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2006 Report on Occupational Radiation Exposures in Canada



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**2006 Report on
Occupational Radiation
Exposures in Canada**

Abstract

The report provides statistics on occupational radiation exposures for use by regulatory authorities, organizations and private individuals. Out of a total of 145,855 monitored workers, 2 annual doses exceeded the regulatory limit of 50 mSv in 2005. Out of 69 specified job categories, 33 had a smaller annual average in 2005 than in 2004, 30 had a higher average, and 6 had the same average rounded to 0.01 mSv.

In the nuclear power sector, the annual average went up in 2005 for all job classes, and for some job classes substantially. In uranium mining, the annual average for all but one job class went down. The annual average dose for the entire NDR in 2005 is 0.42 mSv, which is back to the level of 1995, whereas this average ranged from 0.28 to 0.34 mSv between 1996 and 2004.

The information content of Table 4 has been changed substantially and is now presented in Tables 4 to 6. Please refer to the section "Comments specific to this report" on page 6 for details.

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Introduction

This series of reports provides 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 issues, can be found on the NDR's web site⁽¹⁾ and downloaded, or obtained from the authors.

The information is based on the data in the National Dose Registry (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 October 16, 2006. 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 outside 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 recording thresholds from 0 to 0.2 mSv.

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:

2005: Preliminary analysis

Table 1:

Table 1 gives the annual dose distributions by job category.

2004: 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 (but not the dose) 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 in Tables 2-6 may slightly differ.

Comments specific to this report

A separate job sector particle accelerators has been added, formerly part of the industry sector. The job classes are now listed separately, where they were grouped with miscellaneous/unknown in previous reports. Some job classes are not yet listed separately because of lack of workers.

The contents of Table 4 in previous reports have been revised. The new information is now presented in Tables 4 to 6. The description of what is in the new tables is given in the previous section. As in previous reports, 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 now described in more detail in reference [5]. A method for obtaining confidence intervals is described in reference [5] only. 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 research into this subject is needed in the future.

References

1. The National Dose Registry's Web site is found at
<http://www.healthcanada.gc.ca/ndr>
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:
<http://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.", Radiation Prot Dosimetry 121(3) pp. 284-292 (2006).

2005 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			
Administration										
Administrator	460	187	3	2	0	0	0	652	0.11	0.39
Office staff	3073	488	17	7	2	0	0	3587	0.06	0.39
Safety officer	377	162	6	3	0	0	0	548	0.13	0.40
Industry and Research										
Aircrew	5	3	2	0	0	0	0	10	0.45	0.90
Ground transportation	21	44	12	2	1	0	0	80	0.62	0.84
Industrial radiographer	1173	465	213	401	529	42	0	2823	2.87	4.91
Instructor (non-medical)	239	36	1	0	1	0	0	277	0.06	0.41
Instrument technician	1593	491	40	28	7	0	0	2159	0.16	0.63
Laboratory technician (industrial)	2105	731	82	78	23	1	0	3020	0.27	0.88
Nuclear fuel processor	226	321	110	123	42	0	0	822	1.20	1.66
Scientist/Engineer (field)	836	664	38	24	7	0	0	1569	0.26	0.56
Scientist/Engineer (laboratory)	4107	1008	15	9	1	1	0	5141	0.07	0.35
Security	167	10	0	0	0	0	0	177	0.01	0.20
Tradesmen	126	70	4	0	1	0	0	201	0.16	0.43
Well logger	1189	984	161	90	11	0	0	2435	0.40	0.79
Medicine										
Chiropractor	1017	73	4	2	2	0	0	1098	0.05	0.63
Dental assistant	13522	488	1	3	2	1	0	14017	0.01	0.34
Dental hygienist	9325	280	6	1	1	0	0	9613	0.01	0.23
Dental therapist/nurse	134	20	0	0	0	0	0	154	0.04	0.34
Dentist	7622	335	2	0	0	0	0	7959	0.01	0.22
Gynaecologist	12	1	0	0	0	0	0	13	0.02	0.23
Laboratory technician (medical)	2984	769	41	31	7	0	0	3832	0.11	0.48
Medical physicist	354	78	2	2	1	0	0	437	0.10	0.52
Medical radiation technologist	10307	3040	151	93	10	2	1	13604	0.11	0.47
Nuclear medicine technologist	352	486	358	555	67	0	0	1818	1.59	1.97
Nurse	5462	1525	70	23	6	0	0	7086	0.09	0.41
Physician	2042	730	101	40	12	4	0	2929	0.24	0.78
Radiation therapist	1234	524	8	7	5	0	0	1778	0.11	0.35
Radiologist (diagnostic)	1604	527	31	21	10	0	0	2193	0.17	0.62

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 (therapeutic)	219	51	6	0	2	0	0	278	0.11	0.50
Veterinarian	2972	330	6	3	0	0	0	3311	0.03	0.29
Veterinary technician	3147	323	6	1	1	0	0	3478	0.03	0.28
Ward aid/orderly	922	132	9	4	0	0	0	1067	0.06	0.43
Nuclear Power										
Reactor - administration	3443	350	57	67	38	0	0	3955	0.17	1.33
Reactor - chemical and radiation control	196	188	67	97	120	0	0	668	2.11	2.98
Reactor - construction	642	192	53	115	181	0	0	1183	1.87	4.09
Reactor - control technician	121	79	20	32	16	0	0	268	1.02	1.86
Reactor - electrical maintenance	670	388	148	170	81	0	0	1457	1.00	1.86
Reactor - fuel handling	17	35	9	19	48	0	0	128	4.33	4.99
Reactor - general maintenance	887	306	80	122	141	0	0	1536	1.17	2.76
Reactor - health physics	54	16	4	7	2	0	0	83	0.49	1.41
Reactor - industrial radiographer	13	12	5	14	23	0	0	67	3.39	4.20
Reactor - mechanical maintenance	563	416	161	315	312	0	0	1767	2.23	3.28
Reactor - operations	1034	700	251	298	154	0	0	2437	1.18	2.06
Reactor - scientific/professional	1921	410	63	95	75	0	0	2564	0.43	1.72
Reactor - training	59	22	5	0	3	0	0	89	0.33	0.97
Reactor - visitor	4124	1133	330	482	418	0	0	6487	0.93	2.55
Particle Accelerators										
Accelerators - Administration	20	18	0	1	0	0	0	39	0.14	0.29
Accelerators - Control technicians	17	10	0	1	1	0	0	29	0.38	0.93
Accelerators - Designers	9	6	0	1	1	0	0	17	0.59	1.25
Accelerators - General Maintenance	5	9	1	3	1	0	0	19	1.01	1.36
Accelerators - Machinists	20	7	0	0	1	0	0	28	0.28	0.98
Accelerators - Mechanical technicians	26	28	8	11	5	0	0	78	1.06	1.59
Accelerators - Operations	9	6	6	18	3	0	0	42	1.96	2.49
Accelerators - Scientific/professional	175	126	11	8	2	0	0	322	0.26	0.57
Accelerators - Visitors	67	30	1	0	0	0	0	98	0.07	0.23
Uranium Mining										
Uranium mine electrician	0	1	0	0	0	0	0	1	0.05	0.05
Uranium mine mill maintenance	66	166	55	23	0	0	0	310	0.68	0.86
Uranium mine mill worker	57	105	75	47	0	0	0	284	1.00	1.26
Uranium mine nurse	18	5	0	0	0	0	0	23	0.04	0.18

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 office staff	158	127	0	1	0	0	0	286	0.10	0.22
Uranium mine support worker	61	189	46	56	1	0	0	353	0.87	1.06
Uranium mine surface maintenance	130	232	16	2	0	0	0	380	0.26	0.39
Uranium mine surface miner	19	31	17	5	1	0	0	73	0.83	1.12
Uranium mine surface personnel	143	110	15	13	0	0	0	281	0.32	0.66
Uranium mine surface support worker	512	272	9	2	0	0	0	795	0.12	0.33
Uranium mine underground maintenance	29	115	41	4	0	0	0	189	0.60	0.71
Uranium mine underground miner	36	80	54	75	14	0	0	259	1.72	2.00
Uranium mine underground personnel	27	67	25	5	0	0	0	124	0.61	0.78
Uranium mine visitor	48	5	0	0	0	0	0	53	0.02	0.21
Miscellaneous/Unknown										
Miscellaneous/Unknown	20547	4824	389	368	301	3	1	26433	0.60	2.71
Total										
Total	110342	25449	3375	3883	2746	58	2	145855	0.42	1.71

2004 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
Administration													
Administrator	9 0.28	0 -	4 0.03	11 0.13	65 0.01	381 0.19	23 0.00	11 0.00	95 0.12	44 0.11	0 -	0 -	643 0.15
Office staff	44 0.02	8 0.03	80 0.01	49 0.03	670 0.27	1856 0.07	226 0.01	97 0.01	475 0.06	294 0.03	16 0.00	1 0.00	3815 0.10
Safety officer	3 0.00	2 0.20	6 0.04	5 0.09	32 0.07	364 0.08	13 0.03	6 0.02	42 0.20	17 0.89	0 -	0 -	490 0.12
Sector total	56 0.06	10 0.06	90 0.02	65 0.05	767 0.24	2601 0.09	262 0.01	114 0.01	612 0.01	355 0.08	16 0.08	1 0.08	4948 0.10
Industry and Research													
Aircrew	0 -	0 -	0 -	0 -	6 0.00	9 0.72	0 -	0 -	0 -	1 0.85	0 -	0 -	16 0.46
Ground transportation	0 -	0 -	0 -	0 -	12 1.16	52 0.62	4 0.00	0 -	10 0.04	5 0.25	0 -	0 -	83 0.58
Industrial radiographer	69 0.47	0 -	69 0.61	84 1.27	333 0.95	620 1.04	32 0.29	191 1.43	1212 4.62	215 1.82	1 0.00	2 0.00	2739 2.71
Instructor (non-medical)	6 0.27	1 0.00	14 0.09	3 0.13	25 0.08	99 0.02	11 0.00	21 0.00	47 0.19	18 0.00	0 -	0 -	245 0.07
Instrument technician	61 0.04	0 -	51 0.16	189 0.18	494 0.10	957 0.23	41 0.06	61 0.03	297 0.33	75 0.30	0 -	0 -	2223 0.20
Laboratory technician (industrial)	41 0.13	8 0.05	56 0.03	58 0.30	784 0.10	1526 0.35	194 0.01	276 0.08	254 0.24	163 0.32	0 -	0 -	3357 0.23
Nuclear fuel processor	0 -	0 -	0 -	0 -	0 -	727 1.40	0 -	0 -	35 0.49	0 -	0 -	0 -	762 1.36
Scientist/Engineer (field)	19 0.01	0 -	20 0.06	21 0.24	68 0.03	809 0.34	12 0.00	132 0.04	194 0.26	84 0.11	3 0.04	0 -	1361 0.26
Scientist/Engineer (laboratory)	67 0.01	8 0.11	156 0.03	18 0.19	1942 0.02	1964 0.08	92 0.02	126 0.02	877 0.09	343 0.05	1 0.11	0 -	5588 0.06
Security	1 1.11	0 -	2 0.00	13 0.16	0 -	146 0.01	0 -	0 -	20 0.00	11 0.01	0 -	0 -	193 0.03
Tradesmen	1 0.00	0 -	0 -	2 2.00	7 0.04	182 0.11	0 -	14 0.01	30 0.06	3 0.03	0 -	0 -	239 0.11
Well logger	0 -	0 -	0 -	7 0.01	1 0.00	14 0.65	0 -	12 0.07	2353 0.36	7 0.14	0 -	0 -	2394 0.36
Sector total	265 0.17	17 0.08	368 0.16	395 0.44	3672 0.14	7105 0.41	386 0.04	833 0.37	5329 1.27	925 0.54	5 0.05	2 0.00	19200 0.59

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
Medicine													
Chiropractor	1 0.00	0 -	3 0.00	2 0.25	602 0.03	271 0.03	78 0.06	6 0.00	136 0.06	18 0.12	0 -	0 -	1116 0.03
Dental assistant	161 0.03	67 0.09	306 0.03	186 0.01	2986 0.01	5421 0.01	824 0.00	358 0.01	2946 0.01	761 0.02	24 0.01	3 0.05	14010 0.01
Dental hygienist	56 0.04	18 0.05	204 0.03	122 0.01	3105 0.01	3885 0.01	517 0.00	156 0.06	1156 0.01	339 0.01	4 0.06	2 0.06	9536 0.01
Dental therapist/nurse	0 -	0 -	0 -	0 -	11 0.00	21 0.01	30 0.02	49 0.03	22 0.09	3 0.00	9 0.03	7 0.36	151 0.05
Dentist	112 0.05	10 0.08	156 0.02	96 0.03	3000 0.02	2797 0.01	545 0.03	107 0.02	936 0.02	256 0.02	16 0.01	0 -	7995 0.02
Gynaecologist	1 0.00	0 -	1 0.15	0 -	1 0.00	1 0.00	3 0.00	0 -	1 0.00	1 0.00	1 0.00	0 -	10 0.01
Laboratory technician (medical)	38 0.01	4 0.10	103 0.02	12 0.13	1298 0.07	2180 0.13	119 0.01	70 0.10	272 0.08	185 0.09	2 0.10	1 0.00	4282 0.10
Medical physicist	7 0.00	4 0.00	12 0.02	7 0.23	98 0.04	184 0.06	19 0.14	10 0.00	23 0.16	69 0.04	0 -	0 -	430 0.06
Medical radiation technologist	334 0.08	44 0.16	181 0.13	389 0.12	3290 0.10	4737 0.10	702 0.06	707 0.05	1625 0.21	1484 0.08	39 0.02	11 0.08	13446 0.11
Nuclear medicine technologist	22 1.12	7 0.79	50 1.78	41 1.32	529 3.09	692 1.66	65 1.08	28 1.68	162 1.88	198 0.68	0 -	0 -	1780 1.97
Nurse	202 0.14	6 0.00	114 0.13	185 0.13	1264 0.04	3065 0.11	358 0.03	127 0.10	478 0.24	435 0.11	107 0.00	77 0.04	6412 0.10
Physician	41 0.24	7 0.09	51 0.35	40 0.17	823 0.20	1162 0.23	122 0.09	43 0.58	215 0.18	225 0.21	3 0.00	7 0.00	2727 0.22
Radiation therapist	17 0.39	9 0.19	42 0.20	39 0.13	330 0.10	795 0.12	50 0.07	69 0.10	157 0.06	301 0.05	0 -	0 -	1793 0.11
Radiologist (diagnostic)	54 0.05	4 0.00	27 0.26	49 0.14	548 0.17	865 0.20	94 0.11	60 0.03	266 0.32	246 0.16	5 0.00	0 -	2201 0.19
Radiologist (therapeutic)	1 0.00	0 -	5 0.02	7 0.07	78 0.09	126 0.16	9 0.00	9 0.01	24 0.10	26 0.00	0 -	0 -	285 0.10
Veterinarian	43 0.07	54 0.26	148 0.04	74 0.13	834 0.02	768 0.06	176 0.02	168 0.01	653 0.03	554 0.04	0 -	3 0.00	3464 0.04
Veterinary technician	42 0.03	12 0.06	89 0.02	87 0.04	738 0.02	730 0.06	158 0.01	100 0.02	609 0.04	640 0.04	0 -	7 0.01	3206 0.04
Ward aid/orderly	10 0.00	12 0.01	14 0.30	25 0.11	674 0.08	279 0.07	66 0.00	20 0.11	71 0.10	73 0.08	8 0.03	6 0.00	1258 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
Sector total	1142	258	1506	1361	20209	27979	3935	2087	9752	5814	218	124	74102
	0.10	0.15	0.13	0.13	0.13	0.11	0.05	0.08	0.11	0.09	0.01	0.06	0.11
Nuclear Power													
Reactor - administration	0	0	0	227	476	3252	0	0	0	0	0	0	3949
	-	-	-	0.09	0.01	0.17	-	-	-	-	-	-	0.15
Reactor - chemical and radiation control	0	0	0	25	23	520	0	0	0	0	0	0	568
	-	-	-	0.51	0.43	2.25	-	-	-	-	-	-	2.10
Reactor - construction	0	0	0	0	56	1214	0	0	0	0	0	0	1270
	-	-	-	-	0.24	1.05	-	-	-	-	-	-	1.01
Reactor - control technician	0	0	0	0	153	0	0	0	0	0	0	0	153
	-	-	-	-	0.15	-	-	-	-	-	-	-	0.15
Reactor - electrical maintenance	0	0	0	77	23	1294	0	0	0	0	0	0	1393
	-	-	-	0.56	0.35	0.69	-	-	-	-	-	-	0.67
Reactor - fuel handling	0	0	0	93	20	0	0	0	0	0	0	0	113
	-	-	-	2.13	1.30	-	-	-	-	-	-	-	1.98
Reactor - general maintenance	0	0	0	239	59	1116	0	0	0	0	0	0	1414
	-	-	-	0.38	0.41	0.84	-	-	-	-	-	-	0.75
Reactor - health physics	0	0	0	41	22	8	0	0	0	0	0	0	71
	-	-	-	0.70	0.01	0.21	-	-	-	-	-	-	0.43
Reactor - industrial radiographer	0	0	0	0	7	65	0	0	0	0	0	0	72
	-	-	-	-	0.61	2.43	-	-	-	-	-	-	2.25
Reactor - mechanical maintenance	0	0	0	150	76	1226	0	0	0	0	0	0	1452
	-	-	-	0.46	0.84	1.74	-	-	-	-	-	-	1.56
Reactor - operations	0	0	0	125	103	2091	0	0	0	0	0	0	2319
	-	-	-	0.36	0.32	1.10	-	-	-	-	-	-	1.02
Reactor - scientific/professional	0	0	0	384	225	1908	0	0	0	0	0	0	2510
	-	-	-	0.87	0.05	0.37	-	-	-	-	-	-	0.42
Reactor - training	0	0	0	39	20	2	0	0	0	0	0	0	61
	-	-	-	0.41	0.00	0.10	-	-	-	-	-	-	0.27
Reactor - visitor	0	0	0	0	820	5546	0	0	0	0	0	0	6348
	-	-	-	-	0.00	0.92	-	-	-	-	-	-	0.81
Sector total	0	0	0	1400	2083	18242	0	0	0	0	0	0	21693
	-	-	-	0.61	0.11	0.84	-	-	-	-	-	-	0.75
Particle Accelerators													
Accelerators - Administration	0	0	0	0	0	0	0	0	0	37	0	0	37
	-	-	-	-	-	-	-	-	-	0.12	-	-	0.12
Accelerators - Control technicians	0	0	0	0	0	0	0	0	0	29	0	0	29
	-	-	-	-	-	-	-	-	-	0.26	-	-	0.26

