranium mine visitor	24	2	0	0	0	0	0	26	0.00	0.05
Miscellaneous/Unknown										
Miscellaneous/Unknown	13036	5124	581	579	437	5	2	19764	0.44	1.30
Total										
Total	117523	24911	3744	4163	2744	45	3	153133	0.33	1.41

2006 Final Analysis

Table 2

Number of workers (top) and average whole body dose in mSv (bottom) by job category and province/territory

Job Sector and Category	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	N.W.T.	Yukon	Canada

Shared among all sectors

Administrator	11	0	6	11	89	421	17	7	101	38	0	1	702
	0.23	-	0.00	0.07	0.00	0.15	0.02	0.00	0.06	0.10	-	0.00	0.11
Office staff	32	11	74	46	626	1602	236	100	494	256	17	2	3494
	0.00	0.00	0.01	0.01	0.01	0.07	0.03	0.04	0.06	0.02	0.02	0.00	0.05
Safety officer	2	1	5	8	41	249	37	7	39	22	0	0	411
	0.00	0.31	0.07	0.10	0.04	0.09	0.01	0.01	0.14	0.65	-	-	0.11
Student	147	37	223	138	4643	8227	331	399	1256	617	0	1	15992
	0.01	0.09	0.10	0.15	0.02	0.03	0.00	0.09	0.09	0.03	-	0.00	0.04
Sector totals	192	49	308	203	5394	10488	620	513	1885	932	17	4	20575
	0.02	0.07	0.08	0.11	0.02	0.05	0.01	0.08	0.08	0.05	0.02	0.00	0.04

Industry and Research

Aircrew	0	0	0	0	8	6	0	0	1	0	0	0	15
	-	-	-	-	0.00	1.09	-	-	0.91	-	-	-	0.50
Ground transportation	0	0	0	0	18	46	0	0	14	5	0	0	83
	-	-	-	-	1.59	0.62	-	-	0.01	0.13	-	-	0.70
Industrial radiographer	54	0	66	77	355	601	29	168	1465	228	1	2	2948
	0.50	-	0.57	1.30	0.61	1.07	0.41	1.31	4.10	2.11	0.00	0.00	2.63
Instructor (non-medical)	11	0	12	4	39	141	12	22	52	23	0	0	316
	0.07	-	0.19	0.17	0.12	0.08	0.00	0.00	0.03	0.00	-	-	0.07
Instrument technician	65	0	35	185	422	983	40	59	322	70	0	0	2180
	0.05	-	0.22	0.22	0.12	0.20	0.03	0.01	0.16	0.32	-	-	0.17
Laboratory technician (industrial)	33	8	45	52	677	1426	142	162	214	157	0	0	2915
	0.16	1.03	0.03	0.14	0.11	0.31	0.04	0.05	0.23	0.27	-	-	0.22
Nuclear fuel processor	0	0	0	0	0	926	0	0	76	0	0	0	1002
	-	-	-	-	-	1.02	-	-	0.36	-	-	-	0.97
Scientist/Engineer (field)	20	0	30	11	55	929	16	111	379	107	6	0	1662
	0.14	-	0.08	0.37	0.22	0.32	0.03	0.11	0.41	0.07	0.34	-	0.30
Scientist/Engineer (laboratory)	58	6	121	41	1530	1379	62	147	719	304	0	0	4364
	0.03	0.21	0.03	0.05	0.02	0.04	0.02	0.01	0.13	0.02	-	-	0.04
Security	1	0	14	13	14	147	19	0	5	11	0	0	224
	0.27	-	0.00	0.04	0.00	0.01	0.00	-	0.02	0.13	-	-	0.01

Table 2 (Cont'd)

Number of workers (top) and average whole body dose in mSv (bottom) by job category and province/territory

Job Sector and Category	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	N.W.T.	Yukon	Canada
Tradesmen	0	0	19	1	18	81	0	9	61	4	0	0	193
	-	-	0.00	9.19	0.00	0.22	-	0.00	0.19	0.00	-	-	0.20
Well logger	5	0	0	10	3	68	0	13	2584	5	0	0	2688
	0.05	-	-	0.02	0.86	0.39	-	0.34	0.40	0.19	-	-	0.40
Sector totals	247	14	342	379	3133	6687	319	690	5861	913	7	2	18480
	0.17	0.68	0.16	0.44	0.13	0.40	0.06	0.36	1.27	0.62	0.29	0.00	0.63

Medicine

Chiropractor	1	0	3	3	651	237	76	3	127	16	0	0	1117
	0.00	-	0.00	0.25	0.02	0.03	0.01	0.00	0.04	0.24	-	-	0.02
Dental assistant	183	61	315	231	3133	5045	868	324	3346	594	18	3	14083
	0.04	0.00	0.02	0.01	0.00	0.01	0.00	0.01	0.01	0.01	0.00	0.00	0.01
Dental hygienist	66	22	222	132	3353	3749	543	149	1350	258	6	1	9821
	0.02	0.01	0.06	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01
Dental therapist/nurse	0	0	0	0	12	28	33	52	26	3	5	10	169
	-	-	-	-	0.00	0.01	0.01	0.01	0.03	0.00	0.05	0.23	0.02
Dentist	113	11	156	92	3076	2514	584	101	1030	225	8	0	7879
	0.06	0.00	0.03	0.03	0.01	0.01	0.03	0.00	0.01	0.02	0.00	-	0.01
Gynaecologist	1	0	1	0	0	2	5	0	1	1	0	0	11
	0.00	-	0.00	-	-	0.00	0.02	-	0.00	0.00	-	-	0.01
Laboratory technician (medical)	34	2	89	21	1153	1078	88	40	203	152	2	0	2862
	0.02	0.00	0.01	0.25	0.10	0.12	0.05	0.04	0.05	0.09	0.00	-	0.10
Medical physicist	7	4	9	7	101	172	21	10	25	84	0	0	435
	0.01	0.00	0.02	0.11	0.12	0.04	0.15	0.00	0.10	0.02	-	-	0.06
Medical radiation technologist	334	42	170	362	3517	4749	692	683	1727	1462	41	13	13696
	0.07	0.24	0.11	0.17	0.07	0.10	0.04	0.05	0.15	0.06	0.01	0.06	0.09
Nuclear medicine technologist	19	5	48	35	548	703	67	27	172	187	0	0	1805
	1.67	1.36	1.75	1.52	1.91	1.62	1.48	2.33	1.77	0.88	-	-	1.66
Nurse	271	4	120	180	1322	3972	307	120	543	527	92	81	7533
	0.05	0.00	0.05	0.16	0.04	0.09	0.02	0.21	0.13	0.10	0.00	0.10	0.08
Physician	42	4	42	39	890	1470	110	44	218	236	1	4	3087
	0.34	0.47	0.32	0.27	0.25	0.20	0.07	0.54	0.14	0.15	0.00	0.00	0.21
Radiation therapist	16	12	32	39	342	704	51	69	162	309	0	0	1726
	0.65	0.18	0.10	0.05	0.05	0.11	0.01	0.10	0.05	0.04	-	-	0.08
Radiologist (diagnostic)	52	1	34	47	523	855	71	40	244	227	3	0	2079
	0.07	0.00	0.67	0.39	0.09	0.22	0.06	0.01	0.34	0.22	0.00	-	0.20
Radiologist (therapeutic)	1	0	3	7	84	100	7	8	21	29	0	0	257
	0.11	-	0.00	0.00	0.10	0.22	0.02	0.05	0.01	0.00	-	-	0.12

Table 2 (Cont'd)

Number of workers (top) and average whole body dose in mSv (bottom) by job category and province/territory

Job Sector and Category	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	N.W.T.	Yukon	Canada
Veterinarian	43	52	158	78	918	357	178	168	672	613	0	8	3229
	0.04	0.16	0.04	0.06	0.01	0.04	0.01	0.01	0.02	0.03	-	0.04	0.02
Veterinary technician	62	19	148	118	989	392	212	124	836	896	0	10	3784
	0.04	0.03	0.03	0.01	0.01	0.05	0.01	0.01	0.06	0.02	-	0.03	0.03
Ward aid/orderly	7	8	8	22	532	180	47	16	80	95	5	6	1006
	0.00	0.00	0.00	0.09	0.06	0.07	0.00	0.19	0.06	0.03	0.03	0.00	0.06
Sector totals	1244	247	1548	1412	20898	25915	3927	1963	10695	5860	181	136	73674
	0.10	0.12	0.12	0.14	0.09	0.11	0.05	0.08	0.08	0.08	0.01	0.09	0.09

Nuclear Power

Reactor - administration	0	0	0	228	514	2944	0	0	0	0	0	0	3683
	-	-	-	0.10	0.05	0.16	-	-	-	-	-	-	0.14
Reactor - chemical and radiation control	0	0	0	27	28	786	0	0	0	0	0	0	841
	-	-	-	0.27	0.74	1.97	-	-	-	-	-	-	1.87
Reactor - construction	0	0	0	0	80	1139	0	0	0	0	0	0	1219
	-	-	-	-	0.02	1.00	-	-	-	-	-	-	0.94
Reactor - control technician	0	0	0	0	208	170	0	0	0	0	0	0	378
	-	-	-	-	1.62	1.02	-	-	-	-	-	-	1.35
Reactor - electrical maintenance	0	0	0	92	29	1252	0	0	0	0	0	0	1373
	-	-	-	0.31	1.25	0.87	-	-	-	-	-	-	0.84
Reactor - fuel handling	0	0	0	51	19	16	0	0	0	0	0	0	86
	-	-	-	2.64	3.09	0.42	-	-	-	-	-	-	2.33
Reactor - general maintenance	0	0	0	518	106	1245	0	0	0	0	0	0	1869
	-	-	-	0.56	1.41	1.02	-	-	-	-	-	-	0.91
Reactor - health physics	0	0	0	43	26	36	0	0	0	0	0	0	104
	-	-	-	0.74	0.20	0.39	-	-	-	-	-	-	0.49
Reactor - industrial radiographer	0	0	0	0	6	59	0	0	0	0	0	0	65
	-	-	-	-	6.59	2.21	-	-	-	-	-	-	2.61
Reactor - mechanical maintenance	0	0	0	217	121	1367	0	0	0	0	0	0	1705
	-	-	-	0.55	2.83	1.88	-	-	-	-	-	-	1.78
Reactor - operations	0	0	0	119	118	2237	0	0	0	0	0	0	2474
	-	-	-	0.35	0.85	1.10	-	-	-	-	-	-	1.05
Reactor - scientific/professional	0	0	0	411	270	2174	0	0	0	0	0	0	2847
	-	-	-	0.38	0.41	0.26	-	-	-	-	-	-	0.29
Reactor - training	0	0	0	45	14	43	0	0	0	0	0	0	102
	-	-	-	0.51	0.08	0.04	-	-	-	-	-	-	0.26
Reactor - visitor	0	0	0	0	937	4278	0	0	0	0	0	0	5198
	-	-	-	-	0.00	0.75	-	-	-	-	-	-	0.62

Table 2 (Cont'd)

Number of workers (top) and average whole body dose in mSv (bottom) by job category and province/territory

Job Sector and Category	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	N.W.T.	Yukon	Canada
Sector totals	0	0	0	1751	2455	16914	0	0	0	0	0	0	20911
	-	-	-	0.49	0.50	0.87	-	-	-	-	-	-	0.80

Particle Accelerators

Accelerators - Administration	0	0	0	0	0	0	0	0	0	40	0	0	40
	-	-	-	-	-	-	-	-	-	0.10	-	-	0.10
Accelerators - Control technicians	0	0	0	0	0	0	0	0	0	28	0	0	28
	-	-	-	-	-	-	-	-	-	0.40	-	-	0.40
Accelerators - Designers	0	0	0	0	0	0	0	0	0	17	0	0	17
	-	-	-	-	-	-	-	-	-	0.78	-	-	0.78
Accelerators - General Maintenance	0	0	0	0	0	0	0	0	0	20	0	0	20
	-	-	-	-	-	-	-	-	-	1.34	-	-	1.34
Accelerators - Machinists	0	0	0	0	0	0	0	0	0	26	0	0	26
	-	-	-	-	-	-	-	-	-	0.30	-	-	0.30
Accelerators - Mechanical technicians	0	0	0	0	0	0	0	0	0	75	0	0	75
	-	-	-	-	-	-	-	-	-	1.70	-	-	1.70
Accelerators - Operations	0	0	0	0	0	0	0	0	0	38	0	0	38
	-	-	-	-	-	-	-	-	-	1.95	-	-	1.95
Accelerators - Scientific/professional	0	0	0	0	0	0	0	0	0	299	0	0	299
	-	-	-	-	-	-	-	-	-	0.36	-	-	0.36
Accelerators - Visitors	0	0	0	0	0	0	0	0	0	101	0	0	101
	-	-	-	-	-	-	-	-	-	0.13	-	-	0.13
Sector totals	0	644	0	0	644								
	-	-	-	-	-	-	-	-	-	0.60	-	-	0.60

Uranium Mining

Uranium mine electrician	0	0	0	0	0	0	0	25	0	0	0	0	25
	-	-	-	-	-	-	-	0.04	-	-	-	-	0.04
Uranium mine mill maintenance	0	0	0	0	0	0	0	448	0	0	0	0	448
	-	-	-	-	-	-	-	0.45	-	-	-	-	0.45
Uranium mine mill worker	0	0	0	0	0	0	0	240	0	0	0	0	240
	-	-	-	-	-	-	-	1.19	-	-	-	-	1.19
Uranium mine nurse	0	0	0	0	0	0	0	27	0	0	0	0	27
	-	-	-	-	-	-	-	0.09	-	-	-	-	0.09
Uranium mine office staff	0	0	0	0	0	0	0	422	0	0	0	0	422
	-	-	-	-	-	-	-	0.08	-	-	-	-	0.08

Table 2 (Cont'd)

Number of workers (top) and average whole body dose in mSv (bottom) by job category and province/territory

Job Sector and Category	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	N.W.T.	Yukon	Canada
Uranium mine support worker	0	0	0	0	0	0	0	348	0	0	0	0	348
	-	-	-	-	-	-	-	0.88	-	-	-	-	0.88
Uranium mine surface maintenance	0	0	0	0	0	0	0	1010	0	0	0	0	1010
	-	-	-	-	-	-	-	0.20	-	-	-	-	0.20
Uranium mine surface miner	0	0	0	0	0	0	0	158	0	0	0	0	158
	-	-	-	-	-	-	-	0.30	-	-	-	-	0.30
Uranium mine surface personnel	0	0	0	0	0	11	0	373	0	0	0	0	384
	-	-	-	-	-	0.00	-	0.18	-	-	-	-	0.18
Uranium mine surface support worker	0	0	0	0	0	0	0	1303	0	0	0	0	1303
	-	-	-	-	-	-	-	0.10	-	-	-	-	0.10
Uranium mine underground maintenance	0	0	0	0	0	0	0	210	0	0	0	0	210
	-	-	-	-	-	-	-	0.57	-	-	-	-	0.57
Uranium mine underground miner	0	0	0	0	0	0	0	371	0	0	0	0	371
	-	-	-	-	-	-	-	1.74	-	-	-	-	1.74
Uranium mine underground personnel	0	0	0	0	0	7	0	131	0	0	0	0	132
	-	-	-	-	-	0.03	-	0.67	-	-	-	-	0.67
Uranium mine visitor	0	0	0	0	0	1	0	61	0	0	0	0	61
	-	-	-	-	-	0.00	-	0.02	-	-	-	-	0.02
Sector totals	0	0	0	0	0	19	0	4755	0	0	0	0	4767
	-	-	-	-	-	0.01	-	0.45	-	-	-	-	0.45

