Appendix D

Summary of Air Monitoring Data

Ambient Air and Atmospheric Fallout Samples are Collected From Numerous Locations in the West Valley Area

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Table D-1
2003 Airborne Radioactivity at Main Stack (ANSTACK)

Isotope[a]	N	Exhaust Activity Released[b] (Ci)	Average Concentration (µCi/mL)	Maximum Concentration (µCi/mL)	DCG[c] (µCi/mL)	Average % DCG
Gross Alpha	52	1.68±0.13E-06	2.28±0.17E-15	3.30E-14	--	--
Gross Beta	52	5.46±0.05E-05	7.39±0.07E-14	1.16E-12	--	--
H-3	52	2.41±0.20E-03	3.27±0.27E-12	2.16E-11	1E-07	<0.01
Co-60	4	4.62±5.88E-08	6.26±7.97E-17	3.37E-16	8E-11	<0.01
Sr-90	4	4.31±0.15E-06	5.84±0.21E-15	8.89E-15	9E-12	0.06
I-129	4	6.49±0.44E-05	8.79±0.60E-14	1.20E-13	7E-11	0.13
Cs-137	4	1.22±0.05E-05	1.65±0.07E-14	3.63E-14	4E-10	<0.01
Eu-154	4	0.00±1.53E-07	0.00±2.07E-16	<4.57E-16	5E-11	<0.01
U-232[d]	4	3.32±0.99E-08	4.49±1.34E-17	6.86E-17	2E-14	0.22
U-233/234[d]	4	5.75±0.99E-08	7.80±1.34E-17	7.34E-17	9E-14	0.09
U-235/236[d]	4	6.14±3.70E-09	8.32±5.01E-18	1.43E-17	1E-13	0.01
U-238[d]	4	5.03±0.89E-08	6.82±1.20E-17	7.89E-17	1E-13	0.07
Pu-238	4	1.69±0.17E-07	2.29±0.23E-16	5.09E-16	3E-14	0.76
Pu-239/240	4	2.19±0.19E-07	2.97±0.26E-16	5.26E-16	2E-14	1.48
Am-241	4	5.16±0.30E-07	6.99±0.41E-16	1.15E-15	2E-14	3.49
Total % of DCGs						6.33

N - Number of samples

-- DCGs are not specified for gross alpha and beta activity.

[a] *Half-lives are listed in Table K-1C.*

[b] *Total volume released at 50,000 cfm = 7.38E+14 mL/year*

[c] *Derived concentration guides (DCGs) are listed for reference only. They are applicable to average concentrations at the site boundary but not to stack concentrations, as might be inferred from their inclusion in this table.*

[d] *Total Uranium: 1.56±0.02E-01 g; average = 2.11E±0.03E-10 µg/mL*

Table D-2
2003 Airborne Radioactivity at Vitrification System (HVAC) (ANVITSK)

Isotope	N	Total Activity Released (Ci)	Average Concentration (µCi/mL)	Maximum Concentration µCi/mL	DCG[a] µCi/mL
Gross Alpha	52	-1.78±3.44E-08	-4.84±9.33E-17	<9.02E-16	--
Gross Beta	52	4.68±6.57E-08	1.27±1.78E-16	1.65E-15	--
Co-60	4	-2.28±3.94E-08	-0.62±1.07E-16	<2.95E-16	8E-11
Sr-90	4	2.70±1.58E-08	7.32±4.28E-17	1.90E-16	9E-12
I-129	4	2.69±0.89E-07	7.30±2.41E-16	8.64E-16	7E-11
Cs-137	4	1.24±3.68E-08	3.36±9.98E-17	<3.00E-16	4E-10
Eu-154	4	-3.61±8.69E-08	-0.98±2.35E-16	<5.06E-16	5E-11
U-232[b]	4	0.52±2.72E-09	1.42±7.37E-18	<1.58E-16	2E-14
U-233/234[b]	4	3.84±0.54E-08	1.04±0.15E-16	1.80E-16	9E-14
U-235/236[b]	4	5.36±2.53E-09	1.45±0.69E-17	5.22E-17	1E-13
U-238[b]	4	2.77±0.56E-08	7.49±1.52E-17	9.99E-17	1E-13
Pu-238	4	-0.11±1.34E-09	-0.30±3.63E-18	<1.14E-17	3E-14
Pu-239/240	4	1.70±1.53E-09	4.60±4.17E-18	1.26E-17	2E-14
Am-241	4	4.71±2.09E-09	1.28±0.57E-17	2.45E-17	2E-14

Note: The sampler for former air monitoring location ANSEISK, discontinued at the end of March 2003, was restarted in October 2003 for operational reasons and became the primary sampling point ANVITSK. The pre-existing location was shut down.

N - Number of samples

-- DCGs are not specified for gross alpha and beta activity.