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
Accelerators - Designers	0	0	0	0	0	0	0	0	0	18	0	0	18
	-	-	-	-	-	-	-	-	-	0.86	-	-	0.86
Accelerators - General Maintenance	0	0	0	0	0	0	0	0	0	20	0	0	20
	-	-	-	-	-	-	-	-	-	0.95	-	-	0.95
Accelerators - Machinists	0	0	0	0	0	0	0	0	0	27	0	0	27
	-	-	-	-	-	-	-	-	-	0.26	-	-	0.26
Accelerators - Mechanical technicians	0	0	0	0	0	0	0	0	0	72	0	0	72
	-	-	-	-	-	-	-	-	-	1.42	-	-	1.42
Accelerators - Operations	0	0	0	0	0	0	0	0	0	38	0	0	38
	-	-	-	-	-	-	-	-	-	1.53	-	-	1.53
Accelerators - Scientific/professional	0	0	0	0	0	0	0	0	0	317	0	0	317
	-	-	-	-	-	-	-	-	-	0.25	-	-	0.25
Accelerators - Visitors	0	0	0	0	0	0	0	0	0	68	0	0	68
	-	-	-	-	-	-	-	-	-	0.07	-	-	0.07
Sector total	0	626	0	0	626								
	-	-	-	-	-	-	-	-	-	0.48	-	-	0.48
Uranium Mining													
Uranium mine mill maintenance	0	0	0	0	0	0	0	309	0	0	0	0	309
	-	-	-	-	-	-	-	0.85	-	-	-	-	0.85
Uranium mine mill worker	0	0	0	0	0	0	0	274	0	0	0	0	274
	-	-	-	-	-	-	-	1.59	-	-	-	-	1.59
Uranium mine nurse	0	0	0	0	0	0	0	14	0	0	0	0	14
	-	-	-	-	-	-	-	0.17	-	-	-	-	0.17
Uranium mine office staff	0	0	0	0	0	0	0	223	0	0	0	0	223
	-	-	-	-	-	-	-	0.16	-	-	-	-	0.16
Uranium mine support worker	0	0	0	0	0	0	0	230	0	0	0	0	230
	-	-	-	-	-	-	-	1.21	-	-	-	-	1.21
Uranium mine surface maintenance	0	0	0	0	0	0	0	301	0	0	0	0	301
	-	-	-	-	-	-	-	0.42	-	-	-	-	0.42
Uranium mine surface miner	0	0	0	0	0	0	0	36	0	0	0	0	36
	-	-	-	-	-	-	-	0.45	-	-	-	-	0.45
Uranium mine surface personnel	0	0	0	0	0	12	0	220	0	0	0	0	232
	-	-	-	-	-	0.00	-	0.36	-	-	-	-	0.34
Uranium mine surface support worker	0	0	0	0	0	0	0	568	0	0	0	0	568
	-	-	-	-	-	-	-	0.15	-	-	-	-	0.15
Uranium mine underground	0	0	0	0	0	0	0	142	0	0	0	0	142
	-	-	-	-	-	-	-	1.00	-	-	-	-	1.00

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 underground miner	0	0	0	0	0	0	0	206	0	0	0	0	206
	-	-	-	-	-	-	-	3.71	-	-	-	-	3.71
Uranium mine underground personnel	0	0	0	0	0	7	0	93	0	0	0	0	94
	-	-	-	-	-	0.01	-	1.33	-	-	-	-	1.31
Uranium mine visitor	0	0	0	0	0	1	0	10	0	0	0	0	10
	-	-	-	-	-	0.00	-	0.05	-	-	-	-	0.05
Sector total	0	0	0	0	0	20	0	2626	0	0	0	0	2639
	-	-	-	-	-	0.00	-	0.90	-	-	-	-	0.89
Miscellaneous/unknown													
Miscellaneous/unknown	194	35	448	378	7494	10303	890	780	3078	1377	42	3	24967
	0.23	0.28	2.47	2.39	0.46	2.68	0.08	1.23	2.90	10.41	0.20	0.30	10.26
Sector total	194	35	448	378	7494	10303	890	780	3078	1377	42	3	24967
	0.06	0.08	0.19	0.15	0.06	0.19	0.02	0.18	0.21	0.17	0.04	0.10	0.15
Total													
Total	1636	317	2372	3536	33295	64120	5335	6182	18222	8884	280	130	143259
	0.11	0.14	0.14	0.36	0.12	0.37	0.04	0.48	0.47	0.18	0.02	0.06	0.30
Sector total	1636	317	2372	3536	33295	64120	5335	6182	18222	8884	280	130	143259
	0.11	0.14	0.14	0.36	0.12	0.37	0.04	0.48	0.47	0.18	0.02	0.06	0.30

2004 Final Analysis

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

Job Sector	Age	Statistic	Sex			
			Male	Female	Unknown	Overall
Administration	Below 25	Number of Workers	39	291	0	330
		Average dose (mSv)	0.20	0.03	-	0.05
		% tritium	3.02	0.00	-	1.52
		% radon progeny	0.00	0.00	-	0.00
	25-34	Number of Workers	146	872	0	1018
		Average dose (mSv)	0.13	0.03	-	0.05
		% tritium	0.46	0.51	-	0.49
		% radon progeny	0.00	0.00	-	0.00
	35-44	Number of Workers	277	1112	0	1389
		Average dose (mSv)	0.25	0.04	-	0.08
		% tritium	0.40	0.18	-	0.31
		% radon progeny	0.00	0.00	-	0.00
	45-54	Number of Workers	295	1180	0	1475
		Average dose (mSv)	0.26	0.19	-	0.20
		% tritium	2.17	0.03	-	0.57
		% radon progeny	0.00	0.00	-	0.00
	55 and up	Number of Workers	140	432	0	572
		Average dose (mSv)	0.22	0.02	-	0.07
		% tritium	0.16	0.39	-	0.22
		% radon progeny	0.00	0.00	-	0.00
	Total	Number of Workers	897	3887	0	4784
		Average dose (mSv)	0.23	0.08	-	0.11
		% tritium	1.14	0.10	-	0.51
		% radon progeny	0.00	0.00	-	0.00
Industry and Research	Below 25	Number of Workers	1306	444	0	1750
		Average dose (mSv)	1.51	0.30	-	1.20
		% tritium	0.16	1.72	-	0.26
		% radon progeny	0.01	0.00	-	0.01
	25-34	Number of Workers	3923	1659	0	5582
		Average dose (mSv)	0.95	0.14	-	0.71
		% tritium	0.58	3.34	-	0.74
		% radon progeny	0.04	0.07	-	0.04
	35-44	Number of Workers	4070	1194	0	5264
		Average dose (mSv)	0.62	0.15	-	0.51
		% tritium	0.41	4.69	-	0.68
		% radon progeny	0.01	0.00	-	0.01

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

Job Sector	Age	Statistic	Sex			
			Male	Female	Unknown	Overall
Industry and Research	45-54	Number of Workers	3436	837	0	4273
		Average dose (mSv)	0.56	0.18	-	0.49
		% tritium	0.65	0.05	-	0.60
		% radon progeny	0.00	0.00	-	0.00
	55 and up	Number of Workers	1609	241	0	1850
		Average dose (mSv)	0.35	0.16	-	0.33
		% tritium	0.39	0.00	-	0.36
		% radon progeny	0.00	0.00	-	0.00
	Unknown	Number of Workers	1	0	0	1
		Average dose (mSv)	0.00	-	-	0.00
		% tritium	-	-	-	-
		% radon progeny	-	-	-	-
	Total	Number of Workers	14345	4375	0	18720
		Average dose (mSv)	0.75	0.17	-	0.61
		% tritium	0.46	2.49	-	0.59
		% radon progeny	0.02	0.02	-	0.02
Medicine	Below 25	Number of Workers	408	5123	0	5531
		Average dose (mSv)	0.22	0.06	-	0.07
		% tritium	2.43	0.00	-	0.56
		% radon progeny	0.00	0.00	-	0.00
	25-34	Number of Workers	3382	16981	0	20363
		Average dose (mSv)	0.19	0.09	-	0.11
		% tritium	0.00	0.00	-	0.00
		% radon progeny	0.00	0.00	-	0.00
	35-44	Number of Workers	5104	16436	0	21540
		Average dose (mSv)	0.19	0.11	-	0.13
		% tritium	0.08	0.00	-	0.03
		% radon progeny	0.00	0.02	-	0.01
	45-54	Number of Workers	5202	11797	0	16999
		Average dose (mSv)	0.15	0.10	-	0.12
		% tritium	0.00	0.00	-	0.00
		% radon progeny	0.00	0.00	-	0.00
	55 and up	Number of Workers	3955	3857	0	7812
		Average dose (mSv)	0.09	0.09	-	0.09
		% 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	Unknown	Overall
Medicine	Unknown	Number of Workers	0	2	0	2
		Average dose (mSv)	-	0.00	-	0.00
		% tritium	-	-	-	-
		% radon progeny	-	-	-	-
	Total	Number of Workers	18051	54196	0	72247
		Average dose (mSv)	0.16	0.10	-	0.11
		% tritium	0.10	0.00	-	0.04
		% radon progeny	0.00	0.01	-	0.00
Nuclear Power	Below 25	Number of Workers	895	200	0	1095
		Average dose (mSv)	0.98	0.24	-	0.84
		% tritium	15.61	22.07	-	15.95
		% radon progeny	0.00	0.00	-	0.00
	25-34	Number of Workers	2684	510	0	3194
		Average dose (mSv)	1.13	0.30	-	1.00
		% tritium	21.64	28.45	-	21.96
		% radon progeny	0.00	0.00	-	0.00
	35-44	Number of Workers	5228	860	0	6088
		Average dose (mSv)	0.95	0.37	-	0.87
		% tritium	22.39	21.45	-	22.33
		% radon progeny	0.01	0.00	-	0.01
	45-54	Number of Workers	6459	686	0	7145
		Average dose (mSv)	0.79	0.19	-	0.74
		% tritium	20.99	21.23	-	20.99
		% radon progeny	0.01	0.00	-	0.01
	55 and up	Number of Workers	3151	136	0	3287
		Average dose (mSv)	0.45	0.11	-	0.44
		% tritium	22.06	32.67	-	22.17
		% radon progeny	0.00	0.00	-	0.00
	Unknown	Number of Workers	1	0	0	1
		Average dose (mSv)	0.00	-	-	0.00
		% tritium	-	-	-	-
		% radon progeny	-	-	-	-
	Total	Number of Workers	18418	2392	0	20810
		Average dose (mSv)	0.84	0.28	-	0.77
		% tritium	21.36	23.31	-	21.44
		% radon progeny	0.01	0.00	-	0.01

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

Job Sector	Age	Statistic	Sex			
			Male	Female	Unknown	Overall
Particle Accelerators	Below 25	Number of Workers	19	3	0	22
		Average dose (mSv)	0.46	0.00	-	0.40
		% tritium	0.00	-	-	0.00
		% radon progeny	0.00	-	-	0.00
	25-34	Number of Workers	66	17	0	83
		Average dose (mSv)	0.71	0.30	-	0.63
		% tritium	0.00	0.00	-	0.00
		% radon progeny	0.00	0.00	-	0.00
	35-44	Number of Workers	106	22	0	128
		Average dose (mSv)	0.44	0.12	-	0.38
		% tritium	0.00	0.00	-	0.00
		% radon progeny	0.00	0.00	-	0.00
	45-54	Number of Workers	146	22	0	168
		Average dose (mSv)	0.81	0.07	-	0.71
		% tritium	0.00	0.00	-	0.00
		% radon progeny	0.00	0.00	-	0.00
	55 and up	Number of Workers	181	7	0	188
		Average dose (mSv)	0.36	0.01	-	0.35
		% tritium	0.00	0.00	-	0.00
		% radon progeny	0.00	0.00	-	0.00
	Total	Number of Workers	518	71	0	589
		Average dose (mSv)	0.55	0.13	-	0.50
		% tritium	0.00	0.00	-	0.00
		% radon progeny	0.00	0.00	-	0.00
Uranium Mining	Below 25	Number of Workers	169	37	0	206
		Average dose (mSv)	0.51	0.25	-	0.46
		% tritium	0.00	0.00	-	0.00
		% radon progeny	57.32	56.76	-	57.26
	25-34	Number of Workers	566	65	0	631
		Average dose (mSv)	1.03	0.30	-	0.96
		% tritium	0.00	0.00	-	0.00
		% radon progeny	51.14	62.79	-	51.51
	35-44	Number of Workers	676	71	0	747
		Average dose (mSv)	1.23	0.34	-	1.14
		% tritium	0.00	0.00	-	0.00
		% radon progeny	49.50	64.61	-	49.93

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

Job Sector	Age	Statistic	Sex			
			Male	Female	Unknown	Overall
Uranium Mining	45-54	Number of Workers	579	37	0	616
		Average dose (mSv)	1.02	0.43	-	0.99
		% tritium	0.00	0.00	-	0.00
		% radon progeny	51.33	63.13	-	51.64
	55 and up	Number of Workers	241	11	0	252
		Average dose (mSv)	0.75	0.12	-	0.72
		% tritium	0.00	0.00	-	0.00
		% radon progeny	59.01	77.78	-	59.15
	Unknown	Number of Workers	1	0	0	1
		Average dose (mSv)	0.00	-	-	0.00
		% tritium	-	-	-	-
		% radon progeny	-	-	-	-
	Total	Number of Workers	2232	221	0	2453
		Average dose (mSv)	1.02	0.32	-	0.96
		% tritium	0.00	0.00	-	0.00
		% radon progeny	51.45	62.99	-	51.80
Miscellaneous /Unknown	Below 25	Number of Workers	1596	5747	0	7343
		Average dose (mSv)	0.24	0.04	-	0.08
		% tritium	0.43	0.04	-	0.29
		% radon progeny	0.74	0.00	-	0.47
	25-34	Number of Workers	3234	4262	0	7496
		Average dose (mSv)	0.23	0.09	-	0.15
		% tritium	3.16	1.29	-	2.55
		% radon progeny	0.00	0.00	-	0.00
	35-44	Number of Workers	2737	2045	1	4783
		Average dose (mSv)	0.27	0.10	0.15	0.20
		% tritium	4.41	0.98	0.00	3.65
		% radon progeny	0.01	0.00	0.00	0.01
	45-54	Number of Workers	1781	1191	0	2972
		Average dose (mSv)	0.37	0.13	-	0.27
		% tritium	3.90	0.00	-	3.16
		% radon progeny	0.00	0.00	-	0.00
	55 and up	Number of Workers	682	350	0	1032
		Average dose (mSv)	0.34	0.11	-	0.26
		% tritium	2.58	0.18	-	2.23
		% 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	Unknown	Overall
Miscellaneous /Unknown	Unknown	Number of Workers	16	7	7	30
		Average dose (mSv)	0.02	0.04	0.06	0.04
		% tritium	0.00	0.00	0.00	0.00
		% radon progeny	0.00	0.00	0.00	0.00
	Total	Number of Workers	10046	13602	8	23656
		Average dose (mSv)	0.28	0.07	0.07	0.16
		% tritium	3.25	0.71	0.00	2.58
Total	Below 25	% radon progeny	0.10	0.00	0.00	0.08
		Number of Workers	4432	11845	0	16277
		Average dose (mSv)	0.77	0.06	-	0.25
		% tritium	4.20	1.86	-	3.80
	25-34	% radon progeny	1.54	0.75	-	1.40
		Number of Workers	14001	24366	0	38367
		Average dose (mSv)	0.63	0.10	-	0.29
		% tritium	7.97	2.36	-	6.78
	35-44	% radon progeny	3.40	0.52	-	2.79
		Number of Workers	18198	21740	1	39939
		Average dose (mSv)	0.56	0.12	0.15	0.32
		% tritium	11.39	3.07	0.00	9.72
	45-54	% radon progeny	4.05	0.63	0.00	3.37
		Number of Workers	17898	15750	0	33648
		Average dose (mSv)	0.52	0.12	-	0.33
		% tritium	12.03	1.49	-	10.24
	55 and up	% radon progeny	3.27	0.53	-	2.81
		Number of Workers	9959	5034	0	14993
		Average dose (mSv)	0.29	0.09	-	0.22
		% tritium	11.24	1.12	-	9.91
	Unknown	% radon progeny	3.72	0.24	-	3.26
		Number of Workers	19	9	7	35
		Average dose (mSv)	0.02	0.03	0.06	0.03
		% tritium	0.00	0.00	0.00	0.00
	Total	% radon progeny	0.00	0.00	0.00	0.00
		Number of Workers	64507	78744	8	143259
		Average dose (mSv)	0.54	0.10	0.07	0.30
		% tritium	9.96	2.27	0.00	8.52
		% radon progeny	3.40	0.56	0.00	2.87

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Table 4
Dose distribution by job class as of the end of 2004

Administrator

Annual doses							
Parameters	A	0.314946	B	0.513317	C	0.000000	
Sample size	643				D	1.175660	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average	0.15		0.18		0.15	0.21	
Average from 0.1 mSv up	0.48		0.53		0.46	0.61	
Number at or exceeding 0.1 mSv	200		201.55		179.53	224.54	
Number exceeding 1 mSv	11		28.61		18.62	39.61	
Number exceeding 2 mSv	7		4.62		0.62	8.65	
Number exceeding 5 mSv	1		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 fixed 5 year block starting 2001							
Parameters	A	0.151599	B	0.366875	C	0.000000	
Sample size	979				D	0.730271	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average	0.36		0.38		0.33	0.43	
Average over 0.5 mSv	1.47		1.64		1.49	1.78	
Number exceeding 0.5 mSv	226		203.57		179.55	228.57	
Number exceeding 5 mSv	4		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	
Number exceeding 100 mSv	0		0.00		0.00	0.00	
Doses accumulating over rolling 5 year block starting 2000							
Parameters	A	0.176076	B	0.277865	C	0.000000	
Sample size	1091				D	0.811054	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average	0.41		0.41		0.36	0.47	
Average over 0.5 mSv	1.63		1.84		1.68	2.02	
Number exceeding 0.5 mSv	254		220.57		194.58	248.57	
Number exceeding 5 mSv	4		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 class as of the end of 2004****Office staff****Annual doses**

Parameters	A	0.375357	B	0.000000	C	0.014493	D	2.276070
Sample size		3815						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.1		0.09		0.07		0.17
Average from 0.1 mSv up		0.68		0.67		0.47		1.36
Number at or exceeding 0.1 mSv		543		409.60		372.60		446.62
Number exceeding 1 mSv		21		44.62		31.62		57.62
Number exceeding 2 mSv		9		20.62		12.62		30.62
Number exceeding 5 mSv		4		6.62		2.62		13.62
Number exceeding 20 mSv		1		0.62		0.00		3.62
Number exceeding 50 mSv		1		0.00		0.00		1.62