Miscellaneous/unknown

Miscellaneous/unknown	183	11	204	230	3659	10880	384	425	1924	1594	45	2	19496
	0.07	0.23	0.05	0.32	0.13	0.63	0.04	0.12	0.38	0.14	0.02	0.00	0.44
Sector totals	183	11	204	230	3659	10880	384	425	1924	1594	45	2	19496
	0.07	0.23	0.05	0.32	0.13	0.63	0.04	0.12	0.38	0.14	0.02	0.00	0.44

Total

Sector totals	1853	321	2375	3893	34762	68250	5158	8221	19883	9666	249	144	153468
	0.10	0.14	0.12	0.34	0.12	0.40	0.04	0.32	0.46	0.17	0.02	0.08	0.31

2006 Final Analysis

Table 3
Dose distribution broken down by job sector, age and sex

Job Sector	Age	Statistic	Sex		
			Male	Female	Overall
Shared among all sectors	Below 25	Number of Workers	1040	6677	7717
		Average dose (mSv)	0.07	0.02	0.02
		% tritium	0.00	0.00	0.00
		% radon progeny	0.00	0.00	0.00
	25-34	Number of Workers	1820	4665	6485
		Average dose (mSv)	0.08	0.03	0.04
		% tritium	0.15	0.02	0.09
		% radon progeny	0.00	0.00	0.00
	35-44	Number of Workers	991	2178	3169
		Average dose (mSv)	0.09	0.05	0.06
		% tritium	0.10	0.10	0.10
		% radon progeny	0.00	0.00	0.00
	45-54	Number of Workers	692	1580	2272
		Average dose (mSv)	0.15	0.05	0.08
		% tritium	0.23	0.00	0.13
		% radon progeny	0.00	0.00	0.00
	55 and up	Number of Workers	314	618	932
		Average dose (mSv)	0.13	0.03	0.06
		% tritium	0.26	0.25	0.26
		% radon progeny	0.00	0.00	0.00
	Total	Number of Workers	4857	15718	20575
		Average dose (mSv)	0.09	0.03	0.04
		% tritium	0.14	0.04	0.09
		% radon progeny	0.00	0.00	0.00
Industry and Research	Below 25	Number of Workers	1487	350	1837
		Average dose (mSv)	1.73	0.42	1.48
		% tritium	0.07	0.01	0.07
		% radon progeny	0.00	0.00	0.00
	25-34	Number of Workers	3967	1467	5434
		Average dose (mSv)	0.92	0.15	0.71
		% tritium	0.17	0.89	0.21
		% radon progeny	0.00	0.00	0.00
	35-44	Number of Workers	3868	1044	4912
		Average dose (mSv)	0.60	0.17	0.51
		% tritium	0.22	2.92	0.41
		% radon progeny	0.00	0.00	0.00

Table 3 (Cont'd)
Dose distribution broken down by job sector, age and sex

Job Sector	Age	Statistic	Sex		
			Male	Female	Overall
Industry and Research	45-54	Number of Workers	3487	825	4312
		Average dose (mSv)	0.52	0.13	0.45
		% tritium	0.31	1.74	0.39
		% radon progeny	0.00	0.00	0.00
	55 and up	Number of Workers	1730	255	1985
		Average dose (mSv)	0.33	0.21	0.32
		% tritium	0.35	0.00	0.32
		% radon progeny	0.00	0.00	0.00
	Total	Number of Workers	14539	3941	18480
		Average dose (mSv)	0.75	0.18	0.63
		% tritium	0.19	1.28	0.25
		% radon progeny	0.00	0.00	0.00
Medicine	Below 25	Number of Workers	392	5512	5904
		Average dose (mSv)	0.22	0.06	0.07
		% tritium	0.00	0.00	0.00
		% radon progeny	0.00	0.00	0.00
	25-34	Number of Workers	3066	16652	19718
		Average dose (mSv)	0.18	0.07	0.09
		% tritium	0.43	0.00	0.13
		% radon progeny	0.00	0.00	0.00
	35-44	Number of Workers	4813	16469	21282
		Average dose (mSv)	0.16	0.09	0.10
		% tritium	0.00	0.00	0.00
		% radon progeny	0.00	0.00	0.00
	45-54	Number of Workers	5072	12774	17846
		Average dose (mSv)	0.12	0.09	0.10
		% tritium	0.00	0.00	0.00
		% radon progeny	0.00	0.00	0.00
	55 and up	Number of Workers	4177	4747	8924
		Average dose (mSv)	0.08	0.07	0.08
		% tritium	0.00	0.00	0.00
		% radon progeny	0.00	0.00	0.00
	Total	Number of Workers	17520	56154	73674
		Average dose (mSv)	0.14	0.08	0.09
		% tritium	0.10	0.00	0.03
		% radon progeny	0.00	0.00	0.00
Nuclear Power	Below 25	Number of Workers	918	207	1125
		Average dose (mSv)	1.15	0.45	1.02
		% tritium	13.07	15.12	13.24
		% radon progeny	0.00	0.00	0.00

Table 3 (Cont'd)
Dose distribution broken down by job sector, age and sex

Job Sector	Age	Statistic	Sex		
			Male	Female	Overall
Nuclear Power	25-34	Number of Workers	3034	616	3650
		Average dose (mSv)	1.19	0.40	1.06
		% tritium	18.09	21.75	18.33
		% radon progeny	0.00	0.00	0.00
	35-44	Number of Workers	4600	864	5464
		Average dose (mSv)	0.96	0.36	0.87
		% tritium	18.27	20.08	18.39
		% radon progeny	0.00	0.00	0.00
	45-54	Number of Workers	6437	794	7231
		Average dose (mSv)	0.82	0.23	0.75
		% tritium	17.73	18.82	17.76
		% radon progeny	0.00	0.00	0.00
	55 and up	Number of Workers	3249	192	3441
		Average dose (mSv)	0.45	0.15	0.44
		% tritium	16.80	28.02	17.01
		% radon progeny	0.00	0.00	0.00
	Total	Number of Workers	18238	2673	20911
		Average dose (mSv)	0.87	0.32	0.80
		% tritium	17.57	20.02	17.69
		% radon progeny	0.00	0.00	0.00
Particle Accelerators	Below 25	Number of Workers	25	6	31
		Average dose (mSv)	0.10	0.07	0.10
		% tritium	0.00	0.00	0.00
		% radon progeny	0.00	0.00	0.00
	25-34	Number of Workers	68	24	92
		Average dose (mSv)	0.82	0.51	0.74
		% tritium	0.00	0.00	0.00
		% radon progeny	0.00	0.00	0.00
	35-44	Number of Workers	111	22	133
		Average dose (mSv)	0.79	0.07	0.67
		% tritium	0.00	0.00	0.00
		% radon progeny	0.00	0.00	0.00
	45-54	Number of Workers	154	25	179
		Average dose (mSv)	0.80	0.13	0.71
		% tritium	0.00	0.00	0.00
		% radon progeny	0.00	0.00	0.00
	55 and up	Number of Workers	199	10	209
		Average dose (mSv)	0.48	0.14	0.47
		% tritium	0.00	0.00	0.00
		% radon progeny	0.00	0.00	0.00

Table 3 (Cont'd)
Dose distribution broken down by job sector, age and sex

Job Sector	Age	Statistic	Sex		
			Male	Female	Overall
Particle Accelerators	Total	Number of Workers	557	87	644
		Average dose (mSv)	0.66	0.22	0.60
		% tritium	0.00	0.00	0.00
		% radon progeny	0.00	0.00	0.00
Uranium Mining	Below 25	Number of Workers	549	98	647
		Average dose (mSv)	0.28	0.22	0.28
		% tritium	0.00	0.00	0.00
		% radon progeny	52.21	59.46	53.10
	25-34	Number of Workers	1132	113	1245
		Average dose (mSv)	0.42	0.19	0.40
		% tritium	0.00	0.00	0.00
		% radon progeny	53.84	48.88	53.63
	35-44	Number of Workers	1160	90	1250
		Average dose (mSv)	0.59	0.23	0.56
		% tritium	0.00	0.00	0.00
		% radon progeny	52.24	61.52	52.51
	45-54	Number of Workers	1045	80	1125
		Average dose (mSv)	0.53	0.26	0.51
		% tritium	0.00	0.00	0.00
		% radon progeny	50.10	55.58	50.29
	55 and up	Number of Workers	483	17	500
		Average dose (mSv)	0.39	0.14	0.38
		% tritium	0.00	0.00	0.00
		% radon progeny	56.13	72.03	56.33
	Total	Number of Workers	4369	398	4767
		Average dose (mSv)	0.47	0.22	0.45
		% tritium	0.00	0.00	0.00
		% radon progeny	52.39	56.79	52.56
Miscellaneous /Unknown	Below 25	Number of Workers	1213	670	1883
		Average dose (mSv)	0.61	0.16	0.45
		% tritium	3.12	0.22	2.77
		% radon progeny	0.00	0.00	0.00
	25-34	Number of Workers	3133	2408	5541
		Average dose (mSv)	0.59	0.12	0.39
		% tritium	5.48	1.02	4.87
		% radon progeny	0.00	0.00	0.00
	35-44	Number of Workers	3460	2093	5553
		Average dose (mSv)	0.64	0.15	0.46
		% tritium	5.18	1.46	4.73
		% radon progeny	0.00	0.00	0.00

Table 3 (Cont'd)
Dose distribution broken down by job sector, age and sex

Job Sector	Age	Statistic	Sex		
			Male	Female	Overall
Miscellaneous /Unknown	45-54	Number of Workers	2865	1653	4518
		Average dose (mSv)	0.64	0.12	0.45
		% tritium	7.75	0.27	7.02
		% radon progeny	0.00	0.00	0.00
	55 and up	Number of Workers	1430	571	2001
		Average dose (mSv)	0.59	0.13	0.46
		% tritium	7.95	0.03	7.30
		% radon progeny	0.00	0.00	0.00
	Total	Number of Workers	12101	7395	19496
		Average dose (mSv)	0.62	0.13	0.44
		% tritium	5.98	0.84	5.39
		% radon progeny	0.00	0.00	0.00
Total	Below 25	Number of Workers	5439	12486	17925
		Average dose (mSv)	0.86	0.06	0.31
		% tritium	3.47	1.79	3.23
		% radon progeny	1.74	1.63	1.72
	25-34	Number of Workers	15651	24982	40633
		Average dose (mSv)	0.66	0.09	0.31
		% tritium	7.39	2.75	6.59
		% radon progeny	2.47	0.48	2.13
	35-44	Number of Workers	18389	22262	40651
		Average dose (mSv)	0.58	0.11	0.32
		% tritium	8.76	3.07	7.74
		% radon progeny	3.34	0.54	2.83
	45-54	Number of Workers	19249	17422	36671
		Average dose (mSv)	0.54	0.10	0.33
		% tritium	10.49	2.03	9.24
		% radon progeny	2.68	0.63	2.38
	55 and up	Number of Workers	11321	6267	17588
		Average dose (mSv)	0.31	0.08	0.23
		% tritium	8.91	1.57	7.97
		% radon progeny	2.97	0.33	2.63
	Total	Number of Workers	70049	83419	153468
		Average dose (mSv)	0.56	0.09	0.31
		% tritium	8.24	2.50	7.31
		% radon progeny	2.72	0.64	2.38

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Table 4
Dose distribution by job category as of the end of 2006

Administrator

Annual doses					
Parameters	A	0.369368	B	0.627971	C
Sample size		702			D
Statistic		Sample value		Expectation value	Upper 95% CL
Average		0.11		0.10	0.09
Average from 0.1 mSv up		0.44		0.38	0.33
Number at or exceeding 0.1 mSv		179		165.57	144.55
Number exceeding 1 mSv		5		10.62	4.62
Number exceeding 2 mSv		2		0.62	0.00
Number exceeding 5 mSv		0		0.00	0.00
Number exceeding 20 mSv		0		0.00	0.00
Number exceeding 50 mSv		0		0.00	0.00
Doses accumulating over rolling 5 year block starting 2002					
Parameters	A	0.158787	B	0.294907	C
Sample size		1150			D
Statistic		Sample value		Expectation value	Upper 95% CL
Average		0.37		0.39	0.34
Average over 0.5 mSv		1.64		1.80	1.65
Number exceeding 0.5 mSv		243		224.58	196.58
Number exceeding 5 mSv		4		5.62	1.62
Number exceeding 20 mSv		0		0.00	0.00
Number exceeding 50 mSv		0		0.00	0.00
Number exceeding 100 mSv		0		0.00	0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Office staff****Annual doses**

Parameters	A	0.288520	B	0.312737	C	0.000000	D	1.890140
Sample size		3494						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.05		0.06		0.05		0.07
Average from 0.1 mSv up		0.46		0.50		0.44		0.55
Number at or exceeding 0.1 mSv		368		374.60		341.58		409.60
Number exceeding 1 mSv		29		47.62		34.62		61.62
Number exceeding 2 mSv		7		10.62		4.62		18.62
Number exceeding 5 mSv		1		0.00		0.00		0.62
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.366307	B	0.005525	C	0.000000	D	1.752930
Sample size		6452						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.18		0.25		0.20		0.30
Average over 0.5 mSv		1.82		3.13		2.57		3.90
Number exceeding 0.5 mSv		560		426.61		387.61		465.61
Number exceeding 5 mSv		16		56.62		42.62		72.62
Number exceeding 20 mSv		1		8.62		3.62		15.62
Number exceeding 50 mSv		1		0.62		0.00		4.62
Number exceeding 100 mSv		1		0.00		0.00		0.62

Table 4 (Cont'd)
Dose distribution by job category as of the end of 2006

Safety officer							
Annual doses							
Parameters	A	0.436705	B	0.068282	C	0.000000	
Sample size		411			D	1.860550	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average		0.11		0.12		0.09	0.18
Average from 0.1 mSv up		0.55		0.55		0.40	0.79
Number at or exceeding 0.1 mSv		83		81.58		65.59	97.57
Number exceeding 1 mSv		8		10.62		4.62	16.61
Number exceeding 2 mSv		4		3.62		0.62	7.62
Number exceeding 5 mSv		1		0.62		0.00	2.62
Number exceeding 20 mSv		0		0.00		0.00	0.00
Number exceeding 50 mSv		0		0.00		0.00	0.00
Doses accumulating over rolling 5 year block starting 2002							
Parameters	A	0.472593	B	0.022327	C	0.000000	
Sample size		769			D	1.345210	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average		0.37		0.39		0.31	0.50
Average over 0.5 mSv		1.91		2.12		1.68	2.71
Number exceeding 0.5 mSv		127		115.59		95.59	135.58
Number exceeding 5 mSv		7		9.62		3.62	15.62
Number exceeding 20 mSv		1		0.00		0.00	1.62
Number exceeding 50 mSv		0		0.00		0.00	0.00
Number exceeding 100 mSv		0		0.00		0.00	0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Student****Annual doses**

Parameters	A 0.249918	B 0.184818	C 0.000000	D 0.418180
Sample size	1002			
Statistic	Sample value	Expectation value	Lower 95% CL	Upper 95% CL
Average	0.97	0.96	0.86	1.07
Average from 0.1 mSv up	1.7	1.70	1.55	1.86
Number at or exceeding 0.1 mSv	573	560.48	531.49	593.50
Number exceeding 1 mSv	265	272.56	244.56	300.55
Number exceeding 2 mSv	163	168.58	145.56	192.58
Number exceeding 5 mSv	43	40.61	28.62	52.61
Number exceeding 20 mSv	0	0.00	0.00	0.00
Number exceeding 50 mSv	0	0.00	0.00	0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A 0.382558	B 0.008672	C 0.008535	D 2.188900
Sample size	31402			
Statistic	Sample value	Expectation value	Lower 95% CL	Upper 95% CL
Average	0.08	0.09	0.09	0.10
Average over 0.5 mSv	1.83	2.11	1.88	2.38
Number exceeding 0.5 mSv	1017	869.62	814.62	924.62
Number exceeding 5 mSv	56	68.62	53.62	85.62
Number exceeding 20 mSv	11	6.62	2.60	12.62
Number exceeding 50 mSv	0	0.00	0.00	2.62
Number exceeding 100 mSv	0	0.00	0.00	0.62