[a] Derived concentration guides (DCGs) are listed for reference only. They are applicable to average concentrations at the site boundary but not to stack concentrations, as might be inferred from their inclusion in this table.

[b] Total Uranium: 6.86±0.07E-02 g; average = 1.86±0.02E-10 µg/mL

Table D-3
2003 Airborne Radioactivity at Seismic Sampler (ANSEISK)

Isotope	N	Total Activity Released (Ci)	Average Concentration (µCi/mL)	Maximum Concentration (µCi/mL)	DCG (µCi/mL)
Gross Alpha	13	-1.62±1.93E-08	-1.76±2.10E-16	<9.71E-16	--
Gross Beta	13	1.61±0.38E-07	1.75±0.41E-15	1.93E-14	--

N - Number of samples; Sampling for ANSEISK was discontinued after the first quarter of 2003.

-- DCGs are not specified for gross alpha and gross beta activity.

Table D-4
2003 Airborne Radioactivity at 01-14 Building (ANCSSTK)

Isotope	N	CSS Stack Activity Ci	Average Concentration µCi/mL	Maximum Concentration µCi/mL	DCG[a] µCi/mL
Gross Alpha	52	-1.48±1.33E-08	1.05±0.93E-16	<9.88E-16	--
Gross Beta	52	1.39±2.58E-08	0.94±1.80E-16	1.85E-15	--
Co-60	4	-0.21±1.28E-08	1.50±8.92E-17	<2.65E-16	8E-11
Sr-90	4	0.64±5.83E-09	0.45±4.07E-17	<9.70E-17	9E-12
I-129	4	4.90±2.65E-08	3.63±1.98E-16	5.24E-16	7E-11
Cs-137	4	0.22±1.00E-08	1.51±7.00E-17	<1.90E-16	4E-10
Eu-154	4	-0.76±3.77E-08	-0.54±2.63E-16	<8.49E-16	5E-11
U-232[b]	4	1.35±1.15E-09	9.40±8.06E-18	1.14E-17	2E-14
U-233/234[b]	4	1.06±0.18E-08	7.37±1.28E-17	1.01E-16	9E-14
U-235/236[b]	4	1.80±0.94E-09	1.26±0.66E-17	2.61E-17	1E-13
U-238[b]	4	1.10±0.17E-08	7.70±1.21E-17	9.43E-17	1E-13
Pu-238	4	-0.37±6.37E-10	-0.26±4.45E-17	<1.33E-17	3E-14
Pu-239/240	4	0.80±7.87E-10	0.56±5.49E-18	<1.69E-17	2E-14
Am-241	4	1.55±0.96E-09	1.08±6.69E-18	2.44E-17	2E-14

N - Number of samples

-- DCGs are not specified for gross alpha and beta activity.

[a] Derived concentration guides (DCGs) are listed for reference only. They are applicable to average concentrations at the site boundary but not to stack concentrations, as might be inferred from their inclusion in this table.

[b] Total Uranium: 2.57±0.03E-02 g; average = 1.79±0.02E-10 µg/mL

Table D-5
2003 Airborne Radioactivity at Contact Size-Reduction (ANCSRFK)

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Table D-6
2003 Airborne Radioactivity at Supernatant Treatment System (ANSTSTK)

Isotope	N	Total Activity Released (Ci)	Average Concentration (µCi/mL)	Maximum Concentration (µCi/mL)	DCG[a] (µCi/mL)
Gross Alpha	52	0.15±7.42E-09	0.02±1.10E-16	7.86E-16	--
Gross Beta	52	2.53±1.41E-08	3.80±2.08E-16	2.19E-15	--
H-3	52	5.40±0.55E-05	8.14±0.83E-13	2.47E-12	1E-07
Co-60	4	7.23±7.35E-09	1.09±1.11E-16	1.55E-16	8E-11
Sr-90	4	2.49±3.31E-09	3.76±4.98E-17	<1.04E-16	9E-12
I-129	4	1.61±0.10E-05	2.43±0.15E-13	2.54E-13	7E-11
Cs-137	4	1.36±1.04E-08	2.05±1.56E-16	2.24E-16	4E-10
Eu-154	4	0.43±2.02E-08	0.65±3.04E-16	<5.92E-16	5E-11
U-232[b]	4	-0.34±6.60E-10	-0.51±9.94E-18	<2.30E-17	2E-14
U-233/234[b]	4	6.89±0.99E-09	1.04±0.15E-16	1.25E-16	9E-14
U-235/236[b]	4	1.28±0.76E-09	1.92±1.14E-17	2.39E-17	1E-13
U-238[b]	4	7.21±0.95E-09	1.09±0.14E-16	1.44E-16	1E-13
Pu-238	4	1.65±4.37E-10	2.48±6.57E-18	<1.51E-17	3E-14
Pu-239/240	4	6.31±4.01E-10	9.49±6.03E-18	1.37E-17	2E-14
Am-241	4	4.28±4.07E-10	6.45±6.12E-18	6.53E-18	2E-14

N - Number of samples

-- DCGs are not specified for gross alpha and beta activity.