Doses accumulating over fixed 5 year block starting 2001

Parameters	A	0.373247	B	0.003106	C	0.000000	D	1.794580
Sample size		6040						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.16		0.23		0.19		0.29
Average over 0.5 mSv		1.72		3.17		2.51		4.02
Number exceeding 0.5 mSv		488		372.11		337.61		410.61
Number exceeding 5 mSv		11		47.62		34.62		60.65
Number exceeding 20 mSv		1		7.62		3.62		13.62
Number exceeding 50 mSv		1		1.62		0.00		4.62
Number exceeding 100 mSv		1		0.00		0.00		1.62

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.317566	B	0.017947	C	0.000000	D	1.658830
Sample size		6725						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.18		0.27		0.23		0.31
Average over 0.5 mSv		1.83		3.21		2.79		3.73
Number exceeding 0.5 mSv		589		495.61		454.61		539.60
Number exceeding 5 mSv		21		79.62		61.62		99.62
Number exceeding 20 mSv		1		8.62		3.62		14.65
Number exceeding 50 mSv		1		0.00		0.00		1.62
Number exceeding 100 mSv		1		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job class as of the end of 2004****Safety officer****Annual doses**

Parameters	A	0.530625	B	0.117814	C	0.000000	D	1.838320
Sample size		490						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.12		0.13		0.11		0.17
Average from 0.1 mSv up		0.43		0.43		0.34		0.54
Number at or exceeding 0.1 mSv		134		133.56		114.57		154.57
Number exceeding 1 mSv		10		11.62		5.62		18.62
Number exceeding 2 mSv		4		2.62		0.00		6.62
Number exceeding 5 mSv		0		0.00		0.00		0.65
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 fixed 5 year block starting 2001

Parameters	A	0.465475	B	0.014068	C	0.000000	D	1.448420
Sample size		578						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.34		0.35		0.25		0.48
Average over 0.5 mSv		2.07		2.17		1.58		3.03
Number exceeding 0.5 mSv		81		72.59		58.60		89.61
Number exceeding 5 mSv		6		5.62		1.62		11.62
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

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.444897	B	0.014115	C	0.001953	D	1.415260
Sample size		594						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.37		0.38		0.28		0.54
Average over 0.5 mSv		2.28		2.36		1.69		3.38
Number exceeding 0.5 mSv		85		78.59		62.60		94.59
Number exceeding 5 mSv		9		7.62		2.62		13.62
Number exceeding 20 mSv		1		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 class as of the end of 2004****Aircrew****Annual doses**

Parameters	A	0.128864	B	0.819672	C	0.005732	D	0.132632
Sample size		16						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.45		0.45		0.21		0.79
Average from 0.1 mSv up		0.8		0.81		0.42		1.23
Number at or exceeding 0.1 mSv		9		8.49		4.55		12.43
Number exceeding 1 mSv		2		2.58		0.00		5.54
Number exceeding 2 mSv		1		0.00		0.00		1.60
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 fixed 5 year block starting 2001

Parameters	A	0.298214	B	0.121238	C	0.004312	D	0.416069
Sample size		24						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.2		1.17		0.48		2.11
Average over 0.5 mSv		2.78		2.84		1.47		5.20
Number exceeding 0.5 mSv		10		9.53		4.58		13.48
Number exceeding 5 mSv		3		0.62		0.00		3.59
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

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.333008	B	0.087148	C	0.000000	D	0.463443
Sample size		25						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.35		1.29		0.50		2.39
Average over 0.5 mSv		2.94		3.04		1.47		5.62
Number exceeding 0.5 mSv		11		9.53		4.58		14.48
Number exceeding 5 mSv		3		1.61		0.00		4.58
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 class as of the end of 2004****Ground transportation****Annual doses**

Parameters	A	0.354429	B	0.302106	C	0.000000	D	0.561369
Sample size		83						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.58		0.58		0.40		0.78
Average from 0.1 mSv up		0.96		0.95		0.69		1.24
Number at or exceeding 0.1 mSv		50		48.48		40.50		57.45
Number exceeding 1 mSv		13		15.58		9.60		22.56
Number exceeding 2 mSv		5		6.61		1.62		10.62
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 fixed 5 year block starting 2001

Parameters	A	0.239629	B	0.109087	C	0.009682	D	0.729268
Sample size		257						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.85		0.86		0.65		1.11
Average over 0.5 mSv		2.69		2.95		2.30		3.67
Number exceeding 0.5 mSv		78		69.56		55.57		83.54
Number exceeding 5 mSv		11		11.61		5.62		19.61
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

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.176231	B	0.129369	C	0.018338	D	0.661196
Sample size		257						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.93		0.94		0.72		1.21
Average over 0.5 mSv		2.94		3.08		2.54		3.77
Number exceeding 0.5 mSv		78		72.55		58.57		86.54
Number exceeding 5 mSv		12		13.61		7.59		21.60
Number exceeding 20 mSv		0		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 class as of the end of 2004

Industrial radiographer					
Annual doses					
Parameters	A 0.175490	B 0.072520	C 0.000000	D 0.258717	
Sample size	2739				
Statistic	Sample value	Expectation value	Lower 95% CL	Upper 95% CL	
Average	2.71	2.57	2.41	2.75	
Average from 0.1 mSv up	4.7	4.59	4.32	4.87	
Number at or exceeding 0.1 mSv	1578	1529.49	1481.44	1578.48	
Number exceeding 1 mSv	1110	1012.53	968.54	1061.55	
Number exceeding 2 mSv	892	820.05	777.53	867.55	
Number exceeding 5 mSv	495	501.58	462.56	542.60	
Number exceeding 20 mSv	43	34.62	23.62	46.62	
Number exceeding 50 mSv	1	0.00	0.00	0.00	
Doses accumulating over fixed 5 year block starting 2001					
Parameters	A 0.175084	B 0.024034	C 0.003661	D 0.117924	
Sample size	4304				
Statistic	Sample value	Expectation value	Lower 95% CL	Upper 95% CL	
Average	7.14	7.21	6.79	7.60	
Average over 0.5 mSv	13.87	14.36	13.62	15.01	
Number exceeding 0.5 mSv	2206	2148.50	2087.50	2215.50	
Number exceeding 5 mSv	1305	1300.55	1233.55	1358.57	
Number exceeding 20 mSv	525	563.59	519.57	606.59	
Number exceeding 50 mSv	101	96.62	78.62	116.62	
Number exceeding 100 mSv	2	1.62	0.00	4.62	
Doses accumulating over rolling 5 year block starting 2000					
Parameters	A 0.174596	B 0.020405	C 0.000000	D 0.076135	
Sample size	4734				
Statistic	Sample value	Expectation value	Lower 95% CL	Upper 95% CL	
Average	8.05	8.64	8.17	9.11	
Average over 0.5 mSv	15.82	16.77	16.00	17.55	
Number exceeding 0.5 mSv	2403	2430.50	2364.45	2497.49	
Number exceeding 5 mSv	1440	1529.54	1469.55	1593.54	
Number exceeding 20 mSv	666	743.59	697.59	792.58	
Number exceeding 50 mSv	157	177.62	150.62	204.61	
Number exceeding 100 mSv	10	7.62	2.62	13.62	

Table 4 (Cont'd)
Dose distribution by job class as of the end of 2004

Instructor (non-medical)								
Annual doses								
Parameters	A	0.372784	B	0.009640	C	0.006417	D	2.261680
Sample size		245						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.07		0.07		0.03		0.19
Average from 0.1 mSv up		0.7		0.55		0.27		1.72
Number at or exceeding 0.1 mSv		23		22.60		14.61		31.59
Number exceeding 1 mSv		2		2.62		0.00		6.62
Number exceeding 2 mSv		1		0.62		0.00		3.62
Number exceeding 5 mSv		1		0.00		0.00		1.62
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 fixed 5 year block starting 2001								
Parameters	A	0.353544	B	0.000000	C	0.018359	D	1.936220
Sample size		356						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.25		0.18		0.10		0.76
Average over 0.5 mSv		4.27		2.66		1.22		15.55
Number exceeding 0.5 mSv		19		16.61		9.62		25.61
Number exceeding 5 mSv		2		1.62		0.00		5.62
Number exceeding 20 mSv		1		0.00		0.00		1.62
Number exceeding 50 mSv		1		0.00		0.00		0.62
Number exceeding 100 mSv		0		0.00		0.00		0.62
Doses accumulating over rolling 5 year block starting 2000								
Parameters	A	0.362358	B	0.000000	C	0.007935	D	1.799090
Sample size		380						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.25		0.24		0.12		1.00
Average over 0.5 mSv		3.7		3.09		1.46		15.27
Number exceeding 0.5 mSv		23		23.61		14.62		32.60
Number exceeding 5 mSv		2		2.62		0.00		6.62
Number exceeding 20 mSv		1		0.62		0.00		2.62
Number exceeding 50 mSv		1		0.00		0.00		1.62
Number exceeding 100 mSv		0		0.00		0.00		0.62

Table 4 (Cont'd)
Dose distribution by job class as of the end of 2004

Instrument technician							
Annual doses							
Parameters	A	0.464050	B	0.020932	C	0.000000	
Sample size	2223						
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average		0.2		0.22		0.19	0.27
Average from 0.1 mSv up		0.7		0.73		0.62	0.87
Number at or exceeding 0.1 mSv		627		625.55		579.56	669.55
Number exceeding 1 mSv		78		100.61		83.62	120.61
Number exceeding 2 mSv		42		46.62		34.60	59.62
Number exceeding 5 mSv		7		12.62		6.62	20.62
Number exceeding 20 mSv		2		0.00		0.00	1.62
Number exceeding 50 mSv		0		0.00		0.00	0.00
Doses accumulating over fixed 5 year block starting 2001							
Parameters	A	0.413813	B	0.001627	C	0.000000	
Sample size	3275						
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average		0.77		0.75		0.60	0.96
Average over 0.5 mSv		3.76		4.10		3.27	5.39
Number exceeding 0.5 mSv		630		545.08		507.59	587.58
Number exceeding 5 mSv		74		88.62		71.62	107.62
Number exceeding 20 mSv		21		18.62		10.62	27.62
Number exceeding 50 mSv		10		4.62		0.62	9.62
Number exceeding 100 mSv		2		0.62		0.00	3.62
Doses accumulating over rolling 5 year block starting 2000							
Parameters	A	0.370916	B	0.005181	C	0.000000	
Sample size	3657						
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average		0.78		0.92		0.77	1.08
Average over 0.5 mSv		3.79		4.74		4.00	5.50
Number exceeding 0.5 mSv		714		659.58		611.58	703.58
Number exceeding 5 mSv		91		134.62		110.59	156.61
Number exceeding 20 mSv		23		31.62		20.60	43.62
Number exceeding 50 mSv		11		6.62		2.62	12.62
Number exceeding 100 mSv		2		0.62		0.00	3.62

Table 4 (Cont'd)
Dose distribution by job class as of the end of 2004

Laboratory technician (industrial)								
Annual doses								
Parameters	A	0.367236	B	0.071256	C	0.011775	D	1.514700
Sample size		3357						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.23		0.26		0.23		0.28
Average from 0.1 mSv up		0.79		0.78		0.70		0.87
Number at or exceeding 0.1 mSv		997		994.55		944.53		1044.60
Number exceeding 1 mSv		181		193.61		166.61		221.61
Number exceeding 2 mSv		111		93.62		76.59		112.62
Number exceeding 5 mSv		18		22.62		13.62		32.62
Number exceeding 20 mSv		1		0.00		0.00		0.62
Number exceeding 50 mSv		0		0.00		0.00		0.00
Doses accumulating over fixed 5 year block starting 2001								
Parameters	A	0.350878	B	0.012714	C	0.000000	D	1.283330
Sample size		6124						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.58		0.62		0.55		0.70
Average over 0.5 mSv		3.36		3.85		3.45		4.36
Number exceeding 0.5 mSv		997		899.59		843.59		954.61
Number exceeding 5 mSv		163		170.62		145.62		196.62
Number exceeding 20 mSv		20		28.62		18.62		39.62
Number exceeding 50 mSv		2		2.62		0.00		6.62
Number exceeding 100 mSv		1		0.00		0.00		0.62
Doses accumulating over rolling 5 year block starting 2000								
Parameters	A	0.257651	B	0.010907	C	0.000000	D	0.855605
Sample size		6742						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.63		2.28		2.09		2.49
Average over 0.5 mSv		3.61		9.08		8.32		9.86
Number exceeding 0.5 mSv		1114		1661.56		1595.52		1729.59
Number exceeding 5 mSv		197		624.60		578.58		670.63
Number exceeding 20 mSv		25		218.62		192.59		246.62
Number exceeding 50 mSv		4		53.62		39.62		66.62
Number exceeding 100 mSv		1		5.62		1.62		10.62

Table 4 (Cont'd)**Dose distribution by job class as of the end of 2004****Nuclear fuel processor****Annual doses**

Parameters	A	0.389425	B	0.128936	C	0.000000	D	0.220111
Sample size		762						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.36		1.37		1.23		1.53
Average from 0.1 mSv up		1.81		1.81		1.64		1.99
Number at or exceeding 0.1 mSv		574		574.44		550.42		597.43
Number exceeding 1 mSv		248		276.53		250.54		302.53
Number exceeding 2 mSv		170		172.57		148.58		196.56
Number exceeding 5 mSv		62		51.61		37.61		64.60
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 fixed 5 year block starting 2001

Parameters	A	0.410193	B	0.039672	C	0.000000	D	-0.338397
Sample size		902						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		4.55		4.78		4.32		5.23
Average over 0.5 mSv		6.13		6.52		5.96		7.07
Number exceeding 0.5 mSv		664		654.44		628.45		680.44
Number exceeding 5 mSv		252		271.55		244.56		296.54
Number exceeding 20 mSv		46		40.61		29.59		52.61
Number exceeding 50 mSv		0		0.00		0.00		1.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.411635	B	0.032236	C	0.000000	D	-0.366067
Sample size		910						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		5.3		5.48		4.97		6.02
Average over 0.5 mSv		6.79		7.39		6.75		8.03
Number exceeding 0.5 mSv		705		669.44		643.45		694.43
Number exceeding 5 mSv		279		292.55		263.55		322.54
Number exceeding 20 mSv		61		58.61		44.61		73.60
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 class as of the end of 2004****Scientist/Engineer (field)**

Annual doses	A	B	C	D
Parameters	0.667472	0.002969	0.000000	1.646310
Sample size	1361			
Statistic	Sample value	Expectation value	Lower 95% CL	Upper 95% CL
Average	0.26	0.26	0.23	0.30
Average from 0.1 mSv up	0.58	0.50	0.44	0.59
Number at or exceeding 0.1 mSv	603	639.51	605.51	675.50
Number exceeding 1 mSv	47	66.61	50.62	83.61
Number exceeding 2 mSv	20	22.62	13.62	32.62
Number exceeding 5 mSv	5	3.62	0.62	8.62
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 fixed 5 year block starting 2001				
Parameters	0.367236	0.087595	0.000000	0.775197
Sample size	2108			
Statistic	Sample value	Expectation value	Lower 95% CL	Upper 95% CL
Average	0.68	0.78	0.71	0.85
Average over 0.5 mSv	1.96	2.48	2.29	2.68
Number exceeding 0.5 mSv	680	600.05	563.53	640.57
Number exceeding 5 mSv	42	74.62	58.62	91.64
Number exceeding 20 mSv	3	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
Doses accumulating over rolling 5 year block starting 2000				
Parameters	0.311665	0.117866	0.000000	0.648184
Sample size	2338			
Statistic	Sample value	Expectation value	Lower 95% CL	Upper 95% CL
Average	0.8	0.86	0.79	0.93
Average over 0.5 mSv	2.2	2.56	2.40	2.74
Number exceeding 0.5 mSv	807	724.55	679.55	772.57
Number exceeding 5 mSv	66	95.61	77.62	113.61
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 class as of the end of 2004****Scientist/Engineer (laboratory)**

Annual doses								
Parameters	A	0.581619	B	0.000000	C	0.013123	D	2.417710
Sample size		5588						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.06		0.08		0.08		0.09
Average from 0.1 mSv up		0.33		0.32		0.29		0.37
Number at or exceeding 0.1 mSv		1013		1011.58		955.58		1072.63
Number exceeding 1 mSv		36		44.62		31.62		58.62
Number exceeding 2 mSv		12		12.62		5.62		20.62
Number exceeding 5 mSv		4		1.62		0.00		5.62
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 fixed 5 year block starting 2001								
Parameters	A	0.483161	B	0.000000	C	0.008534	D	1.771910
Sample size		9582						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.21		0.23		0.20		0.27
Average over 0.5 mSv		1.77		2.08		1.79		2.55
Number exceeding 0.5 mSv		886		738.61		687.58		792.60
Number exceeding 5 mSv		24		50.62		37.60		65.65
Number exceeding 20 mSv		7		5.62		1.62		10.62
Number exceeding 50 mSv		6		0.62		0.00		2.62
Number exceeding 100 mSv		1		0.00		0.00		1.62
Doses accumulating over rolling 5 year block starting 2000								
Parameters	A	0.494629	B	0.001549	C	0.000000	D	1.727840
Sample size		10504						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.22		0.23		0.21		0.26
Average over 0.5 mSv		1.67		2.01		1.77		2.36
Number exceeding 0.5 mSv		1100		863.60		810.58		918.63
Number exceeding 5 mSv		30		58.62		44.62		73.62
Number exceeding 20 mSv		7		5.62		1.62		11.62
Number exceeding 50 mSv		6		0.62		0.00		2.62
Number exceeding 100 mSv		1		0.00		0.00		0.62

Table 4 (Cont'd)**Dose distribution by job class as of the end of 2004****Security****Annual doses**

Parameters	A	0.382908	B	0.701228	C	0.000000	D	2.159620
Sample size		193						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.03		0.04		0.02		0.05
Average from 0.1 mSv up		0.29		0.28		0.19		0.42
Number at or exceeding 0.1 mSv		18		17.60		10.61		25.59
Number exceeding 1 mSv		1		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 fixed 5 year block starting 2001

Parameters	A	0.253406	B	0.319964	C	0.057653	D	2.220990
Sample size		204						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.04		0.08		0.06		0.10
Average over 0.5 mSv		1.03		0.94		0.57		1.92
Number exceeding 0.5 mSv		4		3.62		0.61		7.62
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
Number exceeding 100 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.255781	B	0.317323	C	0.057363	D	2.223790
Sample size		204						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.04		0.08		0.06		0.10
Average over 0.5 mSv		1.03		0.95		0.58		1.95
Number exceeding 0.5 mSv		4		2.62		0.00		7.62
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
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job class as of the end of 2004****Tradesmen****Annual doses**

Parameters	A	0.395487	B	0.123487	C	0.066499	D	2.001970
Sample size		239						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.12		0.15		0.11		0.20
Average from 0.1 mSv up		0.33		0.32		0.23		0.46
Number at or exceeding 0.1 mSv		84		83.54		70.55		97.52
Number exceeding 1 mSv		4		3.62		0.62		8.62
Number exceeding 2 mSv		1		0.62		0.00		3.62
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 fixed 5 year block starting 2001