Table 4 (Cont'd)
Dose distribution by job category as of the end of 2006

Aircrew

Annual doses

Parameters	A	0.000000	B	0.237459	C	0.000000	D	0.578675
Sample size		15						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.49		0.66		0.05		1.66
Average from 0.1 mSv up		1.86		2.48		0.70		5.17
Number at or exceeding 0.1 mSv		4		3.57		0.61		7.50
Number exceeding 1 mSv		3		2.58		0.00		5.53
Number exceeding 2 mSv		2		1.60		0.00		4.55
Number exceeding 5 mSv		0		0.00		0.00		1.60
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.256820	B	0.115110	C	0.000000	D	0.694222
Sample size		34						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.96		0.81		0.31		1.56
Average over 0.5 mSv		2.65		2.74		1.35		4.82
Number exceeding 0.5 mSv		12		8.56		4.59		13.53
Number exceeding 5 mSv		1		0.62		0.00		3.60
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Ground transportation****Annual doses**

Parameters	A	0.073687	B	0.388809	C	0.000000	D	0.255887
Sample size		83						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.69		0.72		0.50		1.00
Average from 0.1 mSv up		1.56		1.59		1.21		2.01
Number at or exceeding 0.1 mSv		37		37.51		28.54		45.49
Number exceeding 1 mSv		21		21.06		13.58		29.54
Number exceeding 2 mSv		10		11.59		5.61		17.57
Number exceeding 5 mSv		1		0.62		0.00		2.62
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.282200	B	0.066307	C	0.006706	D	0.767608
Sample size		285						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.99		1.01		0.76		1.31
Average over 0.5 mSv		3.06		3.42		2.70		4.38
Number exceeding 0.5 mSv		89		78.56		62.57		94.54
Number exceeding 5 mSv		16		16.61		9.62		25.60
Number exceeding 20 mSv		1		0.00		0.00		1.62
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)
Dose distribution by job category as of the end of 2006

Industrial radiographer

Annual doses					
Parameters	A 0.210857	B 0.059320	C 0.000000	D 0.277119	
Sample size	2948				
Statistic	Sample value	Expectation value	Lower 95% CL	Upper 95% CL	
Average	2.63	2.67	2.50	2.86	
Average from 0.1 mSv up	4.42	4.55	4.28	4.85	
Number at or exceeding 0.1 mSv	1753	1723.48	1670.46	1773.50	
Number exceeding 1 mSv	1235	1084.53	1037.54	1135.53	
Number exceeding 2 mSv	1014	866.55	820.53	915.55	
Number exceeding 5 mSv	541	531.58	493.58	574.58	
Number exceeding 20 mSv	15	52.62	38.62	67.62	
Number exceeding 50 mSv	1	0.00	0.00	0.62	
Doses accumulating over rolling 5 year block starting 2002					
Parameters	A 0.181476	B 0.021082	C 0.000368	D 0.104017	
Sample size	4854				
Statistic	Sample value	Expectation value	Lower 95% CL	Upper 95% CL	
Average	7.8	7.90	7.49	8.32	
Average over 0.5 mSv	15.04	15.58	14.90	16.27	
Number exceeding 0.5 mSv	2509	2447.50	2380.50	2512.50	
Number exceeding 5 mSv	1499	1496.55	1434.53	1557.54	
Number exceeding 20 mSv	653	692.59	645.59	738.59	
Number exceeding 50 mSv	149	150.62	127.59	174.62	
Number exceeding 100 mSv	3	4.62	1.62	10.62	

Table 4 (Cont'd)
Dose distribution by job category as of the end of 2006

Instructor (non-medical)

Annual doses						
Parameters	A	0.258671	B	0.113836	C	0.000000
Sample size		316			D	1.987040
Statistic		Sample value		Expectation value		Upper 95% CL
Average		0.07		0.07		0.03
Average from 0.1 mSv up		0.8		0.76		0.39
Number at or exceeding 0.1 mSv		26		25.60		17.61
Number exceeding 1 mSv		6		4.62		0.62
Number exceeding 2 mSv		2		2.62		0.00
Number exceeding 5 mSv		1		0.00		0.00
Number exceeding 20 mSv		0		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00
Doses accumulating over rolling 5 year block starting 2002						
Parameters	A	0.346180	B	0.000917	C	0.018830
Sample size		464			D	1.868810
Statistic		Sample value		Expectation value		Upper 95% CL
Average		0.26		0.23		0.12
Average over 0.5 mSv		3.53		3.14		1.39
Number exceeding 0.5 mSv		31		24.61		16.62
Number exceeding 5 mSv		4		2.62		0.00
Number exceeding 20 mSv		1		0.62		0.00
Number exceeding 50 mSv		1		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.62

Table 4 (Cont'd)
Dose distribution by job category as of the end of 2006

Instrument technician							
Annual doses							
Parameters	A	0.418028	B	0.074732	C	0.000000	
Sample size		2180			D	1.614590	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average		0.17		0.19		0.17	0.23
Average from 0.1 mSv up		0.66		0.69		0.61	0.79
Number at or exceeding 0.1 mSv		571		569.56		527.56	610.55
Number exceeding 1 mSv		75		98.61		78.62	118.61
Number exceeding 2 mSv		44		42.62		30.62	56.62
Number exceeding 5 mSv		4		7.62		2.62	13.62
Number exceeding 20 mSv		1		0.00		0.00	0.00
Number exceeding 50 mSv		0		0.00		0.00	0.00
Doses accumulating over rolling 5 year block starting 2002							
Parameters	A	0.370254	B	0.000000	C	0.011694	
Sample size		3471			D	1.377580	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average		0.91		0.85		0.61	1.77
Average over 0.5 mSv		3.96		5.80		4.06	12.48
Number exceeding 0.5 mSv		762		469.59		429.59	509.61
Number exceeding 5 mSv		78		83.62		66.62	102.62
Number exceeding 20 mSv		12		21.62		13.62	31.62
Number exceeding 50 mSv		4		7.62		3.60	13.62
Number exceeding 100 mSv		2		2.62		0.62	7.62

Table 4 (Cont'd)
Dose distribution by job category as of the end of 2006

Laboratory technician (industrial)

Annual doses						
Parameters	A	0.323187	B	0.112515	C	0.000000
Sample size		2915			D	1.426180
Statistic		Sample value		Expectation value		Upper 95% CL
Average		0.22		0.24		0.27
Average from 0.1 mSv up		0.87		0.90		1.00
Number at or exceeding 0.1 mSv		731		726.56		769.56
Number exceeding 1 mSv		150		180.61		205.61
Number exceeding 2 mSv		81		87.62		106.64
Number exceeding 5 mSv		16		17.62		25.62
Number exceeding 20 mSv		0		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00
Doses accumulating over rolling 5 year block starting 2002						
Parameters	A	0.307242	B	0.022506	C	0.008108
Sample size		6109			D	1.214620
Statistic		Sample value		Expectation value		Upper 95% CL
Average		0.66		0.69		0.77
Average over 0.5 mSv		3.59		3.99		4.35
Number exceeding 0.5 mSv		1068		969.59		1026.61
Number exceeding 5 mSv		192		209.62		239.62
Number exceeding 20 mSv		25		29.62		40.62
Number exceeding 50 mSv		3		0.62		3.62
Number exceeding 100 mSv		0		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Nuclear fuel processor****Annual doses**

Parameters	A	0.228825	B	0.208420	C	0.000000	D	0.323147
Sample size		1002						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.97		1.02		0.92		1.12
Average from 0.1 mSv up		1.7		1.75		1.60		1.90
Number at or exceeding 0.1 mSv		573		578.48		548.49		608.47
Number exceeding 1 mSv		265		297.55		269.53		324.54
Number exceeding 2 mSv		163		184.58		160.59		207.57
Number exceeding 5 mSv		43		40.61		29.62		54.61
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.280800	B	0.038521	C	0.000000	D	0.028226
Sample size		1315						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		4.01		4.22		3.82		4.61
Average over 0.5 mSv		6.64		7.47		6.89		8.12
Number exceeding 0.5 mSv		787		732.49		697.47		768.48
Number exceeding 5 mSv		295		328.56		296.57		361.56
Number exceeding 20 mSv		70		66.61		51.59		81.61
Number exceeding 50 mSv		1		0.62		0.00		3.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Scientist/Engineer (field)**

Annual doses	A	B	C	D
Parameters	0.479100	0.119759	0.000000	1.239010
Sample size	1662			
Statistic	Sample value	Expectation value	Lower 95% CL	Upper 95% CL
Average	0.3	0.33	0.30	0.37
Average from 0.1 mSv up	0.69	0.70	0.63	0.77
Number at or exceeding 0.1 mSv	718	749.51	709.52	788.53
Number exceeding 1 mSv	101	143.60	121.61	165.63
Number exceeding 2 mSv	49	57.62	43.62	72.61
Number exceeding 5 mSv	13	7.62	2.62	12.62
Number exceeding 20 mSv	0	0.00	0.00	0.00
Number exceeding 50 mSv	0	0.00	0.00	0.00
Doses accumulating over rolling 5 year block starting 2002	A	B	C	D
Parameters	0.348426	0.104657	0.000000	0.723460
Sample size	2744			
Statistic	Sample value	Expectation value	Lower 95% CL	Upper 95% CL
Average	0.73	0.79	0.73	0.86
Average over 0.5 mSv	2.07	2.45	2.30	2.59
Number exceeding 0.5 mSv	906	808.55	762.53	858.57
Number exceeding 5 mSv	56	96.62	77.62	115.61
Number exceeding 20 mSv	5	0.00	0.00	0.62
Number exceeding 50 mSv	0	0.00	0.00	0.00
Number exceeding 100 mSv	0	0.00	0.00	0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Scientist/Engineer (laboratory)**

Annual doses	A	B	C	D
Parameters	0.435098	0.000000	0.021810	2.515700
Sample size	4364			
Statistic	Sample value	Expectation value	Lower 95% CL	Upper 95% CL
Average	0.04	0.07	0.06	0.08
Average from 0.1 mSv up	0.42	0.38	0.31	0.56
Number at or exceeding 0.1 mSv	452	452.60	413.60	490.60
Number exceeding 1 mSv	24	27.62	17.62	37.62
Number exceeding 2 mSv	8	10.62	5.60	17.62
Number exceeding 5 mSv	4	2.62	0.00	6.62
Number exceeding 20 mSv	0	0.00	0.00	1.62
Number exceeding 50 mSv	0	0.00	0.00	0.62
Doses accumulating over rolling 5 year block starting 2002				
Parameters	A 0.504360	B 0.012671	C 0.000000	D 1.724810
Sample size	9855			
Statistic	Sample value	Expectation value	Lower 95% CL	Upper 95% CL
Average	0.17	0.21	0.19	0.23
Average over 0.5 mSv	1.34	1.75	1.60	1.92
Number exceeding 0.5 mSv	970	816.60	756.61	867.63
Number exceeding 5 mSv	21	45.62	33.62	59.62
Number exceeding 20 mSv	2	1.62	0.00	5.62
Number exceeding 50 mSv	1	0.00	0.00	0.62
Number exceeding 100 mSv	0	0.00	0.00	0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Security****Annual doses**

Parameters	A	0.001242	B	0.651946	C	0.035594	D	2.118420
Sample size	224							
Statistic	Sample value		Expectation value		Lower 95% CL		Upper 95% CL	
Average	0.01		0.03		0.02		0.05	
Average from 0.1 mSv up	0.4		0.37		0.16		0.75	
Number at or exceeding 0.1 mSv	8		7.62		2.62		13.61	
Number exceeding 1 mSv	1		0.00		0.00		2.62	
Number exceeding 2 mSv	0		0.00		0.00		0.62	
Number exceeding 5 mSv	0		0.00		0.00		0.00	
Number exceeding 20 mSv	0		0.00		0.00		0.00	
Number exceeding 50 mSv	0		0.00		0.00		0.00	

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.198602	B	0.238087	C	0.043468	D	2.071460
Sample size	297							
Statistic	Sample value		Expectation value		Lower 95% CL		Upper 95% CL	
Average	0.05		0.08		0.05		0.11	
Average over 0.5 mSv	1.12		1.22		0.72		2.09	
Number exceeding 0.5 mSv	9		6.62		1.62		12.61	
Number exceeding 5 mSv	0		0.00		0.00		0.62	
Number exceeding 20 mSv	0		0.00		0.00		0.00	
Number exceeding 50 mSv	0		0.00		0.00		0.00	
Number exceeding 100 mSv	0		0.00		0.00		0.00	

Table 4 (Cont'd)
Dose distribution by job category as of the end of 2006

Tradesmen

Annual doses

Parameters	A	0.432094	B	0.015811	C	0.000000	D	1.725130
Sample size		193						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.2		0.19		0.11		0.38
Average from 0.1 mSv up		0.81		0.74		0.41		1.48
Number at or exceeding 0.1 mSv		47		45.57		34.58		57.55
Number exceeding 1 mSv		9		7.62		2.62		13.61
Number exceeding 2 mSv		2		3.62		0.00		7.62
Number exceeding 5 mSv		2		0.62		0.00		3.62
Number exceeding 20 mSv		0		0.00		0.00		0.62
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.519611	B	0.007239	C	0.005047	D	1.366010
Sample size		373						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.4		0.41		0.29		0.61
Average over 0.5 mSv		1.89		2.03		1.45		3.14
Number exceeding 0.5 mSv		67		58.59		44.57		71.58
Number exceeding 5 mSv		5		4.62		0.62		8.62
Number exceeding 20 mSv		1		0.00		0.00		1.62
Number exceeding 50 mSv		0		0.00		0.00		0.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)
Dose distribution by job category as of the end of 2006

Well logger							
Annual doses							
Parameters	A	0.291773	B	0.337615	C	0.000000	
Sample size		2688			D	0.748974	
Statistic		Sample value		Expectation value		Upper 95% CL	
Average		0.4		0.41		0.39	0.44
Average from 0.1 mSv up		0.87		0.87		0.82	0.92
Number at or exceeding 0.1 mSv		1238		1243.51		1191.51	1291.50
Number exceeding 1 mSv		303		370.59		336.59	405.59
Number exceeding 2 mSv		135		139.61		116.61	162.61
Number exceeding 5 mSv		12		4.62		0.62	8.62
Number exceeding 20 mSv		0		0.00		0.00	0.00
Number exceeding 50 mSv		0		0.00		0.00	0.00
Doses accumulating over rolling 5 year block starting 2002							
Parameters	A	0.343219	B	0.125401	C	0.000000	
Sample size		4475			D	0.472304	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average		0.99		1.04		0.99	1.10
Average over 0.5 mSv		2.23		2.55		2.44	2.65
Number exceeding 0.5 mSv		1866		1705.53		1643.51	1769.55
Number exceeding 5 mSv		168		219.61		190.61	247.61
Number exceeding 20 mSv		8		0.00		0.00	0.62
Number exceeding 50 mSv		0		0.00		0.00	0.00
Number exceeding 100 mSv		0		0.00		0.00	0.00