[a] Derived concentration guides (DCGs) are listed for reference only. They are applicable to average concentrations at the site boundary but not to stack concentrations, as might be inferred from their inclusion in this table.

[b] Total Uranium: 1.51±0.02E-02 g; average = 2.27±0.03E-10 µg/mL

Table D-7
2003 Airborne Radioactivity at Container Sorting and Packaging Facility (ANCSPFK)

Isotope	N	Stack Activity Ci	Average Concentration µCi/mL	Maximum Concentration µCi/mL	DCG[a] µCi/mL
Gross Alpha	52	-1.58±1.51E-09	-9.50±9.08E-17	6.75E-16	--
Gross Beta	52	2.71±2.98E-09	1.63±1.79E-16	2.12E-15	--
Co-60	4	-1.26±2.71E-09	-0.76±1.63E-16	<2.49E-16	8E-11
Sr-90	4	1.73±1.80E-09	1.04±1.08E-16	1.58E-16	9E-12
I-129	4	1.59±0.36E-07	9.66±2.19E-15	1.43E-14	7E-11
Cs-137	4	1.85±2.55E-09	1.11±1.53E-16	2.48E-16	4E-10
Eu-154	4	2.94±9.47E-09	1.77±5.69E-16	<6.88E-16	5E-11
U-232[b]	4	0.58±3.05E-10	0.35±1.83E-17	<2.59E-17	2E-14
U-233/234[b]	4	9.98±3.93E-10	6.00±2.37E-17	8.71E-17	9E-14
U-235/236[b]	4	1.52±2.71E-10	0.91±1.63E-17	1.97E-17	1E-13
U-238[b]	4	1.08±0.38E-09	6.48±2.26E-17	1.00E-16	1E-13
Pu-238	4	0.20±1.89E-10	0.12±1.14E-17	<2.39E-17	3E-14
Pu-239/240	4	0.01±1.45E-10	0.08±8.74E-18	<1.51E-17	2E-14
Am-241	4	-0.29±1.87E-10	-0.17±1.12E-17	<1.29E-17	2E-14

N - Number of samples

-- DCGs are not specified for gross alpha and gross beta activity.

[a] Derived concentration guides (DCGs) are listed for reference only. They are applicable to average concentrations at the site boundary but not to stack concentrations, as might be inferred from their inclusion in this table.

[b] Total Uranium: 2.44±0.05E-03 g; average = 1.47±0.03E-10 µg/mL

Table D-8
2003 Airborne Radioactivity at Low-Level Waste Treatment Facility (ANLLW2V)

Isotope	N	Stack Activity Ci	Average Concentration µCi/mL	Maximum Concentration µCi/mL	DCG µCi/mL
Gross Alpha	13	-6.18±7.90E-10	-1.46±1.86E-16	<1.03E-15	--
Gross Beta	13	-0.85±1.38E-09	-2.01±3.26E-16	1.37E-15	--

N - Number of samples; Sampling for ANLLW2V was discontinued after the first quarter of 2003.

-- DCGs are not specified for gross alpha and gross beta activity.

Table D-9
2003 Airborne Radioactivity at Outdoor Ventilation Enclosures/Portable Ventilation Units (OVEs/PVUs)

Isotope	N	Total Activity Released (Ci)	Average Concentration (µCi/mL)	Maximum Concentration (µCi/mL)	DCG[a] (µCi/mL)
Gross Alpha	120	1.77±0.41E-08	4.18±0.98E-16	5.73E-15	--
Gross Beta	120	2.39±0.72E-08	5.63±1.71E-16	8.53E-15	--
Co-60	3	-0.34±1.94E-09	-0.79±4.57E-17	<5.11E-16	8E-11
Sr-90	3	-0.54±1.47E-09	-1.27±3.46E-17	<3.06E-16	9E-12
Cs-137	3	4.93±2.20E-09	1.16±5.20E-16	<3.99E-16	4E-10
Eu-154	3	-3.04±5.65E-09	-0.72±1.33E-16	<1.39E-15	5E-11
U-232[b]	3	5.03±6.65E-10	1.19±1.57E-17	<9.40E-17	2E-14
U-233/234[b]	3	5.59±4.92E-09	1.32±1.16E-16	<7.10E-16	9E-14
U-235/236[b]	3	5.65±3.73E-10	1.33±0.88E-17	5.20E-17	1E-13
U-238[b]	3	5.64±5.18E-09	1.33±1.22E-16	<7.48E-16	1E-13
Pu-238	3	2.33±1.38E-09	5.50±3.25E-17	2.14E-16	3E-14
Pu-239/240	3	3.49±3.06E-09	8.23±7.23E-17	<4.41E-16	2E-14
Am-241	3	8.03±5.05E-09	1.98±1.19E-16	7.44E-16	2E-14

N - Number of samples; Composite samples to be analyzed for isotopic constituents for the second quarter of 2003 were lost. Estimated releases for the second quarter were based upon releases for the third and fourth quarters, scaled to gross alpha and beta data for the second quarter.