Parameters	A	0.541119	B	0.057195	C	0.000000	D	1.354400
Sample size		303						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.31		0.33		0.25		0.44
Average over 0.5 mSv		1.35		1.52		1.18		2.08
Number exceeding 0.5 mSv		57		46.59		34.60		59.58
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

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.436234	B	0.097965	C	0.000000	D	1.088140
Sample size		312						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.42		0.44		0.34		0.57
Average over 0.5 mSv		1.62		1.79		1.40		2.26
Number exceeding 0.5 mSv		70		62.57		49.59		75.56
Number exceeding 5 mSv		4		2.62		0.00		6.62
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 class as of the end of 2004

Well logger								
Annual doses								
Parameters	A	0.264900	B	0.379830	C	0.000000	D	0.738778
Sample size		2394						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.36		0.39		0.36		0.41
Average from 0.1 mSv up		0.81		0.85		0.80		0.91
Number at or exceeding 0.1 mSv		1062		1052.52		1004.50		1096.54
Number exceeding 1 mSv		243		311.59		279.60		345.61
Number exceeding 2 mSv		90		109.61		90.62		129.61
Number exceeding 5 mSv		7		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 fixed 5 year block starting 2001								
Parameters	A	0.326827	B	0.128507	C	0.000000	D	0.491646
Sample size		3357						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.88		1.02		0.96		1.08
Average over 0.5 mSv		2.19		2.57		2.44		2.71
Number exceeding 0.5 mSv		1272		1240.53		1186.54		1295.53
Number exceeding 5 mSv		106		161.61		137.62		188.61
Number exceeding 20 mSv		7		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
Doses accumulating over rolling 5 year block starting 2000								
Parameters	A	0.359501	B	0.044343	C	0.000000	D	0.557934
Sample size		3517						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.08		1.49		1.37		1.60
Average over 0.5 mSv		2.54		3.83		3.58		4.09
Number exceeding 0.5 mSv		1423		1298.53		1242.49		1351.55
Number exceeding 5 mSv		157		306.60		273.61		339.60
Number exceeding 20 mSv		11		19.62		11.62		28.62
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 class as of the end of 2004****Chiropractor****Annual doses**

Parameters	A	0.036325	B	0.479534	C	0.047316	D	1.933630
Sample size		1116						
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		0.43		0.42		0.32		0.53
Number at or exceeding 0.1 mSv		91		89.60		72.61		109.60
Number exceeding 1 mSv		6		9.62		3.62		15.62
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 fixed 5 year block starting 2001

Parameters	A	0.286320	B	0.089464	C	0.012223	D	1.851510
Sample size		1364						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.11		0.12		0.10		0.16
Average over 0.5 mSv		1.73		1.82		1.42		2.34
Number exceeding 0.5 mSv		70		63.61		47.62		79.61
Number exceeding 5 mSv		4		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

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.324956	B	0.073661	C	0.000000	D	1.807650
Sample size		1452						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.12		0.13		0.10		0.16
Average over 0.5 mSv		1.66		1.87		1.48		2.34
Number exceeding 0.5 mSv		85		74.61		59.61		91.61
Number exceeding 5 mSv		4		4.62		0.62		8.65
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 class as of the end of 2004****Dental assistant****Annual doses**

Parameters	A 0.371931	B 0.000000	C 0.044843	D 3.048680
Sample size	14010			
Statistic	Sample value	Expectation value	Lower 95% CL	Upper 95% CL
Average	0.01	0.04	0.04	0.05
Average from 0.1 mSv up	0.29	0.27	0.23	0.40
Number at or exceeding 0.1 mSv	623	623.61	576.61	668.61
Number exceeding 1 mSv	12	18.62	10.62	26.65
Number exceeding 2 mSv	6	6.62	2.60	11.65
Number exceeding 5 mSv	2	1.62	0.00	4.62
Number exceeding 20 mSv	1	0.00	0.00	1.62
Number exceeding 50 mSv	0	0.00	0.00	0.62

Table 4 (Cont'd)
Dose distribution by job class as of the end of 2004

Dental hygienist							
Annual doses							
Parameters	A	0.423616	B	0.031085	C	0.042759	
Sample size	9536				D	3.176510	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average	0.01		0.04		0.04		0.04
Average from 0.1 mSv up	0.23		0.22		0.19		0.26
Number at or exceeding 0.1 mSv	397		398.61		359.59		437.61
Number exceeding 1 mSv	4		6.62		1.62		12.62
Number exceeding 2 mSv	3		1.62		0.00		4.62
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 fixed 5 year block starting 2001							
Parameters	A	0.409722	B	0.000000	C	0.021781	
Sample size	11941				D	2.555360	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average	0.04		0.06		0.05		0.08
Average over 0.5 mSv	1.7		1.72		1.32		2.97
Number exceeding 0.5 mSv	150		152.62		127.60		176.62
Number exceeding 5 mSv	4		7.62		2.62		13.62
Number exceeding 20 mSv	1		0.62		0.00		2.62
Number exceeding 50 mSv	1		0.00		0.00		0.62
Number exceeding 100 mSv	1		0.00		0.00		0.62
Doses accumulating over rolling 5 year block starting 2000							
Parameters	A	0.421499	B	0.000000	C	0.014356	
Sample size	12531				D	2.494450	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average	0.04		0.06		0.05		0.08
Average over 0.5 mSv	1.66		1.71		1.34		2.74
Number exceeding 0.5 mSv	182		184.62		158.62		211.62
Number exceeding 5 mSv	7		8.62		3.62		15.62
Number exceeding 20 mSv	1		0.62		0.00		2.62
Number exceeding 50 mSv	1		0.00		0.00		0.62
Number exceeding 100 mSv	1		0.00		0.00		0.62

Table 4 (Cont'd)
Dose distribution by job class as of the end of 2004

Dental therapist/nurse								
Annual doses								
Parameters	A	0.000000	B	2.829740	C	0.019389		
Sample size		151			D	0.922972		
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.05		0.06		0.04		0.08
Average from 0.1 mSv up		0.27		0.24		0.19		0.32
Number at or exceeding 0.1 mSv		26		23.59		15.60		33.57
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 fixed 5 year block starting 2001								
Parameters	A	0.000000	B	0.782170	C	0.046403		
Sample size		193			D	1.229530		
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.1		0.12		0.09		0.16
Average over 0.5 mSv		0.98		1.00		0.76		1.30
Number exceeding 0.5 mSv		13		11.61		5.62		18.60
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
Doses accumulating over rolling 5 year block starting 2000								
Parameters	A	0.093863	B	0.613782	C	0.034878		
Sample size		204			D	1.367770		
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.1		0.12		0.08		0.16
Average over 0.5 mSv		1.04		1.05		0.79		1.40
Number exceeding 0.5 mSv		13		11.61		5.62		19.60
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 class as of the end of 2004

Dentist								
Annual doses								
Parameters	A	0.377422	B	0.000000	C	0.034117	D	2.881160
Sample size	7995							
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.02		0.04		0.04		0.05
Average from 0.1 mSv up		0.35		0.32		0.25		0.48
Number at or exceeding 0.1 mSv		409		409.61		368.61		450.61
Number exceeding 1 mSv		9		17.62		9.62		26.62
Number exceeding 2 mSv		7		6.62		1.62		11.62
Number exceeding 5 mSv		2		1.62		0.00		4.62
Number exceeding 20 mSv		1		0.00		0.00		0.65
Number exceeding 50 mSv		0		0.00		0.00		0.62
Doses accumulating over fixed 5 year block starting 2001								
Parameters	A	0.337238	B	0.000000	C	0.030562	D	2.310640
Sample size	9411							
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.07		0.11		0.09		0.20
Average over 0.5 mSv		2.47		2.93		2.01		7.21
Number exceeding 0.5 mSv		216		204.62		177.62		231.62
Number exceeding 5 mSv		8		19.62		12.62		29.62
Number exceeding 20 mSv		4		3.62		0.62		8.62
Number exceeding 50 mSv		1		0.62		0.00		3.62
Number exceeding 100 mSv		1		0.00		0.00		1.62
Doses accumulating over rolling 5 year block starting 2000								
Parameters	A	0.340946	B	0.000000	C	0.025713	D	2.270240
Sample size	9795							
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.08		0.11		0.09		0.20
Average over 0.5 mSv		2.34		3.06		2.06		6.76
Number exceeding 0.5 mSv		254		228.62		202.62		258.62
Number exceeding 5 mSv		8		23.62		14.62		33.62
Number exceeding 20 mSv		5		4.62		0.62		9.62
Number exceeding 50 mSv		1		0.62		0.00		3.65
Number exceeding 100 mSv		1		0.00		0.00		1.62

Table 4 (Cont'd)
Dose distribution by job class as of the end of 2004

Gynaecologist								
Annual doses								
Parameters	A	0.073184	B	3.988250	C	0.802678		
Sample size		10			D	9.524180		
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		2.56
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 2000								
Parameters	A	0.000000	B	1.362850	C	0.023561	D	1.128870
Sample size		19						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.06		0.07		0.02		0.17
Average over 0.5 mSv		0.7						
Number exceeding 0.5 mSv		1		0.62		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 class as of the end of 2004****Laboratory technician (medical)****Annual doses**

Parameters	A	0.366530	B	0.173048	C	0.031635	D	1.866280
Sample size		4282						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.1		0.13		0.12		0.14
Average from 0.1 mSv up		0.42		0.42		0.38		0.45
Number at or exceeding 0.1 mSv		1054		1053.56		996.54		1108.59
Number exceeding 1 mSv		87		94.62		76.62		113.62
Number exceeding 2 mSv		31		29.62		19.62		41.62
Number exceeding 5 mSv		1		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

Doses accumulating over fixed 5 year block starting 2001

Parameters	A	0.466610	B	0.013577	C	0.001350	D	1.554230
Sample size		6452						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.28		0.29		0.27		0.32
Average over 0.5 mSv		1.99		2.10		1.88		2.34
Number exceeding 0.5 mSv		747		695.60		647.58		739.60
Number exceeding 5 mSv		65		56.62		41.62		72.62
Number exceeding 20 mSv		1		3.62		0.62		7.62
Number exceeding 50 mSv		0		0.00		0.00		0.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.435706	B	0.014280	C	0.000000	D	1.475960
Sample size		7032						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.3		0.35		0.31		0.39
Average over 0.5 mSv		2.05		2.39		2.15		2.69
Number exceeding 0.5 mSv		880		828.60		777.57		885.59
Number exceeding 5 mSv		72		85.62		68.60		104.62
Number exceeding 20 mSv		4		7.62		2.62		12.65
Number exceeding 50 mSv		1		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 class as of the end of 2004****Medical physicist****Annual doses**

Parameters	A	0.228216	B	0.309887	C	0.063110	D	2.046620
Sample size		430						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.06		0.10		0.08		0.12
Average from 0.1 mSv up		0.32		0.31		0.24		0.42
Number at or exceeding 0.1 mSv		82		81.58		66.59		96.57
Number exceeding 1 mSv		4		4.62		0.62		9.62
Number exceeding 2 mSv		2		0.62		0.00		3.62
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 fixed 5 year block starting 2001

Parameters	A	0.512377	B	0.000167	C	0.000000	D	1.522990
Sample size		537						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.3		0.33		0.23		0.55
Average over 0.5 mSv		1.86		2.07		1.39		4.16
Number exceeding 0.5 mSv		72		64.59		48.60		78.59
Number exceeding 5 mSv		3		4.62		0.62		9.62
Number exceeding 20 mSv		1		0.00		0.00		1.62
Number exceeding 50 mSv		1		0.00		0.00		0.62
Number exceeding 100 mSv		0		0.00		0.00		0.62

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.490076	B	0.000429	C	0.000000	D	1.475360
Sample size		559						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.34		0.36		0.25		0.66
Average over 0.5 mSv		1.98		2.29		1.59		4.38
Number exceeding 0.5 mSv		81		70.59		55.60		86.59
Number exceeding 5 mSv		3		5.62		1.62		11.62
Number exceeding 20 mSv		1		0.62		0.00		2.62
Number exceeding 50 mSv		1		0.00		0.00		0.62
Number exceeding 100 mSv		0		0.00		0.00		0.62

Table 4 (Cont'd)**Dose distribution by job class as of the end of 2004****Medical radiation technologist****Annual doses**

Parameters	A	0.477193	B	0.029535	C	0.020900	D	2.030050
Sample size		13446						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.11		0.14		0.13		0.14
Average from 0.1 mSv up		0.44		0.44		0.41		0.47
Number at or exceeding 0.1 mSv		3298		3298.56		3205.54		3408.59
Number exceeding 1 mSv		246		276.62		245.62		308.62
Number exceeding 2 mSv		113		106.62		88.62		129.62
Number exceeding 5 mSv		12		19.62		11.62		28.62
Number exceeding 20 mSv		2		0.00		0.00		1.62
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over fixed 5 year block starting 2001

Parameters	A	0.485673	B	0.029565	C	0.000000	D	1.329330
Sample size		15729						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.35		0.39		0.37		0.41
Average over 0.5 mSv		1.7		1.99		1.89		2.09
Number exceeding 0.5 mSv		2748		2446.59		2356.59		2543.58
Number exceeding 5 mSv		154		187.62		162.60		216.62
Number exceeding 20 mSv		10		5.62		1.62		10.62
Number exceeding 50 mSv		1		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.460222	B	0.036208	C	0.000000	D	1.260140
Sample size		16321						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.39		0.43		0.41		0.45
Average over 0.5 mSv		1.78		2.09		1.99		2.20
Number exceeding 0.5 mSv		3098		2738.58		2649.58		2831.58
Number exceeding 5 mSv		186		238.62		207.60		268.62
Number exceeding 20 mSv		12		5.62		1.62		11.62
Number exceeding 50 mSv		1		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 class as of the end of 2004****Nuclear medicine technologist**

Annual doses							
Parameters	A	0.539714	B	0.014163	C	0.000000	
Sample size		1780			D	0.361049	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average		1.98		1.92		1.75	2.14
Average from 0.1 mSv up		2.47		2.33		2.12	2.59
Number at or exceeding 0.1 mSv		1426		1455.42		1425.42	1485.42
Number exceeding 1 mSv		948		628.54		586.52	665.53
Number exceeding 2 mSv		615		395.57		363.57	427.57
Number exceeding 5 mSv		74		171.60		147.58	197.60
Number exceeding 20 mSv		5		19.62		12.62	29.62
Number exceeding 50 mSv		5		0.62		0.00	3.62
Doses accumulating over fixed 5 year block starting 2001							
Parameters	A	0.262367	B	0.050390	C	0.000000	
Sample size		2125			D	-0.322936	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average		5.51		5.81		5.49	6.13
Average over 0.5 mSv		7.29		8.44		8.01	8.88
Number exceeding 0.5 mSv		1600		1451.45		1407.43	1490.45
Number exceeding 5 mSv		835		770.03		727.51	809.53
Number exceeding 20 mSv		54		149.61		128.61	172.60
Number exceeding 50 mSv		5		0.62		0.00	3.62
Number exceeding 100 mSv		4		0.00		0.00	0.00
Doses accumulating over rolling 5 year block starting 2000							
Parameters	A	0.253062	B	0.053874	C	0.000000	
Sample size		2223			D	-0.402756	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average		6.25		6.20		5.89	6.55
Average over 0.5 mSv		8.43		8.71		8.32	9.13
Number exceeding 0.5 mSv		1644		1572.45		1529.45	1615.44
Number exceeding 5 mSv		959		869.53		826.51	914.52
Number exceeding 20 mSv		103		167.61		145.61	193.60
Number exceeding 50 mSv		5		0.62		0.00	3.62
Number exceeding 100 mSv		4		0.00		0.00	0.00

Table 4 (Cont'd)**Dose distribution by job class as of the end of 2004****Nurse****Annual doses**

Parameters	A	0.454386	B	0.090049	C	0.014603	D	1.943760
Sample size		6412						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.1		0.13		0.12		0.14
Average from 0.1 mSv up		0.44		0.44		0.41		0.47
Number at or exceeding 0.1 mSv		1494		1494.57		1434.54		1558.59
Number exceeding 1 mSv		111		138.62		115.62		160.62
Number exceeding 2 mSv		43		47.62		34.62		60.62
Number exceeding 5 mSv		9		4.62		1.62		10.62
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 fixed 5 year block starting 2001

Parameters	A	0.410001	B	0.077504	C	0.000000	D	1.328410
Sample size		8742						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.3		0.32		0.30		0.34
Average over 0.5 mSv		1.59		1.85		1.75		1.95
Number exceeding 0.5 mSv		1412		1208.59		1145.57		1273.61
Number exceeding 5 mSv		57		75.62		59.62		92.62
Number exceeding 20 mSv		2		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

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.345742	B	0.108435	C	0.000000	D	1.175190
Sample size		9363						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.34		0.38		0.36		0.40
Average over 0.5 mSv		1.73		1.98		1.89		2.08
Number exceeding 0.5 mSv		1579		1499.58		1426.56		1570.58
Number exceeding 5 mSv		68		106.62		87.62		127.62
Number exceeding 20 mSv		3		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 class as of the end of 2004

Physician							
Annual doses							
Parameters	A	0.445377	B	0.052411	C	0.000000	
Sample size		2727			D	1.544600	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average		0.22		0.24		0.21	0.27
Average from 0.1 mSv up		0.71		0.73		0.65	0.82
Number at or exceeding 0.1 mSv		841		840.55		796.53	884.57
Number exceeding 1 mSv		123		148.61		126.59	171.61
Number exceeding 2 mSv		51		67.62		52.60	84.62
Number exceeding 5 mSv		16		14.62		7.62	22.65
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 fixed 5 year block starting 2001							
Parameters	A	0.361720	B	0.044239	C	0.000000	
Sample size		3397			D	0.968384	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average		0.66		0.75		0.68	0.82
Average over 0.5 mSv		2.47		2.98		2.75	3.26
Number exceeding 0.5 mSv		845		778.07		728.55	823.56
Number exceeding 5 mSv		82		129.62		108.59	152.61
Number exceeding 20 mSv		9		4.62		0.62	9.62
Number exceeding 50 mSv		1		0.00		0.00	0.00
Number exceeding 100 mSv		0		0.00		0.00	0.00
Doses accumulating over rolling 5 year block starting 2000							
Parameters	A	0.360498	B	0.036559	C	0.000000	
Sample size		3557			D	1.016130	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average		0.74		0.74		0.67	0.82
Average over 0.5 mSv		2.62		3.14		2.84	3.43
Number exceeding 0.5 mSv		943		766.57		718.57	814.57
Number exceeding 5 mSv		102		133.62		111.62	155.61
Number exceeding 20 mSv		11		7.62		2.62	13.62
Number exceeding 50 mSv		2		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 class as of the end of 2004****Radiation therapist****Annual doses**