Table 4 (Cont'd)
Dose distribution by job category as of the end of 2006

Chiropractor						
Annual doses						
Parameters	A	0.409333	B	0.148536	C	0.000000
Sample size		1117			D	2.446540
Statistic		Sample value		Expectation value		Upper 95% CL
Average		0.03		0.03		0.04
Average from 0.1 mSv up		0.38		0.37		0.50
Number at or exceeding 0.1 mSv		75		74.61		59.61
Number exceeding 1 mSv		4		4.62		0.62
Number exceeding 2 mSv		2		0.62		0.00
Number exceeding 5 mSv		0		0.00		0.62
Number exceeding 20 mSv		0		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00
Doses accumulating over rolling 5 year block starting 2002						
Parameters	A	0.245752	B	0.064018	C	0.021343
Sample size		1436			D	1.834840
Statistic		Sample value		Expectation value		Upper 95% CL
Average		0.13		0.15		0.12
Average over 0.5 mSv		2.05		2.29		1.74
Number exceeding 0.5 mSv		81		69.61		54.62
Number exceeding 5 mSv		7		6.62		2.62
Number exceeding 20 mSv		0		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00

Table 4 (Cont'd)
Dose distribution by job category as of the end of 2006

Dental assistant								
Annual doses								
Parameters	A	0.231488	B	0.189616	C	0.052990		
Sample size		14083			D	3.023400		
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.01		0.03		0.03		0.03
Average from 0.1 mSv up		0.25		0.24		0.21		0.28
Number at or exceeding 0.1 mSv		370		367.62		333.62		407.62
Number exceeding 1 mSv		12		10.62		4.62		17.62
Number exceeding 2 mSv		2		2.62		0.00		5.62
Number exceeding 5 mSv		0		0.00		0.00		0.62
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00
Doses accumulating over rolling 5 year block starting 2002								
Parameters	A	0.388215	B	0.007516	C	0.027204	D	2.589220
Sample size		21808						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.03		0.06		0.05		0.06
Average over 0.5 mSv		1.44		1.65		1.37		2.05
Number exceeding 0.5 mSv		294		249.62		220.62		280.62
Number exceeding 5 mSv		6		11.62		5.62		19.62
Number exceeding 20 mSv		3		0.62		0.00		2.62
Number exceeding 50 mSv		0		0.00		0.00		0.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)
Dose distribution by job category as of the end of 2006

Dental hygienist								
Annual doses								
Parameters	A	0.186864	B	0.049872	C	0.060644	D	3.113730
Sample size		9821						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.01		0.03		0.03		0.04
Average from 0.1 mSv up		0.32		0.31		0.22		0.43
Number at or exceeding 0.1 mSv		203		202.62		175.62		231.62
Number exceeding 1 mSv		8		8.62		3.62		14.62
Number exceeding 2 mSv		3		4.12		0.62		8.62
Number exceeding 5 mSv		2		0.62		0.00		3.62
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00
Doses accumulating over rolling 5 year block starting 2002								
Parameters	A	0.308491	B	0.093452	C	0.041033	D	2.492060
Sample size		13211						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.03		0.06		0.06		0.06
Average over 0.5 mSv		1.19		1.34		1.17		1.56
Number exceeding 0.5 mSv		192		161.62		137.62		187.62
Number exceeding 5 mSv		6		3.62		0.62		7.62
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Dental therapist/nurse****Annual doses**

Parameters	A	0.000000	B	2.235810	C	0.031992	D	1.438970
Sample size		169						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.02		0.05		0.04		0.06
Average from 0.1 mSv up		0.24		0.23		0.17		0.33
Number at or exceeding 0.1 mSv		16		15.60		8.61		23.59
Number exceeding 1 mSv		0		0.00		0.00		0.00
Number exceeding 2 mSv		0		0.00		0.00		0.00
Number exceeding 5 mSv		0		0.00		0.00		0.00
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.000000	B	0.416328	C	0.066008	D	1.425740
Sample size		227						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.12		0.15		0.11		0.21
Average over 0.5 mSv		1.41		1.37		0.99		1.88
Number exceeding 0.5 mSv		15		14.61		7.62		21.60
Number exceeding 5 mSv		0		0.00		0.00		0.62
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)
Dose distribution by job category as of the end of 2006

Dentist								
Annual doses								
Parameters	A	0.380353	B	0.000000	C	0.024813	D	2.993280
Sample size		7879						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.01		0.03		0.03		0.04
Average from 0.1 mSv up		0.35		0.32		0.24		0.51
Number at or exceeding 0.1 mSv		261		261.62		230.62		296.62
Number exceeding 1 mSv		11		10.62		4.60		17.62
Number exceeding 2 mSv		2		4.62		0.62		8.62
Number exceeding 5 mSv		1		0.62		0.00		3.62
Number exceeding 20 mSv		0		0.00		0.00		0.62
Number exceeding 50 mSv		0		0.00		0.00		0.62
Doses accumulating over rolling 5 year block starting 2002								
Parameters	A	0.349517	B	0.000000	C	0.030462	D	2.311550
Sample size		9853						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.08		0.11		0.09		0.19
Average over 0.5 mSv		2.38		2.76		1.90		6.32
Number exceeding 0.5 mSv		256		217.62		186.62		247.64
Number exceeding 5 mSv		8		19.62		11.62		29.62
Number exceeding 20 mSv		4		3.62		0.00		7.62
Number exceeding 50 mSv		1		0.62		0.00		3.62
Number exceeding 100 mSv		1		0.00		0.00		1.62

Table 4 (Cont'd)
Dose distribution by job category as of the end of 2006

Gynaecologist								
Annual doses								
Parameters	A	0.377898	B	9.121770	C	0.820973	D	9.999960
Sample size		11						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.01		0.08		0.08		0.09
Average from 0.1 mSv up		0.13		0.10				0.11
Number at or exceeding 0.1 mSv		1		0.61		0.00		2.57
Number exceeding 1 mSv		0		0.00		0.00		0.00
Number exceeding 2 mSv		0		0.00		0.00		0.00
Number exceeding 5 mSv		0		0.00		0.00		0.00
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00
Doses accumulating over rolling 5 year block starting 2002								
Parameters	A	0.000000	B	1.094690	C	0.065790	D	1.314990
Sample size		17						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.07		0.10		0.05		0.21
Average over 0.5 mSv		0.7		0.69		0.63		1.20
Number exceeding 0.5 mSv		1		0.00		0.00		2.59
Number exceeding 5 mSv		0		0.00		0.00		0.00
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)
Dose distribution by job category as of the end of 2006

Laboratory technician (medical)							
Annual doses							
Parameters	A	0.145343	B	0.138568	C	0.037491	
Sample size		2862			D	1.845220	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average		0.1		0.13		0.11	0.15
Average from 0.1 mSv up		0.76		0.76		0.64	0.90
Number at or exceeding 0.1 mSv		375		374.09		339.60	407.59
Number exceeding 1 mSv		72		72.62		55.62	88.62
Number exceeding 2 mSv		43		38.62		27.62	51.62
Number exceeding 5 mSv		7		7.62		2.62	13.62
Number exceeding 20 mSv		0		0.00		0.00	0.00
Number exceeding 50 mSv		0		0.00		0.00	0.00
Doses accumulating over rolling 5 year block starting 2002							
Parameters	A	0.424494	B	0.014807	C	0.007223	
Sample size		6989			D	1.515400	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average		0.32		0.33		0.30	0.37
Average over 0.5 mSv		2.2		2.38		2.14	2.68
Number exceeding 0.5 mSv		869		779.60		730.57	829.62
Number exceeding 5 mSv		71		80.62		62.62	97.62
Number exceeding 20 mSv		5		6.62		2.62	12.62
Number exceeding 50 mSv		0		0.00		0.00	1.62
Number exceeding 100 mSv		0		0.00		0.00	0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Medical physicist****Annual doses**

Parameters	A	0.016697	B	0.141317	C	0.086339	D	2.173410
Sample size	435							
Statistic	Sample value		Expectation value		Lower 95% CL		Upper 95% CL	
Average	0.06		0.10		0.07		0.14	
Average from 0.1 mSv up	0.57		0.54		0.27		0.97	
Number at or exceeding 0.1 mSv	47		46.60		33.61		58.59	
Number exceeding 1 mSv	4		4.62		0.62		9.62	
Number exceeding 2 mSv	4		2.62		0.00		6.62	
Number exceeding 5 mSv	1		0.62		0.00		2.62	
Number exceeding 20 mSv	0		0.00		0.00		0.00	
Number exceeding 50 mSv	0		0.00		0.00		0.00	

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.468465	B	0.098403	C	0.000000	D	1.460470
Sample size	627							
Statistic	Sample value		Expectation value		Lower 95% CL		Upper 95% CL	
Average	0.23		0.24		0.20		0.30	
Average over 0.5 mSv	1.27		1.47		1.21		1.82	
Number exceeding 0.5 mSv	88		73.60		57.60		88.59	
Number exceeding 5 mSv	3		1.62		0.00		4.62	
Number exceeding 20 mSv	0		0.00		0.00		0.00	
Number exceeding 50 mSv	0		0.00		0.00		0.00	
Number exceeding 100 mSv	0		0.00		0.00		0.00	

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Medical radiation technologist****Annual doses**

Parameters	A	0.383147	B	0.087011	C	0.026842	D	2.016360
Sample size		13696						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.09		0.12		0.11		0.12
Average from 0.1 mSv up		0.45		0.44		0.42		0.47
Number at or exceeding 0.1 mSv		2745		2750.57		2658.55		2845.57
Number exceeding 1 mSv		231		255.62		227.60		287.64
Number exceeding 2 mSv		110		99.62		79.62		119.62
Number exceeding 5 mSv		14		14.62		7.62		22.62
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.488904	B	0.019924	C	0.000000	D	1.275250
Sample size		17063						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.42		0.45		0.43		0.47
Average over 0.5 mSv		1.84		2.16		2.06		2.28
Number exceeding 0.5 mSv		3416		2915.58		2823.56		3010.58
Number exceeding 5 mSv		211		261.62		229.62		292.62
Number exceeding 20 mSv		18		13.62		7.62		21.62
Number exceeding 50 mSv		3		0.00		0.00		0.65
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Nuclear medicine technologist****Annual doses**

Parameters	A	0.165765	B	0.367592	C	0.000000	D	-0.464803
Sample size		1805						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.66		1.67		1.59		1.74
Average from 0.1 mSv up		2.08		2.09		2.00		2.17
Number at or exceeding 0.1 mSv		1438		1432.43		1397.43		1465.42
Number exceeding 1 mSv		986		970.49		928.47		1011.51
Number exceeding 2 mSv		637		628.54		590.54		667.53
Number exceeding 5 mSv		86		90.61		72.61		106.64
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.258086	B	0.048110	C	0.000000	D	-0.377318
Sample size		2336						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		6.49		6.46		6.09		6.81
Average over 0.5 mSv		8.55		9.15		8.72		9.59
Number exceeding 0.5 mSv		1766		1637.45		1592.45		1682.49
Number exceeding 5 mSv		1045		911.53		864.53		956.52
Number exceeding 20 mSv		103		202.60		176.61		230.60
Number exceeding 50 mSv		6		2.62		0.00		6.62
Number exceeding 100 mSv		4		0.00		0.00		0.00

Table 4 (Cont'd)
Dose distribution by job category as of the end of 2006

Nurse							
Annual doses							
Parameters	A	0.431983	B	0.152691	C	0.000000	
Sample size		7533			D	1.934860	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average		0.08		0.09		0.09	0.10
Average from 0.1 mSv up		0.46		0.46		0.43	0.49
Number at or exceeding 0.1 mSv		1322		1325.58		1260.56	1390.58
Number exceeding 1 mSv		105		138.62		114.62	160.62
Number exceeding 2 mSv		42		40.62		29.62	53.65
Number exceeding 5 mSv		5		1.62		0.00	5.62
Number exceeding 20 mSv		0		0.00		0.00	0.00
Number exceeding 50 mSv		0		0.00		0.00	0.00
Doses accumulating over rolling 5 year block starting 2002							
Parameters	A	0.360344	B	0.115027	C	0.000000	
Sample size		10992			D	1.250500	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average		0.3		0.32		0.31	0.34
Average over 0.5 mSv		1.61		1.83		1.74	1.91
Number exceeding 0.5 mSv		1800		1586.59		1517.57	1661.59
Number exceeding 5 mSv		72		87.62		70.62	106.62
Number exceeding 20 mSv		2		0.00		0.00	0.02
Number exceeding 50 mSv		0		0.00		0.00	0.00
Number exceeding 100 mSv		0		0.00		0.00	0.00

Table 4 (Cont'd)
Dose distribution by job category as of the end of 2006

Physician						
Annual doses						
Parameters	A	0.385916	B	0.055468	C	0.000000
Sample size		3087			D	1.578130
Statistic		Sample value		Expectation value		Upper 95% CL
Average		0.21		0.22		0.25
Average from 0.1 mSv up		0.84		0.84		0.95
Number at or exceeding 0.1 mSv		772		770.56		815.56
Number exceeding 1 mSv		141		157.61		179.61
Number exceeding 2 mSv		71		76.62		94.62
Number exceeding 5 mSv		17		19.62		29.62
Number exceeding 20 mSv		0		0.00		0.62
Number exceeding 50 mSv		0		0.00		0.00
Doses accumulating over rolling 5 year block starting 2002						
Parameters	A	0.361948	B	0.034897	C	0.000000
Sample size		4202			D	1.004250
Statistic		Sample value		Expectation value		Upper 95% CL
Average		0.74		0.77		0.84
Average over 0.5 mSv		2.88		3.20		3.49
Number exceeding 0.5 mSv		1021		922.57		973.57
Number exceeding 5 mSv		131		163.62		189.61
Number exceeding 20 mSv		16		10.62		17.62
Number exceeding 50 mSv		0		0.00		0.62
Number exceeding 100 mSv		0		0.00		0.00

Table 4 (Cont'd)
Dose distribution by job category as of the end of 2006

Radiation therapist						
Annual doses						
Parameters	A	0.515332	B	0.000000	C	0.025038
Sample size		1726			D	2.304310
Statistic		Sample value		Expectation value		Upper 95% CL
Average		0.08		0.10		0.13
Average from 0.1 mSv up		0.39		0.35		0.47
Number at or exceeding 0.1 mSv		352		351.57		382.57
Number exceeding 1 mSv		11		18.62		27.62
Number exceeding 2 mSv		5		6.62		11.62
Number exceeding 5 mSv		1		0.62		3.62
Number exceeding 20 mSv		1		0.00		0.62
Number exceeding 50 mSv		0		0.00		0.00
Doses accumulating over rolling 5 year block starting 2002						
Parameters	A	0.582512	B	0.000562	C	0.000000
Sample size		2285			D	1.199170
Statistic		Sample value		Expectation value		Upper 95% CL
Average		0.47		0.55		0.65
Average over 0.5 mSv		1.6		2.11		2.60
Number exceeding 0.5 mSv		561		482.57		521.57
Number exceeding 5 mSv		16		36.62		49.62
Number exceeding 20 mSv		3		2.62		6.62
Number exceeding 50 mSv		1		0.00		1.62
Number exceeding 100 mSv		1		0.00		0.62

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Radiologist (diagnostic)****Annual doses**

Parameters	A	0.422218	B	0.001863	C	0.000000	D	1.809560
Sample size		2079						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.2		0.20		0.15		0.30
Average from 0.1 mSv up		0.97		0.92		0.68		1.41
Number at or exceeding 0.1 mSv		431		431.57		393.58		466.57
Number exceeding 1 mSv		64		72.62		55.62		88.61
Number exceeding 2 mSv		33		35.62		24.62		47.62
Number exceeding 5 mSv		11		12.62		6.62		20.62
Number exceeding 20 mSv		4		1.62		0.00		4.62
Number exceeding 50 mSv		0		0.00		0.00		1.62

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.425569	B	0.008857	C	0.000000	D	1.112950
Sample size		2828						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.74		0.77		0.66		0.90
Average over 0.5 mSv		2.94		3.40		2.92		3.98
Number exceeding 0.5 mSv		665		577.57		535.58		617.59
Number exceeding 5 mSv		77		92.62		74.62		112.64
Number exceeding 20 mSv		15		13.62		7.62		21.62
Number exceeding 50 mSv		1		1.62		0.00		4.62
Number exceeding 100 mSv		0		0.00		0.00		0.62