Parameters	A	0.499014	B	0.000000	C	0.043592	D	2.193690
Sample size		1793						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.11		0.14		0.12		0.17
Average from 0.1 mSv up		0.38		0.36		0.30		0.49
Number at or exceeding 0.1 mSv		518		516.55		477.53		553.55
Number exceeding 1 mSv		17		27.62		17.62		38.62
Number exceeding 2 mSv		11		9.62		4.62		16.62
Number exceeding 5 mSv		2		1.62		0.00		5.62
Number exceeding 20 mSv		1		0.00		0.00		0.62
Number exceeding 50 mSv		0		0.00		0.00		0.62

Doses accumulating over fixed 5 year block starting 2001

Parameters	A	0.601879	B	0.000003	C	0.000000	D	1.249490
Sample size		2105						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.48		0.49		0.43		0.59
Average over 0.5 mSv		1.77		1.95		1.67		2.36
Number exceeding 0.5 mSv		483		423.58		388.58		460.57
Number exceeding 5 mSv		23		27.62		17.62		37.62
Number exceeding 20 mSv		3		1.62		0.00		5.62
Number exceeding 50 mSv		1		0.00		0.00		1.62
Number exceeding 100 mSv		1		0.00		0.00		0.62

Table 4 (Cont'd)**Dose distribution by job class as of the end of 2004****Radiologist (diagnostic)****Annual doses**

Parameters	A	0.479131	B	0.001569	C	0.001303	D	1.786230
Sample size		2201						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.19		0.21		0.17		0.27
Average from 0.1 mSv up		0.74		0.72		0.58		1.00
Number at or exceeding 0.1 mSv		571		572.56		532.57		612.55
Number exceeding 1 mSv		69		79.62		62.62		98.61
Number exceeding 2 mSv		37		36.62		25.62		48.62
Number exceeding 5 mSv		13		10.62		4.62		17.65
Number exceeding 20 mSv		1		0.62		0.00		3.62
Number exceeding 50 mSv		0		0.00		0.00		0.62

Doses accumulating over fixed 5 year block starting 2001

Parameters	A	0.427695	B	0.011734	C	0.000000	D	1.151180
Sample size		2622						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.62		0.68		0.59		0.79
Average over 0.5 mSv		2.64		3.12		2.71		3.61
Number exceeding 0.5 mSv		571		507.58		469.55		546.57
Number exceeding 5 mSv		60		75.62		59.62		91.62
Number exceeding 20 mSv		12		9.62		3.62		16.62
Number exceeding 50 mSv		1		0.62		0.00		2.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.398867	B	0.016213	C	0.000000	D	1.077420
Sample size		2720						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.71		0.78		0.68		0.89
Average over 0.5 mSv		2.86		3.41		3.01		3.86
Number exceeding 0.5 mSv		633		566.57		528.58		603.57
Number exceeding 5 mSv		71		96.62		78.62		116.61
Number exceeding 20 mSv		15		12.62		5.62		19.62
Number exceeding 50 mSv		1		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 class as of the end of 2004****Radiologist (therapeutic)****Annual doses**

Parameters	A	0.136779	B	0.216420	C	0.058123	D	1.767790
Sample size		285						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.1		0.13		0.09		0.19
Average from 0.1 mSv up		0.53		0.51		0.33		0.76
Number at or exceeding 0.1 mSv		56		55.58		42.59		68.56
Number exceeding 1 mSv		8		6.62		2.62		13.61
Number exceeding 2 mSv		3		2.62		0.00		6.62
Number exceeding 5 mSv		0		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 fixed 5 year block starting 2001

Parameters	A	0.437163	B	0.021175	C	0.003444	D	1.407180
Sample size		364						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.36		0.37		0.24		0.55
Average over 0.5 mSv		2.13		2.27		1.51		3.41
Number exceeding 0.5 mSv		53		47.59		35.60		61.58
Number exceeding 5 mSv		6		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		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.439799	B	0.029351	C	0.000000	D	1.335900
Sample size		379						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.38		0.39		0.28		0.55
Average over 0.5 mSv		2.06		2.20		1.59		3.06
Number exceeding 0.5 mSv		60		54.59		43.60		68.58
Number exceeding 5 mSv		6		4.62		0.62		10.62
Number exceeding 20 mSv		1		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 class as of the end of 2004****Veterinarian****Annual doses**

Parameters	A	0.216943	B	0.544503	C	0.043075	D	2.024820
Sample size		3464						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.04		0.07		0.07		0.08
Average from 0.1 mSv up		0.3		0.30		0.27		0.33
Number at or exceeding 0.1 mSv		461		457.59		419.60		500.59
Number exceeding 1 mSv		12		19.62		11.62		27.65
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 fixed 5 year block starting 2001

Parameters	A	0.394461	B	0.114415	C	0.009755	D	1.741570
Sample size		4933						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.13		0.15		0.14		0.16
Average over 0.5 mSv		1.29		1.44		1.30		1.57
Number exceeding 0.5 mSv		371		321.61		288.58		355.61
Number exceeding 5 mSv		7		6.62		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
Number exceeding 100 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.432764	B	0.096117	C	0.000000	D	1.736210
Sample size		5354						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.13		0.15		0.14		0.16
Average over 0.5 mSv		1.29		1.44		1.31		1.57
Number exceeding 0.5 mSv		419		365.61		330.58		401.61
Number exceeding 5 mSv		8		8.62		3.62		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 class as of the end of 2004

Veterinary technician

Annual doses

Parameters	A	0.322926	B	0.256113	C	0.040043	D	2.328910
Sample size		3206						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.04		0.07		0.06		0.07
Average from 0.1 mSv up		0.3		0.29		0.26		0.33
Number at or exceeding 0.1 mSv		387		388.60		350.60		424.59
Number exceeding 1 mSv		16		16.62		8.62		24.62
Number exceeding 2 mSv		2		2.62		0.62		7.62
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 fixed 5 year block starting 2001

Parameters	A	0.415766	B	0.142890	C	0.006661	D	1.954280
Sample size		4788						
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		1.1		1.23		1.12		1.37
Number exceeding 0.5 mSv		233		200.62		175.59		227.61
Number exceeding 5 mSv		2		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

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.430695	B	0.115688	C	0.001472	D	1.951370
Sample size		5110						
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		1.17		1.28		1.16		1.43
Number exceeding 0.5 mSv		252		221.61		193.62		248.61
Number exceeding 5 mSv		3		2.62		0.00		6.62
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 class as of the end of 2004****Ward aid/orderly****Annual doses**

Parameters	A	0.419523	B	0.014297	C	0.018709	D	2.198250
Sample size		1258						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.08		0.10		0.08		0.14
Average from 0.1 mSv up		0.49		0.48		0.35		0.70
Number at or exceeding 0.1 mSv		195		194.59		169.59		220.58
Number exceeding 1 mSv		16		16.62		9.62		26.62
Number exceeding 2 mSv		8		6.62		2.62		13.62
Number exceeding 5 mSv		1		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 fixed 5 year block starting 2001

Parameters	A	0.429615	B	0.030619	C	0.000000	D	1.668700
Sample size		2008						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.2		0.21		0.17		0.25
Average over 0.5 mSv		1.77		1.91		1.59		2.33
Number exceeding 0.5 mSv		184		164.60		142.61		191.60
Number exceeding 5 mSv		14		11.62		5.62		18.62
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

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.401325	B	0.010857	C	0.000000	D	1.657440
Sample size		2311						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.24		0.26		0.20		0.32
Average over 0.5 mSv		2.14		2.54		1.97		3.25
Number exceeding 0.5 mSv		221		189.60		165.61		217.60
Number exceeding 5 mSv		20		20.62		12.60		30.62
Number exceeding 20 mSv		1		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 class as of the end of 2004****Reactor - administration****Annual doses**

Parameters	A	0.162380	B	0.139202	C	0.000000	D	1.591760
Sample size		3949						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.15		0.15		0.13		0.17
Average from 0.1 mSv up		1.32		1.31		1.15		1.48
Number at or exceeding 0.1 mSv		437		437.60		398.60		475.62
Number exceeding 1 mSv		154		163.62		139.62		187.61
Number exceeding 2 mSv		91		92.62		74.62		111.62
Number exceeding 5 mSv		21		20.62		12.62		29.62
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 fixed 5 year block starting 2001

Parameters	A	0.179170	B	0.035753	C	0.000000	D	1.455460
Sample size		6343						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.49		0.46		0.40		0.51
Average over 0.5 mSv		4.75		4.97		4.45		5.48
Number exceeding 0.5 mSv		635		560.60		518.60		602.63
Number exceeding 5 mSv		178		171.62		147.62		195.62
Number exceeding 20 mSv		26		20.62		12.62		30.62
Number exceeding 50 mSv		0		0.00		0.00		0.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.173904	B	0.034350	C	0.000000	D	1.360680
Sample size		6865						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.57		0.59		0.53		0.66
Average over 0.5 mSv		5.15		5.48		4.98		6.00
Number exceeding 0.5 mSv		737		715.60		667.58		767.62
Number exceeding 5 mSv		224		238.62		212.62		270.61
Number exceeding 20 mSv		39		34.62		23.62		46.62
Number exceeding 50 mSv		1		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 class as of the end of 2004****Reactor - chemical and radiation control****Annual doses**

Parameters	A	0.235438	B	0.107699	C	0.000000	D	0.133829
Sample size		568						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		2.1		2.05		1.81		2.34
Average from 0.1 mSv up		3.2		3.11		2.78		3.48
Number at or exceeding 0.1 mSv		373		373.46		351.47		395.48
Number exceeding 1 mSv		216		228.52		206.51		251.51
Number exceeding 2 mSv		154		171.55		151.56		193.54
Number exceeding 5 mSv		93		82.59		67.60		100.58
Number exceeding 20 mSv		0		0.62		0.00		2.62
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over fixed 5 year block starting 2001

Parameters	A	0.189001	B	0.051700	C	0.000000	D	-0.190282
Sample size		711						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		5.11		5.82		5.26		6.47
Average over 0.5 mSv		8.02		9.42		8.68		10.32
Number exceeding 0.5 mSv		451		436.47		411.48		463.46
Number exceeding 5 mSv		217		251.54		225.55		277.55
Number exceeding 20 mSv		41		55.61		42.61		70.60
Number exceeding 50 mSv		1		0.00		0.00		1.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.236154	B	0.041160	C	0.000000	D	-0.099754
Sample size		732						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		5.69		5.44		4.82		6.05
Average over 0.5 mSv		8.79		9.05		8.20		9.96
Number exceeding 0.5 mSv		472		435.48		410.46		460.49
Number exceeding 5 mSv		240		229.55		203.55		253.54
Number exceeding 20 mSv		47		55.61		41.61		70.60
Number exceeding 50 mSv		8		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 class as of the end of 2004****Reactor - construction****Annual doses**

Parameters	A	0.134165	B	0.133665	C	0.000000	D	0.596689
Sample size		1270						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.01		1.04		0.92		1.17
Average from 0.1 mSv up		2.64		2.68		2.44		2.95
Number at or exceeding 0.1 mSv		485		488.03		454.54		522.52
Number exceeding 1 mSv		276		294.57		267.57		325.56
Number exceeding 2 mSv		220		214.58		190.59		241.60
Number exceeding 5 mSv		82		87.61		71.61		104.63
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 fixed 5 year block starting 2001

Parameters	A	0.131507	B	0.061125	C	0.000000	D	0.218918
Sample size		3036						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		3.28		3.44		3.23		3.68
Average over 0.5 mSv		6.95		7.82		7.45		8.21
Number exceeding 0.5 mSv		1421		1323.52		1270.50		1382.51
Number exceeding 5 mSv		623		701.57		650.57		747.59
Number exceeding 20 mSv		104		101.62		82.59		121.61
Number exceeding 50 mSv		0		0.00		0.00		1.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.095206	B	0.060933	C	0.000000	D	0.123751
Sample size		3415						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		3.74		4.32		4.08		4.57
Average over 0.5 mSv		8.05		9.25		8.85		9.70
Number exceeding 0.5 mSv		1577		1584.51		1529.49		1638.53
Number exceeding 5 mSv		761		957.05		906.56		1008.55
Number exceeding 20 mSv		162		176.61		150.61		202.61
Number exceeding 50 mSv		3		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 class as of the end of 2004****Reactor - control technician**

Annual doses								
Parameters	A	0.301612	B	0.259706	C	0.023951	D	1.516970
Sample size		153						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.15		0.17		0.11		0.25
Average from 0.1 mSv up		0.53		0.51		0.34		0.76
Number at or exceeding 0.1 mSv		43		42.56		31.57		54.54
Number exceeding 1 mSv		7		5.62		1.62		10.61
Number exceeding 2 mSv		1		1.62		0.00		4.62
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 fixed 5 year block starting 2001								
Parameters	A	0.162604	B	0.049051	C	0.000000	D	0.379745
Sample size		274						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		3.02		2.95		2.27		3.71
Average over 0.5 mSv		7.1		7.62		6.13		9.26
Number exceeding 0.5 mSv		116		104.53		88.54		119.52
Number exceeding 5 mSv		47		50.58		37.59		64.57
Number exceeding 20 mSv		11		8.62		3.62		14.61
Number exceeding 50 mSv		0		0.00		0.00		0.62
Number exceeding 100 mSv		0		0.00		0.00		0.00
Doses accumulating over rolling 5 year block starting 2000								
Parameters	A	0.154132	B	0.037623	C	0.000000	D	0.612478
Sample size		305						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		3.17		2.53		1.84		3.25
Average over 0.5 mSv		7.82		8.32		6.46		10.35
Number exceeding 0.5 mSv		123		90.55		74.56		106.54
Number exceeding 5 mSv		53		43.59		31.60		56.58
Number exceeding 20 mSv		12		9.62		4.62		15.61
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 class as of the end of 2004****Reactor - electrical maintenance****Annual doses**

Parameters	A	0.181874	B	0.249013	C	0.000000	D	0.577277
Sample size		1393						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.67		0.64		0.58		0.71
Average from 0.1 mSv up		1.51		1.47		1.35		1.60
Number at or exceeding 0.1 mSv		621		599.52		565.52		632.51
Number exceeding 1 mSv		273		283.57		255.55		313.59
Number exceeding 2 mSv		162		159.60		136.60		182.59
Number exceeding 5 mSv		30		23.62		14.62		33.62
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 fixed 5 year block starting 2001

Parameters	A	0.168883	B	0.056518	C	0.000000	D	0.448922
Sample size		1967						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		2.56		2.36		2.13		2.58
Average over 0.5 mSv		5.56		6.48		5.99		6.96
Number exceeding 0.5 mSv		897		705.53		662.54		747.53
Number exceeding 5 mSv		301		309.59		275.59		341.58
Number exceeding 20 mSv		44		35.62		24.62		47.62
Number exceeding 50 mSv		0		0.00		0.00		0.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.298562	B	0.025125	C	0.000000	D	0.304872
Sample size		2084						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		2.85		3.40		3.10		3.71
Average over 0.5 mSv		5.92		7.35		6.74		7.96
Number exceeding 0.5 mSv		995		946.51		905.49		989.53
Number exceeding 5 mSv		342		376.58		343.58		411.58
Number exceeding 20 mSv		63		91.61		73.62		109.61
Number exceeding 50 mSv		0		5.62		1.62		11.62
Number exceeding 100 mSv		0		0.00		0.00		0.62

Table 4 (Cont'd)**Dose distribution by job class as of the end of 2004****Reactor - fuel handling****Annual doses**

Parameters	A	0.304024	B	0.086583	C	0.000000	D	0.194306
Sample size		113						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.98		1.97		1.37		2.60
Average from 0.1 mSv up		2.84		2.81		2.03		3.66
Number at or exceeding 0.1 mSv		79		78.45		68.47		86.46
Number exceeding 1 mSv		40		43.53		33.55		54.50
Number exceeding 2 mSv		31		31.56		21.58		41.53
Number exceeding 5 mSv		18		14.59		7.61		22.58
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 fixed 5 year block starting 2001

Parameters	A	0.261270	B	0.039205	C	0.000000	D	-0.098279
Sample size		194						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		5.16		5.20		4.06		6.50
Average over 0.5 mSv		8.28		8.59		7.00		10.39
Number exceeding 0.5 mSv		120		116.47		102.49		128.48
Number exceeding 5 mSv		64		57.55		45.57		71.53
Number exceeding 20 mSv		16		13.61		6.62		20.60
Number exceeding 50 mSv		0		0.00		0.00		1.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.263802	B	0.030114	C	0.000000	D	-0.110200
Sample size		204						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		6.34		6.24		4.81		7.61
Average over 0.5 mSv		10.05		10.22		8.35		12.21
Number exceeding 0.5 mSv		128		123.47		109.49		136.46
Number exceeding 5 mSv		72		65.54		52.54		77.56
Number exceeding 20 mSv		19		19.60		11.61		28.59
Number exceeding 50 mSv		2		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 class as of the end of 2004****Reactor - general maintenance****Annual doses**

Parameters	A	0.166135	B	0.114829	C	0.000000	D	0.837735
Sample size		1414						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.75		0.75		0.65		0.85
Average from 0.1 mSv up		2.26		2.30		2.03		2.56
Number at or exceeding 0.1 mSv		467		457.54		422.55		492.54
Number exceeding 1 mSv		220		240.58		212.59		268.58
Number exceeding 2 mSv		165		166.60		143.60		191.59
Number exceeding 5 mSv		83		65.61		50.62		81.61
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 fixed 5 year block starting 2001

Parameters	A	0.180570	B	0.033501	C	0.000000	D	0.731019
Sample size		2307						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		2.31		2.05		1.82		2.28
Average over 0.5 mSv		7.3		7.58		6.84		8.30
Number exceeding 0.5 mSv		724		613.56		570.54		655.55
Number exceeding 5 mSv		296		269.60		239.57		299.59
Number exceeding 20 mSv		76		59.62		44.62		74.62
Number exceeding 50 mSv		0		1.62		0.00		4.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.170752	B	0.024989	C	0.000000	D	0.773514
Sample size		2605						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		2.5		2.39		2.13		2.67
Average over 0.5 mSv		7.91		9.43		8.50		10.27
Number exceeding 0.5 mSv		815		653.56		609.54		698.56
Number exceeding 5 mSv		339		311.60		280.60		346.59
Number exceeding 20 mSv		95		95.62		77.62		114.64
Number exceeding 50 mSv		0		8.62		3.62		15.62
Number exceeding 100 mSv		0		0.00		0.00		0.62

Table 4 (Cont'd)**Dose distribution by job class as of the end of 2004****Reactor - health physics****Annual doses**

Parameters	A	0.097523	B	0.313126	C	0.000000	D	0.724744
Sample size		71						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.43		0.43		0.22		0.68
Average from 0.1 mSv up		1.44		1.41		0.93		2.04
Number at or exceeding 0.1 mSv		21		20.55		13.58		28.52
Number exceeding 1 mSv		12		10.59		4.61		16.57
Number exceeding 2 mSv		4		5.61		1.62		10.59
Number exceeding 5 mSv		0		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 fixed 5 year block starting 2001

Parameters	A	0.058304	B	0.093313	C	0.028413	D	0.635813
Sample size		96						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.55		1.54		0.93		2.33
Average over 0.5 mSv		5.42		5.38		3.83		7.42
Number exceeding 0.5 mSv		27		25.56		17.58		35.53
Number exceeding 5 mSv		11		10.60		5.61		17.58
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

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.121995	B	0.063023	C	0.014006	D	0.772643
Sample size		126						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.45		1.44		0.89		2.15
Average over 0.5 mSv		5.8		5.73		3.79		8.14
Number exceeding 0.5 mSv		31		30.56		21.58		39.55
Number exceeding 5 mSv		13		12.60		5.61		19.59
Number exceeding 20 mSv		1		0.62		0.00		3.62
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 class as of the end of 2004****Reactor - industrial radiographer****Annual doses**

Parameters	A	0.012288	B	0.381421	C	0.019152	D	-0.712908
Sample size		72						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		2.25		2.25		1.80		2.75
Average from 0.1 mSv up		2.74		2.75		2.31		3.25
Number at or exceeding 0.1 mSv		59		58.42		51.45		64.40
Number exceeding 1 mSv		47		45.47		37.49		52.44
Number exceeding 2 mSv		35		34.51		25.54		42.48
Number exceeding 5 mSv		9		7.60		2.62		13.58
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 fixed 5 year block starting 2001

Parameters	A	0.317552	B	0.082281	C	0.000000	D	-0.435687
Sample size		167						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		4.15		4.22		3.47		4.99
Average over 0.5 mSv		5.37		5.72		4.86		6.64
Number exceeding 0.5 mSv		128		121.44		109.46		132.43
Number exceeding 5 mSv		48		51.55		39.57		63.53
Number exceeding 20 mSv		3		1.62		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

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.362595	B	0.068272	C	0.000000	D	-0.517180
Sample size		177						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		4.7		4.78		4.03		5.73
Average over 0.5 mSv		6		6.20		5.25		7.30
Number exceeding 0.5 mSv		138		135.43		123.45		145.42
Number exceeding 5 mSv		58		59.54		47.56		73.52
Number exceeding 20 mSv		4		4.62		0.62		9.61
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 class as of the end of 2004****Reactor - mechanical maintenance****Annual doses**

Parameters	A	0.164664	B	0.179683	C	0.000000	D	0.113779
Sample size		1452						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.56		1.58		1.46		1.71
Average from 0.1 mSv up		2.58		2.62		2.45		2.80
Number at or exceeding 0.1 mSv		876		872.47		833.48		909.49
Number exceeding 1 mSv		538		558.53		522.48		595.52
Number exceeding 2 mSv		381		403.56		369.56		438.55
Number exceeding 5 mSv		146		146.10		123.60		168.62
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 fixed 5 year block starting 2001

Parameters	A	0.157767	B	0.062307	C	0.000000	D	-0.171939
Sample size		2701						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		4.67		5.32		5.03		5.61
Average over 0.5 mSv		8		8.84		8.47		9.23
Number exceeding 0.5 mSv		1569		1616.48		1563.46		1664.50
Number exceeding 5 mSv		746		936.54		888.54		985.53
Number exceeding 20 mSv		164		165.61		139.61		192.61
Number exceeding 50 mSv		0		0.00		0.00		1.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.178698	B	0.038930	C	0.000000	D	0.011368
Sample size		2927						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		5.23		5.74		5.41		6.11
Average over 0.5 mSv		8.98		10.64		10.13		11.18
Number exceeding 0.5 mSv		1698		1569.49		1518.47		1621.49
Number exceeding 5 mSv		841		908.55		859.53		956.57
Number exceeding 20 mSv		224		270.60		241.60		301.60
Number exceeding 50 mSv		10		10.62		4.62		17.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job class as of the end of 2004****Reactor - operations****Annual doses**

Parameters	A	0.253426	B	0.129327	C	0.000000	D	0.608966
Sample size		2319						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.02		0.91		0.84		0.99
Average from 0.1 mSv up		1.99		1.84		1.71		1.97
Number at or exceeding 0.1 mSv		1189		1135.00		1090.48		1183.52
Number exceeding 1 mSv		597		532.57		492.57		570.56
Number exceeding 2 mSv		359		343.59		312.57		376.58
Number exceeding 5 mSv		111		111.61		91.59		132.61
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 fixed 5 year block starting 2001

Parameters	A	0.222037	B	0.046025	C	0.000000	D	0.204002
Sample size		2637						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		3.64		3.44		3.19		3.71
Average over 0.5 mSv		6.52		7.23		6.80		7.68
Number exceeding 0.5 mSv		1459		1238.01		1189.51		1288.50
Number exceeding 5 mSv		595		565.57		522.58		607.59
Number exceeding 20 mSv		90		96.62		78.59		115.61
Number exceeding 50 mSv		5		0.62		0.00		2.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.245468	B	0.040071	C	0.000000	D	0.040682
Sample size		2717						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		4.35		4.45		4.15		4.75
Average over 0.5 mSv		7.34		8.11		7.64		8.59
Number exceeding 0.5 mSv		1601		1472.49		1421.49		1526.56
Number exceeding 5 mSv		692		712.56		666.56		756.55
Number exceeding 20 mSv		122		154.61		131.59		179.61
Number exceeding 50 mSv		22		2.62		0.00		7.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job class as of the end of 2004****Reactor - scientific/professional****Annual doses**

Parameters	A	0.150350	B	0.137058	C	0.000000	D	1.082940
Sample size		2510						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.42		0.43		0.38		0.49
Average from 0.1 mSv up		1.84		1.85		1.68		2.06
Number at or exceeding 0.1 mSv		575		574.57		534.55		615.56
Number exceeding 1 mSv		261		278.60		248.60		309.59
Number exceeding 2 mSv		173		180.61		155.61		206.60
Number exceeding 5 mSv		61		54.62		40.62		69.64
Number exceeding 20 mSv		0		0.00		0.00		0.02
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over fixed 5 year block starting 2001

Parameters	A	0.167542	B	0.042957	C	0.000000	D	0.965910
Sample size		3879						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.26		1.17		1.05		1.29
Average over 0.5 mSv		5.81		5.96		5.50		6.47
Number exceeding 0.5 mSv		830		742.58		692.58		791.60
Number exceeding 5 mSv		312		284.61		253.61		316.63
Number exceeding 20 mSv		48		38.62		26.62		50.62
Number exceeding 50 mSv		0		0.00		0.00		1.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.186237	B	0.035542	C	0.000000	D	1.056180
Sample size		4349						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.35		1.05		0.94		1.17
Average over 0.5 mSv		6.08		5.92		5.40		6.47
Number exceeding 0.5 mSv		949		747.58		703.53		800.58
Number exceeding 5 mSv		352		272.61		241.61		303.61
Number exceeding 20 mSv		66		42.62		30.62		55.62
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 class as of the end of 2004****Reactor - training****Annual doses**

Parameters	A	0.244785	B	0.040844	C	0.000000	D	1.599140
Sample size		61						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.26		0.23		0.04		0.74
Average from 0.1 mSv up		1.61		1.43		0.32		4.65
Number at or exceeding 0.1 mSv		10		8.59		3.61		14.59
Number exceeding 1 mSv		3		2.61		0.00		6.60
Number exceeding 2 mSv		2		1.62		0.00		4.61
Number exceeding 5 mSv		1		0.62		0.00		2.61
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 fixed 5 year block starting 2001

Parameters	A	0.094266	B	0.079026	C	0.000000	D	0.820928
Sample size		96						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.13		1.15		0.62		1.86
Average over 0.5 mSv		5.08		5.35		3.47		7.76
Number exceeding 0.5 mSv		21		19.57		12.59		28.55
Number exceeding 5 mSv		8		7.61		2.62		13.59
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

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.158619	B	0.033819	C	0.000000	D	1.108830
Sample size		144						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.03		1.04		0.52		1.73
Average over 0.5 mSv		4.42		6.64		3.81		10.24
Number exceeding 0.5 mSv		33		21.59		13.60		30.57
Number exceeding 5 mSv		9		8.61		3.62		14.60
Number exceeding 20 mSv		2		0.62		0.00		3.62
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 class as of the end of 2004****Reactor - visitor****Annual doses**

Parameters	A	0.102841	B	0.148060	C	0.000000	D	0.708162
Sample size		6348						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.81		0.83		0.78		0.87
Average from 0.1 mSv up		2.57		2.61		2.49		2.73
Number at or exceeding 0.1 mSv		1993		2002.55		1930.55		2069.54
Number exceeding 1 mSv		1185		1242.58		1181.58		1300.60
Number exceeding 2 mSv		843		894.59		840.59		948.59
Number exceeding 5 mSv		311		337.61		300.59		372.64
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 fixed 5 year block starting 2001

Parameters	A	0.115704	B	0.057411	C	0.000000	D	0.891671
Sample size		13429						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.2		1.26		1.20		1.32
Average over 0.5 mSv		5.39		6.19		5.95		6.42
Number exceeding 0.5 mSv		2965		2688.57		2599.58		2781.60
Number exceeding 5 mSv		971		1156.60		1094.60		1221.60
Number exceeding 20 mSv		123		113.62		93.62		134.65
Number exceeding 50 mSv		3		0.00		0.00		0.62
Number exceeding 100 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.120209	B	0.059807	C	0.000000	D	0.903015
Sample size		14892						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.12		1.18		1.12		1.24
Average over 0.5 mSv		5.5		5.87		5.66		6.08
Number exceeding 0.5 mSv		3007		2945.58		2854.53		3044.60
Number exceeding 5 mSv		987		1211.60		1145.61		1282.60
Number exceeding 20 mSv		133		102.62		83.62		123.62
Number exceeding 50 mSv		9		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 class as of the end of 2004****Accelerators - Administration****Annual doses**

Parameters	A	0.000000	B	0.254596	C	0.195866	D	2.065650
Sample size		37						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.13		0.14		0.10		0.30
Average from 0.1 mSv up		0.27		0.22		0.14		0.52
Number at or exceeding 0.1 mSv		18		17.51		11.55		23.47
Number exceeding 1 mSv		1		0.00		0.00		1.61
Number exceeding 2 mSv		0		0.00		0.00		1.61
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 fixed 5 year block starting 2001

Parameters	A	0.483951	B	0.645830	C	0.000000	D	-0.897063
Sample size		42						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.37		1.38		1.11		1.66
Average over 0.5 mSv		1.61		1.63		1.35		1.93
Number exceeding 0.5 mSv		35		33.43		28.46		38.40
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

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.445773	B	0.683007	C	0.000000	D	-0.996256
Sample size		42						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.42		1.41		1.17		1.71
Average over 0.5 mSv		1.62		1.65		1.41		1.95
Number exceeding 0.5 mSv		36		34.42		29.45		38.40
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 class as of the end of 2004****Accelerators - Control technicians****Annual doses**

Parameters	A	0.190256	B	0.248881	C	0.000000	D	1.128440
Sample size		29						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.26		0.23		0.05		0.58
Average from 0.1 mSv up		1.09		1.00		0.31		2.13
Number at or exceeding 0.1 mSv		7		6.57		2.60		11.53
Number exceeding 1 mSv		2		1.61		0.00		5.58
Number exceeding 2 mSv		2		0.62		0.00		3.59
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 fixed 5 year block starting 2001

Parameters	A	0.278201	B	0.403398	C	0.000000	D	-0.622282
Sample size		29						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.58		1.68		1.20		2.24
Average over 0.5 mSv		2.11		2.23		1.67		2.92
Number exceeding 0.5 mSv		21		20.45		16.48		24.44
Number exceeding 5 mSv		1		0.62		0.00		2.60
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

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.239215	B	0.478801	C	0.000000	D	-0.764504
Sample size		29						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.63		1.67		1.21		2.19
Average over 0.5 mSv		2.17		2.15		1.67		2.70
Number exceeding 0.5 mSv		21		21.44		16.48		25.41
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
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job class as of the end of 2004****Accelerators - Designers****Annual doses**

Parameters	A	0.000000	B	0.166721	C	0.021287	D	0.890251
Sample size		18						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.86		0.57		0.06		1.60
Average from 0.1 mSv up		3.09		2.42		0.39		6.09
Number at or exceeding 0.1 mSv		5		3.58		0.62		7.52
Number exceeding 1 mSv		4		2.59		0.00		5.55
Number exceeding 2 mSv		3		1.60		0.00		4.56
Number exceeding 5 mSv		1		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 fixed 5 year block starting 2001

Parameters	A	0.651781	B	0.008243	C	0.000000	D	-0.364214
Sample size		19						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		4.31		4.08		1.88		8.22
Average over 0.5 mSv		4.79		5.07		2.35		10.47
Number exceeding 0.5 mSv		17		14.44		10.49		17.40
Number exceeding 5 mSv		3		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

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.758712	B	0.000126	C	0.000000	D	-0.669697
Sample size		19						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		5.02		5.14		2.47		12.91
Average over 0.5 mSv		5.58		5.76		2.81		14.11
Number exceeding 0.5 mSv		17		16.41		13.45		18.38
Number exceeding 5 mSv		3		4.56		1.60		8.51
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		0.62

Table 4 (Cont'd)**Dose distribution by job class as of the end of 2004****Accelerators - General Maintenance****Annual doses**

Parameters	A	0.000000	B	0.367288	C	0.027662	D	0.110234
Sample size		20						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.95		0.98		0.44		1.71
Average from 0.1 mSv up		1.74		1.72		0.94		2.82
Number at or exceeding 0.1 mSv		11		10.49		6.54		14.44
Number exceeding 1 mSv		8		5.56		2.59		10.49
Number exceeding 2 mSv		3		3.58		0.62		7.53
Number exceeding 5 mSv		1		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 fixed 5 year block starting 2001

Parameters	A	0.227973	B	0.107619	C	0.000000	D	-0.513123
Sample size		20						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		4.32		4.29		2.28		6.60
Average over 0.5 mSv		5.39		5.94		3.63		8.74
Number exceeding 0.5 mSv		16		14.44		9.51		17.41
Number exceeding 5 mSv		7		6.54		2.59		10.49
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

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.211516	B	0.094703	C	0.000000	D	-0.507343
Sample size		20						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		4.71		4.94		2.68		7.42
Average over 0.5 mSv		5.87		6.77		4.19		9.97
Number exceeding 0.5 mSv		16		14.44		10.49		17.41
Number exceeding 5 mSv		7		7.53		2.59		11.48
Number exceeding 20 mSv		0		0.00		0.00		1.60
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 class as of the end of 2004****Accelerators - Machinists****Annual doses**

Parameters	A	0.000000	B	0.048839	C	0.055601	D	1.807900
Sample size		27						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.26		0.19		0.03		1.43
Average from 0.1 mSv up		2.31		1.71		0.11		15.44
Number at or exceeding 0.1 mSv		3		2.60		0.00		5.57
Number exceeding 1 mSv		1		0.62		0.00		2.60
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		0.62
Number exceeding 50 mSv		0		0.00		0.00		0.00

Doses accumulating over fixed 5 year block starting 2001

Parameters	A	0.649142	B	0.003181	C	0.000000	D	0.192621
Sample size		27						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.97		2.07		0.94		4.91
Average over 0.5 mSv		2.88		3.25		1.55		7.91
Number exceeding 0.5 mSv		18		15.48		10.53		20.44
Number exceeding 5 mSv		1		2.60		0.00		5.57
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

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.650536	B	0.000000	C	0.000000	D	0.330543
Sample size		27						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		2.21		1.70		0.76		4.10
Average over 0.5 mSv		3.24		2.94		1.39		7.16
Number exceeding 0.5 mSv		18		14.49		9.54		19.44
Number exceeding 5 mSv		1		1.61		0.00		4.58
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 class as of the end of 2004****Accelerators - Mechanical technicians****Annual doses**

Parameters	A	0.014608	B	0.231792	C	0.036155	D	0.176513
Sample size		72						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.43		1.42		0.96		1.99
Average from 0.1 mSv up		2.45		2.39		1.74		3.25
Number at or exceeding 0.1 mSv		42		41.48		33.51		49.45
Number exceeding 1 mSv		25		25.54		17.56		33.51
Number exceeding 2 mSv		18		18.56		11.58		26.53
Number exceeding 5 mSv		8		5.61		1.62		11.58
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 fixed 5 year block starting 2001

Parameters	A	0.442216	B	0.065247	C	0.000000	D	-0.747237
Sample size		73						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		5.37		5.32		4.13		6.68
Average over 0.5 mSv		5.84		6.25		4.90		7.75
Number exceeding 0.5 mSv		67		61.41		54.44		66.40
Number exceeding 5 mSv		28		27.53		19.56		35.50
Number exceeding 20 mSv		3		1.62		0.00		4.63
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.451323	B	0.055610	C	0.000000	D	-0.748226
Sample size		73						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		5.99		5.75		4.41		7.29
Average over 0.5 mSv		6.51		6.70		5.25		8.31
Number exceeding 0.5 mSv		67		61.41		54.44		67.39
Number exceeding 5 mSv		29		28.53		20.55		36.50
Number exceeding 20 mSv		6		2.62		0.00		6.60
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 class as of the end of 2004****Accelerators - Operations****Annual doses**

Parameters	A	0.000000	B	0.361624	C	0.077331	D	-0.199061
Sample size		38						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.54		1.54		1.02		2.13
Average from 0.1 mSv up		1.83		1.83		1.24		2.44
Number at or exceeding 0.1 mSv		32		31.42		26.45		35.39
Number exceeding 1 mSv		16		17.51		11.55		23.47
Number exceeding 2 mSv		12		11.55		6.58		17.51
Number exceeding 5 mSv		3		1.61		0.00		4.59
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 fixed 5 year block starting 2001

Parameters	A	0.254985	B	0.132347	C	0.000000	D	-1.010670
Sample size		38						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		5.68		5.63		4.20		7.26
Average over 0.5 mSv		6.17		6.48		5.06		8.05
Number exceeding 0.5 mSv		35		32.41		28.44		36.39
Number exceeding 5 mSv		17		17.51		11.55		23.47
Number exceeding 20 mSv		1		0.00		0.00		1.61
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.234624	B	0.114852	C	0.000000	D	-0.955913
Sample size		38						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		6.15		6.18		4.53		8.25
Average over 0.5 mSv		6.67		7.21		5.45		9.28
Number exceeding 0.5 mSv		35		32.41		27.44		35.39
Number exceeding 5 mSv		18		18.50		12.54		24.46
Number exceeding 20 mSv		3		0.62		0.00		2.61
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 class as of the end of 2004****Accelerators - Scientific/professional****Annual doses**