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Radiologist (therapeutic)****Annual doses**

Parameters	A	0.148338	B	0.096263	C	0.030631	D	1.834340
Sample size		257						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.12		0.14		0.08		0.25
Average from 0.1 mSv up		1.01		0.96		0.46		1.72
Number at or exceeding 0.1 mSv		31		30.60		20.60		39.59
Number exceeding 1 mSv		7		6.62		2.62		11.61
Number exceeding 2 mSv		6		3.62		0.62		8.62
Number exceeding 5 mSv		2		0.62		0.00		3.62
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.368627	B	0.020406	C	0.018980	D	1.414830
Sample size		385						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.41		0.42		0.29		0.66
Average over 0.5 mSv		2.44		2.72		1.77		4.22
Number exceeding 0.5 mSv		58		48.59		36.60		61.58
Number exceeding 5 mSv		7		6.62		1.62		11.62
Number exceeding 20 mSv		1		0.00		0.00		2.62
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)
Dose distribution by job category as of the end of 2006

Veterinarian								
Annual doses								
Parameters	A	0.553628	B	0.054265	C	0.001414	D	2.706140
Sample size		3229						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.02		0.04		0.03		0.04
Average from 0.1 mSv up		0.29		0.28		0.25		0.34
Number at or exceeding 0.1 mSv		264		263.61		233.61		296.63
Number exceeding 1 mSv		5		8.62		3.62		14.62
Number exceeding 2 mSv		3		1.62		0.00		5.62
Number exceeding 5 mSv		0		0.00		0.00		0.62
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00
Doses accumulating over rolling 5 year block starting 2002								
Parameters	A	0.331654	B	0.125869	C	0.020694	D	1.697080
Sample size		4950						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.14		0.17		0.15		0.18
Average over 0.5 mSv		1.37		1.54		1.41		1.70
Number exceeding 0.5 mSv		389		336.61		300.61		372.61
Number exceeding 5 mSv		8		9.62		4.62		15.62
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)
Dose distribution by job category as of the end of 2006

Veterinary technician							
Annual doses							
Parameters	A	0.302894	B	0.023237	C	0.045430	
Sample size		3784			D	2.651100	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average		0.03		0.06		0.05	0.07
Average from 0.1 mSv up		0.39		0.37		0.28	0.52
Number at or exceeding 0.1 mSv		272		271.61		242.58	304.61
Number exceeding 1 mSv		10		15.62		8.62	23.62
Number exceeding 2 mSv		7		6.62		2.62	12.62
Number exceeding 5 mSv		4		1.62		0.00	4.62
Number exceeding 20 mSv		0		0.00		0.00	0.62
Number exceeding 50 mSv		0		0.00		0.00	0.00
Doses accumulating over rolling 5 year block starting 2002							
Parameters	A	0.413087	B	0.073619	C	0.010689	
Sample size		6402			D	2.030300	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average		0.08		0.10		0.09	0.11
Average over 0.5 mSv		1.25		1.42		1.25	1.58
Number exceeding 0.5 mSv		293		249.62		218.62	278.61
Number exceeding 5 mSv		8		6.62		1.62	12.62
Number exceeding 20 mSv		0		0.00		0.00	0.00
Number exceeding 50 mSv		0		0.00		0.00	0.00
Number exceeding 100 mSv		0		0.00		0.00	0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Ward aid/orderly****Doses accumulating over rolling 5 year block starting 2002**

Parameters	A 0.376607	B 0.035654	C 0.014565	D 1.670070
Sample size	2048			
Statistic	Sample value	Expectation value	Lower 95% CL	Upper 95% CL
Average	0.21	0.23	0.19	0.27
Average over 0.5 mSv	2	2.08	1.72	2.56
Number exceeding 0.5 mSv	176	164.60	139.61	186.63
Number exceeding 5 mSv	18	13.62	7.62	21.62
Number exceeding 20 mSv	0	0.00	0.00	1.62
Number exceeding 50 mSv	0	0.00	0.00	0.00
Number exceeding 100 mSv	0	0.00	0.00	0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Reactor - administration****Annual doses**

Parameters	A	0.160715	B	0.104467	C	0.000000	D	1.693880
Sample size		3683						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.14		0.14		0.12		0.17
Average from 0.1 mSv up		1.52		1.50		1.28		1.72
Number at or exceeding 0.1 mSv		339		341.60		307.60		378.60
Number exceeding 1 mSv		123		132.62		109.62		152.64
Number exceeding 2 mSv		85		80.62		63.62		96.62
Number exceeding 5 mSv		27		23.62		14.62		34.62
Number exceeding 20 mSv		0		0.00		0.00		0.62
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.152984	B	0.033635	C	0.004578	D	1.446620
Sample size		6424						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.53		0.54		0.47		0.60
Average over 0.5 mSv		5.55		5.80		5.24		6.46
Number exceeding 0.5 mSv		597		569.60		524.60		613.63
Number exceeding 5 mSv		194		202.62		175.62		231.62
Number exceeding 20 mSv		31		31.62		20.62		43.62
Number exceeding 50 mSv		0		0.00		0.00		2.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Reactor - chemical and radiation control****Annual doses**

Parameters	A 0.190077	B 0.179654	C 0.000000	D -0.071108
Sample size	841			
Statistic	Sample value	Expectation value	Lower 95% CL	Upper 95% CL
Average	1.87	1.92	1.75	2.11
Average from 0.1 mSv up	2.73	2.77	2.56	3.00
Number at or exceeding 0.1 mSv	578	581.45	553.43	609.44
Number exceeding 1 mSv	357	382.51	353.52	412.50
Number exceeding 2 mSv	277	282.54	254.55	309.56
Number exceeding 5 mSv	108	107.59	88.60	127.59
Number exceeding 20 mSv	0	0.00	0.00	0.00
Number exceeding 50 mSv	0	0.00	0.00	0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A 0.222383	B 0.041658	C 0.000000	D -0.146567
Sample size	1048			
Statistic	Sample value	Expectation value	Lower 95% CL	Upper 95% CL
Average	5.73	5.90	5.38	6.48
Average over 0.5 mSv	8.52	9.65	8.88	10.44
Number exceeding 0.5 mSv	702	636.47	607.48	670.47
Number exceeding 5 mSv	327	352.54	325.55	382.53
Number exceeding 20 mSv	85	91.60	74.61	110.60
Number exceeding 50 mSv	6	1.62	0.00	5.62
Number exceeding 100 mSv	0	0.00	0.00	0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Reactor - construction****Annual doses**

Parameters	A	0.096208	B	0.146822	C	0.002819	D	0.648530
Sample size		1219						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.94		0.94		0.82		1.05
Average from 0.1 mSv up		2.74		2.71		2.45		2.98
Number at or exceeding 0.1 mSv		416		417.54		384.55		450.53
Number exceeding 1 mSv		249		258.57		233.58		286.57
Number exceeding 2 mSv		195		189.59		164.59		215.58
Number exceeding 5 mSv		88		75.61		59.61		92.61
Number exceeding 20 mSv		0		0.00		0.00		0.62
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.138656	B	0.052586	C	0.000000	D	0.338558
Sample size		3070						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		3.22		3.19		2.98		3.42
Average over 0.5 mSv		7.34		8.04		7.59		8.46
Number exceeding 0.5 mSv		1337		1208.53		1155.51		1255.52
Number exceeding 5 mSv		608		626.57		587.58		671.57
Number exceeding 20 mSv		118		108.62		88.59		128.62
Number exceeding 50 mSv		0		0.00		0.00		2.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Reactor - control technician****Annual doses**

Parameters	A	0.175888	B	0.166751	C	0.000000	D	0.247545
Sample size		378						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.35		1.39		1.16		1.62
Average from 0.1 mSv up		2.49		2.47		2.11		2.81
Number at or exceeding 0.1 mSv		204		210.49		191.50		229.50
Number exceeding 1 mSv		119		127.54		109.55		146.55
Number exceeding 2 mSv		73		90.57		74.58		106.56
Number exceeding 5 mSv		38		32.60		21.61		42.60
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.143265	B	0.060651	C	0.000000	D	0.263853
Sample size		502						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		2.92		3.13		2.66		3.73
Average over 0.5 mSv		6.35		7.37		6.43		8.44
Number exceeding 0.5 mSv		229		211.52		189.53		234.51
Number exceeding 5 mSv		88		106.57		88.56		125.56
Number exceeding 20 mSv		18		13.62		6.62		21.61
Number exceeding 50 mSv		0		0.00		0.00		0.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Reactor - electrical maintenance****Annual doses**

Parameters	A	0.149406	B	0.203390	C	0.000000	D	0.513061
Sample size		1373						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.84		0.84		0.76		0.93
Average from 0.1 mSv up		1.94		1.94		1.79		2.10
Number at or exceeding 0.1 mSv		597		587.52		552.52		625.51
Number exceeding 1 mSv		313		325.07		295.57		355.56
Number exceeding 2 mSv		197		209.59		186.59		236.58
Number exceeding 5 mSv		66		52.62		39.62		65.61
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.174649	B	0.067010	C	0.000000	D	0.165961
Sample size		2082						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		3.05		3.11		2.88		3.34
Average over 0.5 mSv		6.15		6.56		6.18		6.95
Number exceeding 0.5 mSv		1026		973.51		931.49		1017.53
Number exceeding 5 mSv		397		450.57		416.55		487.62
Number exceeding 20 mSv		61		43.62		30.62		56.62
Number exceeding 50 mSv		0		0.00		0.00		0.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Reactor - fuel handling****Annual doses**

Parameters	A	0.000000	B	0.254248	C	0.009983	D	-0.445221
Sample size		86						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		2.33		2.61		2.02		3.28
Average from 0.1 mSv up		3.7		3.72		3.01		4.48
Number at or exceeding 0.1 mSv		54		59.45		51.48		67.43
Number exceeding 1 mSv		42		49.48		39.51		58.46
Number exceeding 2 mSv		32		40.51		31.53		50.48
Number exceeding 5 mSv		17		16.58		9.60		25.55
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.253916	B	0.037656	C	0.000000	D	-0.132392
Sample size		272						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		5.91		5.69		4.68		6.77
Average over 0.5 mSv		9.18		9.22		7.77		10.83
Number exceeding 0.5 mSv		174		166.47		150.49		181.46
Number exceeding 5 mSv		99		86.55		72.56		101.53
Number exceeding 20 mSv		18		22.60		13.61		31.60
Number exceeding 50 mSv		0		0.62		0.00		2.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Reactor - general maintenance****Annual doses**

Parameters	A	0.118985	B	0.165182	C	0.005045	D	0.588269
Sample size		1869						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.91		0.91		0.83		1.01
Average from 0.1 mSv up		2.32		2.30		2.13		2.48
Number at or exceeding 0.1 mSv		734		733.53		693.53		773.52
Number exceeding 1 mSv		407		421.57		387.55		458.56
Number exceeding 2 mSv		301		295.58		264.57		326.61
Number exceeding 5 mSv		107		100.61		83.61		119.61
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.181211	B	0.032888	C	0.000000	D	0.632602
Sample size		2891						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		2.52		2.47		2.25		2.71
Average over 0.5 mSv		7.34		8.11		7.53		8.77
Number exceeding 0.5 mSv		984		866.55		821.55		916.55
Number exceeding 5 mSv		360		398.59		363.59		433.61
Number exceeding 20 mSv		109		95.62		78.62		115.64
Number exceeding 50 mSv		0		3.62		0.61		7.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Reactor - health physics****Annual doses**

Parameters	A	0.065243	B	0.336779	C	0.000000	D	0.635398
Sample size		104						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.49		0.46		0.29		0.66
Average from 0.1 mSv up		1.54		1.52		1.10		2.00
Number at or exceeding 0.1 mSv		33		30.55		22.57		40.53
Number exceeding 1 mSv		16		16.59		9.60		23.57
Number exceeding 2 mSv		10		8.60		3.62		14.59
Number exceeding 5 mSv		0		0.62		0.00		2.62
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.148699	B	0.064148	C	0.007666	D	0.710223
Sample size		142						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.49		1.46		0.95		2.14
Average over 0.5 mSv		5.45		5.40		3.68		7.45
Number exceeding 0.5 mSv		38		37.56		27.58		47.54
Number exceeding 5 mSv		13		13.60		7.61		21.59
Number exceeding 20 mSv		2		0.62		0.00		2.62
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Reactor - industrial radiographer****Annual doses**

Parameters	A	0.108749	B	0.251782	C	0.000000	D	-0.541967
Sample size	65							
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		2.61		2.57		1.93		3.29
Average from 0.1 mSv up		3.33		3.30		2.59		4.04
Number at or exceeding 0.1 mSv		51		50.43		43.46		56.41
Number exceeding 1 mSv		40		39.47		31.50		46.45
Number exceeding 2 mSv		31		30.51		22.54		38.48
Number exceeding 5 mSv		11		11.58		5.60		18.55
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.216845	B	0.076180	C	0.000000	D	-0.519199
Sample size	175							
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		5.8		5.92		4.87		6.92
Average over 0.5 mSv		7.61		7.99		6.82		9.17
Number exceeding 0.5 mSv		133		128.44		116.46		137.45
Number exceeding 5 mSv		68		72.52		60.51		85.50
Number exceeding 20 mSv		7		8.11		3.62		13.61
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Reactor - mechanical maintenance****Annual doses**

Parameters	A 0.125538	B 0.197836	C 0.000000	D -0.016665
Sample size	1705			
Statistic	Sample value	Expectation value	Lower 95% CL	Upper 95% CL
Average	1.77	1.78	1.67	1.91
Average from 0.1 mSv up	2.89	2.89	2.74	3.05
Number at or exceeding 0.1 mSv	1047	1047.47	1007.45	1089.49
Number exceeding 1 mSv	702	728.52	685.52	770.54
Number exceeding 2 mSv	556	544.54	504.55	580.57
Number exceeding 5 mSv	199	203.60	176.60	229.59
Number exceeding 20 mSv	0	0.00	0.00	0.00
Number exceeding 50 mSv	0	0.00	0.00	0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A 0.155684	B 0.052111	C 0.000000	D -0.021720
Sample size	3101			
Statistic	Sample value	Expectation value	Lower 95% CL	Upper 95% CL
Average	5.23	5.10	4.83	5.39
Average over 0.5 mSv	8.7	9.37	8.98	9.78
Number exceeding 0.5 mSv	1858	1676.49	1622.49	1728.49
Number exceeding 5 mSv	962	967.55	916.55	1013.54
Number exceeding 20 mSv	237	212.61	186.61	238.61
Number exceeding 50 mSv	0	1.62	0.00	4.62
Number exceeding 100 mSv	0	0.00	0.00	0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Reactor - operations****Annual doses**

Parameters	A	0.190015	B	0.151891	C	0.000000	D	0.489752
Sample size		2474						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.05		1.04		0.96		1.13
Average from 0.1 mSv up		2.12		2.17		2.02		2.32
Number at or exceeding 0.1 mSv		1224		1180.51		1123.49		1228.53
Number exceeding 1 mSv		663		642.56		598.57		686.56
Number exceeding 2 mSv		439		438.58		398.56		479.58
Number exceeding 5 mSv		144		147.61		123.61		172.61
Number exceeding 20 mSv		0		0.00		0.00		0.62
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.177779	B	0.045045	C	0.000000	D	0.035284
Sample size		2857						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		4.41		4.98		4.68		5.31
Average over 0.5 mSv		7.7		9.42		8.95		9.91
Number exceeding 0.5 mSv		1629		1500.49		1447.50		1551.49
Number exceeding 5 mSv		758		834.55		787.53		884.55
Number exceeding 20 mSv		120		202.61		175.61		230.60
Number exceeding 50 mSv		19		3.62		0.62		7.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Reactor - scientific/professional****Annual doses**