Parameters	A	0.000000	B	0.104084	C	0.136928	D	1.816670
Sample size		317						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.25		0.25		0.16		0.37
Average from 0.1 mSv up		0.71		0.60		0.35		0.91
Number at or exceeding 0.1 mSv		113		110.54		93.55		127.55
Number exceeding 1 mSv		15		11.62		5.62		18.61
Number exceeding 2 mSv		12		7.62		2.62		13.61
Number exceeding 5 mSv		5		2.62		0.00		6.62
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 fixed 5 year block starting 2001

Parameters	A	0.764147	B	0.049042	C	0.000000	D	-0.090209
Sample size		321						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.98		1.87		1.62		2.14
Average over 0.5 mSv		2.43		2.48		2.19		2.84
Number exceeding 0.5 mSv		258		230.45		215.43		246.43
Number exceeding 5 mSv		17		26.60		16.61		36.60
Number exceeding 20 mSv		3		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

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.668396	B	0.031534	C	0.000000	D	-0.164799
Sample size		321						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		2.15		2.51		2.16		2.93
Average over 0.5 mSv		2.62		3.35		2.92		3.90
Number exceeding 0.5 mSv		259		233.44		217.46		248.43
Number exceeding 5 mSv		17		45.09		33.60		57.58
Number exceeding 20 mSv		4		1.62		0.00		4.62
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 class as of the end of 2004****Accelerators - Visitors****Annual doses**

Parameters	A	0.846758	B	0.612522	C	0.000000	D	2.353240
Sample size		68						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.08		0.10		0.08		0.14
Average from 0.1 mSv up		0.23		0.22		0.17		0.30
Number at or exceeding 0.1 mSv		23		22.54		15.54		29.54
Number exceeding 1 mSv		0		0.00		0.00		0.62
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 fixed 5 year block starting 2001

Parameters	A	0.192762	B	0.592738	C	0.000000	D	-0.364663
Sample size		71						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.97		1.00		0.78		1.27
Average over 0.5 mSv		1.47		1.64		1.36		1.93
Number exceeding 0.5 mSv		45		40.48		31.51		48.48
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
Number exceeding 100 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.186820	B	0.590252	C	0.000000	D	-0.324050
Sample size		71						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.98		0.97		0.76		1.21
Average over 0.5 mSv		1.5		1.63		1.36		1.93
Number exceeding 0.5 mSv		45		39.49		31.51		47.46
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
Number exceeding 100 mSv		0		0.00		0.00		0.00

Table 4 (Cont'd)**Dose distribution by job class as of the end of 2004****Uranium mine electrician****Doses accumulating over fixed 5 year block starting 2001**

Parameters	A	0.885606	B	2.591540	C	0.000052	D	9.803830
Sample size		4						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0		0.00		0.00		0.00
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

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.000000	B	0.508086	C	0.053359	D	1.383360
Sample size		10						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.11		0.10		0.03		0.44
Average over 0.5 mSv		1						
Number exceeding 0.5 mSv		1		0.00		0.00		1.59
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 class as of the end of 2004****Uranium mine mill maintenance****Annual doses**

Parameters	A	0.072163	B	0.714748	C	0.020858	D	-0.312100
Sample size		309						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.84		0.85		0.76		0.94
Average from 0.1 mSv up		1.14		1.14		1.03		1.26
Number at or exceeding 0.1 mSv		228		226.44		210.46		241.43
Number exceeding 1 mSv		102		107.54		91.55		123.53
Number exceeding 2 mSv		37		37.59		26.60		49.58
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 fixed 5 year block starting 2001

Parameters	A	0.155710	B	0.182800	C	0.014628	D	-0.264609
Sample size		389						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		2.48		2.49		2.20		2.78
Average over 0.5 mSv		3.77		3.93		3.56		4.29
Number exceeding 0.5 mSv		253		241.47		222.48		259.48
Number exceeding 5 mSv		71		70.58		55.59		86.57
Number exceeding 20 mSv		0		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

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.189255	B	0.123611	C	0.014009	D	-0.220898
Sample size		412						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		3.1		3.10		2.73		3.49
Average over 0.5 mSv		4.75		4.89		4.43		5.40
Number exceeding 0.5 mSv		266		256.47		237.48		275.46
Number exceeding 5 mSv		93		99.56		83.55		117.55
Number exceeding 20 mSv		0		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 class as of the end of 2004****Uranium mine mill worker****Annual doses**

Parameters	A	0.096762	B	0.457861	C	0.019220	D	-0.557836
Sample size		274						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.57		1.59		1.42		1.76
Average from 0.1 mSv up		1.9		1.90		1.73		2.11
Number at or exceeding 0.1 mSv		227		226.42		213.43		237.41
Number exceeding 1 mSv		152		149.49		132.50		163.48
Number exceeding 2 mSv		92		91.54		76.56		107.53
Number exceeding 5 mSv		9		7.62		2.62		13.64
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 fixed 5 year block starting 2001

Parameters	A	0.163779	B	0.125916	C	0.000000	D	-0.568784
Sample size		382						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		4.54		4.55		4.09		5.02
Average over 0.5 mSv		6.15		6.18		5.66		6.71
Number exceeding 0.5 mSv		281		278.44		261.45		296.43
Number exceeding 5 mSv		147		141.53		123.54		159.55
Number exceeding 20 mSv		1		2.62		0.00		6.62
Number exceeding 50 mSv		0		0.00		0.00		0.00
Number exceeding 100 mSv		0		0.00		0.00		0.00

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.214086	B	0.086029	C	0.005103	D	-0.495762
Sample size		432						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		5.3		5.28		4.70		5.85
Average over 0.5 mSv		7.11		7.16		6.54		7.87
Number exceeding 0.5 mSv		320		314.44		295.45		332.43
Number exceeding 5 mSv		170		167.53		147.54		187.54
Number exceeding 20 mSv		8		12.62		6.62		20.61
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 class as of the end of 2004****Uranium mine nurse****Annual doses**

Parameters	A	0.000000	B	0.820101	C	0.137444	D	1.243840
Sample size		14						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.17		0.18		0.10		0.37
Average from 0.1 mSv up		0.31		0.28		0.14		0.57
Number at or exceeding 0.1 mSv		8		7.49		3.56		10.44
Number exceeding 1 mSv		0		0.00		0.00		1.60
Number exceeding 2 mSv		0		0.00		0.00		0.61
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 fixed 5 year block starting 2001

Parameters	A	0.000000	B	0.703002	C	0.029567	D	0.583426
Sample size		26						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.3		0.29		0.12		0.55
Average over 0.5 mSv		1.35		1.21		0.73		1.92
Number exceeding 0.5 mSv		5		4.58		0.62		8.54
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

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.000000	B	0.764673	C	0.034796	D	0.545721
Sample size		30						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.32		0.29		0.13		0.51
Average over 0.5 mSv		1.22		1.16		0.72		1.78
Number exceeding 0.5 mSv		7		5.58		1.61		9.55
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 class as of the end of 2004****Uranium mine office staff****Annual doses**

Parameters	A	0.631948	B	0.225587	C	0.016342	D	1.802460
Sample size		223						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.15		0.17		0.14		0.21
Average from 0.1 mSv up		0.34		0.33		0.27		0.42
Number at or exceeding 0.1 mSv		97		96.52		81.53		112.50
Number exceeding 1 mSv		4		4.62		0.62		9.61
Number exceeding 2 mSv		2		0.62		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 fixed 5 year block starting 2001

Parameters	A	0.268382	B	0.442258	C	0.029071	D	0.908025
Sample size		353						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.3		0.32		0.27		0.38
Average over 0.5 mSv		1.12		1.21		1.05		1.41
Number exceeding 0.5 mSv		75		65.58		51.59		79.57
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

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.291466	B	0.377206	C	0.028168	D	0.894600
Sample size		405						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.34		0.36		0.30		0.43
Average over 0.5 mSv		1.21		1.30		1.12		1.49
Number exceeding 0.5 mSv		92		82.57		65.58		98.56
Number exceeding 5 mSv		0		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 class as of the end of 2004****Uranium mine support worker**

Annual doses									
Parameters	A	0.149346	B	0.273354	C	0.044248	D	0.127287	
Sample size	230								
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL	
Average		1.19		1.21		1.00		1.42	
Average from 0.1 mSv up		1.59		1.59		1.35		1.86	
Number at or exceeding 0.1 mSv		172		171.44		158.45		184.43	
Number exceeding 1 mSv		81		82.54		68.55		96.52	
Number exceeding 2 mSv		52		50.57		39.58		64.55	
Number exceeding 5 mSv		8		9.61		3.62		15.61	
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 fixed 5 year block starting 2001									
Parameters	A	0.170354	B	0.098539	C	0.032234	D	0.212997	
Sample size	408								
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL	
Average		2.25		2.25		1.93		2.60	
Average over 0.5 mSv		4.56		4.70		4.11		5.30	
Number exceeding 0.5 mSv		197		189.51		170.52		209.50	
Number exceeding 5 mSv		66		66.58		52.59		81.57	
Number exceeding 20 mSv		1		0.62		0.00		3.62	
Number exceeding 50 mSv		0		0.00		0.00		0.00	
Number exceeding 100 mSv		0		0.00		0.00		0.00	
Doses accumulating over rolling 5 year block starting 2000									
Parameters	A	0.355787	B	0.051450	C	0.014455	D	0.261163	
Sample size	593								
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL	
Average		2.2		2.20		1.88		2.50	
Average over 0.5 mSv		4.22		4.30		3.74		4.85	
Number exceeding 0.5 mSv		300		292.50		268.51		315.52	
Number exceeding 5 mSv		80		80.59		66.60		98.58	
Number exceeding 20 mSv		7		4.62		1.60		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 class as of the end of 2004****Uranium mine surface maintenance****Annual doses**

Parameters	A	0.082220	B	0.824934	C	0.056420	D	0.317784
Sample size		301						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.41		0.43		0.37		0.49
Average from 0.1 mSv up		0.63		0.63		0.54		0.71
Number at or exceeding 0.1 mSv		197		196.46		179.45		212.45
Number exceeding 1 mSv		36		40.59		29.58		53.58
Number exceeding 2 mSv		8		6.62		1.62		11.62
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 fixed 5 year block starting 2001

Parameters	A	0.127859	B	0.256441	C	0.034024	D	0.205722
Sample size		426						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.13		1.16		0.99		1.31
Average over 0.5 mSv		2.45		2.53		2.27		2.81
Number exceeding 0.5 mSv		188		181.52		162.53		202.51
Number exceeding 5 mSv		16		18.61		11.62		28.61
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

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.122883	B	0.206139	C	0.037351	D	0.282085
Sample size		492						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.24		1.25		1.10		1.43
Average over 0.5 mSv		2.79		2.89		2.59		3.19
Number exceeding 0.5 mSv		210		200.52		180.51		223.51
Number exceeding 5 mSv		27		32.61		21.61		43.60
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 class as of the end of 2004

Uranium mine surface miner

Annual doses							
Parameters	A	0.255580	B	1.130380	C	0.000000	
Sample size		36			D	-0.024852	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average		0.44		0.45		0.30	0.62
Average from 0.1 mSv up		0.63		0.63		0.46	0.83
Number at or exceeding 0.1 mSv		25		24.46		19.49	29.42
Number exceeding 1 mSv		2		4.59		0.62	8.57
Number exceeding 2 mSv		1		0.00		0.00	1.61
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 fixed 5 year block starting 2001							
Parameters	A	0.184303	B	0.113944	C	0.014743	
Sample size		89			D	-0.032961	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average		2.66		2.68		1.95	3.55
Average over 0.5 mSv		4.57		4.72		3.66	6.00
Number exceeding 0.5 mSv		51		48.49		38.52	57.46
Number exceeding 5 mSv		18		17.58		10.60	25.55
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
Doses accumulating over rolling 5 year block starting 2000							
Parameters	A	0.233503	B	0.069948	C	0.031246	
Sample size		131			D	0.177598	
Statistic		Sample value		Expectation value		Lower 95% CL	Upper 95% CL
Average		2.7		2.67		1.97	3.52
Average over 0.5 mSv		4.96		5.17		4.01	6.67
Number exceeding 0.5 mSv		70		65.50		54.52	76.48
Number exceeding 5 mSv		31		23.58		15.60	33.56
Number exceeding 20 mSv		2		0.62		0.00	3.62
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 class as of the end of 2004****Uranium mine surface personnel**

Annual doses								
Parameters	A	0.279839	B	0.365350	C	0.015391	D	0.883075
Sample size		232						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.33		0.35		0.27		0.44
Average from 0.1 mSv up		0.72		0.72		0.57		0.88
Number at or exceeding 0.1 mSv		107		107.51		92.53		121.52
Number exceeding 1 mSv		22		24.60		16.61		33.61
Number exceeding 2 mSv		11		7.62		2.62		13.61
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
Doses accumulating over fixed 5 year block starting 2001								
Parameters	A	0.301346	B	0.115403	C	0.000000	D	0.634099
Sample size		394						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.89		0.90		0.72		1.06
Average over 0.5 mSv		2.55		2.66		2.28		3.11
Number exceeding 0.5 mSv		130		122.55		105.56		140.54
Number exceeding 5 mSv		19		17.61		10.62		24.61
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
Doses accumulating over rolling 5 year block starting 2000								
Parameters	A	0.308009	B	0.097726	C	0.000000	D	0.577783
Sample size		452						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.03		1.06		0.88		1.27
Average over 0.5 mSv		2.76		2.96		2.50		3.43
Number exceeding 0.5 mSv		162		152.54		133.55		171.53
Number exceeding 5 mSv		32		26.61		17.59		36.60
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 class as of the end of 2004****Uranium mine surface support worker**

Annual doses								
Parameters	A	0.374078	B	0.403130	C	0.022217	D	1.484440
Sample size		568						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.14		0.17		0.14		0.20
Average from 0.1 mSv up		0.42		0.41		0.35		0.48
Number at or exceeding 0.1 mSv		194		192.54		169.55		215.53
Number exceeding 1 mSv		17		16.62		9.62		25.61
Number exceeding 2 mSv		4		2.62		0.00		6.62
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 fixed 5 year block starting 2001								
Parameters	A	0.424756	B	0.123547	C	0.000000	D	1.286160
Sample size		1043						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.28		0.30		0.26		0.35
Average over 0.5 mSv		1.5		1.58		1.37		1.80
Number exceeding 0.5 mSv		162		151.59		129.59		176.58
Number exceeding 5 mSv		6		4.62		0.62		9.62
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
Doses accumulating over rolling 5 year block starting 2000								
Parameters	A	0.387525	B	0.115773	C	0.007809	D	1.211160
Sample size		1127						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.34		0.36		0.31		0.41
Average over 0.5 mSv		1.69		1.75		1.53		2.00
Number exceeding 0.5 mSv		192		180.59		156.59		206.60
Number exceeding 5 mSv		9		8.62		2.62		14.62
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 class as of the end of 2004****Uranium mine underground maintenance****Annual doses**

Parameters	A	0.242392	B	0.518266	C	0.046834	D	-0.158175
Sample size		142						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.98		0.99		0.82		1.15
Average from 0.1 mSv up		1.11		1.11		0.94		1.29
Number at or exceeding 0.1 mSv		125		124.41		116.42		131.39
Number exceeding 1 mSv		48		53.53		41.55		64.51
Number exceeding 2 mSv		26		21.59		12.60		30.57
Number exceeding 5 mSv		0		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 fixed 5 year block starting 2001

Parameters	A	0.147542	B	0.229655	C	0.036737	D	-0.049148
Sample size		267						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.66		1.68		1.44		1.95
Average over 0.5 mSv		2.92		2.96		2.61		3.35
Number exceeding 0.5 mSv		147		144.49		128.51		160.50
Number exceeding 5 mSv		19		24.60		15.61		33.59
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

Doses accumulating over rolling 5 year block starting 2000

Parameters	A	0.340916	B	0.156281	C	0.015037	D	0.028053
Sample size		353						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.64		1.65		1.44		1.87
Average over 0.5 mSv		2.68		2.80		2.47		3.15
Number exceeding 0.5 mSv		209		197.49		179.50		215.47
Number exceeding 5 mSv		28		30.60		20.61		40.60
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 class as of the end of 2004****Uranium mine underground miner**

Annual doses								
Parameters	A	0.097199	B	0.454860	C	0.026411	D	-0.335760
Sample size	94							
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.3		1.29		1.03		1.59
Average from 0.1 mSv up		1.65		1.64		1.34		1.96
Number at or exceeding 0.1 mSv		74		73.43		65.45		81.41
Number exceeding 1 mSv		42		42.51		32.54		52.49
Number exceeding 2 mSv		26		24.56		15.58		33.54
Number exceeding 5 mSv		1		1.62		0.00		4.61
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 fixed 5 year block starting 2001								
Parameters	A	0.157059	B	0.070163	C	0.022698	D	-0.321521
Sample size	411							
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		5.82		5.82		5.11		6.55
Average over 0.5 mSv		8.3		8.62		7.71		9.52
Number exceeding 0.5 mSv		287		274.46		254.47		293.45
Number exceeding 5 mSv		160		159.53		141.54		180.51
Number exceeding 20 mSv		21		24.61		15.62		34.60
Number exceeding 50 mSv		0		0.00		0.00		0.62
Number exceeding 100 mSv		0		0.00		0.00		0.00
Doses accumulating over rolling 5 year block starting 2000								
Parameters	A	0.251584	B	0.048817	C	0.004657	D	-0.299700
Sample size	526							
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		5.93		5.94		5.20		6.68
Average over 0.5 mSv		8.38		8.74		7.84		9.67
Number exceeding 0.5 mSv		371		354.46		334.47		375.45
Number exceeding 5 mSv		186		191.53		169.54		212.52
Number exceeding 20 mSv		38		39.61		27.61		51.60
Number exceeding 50 mSv		1		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 class as of the end of 2004****Uranium mine underground personnel**

Annual doses								
Parameters	A	0.096905	B	0.455041	C	0.026455	D	-0.335968
Sample size		94						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.3		1.30		1.04		1.58
Average from 0.1 mSv up		1.65		1.64		1.33		1.95
Number at or exceeding 0.1 mSv		74		73.43		65.45		80.41
Number exceeding 1 mSv		42		43.51		33.54		51.49
Number exceeding 2 mSv		26		24.56		16.58		32.56
Number exceeding 5 mSv		1		1.62		0.00		4.61
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 fixed 5 year block starting 2001								
Parameters	A	0.120274	B	0.152421	C	0.042054	D	0.147155
Sample size		169						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.91		1.91		1.49		2.32
Average over 0.5 mSv		3.79		3.85		3.21		4.53
Number exceeding 0.5 mSv		83		80.51		67.53		92.49
Number exceeding 5 mSv		29		22.59		13.60		30.58
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
Doses accumulating over rolling 5 year block starting 2000								
Parameters	A	0.314496	B	0.097841	C	0.003286	D	0.128034
Sample size		214						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		1.96		1.99		1.60		2.39
Average over 0.5 mSv		3.56		3.69		3.07		4.37
Number exceeding 0.5 mSv		115		110.50		97.49		124.48
Number exceeding 5 mSv		34		27.59		18.60		37.58
Number exceeding 20 mSv		1		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 class as of the end of 2004