Parameters	A	0.146959	B	0.133338	C	0.000000	D	1.284200
Sample size		2847						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.29		0.30		0.26		0.34
Average from 0.1 mSv up		1.72		1.71		1.53		1.91
Number at or exceeding 0.1 mSv		482		484.58		449.56		522.58
Number exceeding 1 mSv		197		220.61		195.61		248.60
Number exceeding 2 mSv		144		139.61		119.61		162.61
Number exceeding 5 mSv		41		39.62		27.60		52.62
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.157896	B	0.045375	C	0.000000	D	0.904392
Sample size		4593						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.25		1.30		1.19		1.41
Average over 0.5 mSv		5.85		6.16		5.74		6.60
Number exceeding 0.5 mSv		963		948.57		896.58		1000.60
Number exceeding 5 mSv		350		379.60		347.58		416.63
Number exceeding 20 mSv		55		50.62		37.62		64.65
Number exceeding 50 mSv		0		0.00		0.00		1.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Reactor - training****Annual doses**

Parameters	A	0.157916	B	0.139172	C	0.011132	D	1.366580
Sample size	102							
Statistic	Sample value		Expectation value		Lower 95% CL		Upper 95% CL	
Average	0.25		0.26		0.12		0.46	
Average from 0.1 mSv up	1.35		1.30		0.65		2.30	
Number at or exceeding 0.1 mSv	19		18.58		11.60		25.56	
Number exceeding 1 mSv	7		6.61		2.62		11.60	
Number exceeding 2 mSv	4		3.62		0.62		7.61	
Number exceeding 5 mSv	1		0.62		0.00		2.62	
Number exceeding 20 mSv	0		0.00		0.00		0.00	
Number exceeding 50 mSv	0		0.00		0.00		0.00	

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.195141	B	0.052796	C	0.000000	D	1.086620
Sample size	143							
Statistic	Sample value		Expectation value		Lower 95% CL		Upper 95% CL	
Average	0.98		0.71		0.37		1.19	
Average over 0.5 mSv	5.02		4.24		2.48		6.55	
Number exceeding 0.5 mSv	27		22.59		14.60		31.57	
Number exceeding 5 mSv	9		6.61		1.62		11.60	
Number exceeding 20 mSv	1		0.00		0.00		1.62	
Number exceeding 50 mSv	0		0.00		0.00		0.00	
Number exceeding 100 mSv	0		0.00		0.00		0.00	

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Reactor - visitor****Annual doses**

Parameters	A	0.059773	B	0.130945	C	0.005701	D	0.976762
Sample size		5198						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.61		0.62		0.57		0.67
Average from 0.1 mSv up		2.86		2.84		2.67		3.01
Number at or exceeding 0.1 mSv		1116		1120.57		1065.57		1177.57
Number exceeding 1 mSv		680		700.59		652.59		749.61
Number exceeding 2 mSv		526		522.60		479.60		568.60
Number exceeding 5 mSv		221		218.61		190.62		249.61
Number exceeding 20 mSv		0		0.00		0.00		1.62
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.119740	B	0.056818	C	0.000000	D	0.833616
Sample size		15730						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.42		1.40		1.34		1.45
Average over 0.5 mSv		5.87		6.32		6.11		6.51
Number exceeding 0.5 mSv		3778		3422.57		3325.55		3521.62
Number exceeding 5 mSv		1369		1491.60		1425.60		1562.63
Number exceeding 20 mSv		209		155.62		131.62		177.62
Number exceeding 50 mSv		1		0.00		0.00		0.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Accelerators - Administration****Annual doses**

Parameters	A	0.264496	B	1.217410	C	0.000000	D	1.127920
Sample size		40						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.1		0.10		0.05		0.18
Average from 0.1 mSv up		0.4		0.35		0.21		0.54
Number at or exceeding 0.1 mSv		10		10.56		4.60		15.53
Number exceeding 1 mSv		1		0.00		0.00		1.61
Number exceeding 2 mSv		0		0.00		0.00		0.00
Number exceeding 5 mSv		0		0.00		0.00		0.00
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.000000	B	0.789383	C	0.037312	D	-0.753541
Sample size		52						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.18		1.18		0.94		1.46
Average over 0.5 mSv		1.55		1.68		1.40		1.95
Number exceeding 0.5 mSv		39		34.46		27.49		40.43
Number exceeding 5 mSv		0		0.00		0.00		0.62
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Accelerators - Control technicians****Annual doses**

Parameters	A	0.072092	B	0.239329	C	0.000000	D	0.961097
Sample size		28						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.39		0.35		0.05		0.78
Average from 0.1 mSv up		1.58		1.68		0.51		3.47
Number at or exceeding 0.1 mSv		7		5.58		1.61		9.54
Number exceeding 1 mSv		3		2.60		0.00		5.60
Number exceeding 2 mSv		2		1.61		0.00		4.58
Number exceeding 5 mSv		0		0.00		0.00		1.61
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.670569	B	0.048926	C	0.000000	D	-0.162113
Sample size		29						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		2.17		2.12		1.30		3.42
Average over 0.5 mSv		2.68		2.86		1.82		4.50
Number exceeding 0.5 mSv		23		20.45		15.49		25.41
Number exceeding 5 mSv		2		2.60		0.00		6.57
Number exceeding 20 mSv		0		0.00		0.00		0.62
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Accelerators - Designers****Annual doses**

Parameters	A	0.094602	B	0.148344	C	0.000000	D	0.667503
Sample size		17						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.78		0.80		0.09		2.06
Average from 0.1 mSv up		2.66		2.54		0.59		5.73
Number at or exceeding 0.1 mSv		5		4.56		1.60		8.50
Number exceeding 1 mSv		2		2.59		0.60		6.53
Number exceeding 2 mSv		2		1.60		0.00		5.54
Number exceeding 5 mSv		2		0.62		0.00		2.59
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.540062	B	0.011010	C	0.243240	D	-0.121146
Sample size		19						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		4.53		4.17		1.79		8.49
Average over 0.5 mSv		5.65		4.99		2.18		10.35
Number exceeding 0.5 mSv		15		15.42		11.47		17.40
Number exceeding 5 mSv		4		3.58		0.62		7.53
Number exceeding 20 mSv		2		0.62		0.00		2.59
Number exceeding 50 mSv		0		0.00		0.00		0.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Accelerators - General Maintenance****Annual doses**

Parameters	A	0.000000	B	0.305016	C	0.033770	D	0.117006
Sample size		20						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.34		1.17		0.51		2.04
Average from 0.1 mSv up		2.23		2.02		1.02		3.22
Number at or exceeding 0.1 mSv		12		11.48		6.54		15.43
Number exceeding 1 mSv		8		6.54		2.59		11.48
Number exceeding 2 mSv		7		4.57		0.62		8.52
Number exceeding 5 mSv		0		0.62		0.00		2.59
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.306553	B	0.072557	C	0.000000	D	-0.544484
Sample size		21						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		5.61		5.25		2.90		7.87
Average over 0.5 mSv		7.35		6.86		4.22		10.08
Number exceeding 0.5 mSv		16		15.44		11.49		18.41
Number exceeding 5 mSv		8		7.54		3.58		11.49
Number exceeding 20 mSv		0		0.62		0.00		2.59
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)
Dose distribution by job category as of the end of 2006

Accelerators - Machinists

Annual doses

Parameters	A	0.409284	B	0.035268	C	0.000000	D	1.455910
Sample size		26						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.29		0.24		0.06		0.92
Average from 0.1 mSv up		0.95		0.75		0.22		2.66
Number at or exceeding 0.1 mSv		8		7.55		3.59		12.50
Number exceeding 1 mSv		1		1.61		0.00		4.58
Number exceeding 2 mSv		1		0.62		0.00		2.60
Number exceeding 5 mSv		1		0.00		0.00		1.61
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.590628	B	0.000159	C	0.000000	D	0.508991
Sample size		34						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.67		1.48		0.68		4.68
Average over 0.5 mSv		3.02		3.01		1.43		9.94
Number exceeding 0.5 mSv		18		14.52		9.55		20.47
Number exceeding 5 mSv		1		1.61		0.00		5.58
Number exceeding 20 mSv		1		0.00		0.00		1.61
Number exceeding 50 mSv		0		0.00		0.00		0.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Accelerators - Mechanical technicians****Annual doses**

Parameters	A	0.062024	B	0.163860	C	0.012926	D	0.218061
Sample size		75						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.7		1.71		1.13		2.36
Average from 0.1 mSv up		3.26		3.26		2.33		4.36
Number at or exceeding 0.1 mSv		39		38.50		30.52		46.47
Number exceeding 1 mSv		26		26.54		18.56		34.51
Number exceeding 2 mSv		21		20.56		13.58		28.53
Number exceeding 5 mSv		9		9.59		3.61		15.57
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.376943	B	0.046138	C	0.000000	D	-0.637522
Sample size		86						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		6.39		6.65		5.12		8.56
Average over 0.5 mSv		7.41		8.20		6.45		10.28
Number exceeding 0.5 mSv		74		69.42		61.45		76.40
Number exceeding 5 mSv		30		35.52		26.55		44.50
Number exceeding 20 mSv		8		6.61		1.62		12.59
Number exceeding 50 mSv		0		0.00		0.00		0.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Accelerators - Operations****Annual doses**

Parameters	A	0.053565	B	0.315807	C	0.000000	D	-0.398104
Sample size		38						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.94		1.90		1.29		2.58
Average from 0.1 mSv up		2.74		2.76		2.08		3.56
Number at or exceeding 0.1 mSv		27		25.46		19.50		31.42
Number exceeding 1 mSv		19		19.50		13.54		25.46
Number exceeding 2 mSv		14		14.53		9.56		20.49
Number exceeding 5 mSv		4		3.60		0.62		7.58
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.175461	B	0.094513	C	0.000000	D	-0.862323
Sample size		44						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		7.73		7.44		5.52		9.48
Average over 0.5 mSv		8.5		9.02		6.93		11.24
Number exceeding 0.5 mSv		40		35.42		30.45		40.40
Number exceeding 5 mSv		23		23.49		16.53		30.45
Number exceeding 20 mSv		4		1.62		0.00		5.59
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Accelerators - Scientific/professional****Annual doses**

Parameters	A	0.381860	B	0.094177	C	0.000000	D	1.335240
Sample size		299						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.35		0.30		0.21		0.41
Average from 0.1 mSv up		1.16		0.87		0.64		1.20
Number at or exceeding 0.1 mSv		91		97.54		81.53		114.53
Number exceeding 1 mSv		23		22.61		13.61		31.60
Number exceeding 2 mSv		14		10.62		4.62		17.61
Number exceeding 5 mSv		3		1.62		0.00		5.62
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.653309	B	0.016782	C	0.000000	D	0.058709
Sample size		348						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		2.06		2.24		1.86		2.67
Average over 0.5 mSv		2.71		3.34		2.79		3.90
Number exceeding 0.5 mSv		259		224.46		209.45		242.45
Number exceeding 5 mSv		21		40.60		29.60		51.59
Number exceeding 20 mSv		5		2.62		0.00		6.62
Number exceeding 50 mSv		0		0.00		0.00		0.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Accelerators - Visitors****Annual doses**

Parameters	A	0.543614	B	0.160467	C	0.000000	D	1.783210
Sample size		101						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.13		0.14		0.09		0.22
Average from 0.1 mSv up		0.5		0.40		0.27		0.65
Number at or exceeding 0.1 mSv		25		29.55		21.57		39.53
Number exceeding 1 mSv		1		1.62		0.00		5.61
Number exceeding 2 mSv		1		0.00		0.00		2.62
Number exceeding 5 mSv		0		0.00		0.00		0.00
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.146478	B	0.431417	C	0.000000	D	0.299384
Sample size		143						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.59		0.62		0.47		0.79
Average over 0.5 mSv		1.52		1.68		1.42		2.00
Number exceeding 0.5 mSv		52		47.54		37.56		59.52
Number exceeding 5 mSv		2		0.00		0.00		1.62
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)
Dose distribution by job category as of the end of 2006

Uranium mine electrician								
Annual doses								
Parameters	A	0.000000	B	7.128340	C	0.000001		
Sample size		25						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.02		0.03		0.01		0.06
Average from 0.1 mSv up		0.18		0.16		0.11		0.25
Number at or exceeding 0.1 mSv		3		2.60		0.62		6.56
Number exceeding 1 mSv		0		0.00		0.00		0.00
Number exceeding 2 mSv		0		0.00		0.00		0.00
Number exceeding 5 mSv		0		0.00		0.00		0.00
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00
Doses accumulating over rolling 5 year block starting 2002								
Parameters	A	0.062561	B	4.937100	C	0.000000	D	0.949834
Sample size		29						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.02		0.02		0.01		0.05
Average over 0.5 mSv								
Number exceeding 0.5 mSv		0		0.00		0.00		0.00
Number exceeding 5 mSv		0		0.00		0.00		0.00
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Uranium mine mill maintenance****Annual doses**

Parameters	A	0.227855	B	0.816095	C	0.000000	D	0.187524
Sample size		448						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.44		0.45		0.40		0.50
Average from 0.1 mSv up		0.73		0.73		0.66		0.80
Number at or exceeding 0.1 mSv		272		271.47		252.48		291.49
Number exceeding 1 mSv		66		69.59		55.59		85.58
Number exceeding 2 mSv		12		9.62		4.62		16.64
Number exceeding 5 mSv		0		0.00		0.00		0.00
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.235559	B	0.126441	C	0.011066	D	0.309533
Sample size		751						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.47		1.49		1.31		1.65
Average over 0.5 mSv		3.23		3.34		3.03		3.69
Number exceeding 0.5 mSv		332		318.52		290.53		344.51
Number exceeding 5 mSv		75		69.60		54.61		85.60
Number exceeding 20 mSv		0		0.00		0.00		0.62
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Uranium mine mill worker****Annual doses**

Parameters	A	0.254080	B	0.626116	C	0.000000	D	-0.633257
Sample size		240						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.19		1.21		1.09		1.35
Average from 0.1 mSv up		1.35		1.38		1.25		1.52
Number at or exceeding 0.1 mSv		211		210.41		200.42		219.40
Number exceeding 1 mSv		120		119.50		105.51		134.49
Number exceeding 2 mSv		44		50.57		38.58		62.56
Number exceeding 5 mSv		1		0.00		0.00		1.62
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.124101	B	0.120926	C	0.010345	D	-0.272537
Sample size		476						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		3.72		3.69		3.28		4.10
Average over 0.5 mSv		5.87		5.88		5.38		6.38
Number exceeding 0.5 mSv		299		296.97		275.48		318.46
Number exceeding 5 mSv		155		141.55		123.56		160.57
Number exceeding 20 mSv		2		2.62		0.00		5.62
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)
Dose distribution by job category as of the end of 2006

Uranium mine nurse						
Annual doses						
Parameters	A	0.000000	B	0.643696	C	0.057435
Sample size		27			D	1.434870
Statistic		Sample value		Expectation value		Upper 95% CL
Average		0.08		0.10		0.23
Average from 0.1 mSv up		0.43		0.39		0.96
Number at or exceeding 0.1 mSv		5		4.58		8.55
Number exceeding 1 mSv		0		0.00		1.61
Number exceeding 2 mSv		0		0.00		0.62
Number exceeding 5 mSv		0		0.00		0.00
Number exceeding 20 mSv		0		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00
Doses accumulating over rolling 5 year block starting 2002						
Parameters	A	0.162557	B	0.296525	C	0.000000
Sample size		38			D	1.135090
Statistic		Sample value		Expectation value		Upper 95% CL
Average		0.25		0.21		0.47
Average over 0.5 mSv		1.66		1.53		3.01
Number exceeding 0.5 mSv		5		4.10		8.57
Number exceeding 5 mSv		0		0.00		0.62
Number exceeding 20 mSv		0		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Uranium mine office staff****Annual doses**