Uranium mine visitor								
Annual doses								
Parameters	A	0.000000	B	2.290440	C	0.037712	D	1.024140
Sample size		10						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.05		0.07		0.03		0.16
Average from 0.1 mSv up		0.26		0.23		0.11		0.47
Number at or exceeding 0.1 mSv		2		1.59		0.00		4.51
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 fixed 5 year block starting 2001								
Parameters	A	0.324430	B	0.132498	C	0.003264	D	1.139830
Sample size		332						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.36		0.37		0.28		0.49
Average over 0.5 mSv		1.8		1.89		1.50		2.44
Number exceeding 0.5 mSv		59		53.58		40.59		68.57
Number exceeding 5 mSv		5		2.62		0.00		6.62
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
Doses accumulating over rolling 5 year block starting 2000								
Parameters	A	0.402558	B	0.061913	C	0.010776	D	1.340000
Sample size		464						
Statistic		Sample value		Expectation value		Lower 95% CL		Upper 95% CL
Average		0.34		0.35		0.27		0.46
Average over 0.5 mSv		1.78		1.96		1.51		2.54
Number exceeding 0.5 mSv		75		64.59		50.60		79.58
Number exceeding 5 mSv		6		4.62		0.62		9.62
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

2004 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
Administration				
Administrator	643	95.65	0.64	0.00
Office staff	3815	366.68	0.14	0.00
Safety officer	490	57.11	2.19	0.00
Industry and Research				
Aircrew	16	7.29	0.00	0.00
Ground transportation	83	47.81	0.00	0.00
Industrial radiographer	2739	7423.04	0.00	0.00
Instructor (non-medical)	245	16.31	0.00	0.00
Instrument technician	2223	436.44	1.79	0.00
Laboratory technician (industrial)	3357	779.67	4.26	0.00
Nuclear fuel processor	762	1034.69	0.00	0.00
Scientist/Engineer (field)	1361	349.61	1.05	0.00
Scientist/Engineer (laboratory)	5588	320.38	0.00	0.00
Security	193	5.12	0.00	0.00
Tradesmen	239	27.00	0.00	0.00
Well logger	2394	852.71	0.00	0.00
Medicine				
Chiropractor	1116	38.50	0.00	0.00
Dental assistant	14010	173.02	0.00	0.00
Dental hygienist	9536	87.92	0.00	0.00
Dental therapist/nurse	151	6.81	0.00	0.00
Dentist	7995	138.42	0.00	0.00
Gynaecologist	10	0.15	0.00	0.00
Laboratory technician (medical)	4282	430.70	0.00	0.00
Medical physicist	430	25.62	0.00	0.00
Medical radiation technologist	13446	1426.35	0.15	0.00
Nuclear medicine technologist	1780	3512.52	0.00	0.00
Nurse	6412	646.59	0.00	0.00
Physician	2727	593.79	0.00	0.00
Radiation therapist	1793	189.40	0.00	0.00
Radiologist (diagnostic)	2201	417.60	0.00	0.00
Radiologist (therapeutic)	285	29.35	0.00	0.00
Veterinarian	3464	136.63	0.00	0.00
Veterinary technician	3206	113.64	0.00	0.00
Ward aid/orderly	1258	94.87	0.00	0.00
Nuclear Power				
Reactor - administration	3949	577.91	36.52	0.00
Reactor - chemical and radiation control	568	1195.01	21.12	0.00
Reactor - construction	1270	1286.55	17.58	0.00
Reactor - control technician	153	23.61	41.08	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 - electrical maintenance	1393	938.59	27.38	0.00
Reactor - fuel handling	113	224.24	16.11	0.00
Reactor - general maintenance	1414	1057.96	21.94	0.00
Reactor - health physics	71	30.61	19.83	0.00
Reactor - industrial radiographer	72	161.88	19.56	0.00
Reactor - mechanical maintenance	1452	2266.17	19.33	0.00
Reactor - operations	2319	2370.93	30.24	0.00
Reactor - scientific/professional	2510	1059.64	15.13	0.00
Reactor - training	61	16.30	11.84	0.00
Reactor - visitor	6348	5125.56	17.49	0.00
Particle Accelerators				
Accelerators - Administration	37	4.50	0.00	0.00
Accelerators - Control technicians	29	7.60	0.00	0.00
Accelerators - Designers	18	15.40	0.00	0.00
Accelerators - General Maintenance	20	19.00	0.00	0.00
Accelerators - Machinists	27	6.90	0.00	0.00
Accelerators - Mechanical technicians	72	102.40	0.00	0.00
Accelerators - Operations	38	58.30	0.00	0.00
Accelerators - Scientific/professional	317	78.90	0.00	0.00
Accelerators - Visitors	68	5.00	0.00	0.00
Uranium Mining				
Uranium mine mill maintenance	309	263.45	0.00	50.62
Uranium mine mill worker	274	435.00	0.00	55.20
Uranium mine nurse	14	2.45	0.00	79.59
Uranium mine office staff	223	35.65	0.00	73.63
Uranium mine support worker	230	277.70	0.00	48.83
Uranium mine surface maintenance	301	127.20	0.00	59.36
Uranium mine surface miner	36	16.25	0.00	23.69
Uranium mine surface personnel	232	79.55	0.00	78.13
Uranium mine surface support worker	568	85.45	0.00	58.46
Uranium mine underground maintenance	142	141.30	0.00	56.40
Uranium mine underground miner	206	764.47	0.00	43.66
Uranium mine underground personnel	94	123.40	0.00	62.72
Uranium mine visitor	10	0.55	0.00	27.27
Miscellaneous/Unknown				
Miscellaneous/Unknown	24967	3637.12	2.68	0.00
Total				
Total	143259	42503.89	8.52	2.87

2004 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	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Administration										
Administrator	477	411	565	563	573	579	612	629	627	643
	0.21	0.12	0.14	0.14	0.13	0.15	0.14	0.16	0.12	0.15
Office staff	4283	3953	3806	3775	3920	3993	4026	3920	3932	3815
	0.10	0.08	0.06	0.05	0.05	0.06	0.05	0.05	0.05	0.10
Safety officer	118	129	125	116	153	186	206	221	295	490
	0.13	0.15	0.19	0.21	0.25	0.15	0.16	0.21	0.20	0.12
Industry and Research										
Aircrew	1	2	3	3	9	10	12	13	11	16
	0.40	5.05	0.70	0.77	0.27	0.49	0.69	0.49	0.63	0.46
Ground transportation				18	19	41	189	212	82	83
				0.09	0.34	0.48	0.23	0.32	0.72	0.58
Industrial radiographer	2355	2339	2445	2588	2630	2845	2894	2896	2710	2739
	2.89	3.46	3.45	2.98	2.87	2.60	3.01	2.44	2.77	2.71
Instructor (non-medical)	173	173	175	187	195	199	207	209	216	245
	0.05	0.06	0.04	0.03	0.03	0.02	0.03	0.16	0.16	0.07
Instrument technician	1966	1955	1986	1923	2206	2367	2376	2319	2233	2223
	0.34	0.21	0.15	0.31	0.13	0.15	0.44	0.18	0.27	0.20
Laboratory technician (industrial)	4339	4046	4023	4046	3901	4022	4454	4204	3625	3357
	0.15	0.17	0.17	0.16	0.18	0.17	0.22	0.20	0.26	0.23
Nuclear fuel processor	185	187	179	175	571	572	638	706	737	762
	2.58	2.78	2.27	2.03	1.46	1.25	1.31	1.65	1.45	1.36
Scientist/Engineer (field)	1265	1500	1510	1375	1266	1275	1289	1299	1241	1361
	0.42	0.39	0.33	0.29	0.35	0.35	0.26	0.24	0.35	0.26
Scientist/Engineer (laboratory)	5108	5102	5041	5231	5615	6120	6557	6756	6031	5588
	0.07	0.06	0.05	0.05	0.04	0.04	0.13	0.07	0.06	0.06
Security	2	3	3	4	3	4	10	130	193	
	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.02	0.03
Tradesmen	11	16	19	27	108	123	142	161	192	239
	0.02	0.01	0.12	0.21	0.19	0.30	0.11	0.12	0.17	0.11
Well logger	1013	1008	986	1025	984	1231	1528	1572	1961	2394
	0.51	0.59	0.51	0.43	0.45	0.67	0.42	0.39	0.43	0.36
Medicine										
Chiropractor	1035	1062	1044	991	1020	1056	1066	1053	1098	1116
	0.05	0.05	0.03	0.06	0.02	0.02	0.04	0.03	0.03	0.03
Dental assistant	6671	7807	8904	9449	10226	10981	11640	11951	13394	14010
	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Dental hygienist	6782	6813	7013	7132	7533	7899	8266	8511	9271	9536
	0.01	0.01	0.01	0.01	0.01	0.01	0.02	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	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Dental therapist/nurse	33 0.01	57 0.01	95 0.02	101 0.01	99 0.02	110 0.01	119 0.01	130 0.04	137 0.04	151 0.05
Dentist	6617 0.01	6790 0.01	6955 0.01	7018 0.01	7187 0.01	7286 0.01	7443 0.01	7448 0.04	7831 0.02	7995 0.02
Gynaecologist	29 0.01	38 0.06	28 0.15	26 0.11	18 0.01	17 0.00	14 0.01	11 0.04	11 0.03	10 0.02
Laboratory technician (medical)	3846 0.05	3673 0.06	3404 0.06	3369 0.08	3400 0.09	3591 0.09	3738 0.08	3987 0.12	4386 0.13	4282 0.10
Medical physicist	270 0.08	276 0.16	275 0.07	288 0.23	326 0.03	346 0.08	371 0.20	385 0.07	411 0.09	430 0.06
Medical radiation technologist	12487 0.06	12352 0.10	12025 0.09	11888 0.10	11952 0.06	12321 0.07	12722 0.09	13062 0.11	13424 0.12	13446 0.11
Nuclear medicine technologist	1494 1.06	1515 1.27	1476 1.24	1448 1.46	1445 1.38	1526 1.44	1625 1.51	1657 1.70	1711 1.71	1780 1.97
Nurse	5523 0.05	5380 0.10	5067 0.10	4990 0.20	4793 0.08	5065 0.10	5694 0.10	5961 0.12	6183 0.11	6412 0.10
Physician	2272 0.13	2217 0.19	2122 0.16	2109 0.25	2081 0.16	2139 0.17	2350 0.17	2446 0.23	2592 0.27	2727 0.22
Radiation therapist	1111 0.15	1109 0.16	1099 0.24	1133 0.11	1338 0.15	1514 0.11	1656 0.14	1741 0.18	1801 0.15	1793 0.11
Radiologist (diagnostic)	1878 0.10	1816 0.15	1812 0.14	1794 0.16	1780 0.17	1869 0.16	1986 0.17	2071 0.18	2128 0.24	2201 0.19
Radiologist (therapeutic)	193 0.06	180 0.05	169 0.08	163 0.12	202 0.05	214 0.06	250 0.13	259 0.12	270 0.13	285 0.10
Veterinarian	3661 0.04	4066 0.05	4232 0.03	4225 0.05	4069 0.03	3958 0.02	3863 0.03	3647 0.06	3580 0.05	3464 0.04
Veterinary technician	91 0.11	122 0.05	190 0.05	368 0.07	998 0.02	1674 0.03	2057 0.03	2229 0.04	2739 0.04	3206 0.04
Ward aid/orderly	1932 0.06	1878 0.09	1736 0.06	1593 0.13	1573 0.06	1500 0.10	1434 0.06	1507 0.07	1388 0.08	1258 0.08
Nuclear Power										
Reactor - administration	3903 0.26	4083 0.21	5163 0.25	5079 0.21	4507 0.24	4378 0.18	4679 0.19	4512 0.16	4381 0.21	3949 0.15
Reactor - chemical and radiation control	391 2.18	388 1.91	374 1.79	368 1.40	360 1.57	349 1.52	422 1.46	470 1.71	523 1.96	568 2.10
Reactor - construction	1370 3.87	1344 1.00	1359 1.60	1155 1.59	1602 1.82	1814 1.56	2085 1.65	1841 1.64	1861 1.19	1270 1.01
Reactor - control technician	103 1.99	111 1.33	111 1.30	118 1.48	135 1.20	170 0.82	177 0.82	189 1.34	183 2.22	153 0.15
Reactor - electrical maintenance	1029 1.90	1015 1.18	978 1.13	956 0.95	987 1.04	1064 0.85	1331 0.99	1441 0.86	1410 1.10	1393 0.67

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	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Reactor - fuel handling	160 6.93	44 3.84	39 4.76	55 4.73	45 6.31	52 5.64	47 3.17	51 3.99	127 3.34	113 1.98
Reactor - general maintenance	1187 1.50	1298 0.87	1286 0.79	1147 0.90	1299 1.03	1353 0.86	1502 1.03	1518 0.77	1394 1.12	1414 0.75
Reactor - health physics	95 1.29	84 0.54	68 0.36	61 0.48	79 0.48	84 0.40	63 0.47	63 0.69	54 0.84	71 0.43
Reactor - industrial radiographer	24 3.71	26 2.24	11 1.30	9 1.13	22 2.12	58 2.40	46 1.59	68 2.88	94 2.79	72 2.25
Reactor - mechanical maintenance	1466 3.95	1429 2.31	1315 2.55	1229 2.12	1293 2.52	1286 2.10	1558 2.17	1736 1.84	1632 2.32	1452 1.56
Reactor - operations	1694 1.71	1863 1.59	1865 1.60	1913 1.23	1934 1.16	1993 1.12	2171 1.14	2191 0.97	2312 1.14	2319 1.02
Reactor - scientific/professional	1503 1.38	1388 0.55	1572 0.73	1440 0.53	1558 0.54	1989 0.48	2467 0.45	2519 0.54	2533 0.55	2510 0.42
Reactor - training	53 0.65	55 0.28	50 0.31	58 0.60	93 0.83	93 0.43	64 0.36	58 0.56	60 0.61	61 0.27
Reactor - visitor	500 5.46	339 0.92	529 0.41	725 0.54	2667 0.40	3442 0.17	5351 0.57	6683 0.67	6630 0.54	6348 0.81
Particle Accelerators										
Accelerators - Administration	2 0.15	3 0.00	4 0.00	27 0.00	27 0.07	27 0.23	27 0.10	38 1.16	38 0.12	37
Accelerators - Control technicians	1 0.00	1 0.10	1 0.00	15 0.07	15 0.10	15 0.33	15 0.11	25 1.25	25 0.26	29
Accelerators - Designers				14 1.03	14 0.96	14 1.36	14 0.92	18 1.92	18 0.86	18
Accelerators - General Maintenance				1 0.80	11 0.98	11 0.71	11 1.30	11 1.20	18 2.21	20 0.95
Accelerators - Machinists				1 2.90	3 1.80	19 0.41	19 0.34	19 0.62	25 0.32	27 1.14
Accelerators - Mechanical technicians				1 0.50	2 1.25	4 0.20	50 0.80	51 0.89	51 1.03	72 1.11
Accelerators - Operations				1 0.80	2 0.40	4 0.25	18 0.62	18 0.98	18 1.77	38 1.81
Accelerators - Scientific/professional				5 0.02	11 0.04	22 0.01	218 0.20	224 0.23	232 0.47	303 0.30
Accelerators - Visitors				1 0.00	1 0.00	15 0.01	15 0.07	14 0.26	15 0.12	56 1.04
Uranium Mining										
Uranium mine electrician					8 0.18	16 0.27	8 0.15		4 0.00	

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	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Uranium mine mill maintenance	183 1.27	163 1.95	169 2.71	186 2.13	207 1.36	185 1.68	162 1.66	183 1.24	209 1.01	309 0.85
Uranium mine mill worker	226 1.54	245 2.14	256 2.62	272 2.05	306 1.47	273 2.03	258 2.10	249 1.66	260 1.35	274 1.59
Uranium mine nurse	7 0.07	8 0.09	10 0.16	18 0.24	24 0.06	17 0.11	14 0.11	11 0.11	13 0.21	14 0.17
Uranium mine office staff	128 0.50	115 0.34	140 0.23	177 0.19	196 0.24	179 0.18	170 0.16	149 0.17	145 0.15	223 0.16
Uranium mine support worker	165 4.31	154 2.73	153 3.51	296 1.79	467 1.29	327 1.19	176 1.11	142 1.38	144 1.77	230 1.21
Uranium mine surface maintenance	223 0.77	269 0.78	224 0.51	222 0.57	287 0.51	207 0.61	190 0.81	203 0.49	231 0.47	301 0.42
Uranium mine surface miner	155 0.88	217 0.95	245 0.93	116 0.73	108 0.59	88 1.34	47 2.15	46 1.53	42 1.19	36 0.45
Uranium mine surface personnel	65 0.35	80 0.39	123 0.31	164 0.52	222 0.41	187 0.64	177 0.61	173 0.41	182 0.52	232 0.34
Uranium mine surface support worker	290 0.46	345 0.57	352 0.65	357 0.60	302 0.30	296 0.30	334 0.28	331 0.19	369 0.17	568 0.15
Uranium mine underground maintenance	121 3.30	116 2.32	103 1.49	137 1.13	204 0.92	195 0.70	115 0.46	128 0.74	158 1.01	142 1.00
Uranium mine underground miner	416 6.99	494 6.51	353 6.05	361 3.27	344 3.13	284 2.57	161 2.29	196 2.65	273 2.74	206 3.71
Uranium mine underground personnel	328 0.78	347 0.64	340 0.92	213 0.92	150 1.08	110 0.89	72 0.49	82 0.77	97 1.07	94 1.31
Uranium mine visitor	297 0.27	238 0.15	249 0.13	306 0.06	399 0.10	185 0.21	132 0.41	151 0.34	120 0.14	10 0.05
Miscellaneous/Unknown										
Miscellaneous/Unknown	30594 0.19	30238 0.19	29849 0.20	30114 0.20	30809 0.17	28561 0.17	25939 0.15	24935 0.14	25098 0.15	24967 0.15
Total										
Total	122515 0.42	123201 0.34	124272 0.34	124475 0.31	127733 0.31	131459 0.28	136123 0.33	139161 0.31	142541 0.33	143259 0.30

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), which were used in earlier reports.

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:

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

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 as in early reports.