Parameters	A	0.605876	B	0.581815	C	0.000000	D	1.980290
Sample size		422						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.08		0.10		0.08		0.11
Average from 0.1 mSv up		0.29		0.27		0.23		0.32
Number at or exceeding 0.1 mSv		115		113.56		98.57		131.55
Number exceeding 1 mSv		1		1.62		0.00		5.62
Number exceeding 2 mSv		1		0.00		0.00		0.62
Number exceeding 5 mSv		0		0.00		0.00		0.00
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.425234	B	0.208666	C	0.012492	D	1.370100
Sample size		640						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.22		0.24		0.20		0.28
Average over 0.5 mSv		1.17		1.27		1.08		1.50
Number exceeding 0.5 mSv		90		78.59		62.60		96.59
Number exceeding 5 mSv		1		0.00		0.00		1.62
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Uranium mine support worker**

Annual doses									
Parameters	A	0.342250	B	0.214796	C	0.040789	D	0.440955	
Sample size		348							
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL	
Average		0.87		0.87		0.75		1.01	
Average from 0.1 mSv up		1.11		1.11		0.95		1.28	
Number at or exceeding 0.1 mSv		272		271.43		256.44		285.42	
Number exceeding 1 mSv		83		92.56		76.54		109.55	
Number exceeding 2 mSv		55		47.59		34.60		60.58	
Number exceeding 5 mSv		7		6.62		1.62		11.62	
Number exceeding 20 mSv		0		0.00		0.00		0.00	
Number exceeding 50 mSv		0		0.00		0.00		0.00	
Doses accumulating over rolling 5 year block starting 2002									
Parameters	A	0.345108	B	0.053719	C	0.017029	D	0.269104	
Sample size		615							
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL	
Average		2.17		2.18		1.89		2.49	
Average over 0.5 mSv		4.04		4.30		3.78		4.81	
Number exceeding 0.5 mSv		322		300.50		274.51		324.52	
Number exceeding 5 mSv		92		84.59		66.60		101.58	
Number exceeding 20 mSv		7		4.62		0.62		10.62	
Number exceeding 50 mSv		0		0.00		0.00		0.00	
Number exceeding 100 mSv		0		0.00		0.00		0.00	

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Uranium mine surface maintenance****Annual doses**

Parameters	A	0.484000	B	0.224414	C	0.000000	D	1.426410
Sample size		1010						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.19		0.21		0.19		0.24
Average from 0.1 mSv up		0.51		0.51		0.46		0.58
Number at or exceeding 0.1 mSv		382		382.53		353.54		410.55
Number exceeding 1 mSv		42		48.61		36.62		62.61
Number exceeding 2 mSv		11		13.62		6.62		21.62
Number exceeding 5 mSv		2		0.00		0.00		1.62
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.270416	B	0.141268	C	0.025652	D	0.997552
Sample size		1312						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.48		0.50		0.45		0.57
Average over 0.5 mSv		1.99		2.11		1.90		2.33
Number exceeding 0.5 mSv		282		265.57		236.58		294.57
Number exceeding 5 mSv		13		20.62		12.62		30.62
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Uranium mine surface miner****Annual doses**

Parameters	A	0.250279	B	0.751631	C	0.000000	D	0.603881
Sample size		158						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.29		0.29		0.23		0.36
Average from 0.1 mSv up		0.59		0.61		0.50		0.73
Number at or exceeding 0.1 mSv		78		72.51		60.53		85.49
Number exceeding 1 mSv		10		13.60		6.61		20.59
Number exceeding 2 mSv		2		1.62		0.00		4.62
Number exceeding 5 mSv		0		0.00		0.00		0.00
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.237228	B	0.098456	C	0.000000	D	0.507291
Sample size		214						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.14		1.27		0.95		1.67
Average over 0.5 mSv		3.09		3.55		2.83		4.40
Number exceeding 0.5 mSv		76		73.54		60.55		86.52
Number exceeding 5 mSv		16		17.60		9.61		25.60
Number exceeding 20 mSv		0		0.00		0.00		0.62
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Uranium mine surface personnel**

Annual doses									
Parameters	A	0.332862	B	0.608710	C	0.000000	D	1.157890	
Sample size		384							
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL	
Average		0.17		0.17		0.14		0.21	
Average from 0.1 mSv up		0.5		0.48		0.40		0.56	
Number at or exceeding 0.1 mSv		129		126.54		109.55		144.53	
Number exceeding 1 mSv		17		13.62		7.62		21.61	
Number exceeding 2 mSv		0		1.62		0.00		4.62	
Number exceeding 5 mSv		0		0.00		0.00		0.00	
Number exceeding 20 mSv		0		0.00		0.00		0.00	
Number exceeding 50 mSv		0		0.00		0.00		0.00	
Doses accumulating over rolling 5 year block starting 2002									
Parameters	A	0.291158	B	0.108758	C	0.003155	D	0.927593	
Sample size		690							
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL	
Average		0.58		0.59		0.48		0.71	
Average over 0.5 mSv		2.27		2.43		2.10		2.85	
Number exceeding 0.5 mSv		164		150.57		128.58		172.56	
Number exceeding 5 mSv		16		17.62		9.62		26.62	
Number exceeding 20 mSv		0		0.00		0.00		0.00	
Number exceeding 50 mSv		0		0.00		0.00		0.00	
Number exceeding 100 mSv		0		0.00		0.00		0.00	

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Uranium mine surface support worker**

Annual doses								
Parameters	A	0.439255	B	0.259633	C	0.014834	D	1.824990
Sample size		1303						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.1		0.12		0.11		0.14
Average from 0.1 mSv up		0.39		0.38		0.34		0.43
Number at or exceeding 0.1 mSv		332		331.56		302.54		364.55
Number exceeding 1 mSv		21		24.12		15.62		34.62
Number exceeding 2 mSv		6		4.62		0.62		9.62
Number exceeding 5 mSv		0		0.00		0.00		0.62
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00
Doses accumulating over rolling 5 year block starting 2002								
Parameters	A	0.440847	B	0.145627	C	0.000000	D	1.500000
Sample size		2280						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.19		0.20		0.18		0.23
Average over 0.5 mSv		1.27		1.37		1.24		1.51
Number exceeding 0.5 mSv		254		231.60		202.58		261.60
Number exceeding 5 mSv		8		2.62		0.00		7.62
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Uranium mine underground maintenance****Annual doses**

Parameters	A	0.350933	B	0.656198	C	0.000000	D	0.168658
Sample size		210						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.56		0.57		0.49		0.66
Average from 0.1 mSv up		0.77		0.77		0.67		0.88
Number at or exceeding 0.1 mSv		152		151.45		139.43		163.43
Number exceeding 1 mSv		39		41.58		31.59		53.59
Number exceeding 2 mSv		12		8.61		2.62		14.61
Number exceeding 5 mSv		0		0.00		0.00		0.00
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.265329	B	0.138407	C	0.025163	D	0.174895
Sample size		386						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.62		1.63		1.40		1.87
Average over 0.5 mSv		3.09		3.14		2.79		3.54
Number exceeding 0.5 mSv		195		190.50		172.51		209.49
Number exceeding 5 mSv		38		37.60		26.61		48.59
Number exceeding 20 mSv		0		0.00		0.00		0.62
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)
Dose distribution by job category as of the end of 2006

Uranium mine underground miner								
Annual doses								
Parameters	A	0.000000	B	0.726855	C	0.056606		
Sample size		132						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.66		0.66		0.54		0.80
Average from 0.1 mSv up		0.92		0.92		0.77		1.07
Number at or exceeding 0.1 mSv		94		93.45		82.47		103.43
Number exceeding 1 mSv		37		33.56		24.58		43.54
Number exceeding 2 mSv		10		9.61		4.62		16.59
Number exceeding 5 mSv		0		0.00		0.00		0.00
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00
Doses accumulating over rolling 5 year block starting 2002								
Parameters	A	0.281474	B	0.037200	C	0.016149	D	-0.089855
Sample size		611						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		5.1		5.09		4.46		5.81
Average over 0.5 mSv		7.79		8.17		7.20		9.12
Number exceeding 0.5 mSv		397		375.47		352.48		399.46
Number exceeding 5 mSv		179		178.55		155.56		200.57
Number exceeding 20 mSv		48		40.61		28.61		53.60
Number exceeding 50 mSv		0		0.62		0.00		3.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Uranium mine underground personnel****Annual doses**

Parameters	A	0.000000	B	0.734512	C	0.055575	D	-0.033587
Sample size		132						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.66		0.66		0.53		0.82
Average from 0.1 mSv up		0.92		0.92		0.77		1.08
Number at or exceeding 0.1 mSv		94		92.45		82.47		102.46
Number exceeding 1 mSv		37		33.56		24.58		44.54
Number exceeding 2 mSv		10		9.61		4.62		16.59
Number exceeding 5 mSv		0		0.00		0.00		0.00
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.148574	B	0.119932	C	0.043606	D	0.256377
Sample size		234						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.92		1.91		1.54		2.34
Average over 0.5 mSv		3.95		4.09		3.44		4.83
Number exceeding 0.5 mSv		111		104.51		90.53		118.50
Number exceeding 5 mSv		36		31.59		22.60		42.58
Number exceeding 20 mSv		0		0.00		0.00		0.62
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job category as of the end of 2006****Uranium mine visitor****Annual doses**

Parameters	A	0.047288	B	0.742040	C	0.000000	D	1.912390
Sample size		61						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.02		0.01		0.00		0.05
Average from 0.1 mSv up		0.5				0.14		1.29
Number at or exceeding 0.1 mSv		2		1.62		0.00		4.61
Number exceeding 1 mSv		0		0.00		0.00		1.62
Number exceeding 2 mSv		0		0.00		0.00		0.00
Number exceeding 5 mSv		0		0.00		0.00		0.00
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2002

Parameters	A	0.252599	B	0.240366	C	0.010577	D	1.291530
Sample size		335						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.21		0.22		0.17		0.29
Average over 0.5 mSv		1.39		1.51		1.22		1.94
Number exceeding 0.5 mSv		42		36.60		25.61		48.59
Number exceeding 5 mSv		2		0.00		0.00		2.62
Number exceeding 20 mSv		0		0.00		0.00		0.00
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

2006 Final Analysis

Table 5
Collective dose in mSv by job class including tritium and radon progeny components

Job Sector and Category	Number of Workers	Collective Dose (mSv)	% tritium	% radon progeny
Shared among all sectors				
Administrator	702	79	0.35	0.00
Office staff	3494	171	0.28	0.00
Safety officer	411	46	0.13	0.00
Student	15992	596	0.00	0.00
Industry and Research				
Aircrew	15	7	0.00	0.00
Ground transportation	83	58	0.00	0.00
Industrial radiographer	2948	7752	0.00	0.00
Instructor (non-medical)	316	21	0.00	0.00
Instrument technician	2180	378	1.67	0.00
Laboratory technician (industrial)	2915	639	2.86	0.00
Nuclear fuel processor	1002	977	0.00	0.00
Scientist/Engineer (field)	1662	497	1.01	0.00
Scientist/Engineer (laboratory)	4364	192	0.00	0.00
Security	224	3	0.00	0.00
Tradesmen	193	39	0.00	0.00
Well logger	2688	1080	0.00	0.00
Medicine				
Chiropractor	1117	28	0.00	0.00
Dental assistant	14083	90	0.00	0.00
Dental hygienist	9821	64	0.00	0.00
Dental therapist/nurse	169	4	0.00	0.00
Dentist	7879	90	0.00	0.00
Gynaecologist	11	0	0.00	0.00
Laboratory technician (medical)	2862	285	0.00	0.00
Medical physicist	435	27	0.00	0.00
Medical radiation technologist	13696	1237	0.19	0.00
Nuclear medicine technologist	1805	2991	0.00	0.00
Nurse	7533	605	0.00	0.00
Physician	3087	646	0.00	0.00
Radiation therapist	1726	139	0.00	0.00
Radiologist (diagnostic)	2079	420	0.00	0.00
Radiologist (therapeutic)	257	32	0.00	0.00
Veterinarian	3229	76	0.00	0.00
Veterinary technician	3784	105	0.00	0.00
Ward aid/orderly	1006	56	0.00	0.00
Nuclear Power				
Reactor - administration	3683	520	22.83	0.00
Reactor - chemical and radiation control	841	1577	19.44	0.00
Reactor - construction	1219	1142	9.88	0.00

Table 5 (Cont'd)
Collective dose in mSv by job class including tritium and radon progeny components

Job Sector and Category	Number of Workers	Collective Dose (mSv)	% tritium	% radon progeny
Reactor - control technician	378	510	13.96	0.00
Reactor - electrical maintenance	1373	1159	17.79	0.00
Reactor - fuel handling	86	200	24.02	0.00
Reactor - general maintenance	1869	1706	17.33	0.00
Reactor - health physics	104	51	13.46	0.00
Reactor - industrial radiographer	65	170	15.69	0.00
Reactor - mechanical maintenance	1705	3027	15.57	0.00
Reactor - operations	2474	2597	27.91	0.00
Reactor - scientific/professional	2847	834	15.22	0.00
Reactor - training	102	26	12.03	0.00
Reactor - visitor	5198	3201	13.72	0.00
Particle Accelerators				
Accelerators - Administration	40	4	0.00	0.00
Accelerators - Control technicians	28	11	0.00	0.00
Accelerators - Designers	17	13	0.00	0.00
Accelerators - General Maintenance	20	27	0.00	0.00
Accelerators - Machinists	26	8	0.00	0.00
Accelerators - Mechanical technicians	75	128	0.00	0.00
Accelerators - Operations	38	74	0.00	0.00
Accelerators - Scientific/professional	299	107	0.00	0.00
Accelerators - Visitors	101	13	0.00	0.00
Uranium Mining				
Uranium mine electrician	25	1	0.00	45.00
Uranium mine mill maintenance	448	200	0.00	44.13
Uranium mine mill worker	240	286	0.00	48.52
Uranium mine nurse	27	2	0.00	78.26
Uranium mine office staff	422	35	0.00	64.29
Uranium mine support worker	348	306	0.00	59.31
Uranium mine surface maintenance	1010	201	0.00	42.03
Uranium mine surface miner	158	47	0.00	23.27
Uranium mine surface personnel	384	67	0.00	62.82
Uranium mine surface support worker	1303	136	0.00	49.78
Uranium mine underground maintenance	210	121	0.00	69.84
Uranium mine underground miner	371	645	0.00	53.27
Uranium mine underground personnel	132	88	0.00	64.06
Uranium mine visitor	61	1	0.00	20.00
Miscellaneous/Unknown				
Miscellaneous/Unknown	19585	8488	5.39	0.00
Total				
Total	153468	47158	7.31	2.38

2006 Final Analysis

Table 6

**10 year trend of worker counts (top) and average annual doses in mSv (bottom)
by job category for all of Canada**

Job Category	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Shared among all sectors										
Administrator	578	577	573	579	612	629	627	646	657	702
	0.15	0.15	0.13	0.15	0.14	0.16	0.13	0.15	0.11	0.11
Office staff	3882	3858	3920	3993	4026	3921	3934	3816	3600	3494
	0.06	0.05	0.05	0.06	0.05	0.05	0.05	0.10	0.06	0.05
Safety officer	147	138	153	187	207	221	295	490	555	411
	0.20	0.21	0.25	0.15	0.16	0.21	0.20	0.12	0.13	0.11
Student	2631	3023	5387	6884	8165	8566	9603	11291	13394	15992
	0.05	0.08	0.06	0.03	0.03	0.03	0.05	0.04	0.04	0.04
Industry and Research										
Aircrew	3	3	9	10	12	13	11	16	10	15
	0.70	0.77	0.27	0.49	0.69	0.49	0.63	0.46	0.45	0.50
Ground transportation	7	25	19	41	189	212	82	83	80	83
	0.67	0.14	0.34	0.48	0.23	0.32	0.72	0.58	0.62	0.70
Industrial radiographer	2403	2554	2630	2845	2894	2896	2710	2739	2824	2948
	3.45	2.99	2.87	2.60	3.01	2.44	2.77	2.71	2.87	2.63
Instructor (non-medical)	166	183	195	199	207	209	216	245	277	316
	0.04	0.03	0.03	0.02	0.03	0.16	0.16	0.07	0.06	0.07
Instrument technician	1980	1925	2206	2371	2379	2319	2235	2224	2172	2180
	0.15	0.31	0.13	0.15	0.44	0.18	0.27	0.20	0.61	0.17
Laboratory technician (industrial)	3587	3725	3902	4022	4454	4204	3625	3357	3030	2915
	0.20	0.19	0.18	0.17	0.22	0.20	0.26	0.23	0.27	0.22
Nuclear fuel processor	266	266	571	572	638	706	738	863	965	1002
	2.57	2.09	1.46	1.25	1.31	1.65	1.45	1.20	1.06	0.97
Scientist/Engineer (field)	1494	1366	1266	1275	1289	1299	1241	1361	1579	1662
	0.31	0.29	0.35	0.35	0.26	0.24	0.35	0.26	0.26	0.30
Scientist/Engineer (laboratory)	4809	5125	5618	6121	6558	6757	6033	5592	5186	4364
	0.06	0.05	0.04	0.04	0.13	0.06	0.06	0.06	0.07	0.04
Security	3	3	4	3	4	10	130	193	177	224
	0.00	0.00	0.00	0.00	0.05	0.05	0.03	0.03	0.01	0.01
Tradesmen	66	74	108	123	142	161	192	239	204	193
	0.23	0.23	0.19	0.30	0.11	0.12	0.17	0.11	0.16	0.20
Well logger	853	927	984	1231	1528	1573	1970	2411	2485	2688
	0.57	0.48	0.45	0.67	0.42	0.39	0.43	0.36	0.41	0.40
Medicine										
Chiropractor	1044	990	1020	1056	1066	1053	1099	1117	1100	1117
	0.03	0.06	0.02	0.02	0.04	0.03	0.03	0.04	0.05	0.02
Dental assistant	8900	9444	10227	10983	11643	11956	13400	14039	14064	14083
	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Table 6 (Cont'd)

**10 year trend of worker counts (top) and average annual doses in mSv (bottom)
by job category for all of Canada**

Job Category	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	
Dental hygienist	7022 0.01	7138 0.01	7534 0.01	7900 0.01	8267 0.02	8513 0.01	9271 0.01	9538 0.01	9621 0.01	9821 0.01	
Dental therapist/nurse		95 0.02	101 0.01	99 0.02	110 0.01	119 0.01	130 0.04	137 0.04	151 0.05	154 0.04	169 0.02
Dentist	6962 0.01	7018 0.01	7189 0.01	7288 0.01	7444 0.01	7452 0.04	7837 0.02	8002 0.02	7970 0.01	7879 0.01	
Gynaecologist		28 0.15	26 0.11	18 0.01	17 0.00	14 0.01	11 0.04	11 0.03	10 0.02	13 0.02	11 0.01
Laboratory technician (medical)	3503 0.06	3420 0.09	3400 0.09	3592 0.09	3738 0.08	3988 0.12	4387 0.13	4284 0.10	4123 0.11	2862 0.10	
Medical physicist		282 0.08	291 0.23	326 0.03	346 0.08	371 0.20	385 0.07	411 0.09	430 0.06	445 0.06	435 0.06
Medical radiation technologist	12117 0.09	11962 0.10	11952 0.06	12321 0.07	12722 0.09	13062 0.11	13429 0.12	13450 0.11	13612 0.12	13696 0.09	
Nuclear medicine technologist		1490 1.33	1459 1.45	1445 1.39	1526 1.44	1625 1.51	1657 1.70	1714 1.71	1780 1.97	1818 1.60	1805 1.66
Nurse	5134 0.10	5034 0.20	4794 0.08	5066 0.10	5695 0.10	5963 0.12	6189 0.11	6416 0.10	7132 0.09	7533 0.08	
Physician		2167 0.17	2145 0.25	2081 0.16	2139 0.18	2351 0.17	2447 0.23	2593 0.25	2728 0.22	2950 0.23	3087 0.21
Radiation therapist		1078 0.24	1110 0.12	1338 0.15	1514 0.11	1656 0.14	1741 0.17	1801 0.15	1793 0.11	1799 0.09	1726 0.08
Radiologist (diagnostic)		1830 0.15	1806 0.16	1780 0.17	1869 0.16	1986 0.17	2071 0.18	2129 0.24	2201 0.19	2198 0.17	2079 0.20
Radiologist (therapeutic)		159 0.06	152 0.13	202 0.05	214 0.06	250 0.13	259 0.12	270 0.13	285 0.10	279 0.11	257 0.12
Veterinarian	4233 0.03	4227 0.06	4069 0.03	3958 0.02	3863 0.03	3647 0.06	3581 0.05	3465 0.04	3314 0.03	3229 0.02	
Veterinary technician		176 0.04	354 0.07	998 0.02	1675 0.03	2057 0.03	2230 0.04	2741 0.04	3217 0.04	3493 0.03	3784 0.03
Ward aid/orderly		1747 0.06	1601 0.13	1573 0.06	1500 0.10	1434 0.06	1507 0.07	1388 0.08	1258 0.08	1072 0.06	1006 0.06
Nuclear Power											
Reactor - administration	5164 0.25	5080 0.21	4507 0.24	4378 0.18	4679 0.19	4513 0.16	4383 0.21	3950 0.15	3955 0.17	3683 0.14	
Reactor - chemical and radiation control		374 1.79	368 1.40	360 1.57	349 1.52	422 1.46	470 1.71	523 1.96	568 2.11	668 2.11	841 1.87
Reactor - construction		1359 1.60	1155 1.59	1602 1.82	1814 1.56	2085 1.65	1841 1.64	1861 1.19	1270 1.02	1183 1.87	1219 0.94
Reactor - control technician		111 1.30	118 1.48	135 1.20	170 0.82	177 0.82	189 1.34	183 2.22	153 0.15	268 1.02	378 1.35

Table 6 (Cont'd)

**10 year trend of worker counts (top) and average annual doses in mSv (bottom)
by job category for all of Canada**

Job Category	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Reactor - electrical maintenance	978 1.13	956 0.95	987 1.04	1064 0.85	1331 0.99	1441 0.86	1410 1.10	1393 0.67	1457 1.00	1373 0.84
Reactor - fuel handling	39 4.76	55 4.73	45 6.31	52 5.64	47 3.17	51 3.99	127 3.34	113 1.98	128 4.33	86 2.33
Reactor - general maintenance	1286 0.79	1147 0.90	1299 1.03	1353 0.86	1502 1.03	1518 0.77	1394 1.12	1415 0.75	1536 1.17	1869 0.91
Reactor - health physics	68 0.36	61 0.48	79 0.48	84 0.40	63 0.47	63 0.69	54 0.84	71 0.43	83 0.49	104 0.49
Reactor - industrial radiographer	11 1.30	9 1.13	22 2.12	58 2.40	46 1.59	68 2.88	95 2.76	72 2.25	67 3.39	65 2.61
Reactor - mechanical maintenance	1315 2.55	1229 2.12	1293 2.52	1286 2.10	1558 2.17	1737 1.84	1632 2.32	1452 1.56	1767 2.24	1705 1.78
Reactor - operations	1871 1.61	1919 1.24	1934 1.16	1993 1.12	2171 1.14	2191 0.97	2312 1.14	2319 1.02	2437 1.19	2474 1.05
Reactor - scientific/professional	1573 0.73	1441 0.53	1558 0.54	1989 0.48	2467 0.45	2520 0.53	2533 0.55	2510 0.42	2564 0.43	2847 0.29
Reactor - training	50 0.31	58 0.60	93 0.83	93 0.43	64 0.36	58 0.56	60 0.61	61 0.27	89 0.33	102 0.26
Reactor - visitor	529 0.41	725 0.54	2667 0.40	3442 0.17	5350 0.57	6708 0.67	6650 0.53	6363 0.81	6497 0.93	5198 0.62
Particle Accelerators										
Accelerators - Administration	25 0.02	26 0.01	27 0.00	27 0.07	27 0.23	27 0.10	38 1.16	37 0.12	39 0.14	40 0.10
Accelerators - Control technicians	15 0.01	15 0.01	15 0.07	15 0.10	15 0.33	15 0.11	25 1.25	29 0.26	29 0.38	28 0.40
Accelerators - Designers	13 1.18	13 0.65	14 1.03	14 0.96	14 1.36	14 0.92	18 1.92	18 0.86	17 0.59	17 0.78
Accelerators - General Maintenance	10 1.13	11 3.78	11 0.98	11 0.71	11 1.30	11 1.20	18 2.21	20 0.95	19 1.01	20 1.34
Accelerators - Machinists	16 0.19	19 0.30	19 0.41	19 0.34	19 0.62	19 0.32	25 1.14	27 0.26	28 0.28	26 0.30
Accelerators - Mechanical technicians	47 1.96	49 0.65	50 0.80	51 0.89	51 1.03	51 1.11	69 2.61	72 1.42	78 1.06	75 1.70
Accelerators - Operations	16 2.05	18 0.97	18 0.62	18 0.98	18 1.77	18 1.81	34 2.74	38 1.53	42 1.96	38 1.95
Accelerators - Scientific/professional	184 0.20	196 0.18	218 0.20	225 0.24	233 0.47	239 0.30	303 1.24	317 0.25	322 0.26	299 0.36
Accelerators - Visitors	9 0.04	8 0.01	15 0.01	15 0.07	14 0.26	15 0.12	56 1.04	68 0.07	98 0.07	101 0.13

Uranium Mining

Table 6 (Cont'd)

**10 year trend of worker counts (top) and average annual doses in mSv (bottom)
by job category for all of Canada**

Job Category	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Uranium mine electrician		8 0.18	16 0.27	8 0.15		4 0.00			1 0.05	25 0.04
Uranium mine mill maintenance		169 2.71	186 2.13	207 1.36	185 1.68	162 1.66	183 1.24	209 1.01	309 0.85	310 0.68
Uranium mine mill worker		256 2.62	272 2.05	306 1.47	273 2.03	258 2.10	249 1.66	260 1.35	274 1.59	285 1.00
Uranium mine nurse		10 0.16	18 0.24	24 0.06	17 0.11	14 0.11	11 0.11	13 0.21	14 0.17	23 0.04
Uranium mine office staff		140 0.23	177 0.19	196 0.24	179 0.18	170 0.16	149 0.17	145 0.15	223 0.16	286 0.10
Uranium mine support worker		153 3.51	296 1.79	467 1.29	327 1.19	176 1.11	143 1.37	144 1.77	230 1.21	350 0.89
Uranium mine surface maintenance		224 0.51	222 0.57	287 0.51	207 0.61	190 0.81	203 0.49	231 0.47	301 0.42	385 0.27
Uranium mine surface miner		245 0.93	116 0.73	108 0.59	88 1.34	47 2.15	46 1.53	42 1.19	36 0.45	73 0.83
Uranium mine surface personnel		123 0.31	164 0.52	222 0.41	187 0.64	177 0.61	173 0.41	182 0.52	232 0.34	280 0.33
Uranium mine surface support worker		352 0.65	357 0.60	302 0.30	296 0.30	335 0.28	331 0.19	369 0.17	568 0.15	795 0.12
Uranium mine underground maintenance		103 1.49	137 1.13	204 0.92	195 0.70	115 0.46	128 0.74	158 1.01	142 1.00	190 0.60
Uranium mine underground miner		353 6.05	361 3.27	344 3.13	284 2.57	161 2.29	196 2.65	273 2.74	206 3.71	258 1.73
Uranium mine underground personnel		340 0.92	213 0.92	150 1.08	110 0.89	72 0.49	82 0.77	97 1.07	94 1.31	125 0.60
Uranium mine visitor		249 0.13	306 0.06	399 0.10	185 0.21	132 0.41	151 0.34	120 0.14	10 0.05	53 0.02
Miscellaneous/Unknown										
Miscellaneous/Unknown	29698 0.22	28790 0.22	25423 0.20	21676 0.21	17777 0.21	16374 0.19	15511 0.21	13710 0.23	14544 1.07	19585 0.43
Total	124276 0.34	124477 0.31	127742 0.31	131472 0.28	136137 0.33	139201 0.31	142621 0.33	143391 0.30	147412 0.42	153468 0.31

Appendix

The new three component normal (TCN) distribution

The appendix explains how the data can be fitted to a statistical distribution, so that: (1) the sample of doses can be described by 5 quantities (the parameters of the distribution and sample size); and, (2) from these quantities, any dose statistic can be estimated, including any statistic not listed in this report, such as the 9-th decile.

Statistical distributions are defined by a probability density function, which is interpreted as follows:

The probability that a dose value lies between a and b equals

$$\int_a^b f(x)dx ,$$

where f represents the probability density function and x assumes possible values of a random variable X which in our case represents the occupational dose.

The probability density function also contains a number of parameters, which determine the shape of the function. The distribution is defined by the mathematical formula for the density function, with the parameters as yet unspecified. Only when the parameters have been specified is the statistical model for the occupational dose defined. Parameters are adjusted to fit the data.

The TCN distribution has been designed to provide good fits especially to low dose distributions. Its probability density function is defined as:

$$f(x;A,B,C,D) =$$

$$\phi(A*\log(x) + B*x - C/x + D) *$$

$$(A/x + B + C/x^2) =$$

$$\phi(z) * (dz/dx)$$

where $\phi(t)$ denotes the standard normal probability density function $\exp(-t^2/2)/\sqrt{2\pi}$, and A, B, C and D are parameters of the distribution. In other words, the random variable:

$$Z = A*\log(X) + B*X - C/X + D$$

follows a standard normal distribution.

The parameters A, B and C are restricted to values $>=0$. If $A=0$ then $B>0$ and $C>0$. There are no restrictions on the parameter D.

Special cases of this distribution arise when B and C are fixed to 0, and when just C is fixed to 0, while $A>0$; they are reparametrized versions of respectively the lognormal and hybrid lognormal distributions^(4,5).

If the parameters for the probability density function f are known, one can estimate any dose statistic. For example, the mean dose is estimated as

$$\int_0^\infty xf(x)dx$$

(since the dose values x are between 0 and infinity).

The variance of the dose is estimated as:

$$\int_0^\infty (x-\text{mean})^2f(x)dx$$

and the standard deviation as the square root thereof.

The probability that a dose exceeds, for example, 50 mSv, is estimated as:

$$\int_{50}^\infty f(x)dx .$$

The 95-th percentile is estimated as that dose value v for which:

$$\int_v^\infty f(x)dx = 95/100.$$

The fraction of the collective dose due to doses exceeding 15 mSv is estimated as:

$$\frac{\int_{15}^\infty xf(x)dx}{\int_0^\infty xf(x)dx}.$$

The parameters are determined from the actual dose data. They are chosen to give the best “fit” with the sample of observed data, for which purpose there exists a variety of methods. The parameters in Table 4 have been estimated with a form of the Maximum Likelihood method. With this method, dose statistics can be estimated with the formulas given above, with the tabulated parameter values substituted for A, B, C and D.

Instead of single dose values, small dose intervals and their frequencies (i.e. number of doses within the intervals) are used to determine the parameters. Doses recorded as 0 are assumed to have small positive values within the lowest dose interval. The resulting models will be valid for complete sets of workers’ doses, not just doses recorded as positive.