-- DCGs are not specified for gross alpha and gross beta activity.

[a] Derived concentration guides (DCGs) are listed for reference only. They are applicable to average concentrations at the site boundary but not to stack concentrations, as might be inferred from their inclusion in this table.

[b] Total Uranium: 1.20±0.90E-02 g; average = 2.82±2.12E-10 µg/mL

Table D-10
2003 Airborne Radioactivity at Lag Storage (ANLAGAM)

Isotope	N	ANLAGAM µCi/mL		N	AFGRVAL[a] µCi/mL	DCG[b]
		Average	Maximum		Background Range	
Gross Alpha	52	6.54±8.76E-16	1.69E-15	52	<7.71E-16–6.15E-15	--
Gross Beta	52	1.89±0.26E-14	3.64E-14	52	8.97E-15–3.38E-14	--
K-40	3	2.10±3.02E-15	3.90E-15	3	<3.44E-15–<6.45E-15	9E-10
Co-60	3	0.24±1.80E-16	<2.11E-16	3	<2.38E-16–<4.80E-16	8E-11
Sr-90	3	3.05±8.17E-17	<9.44E-17	3	<1.01E-16–2.84E-16	9E-12
Cs-137	3	-0.02±1.59E-16	<1.94E-16	3	<1.87E-16–<2.43E-16	4E-10
U-232[c]	3	0.28±1.74E-17	<2.01E-17	3	<1.53E-17–<2.22E-17	2E-14
U-233/234[c]	3	5.67±2.08E-17	7.55E-17	3	6.20E-17–1.21E-16	9E-14
U-235/236[c]	3	0.78±1.24E-17	1.48E-17	3	<1.09E-17–1.95E-17	1E-13
U-238[c]	3	1.03±0.26E-16	2.14E-16	3	7.43E-17–1.48E-16	1E-13
Pu-238	3	0.58±1.21E-17	<1.93E-17	3	<7.06E-18–<1.80E-17	3E-14
Pu-239/240	3	-1.96±6.45E-18	<8.18E-18	3	<7.68E-18–<2.27E-17	2E-14
Am-241	3	0.62±1.08E-17	<1.58E-17	3	<4.21E-18–9.49E-18	2E-14

N - Number of samples; Composite samples to be analyzed for isotopic constituents for the second quarter of 2003 were lost. Averages and Maxima are based on samples from three quarters.

-- DCGs are not specified for gross alpha and gross beta activity.

[a] Background air sampling location

[b] Derived concentration guides (DCGs) are applicable to average concentrations at the site boundary.

[c] Total Uranium: ANLAGAM average = 1.30±0.03E-10 µg/mL; AFGRVAL average = 2.81±0.80E-10 µg/mL

Table D-11
2003 Airborne Radioactivity at the NDA (ANNDAAM)

Isotope	N	ANNDAAM µCi/mL		N	AFGRVAL[a] µCi/mL	DCG[b]
		Average	Maximum		Background Range	
Gross Alpha	52	7.13±8.84E-16	2.75E-15	52	<7.71E-16–6.15E-15	--
Gross Beta	52	1.73±0.25E-14	3.23E-14	52	8.97E-15–3.38E-14	--
K-40	3	1.91±3.56E-15	4.06E-15	3	<3.44E-15–<6.45E-15	9E-10
Co-60	3	-0.22±2.08E-16	<2.54E-16	3	<2.38E-16–<4.80E-16	8E-11
Sr-90	3	7.14±8.72E-17	7.44E-17	3	<1.01E-16–2.84E-16	9E-12
Cs-137	3	-0.42±1.76E-16	<1.88E-16	3	<1.87E-16–<2.43E-16	4E-10
U-232[c]	3	0.87±1.15E-17	1.64E-17	3	<1.53E-17–<2.22E-17	2E-14
U-233/234[c]	3	5.81±2.04E-17	7.79E-17	3	6.20E-17–1.21E-16	9E-14
U-235/236[c]	3	0.64±1.08E-17	9.33E-18	3	<1.09E-17–1.95E-17	1E-13
U-238[c]	3	5.79±1.97E-17	6.29E-17	3	7.43E-17–1.48E-16	1E-13
Pu-238	3	-2.73±9.46E-18	<1.25E-17	3	<7.06E-18–<1.80E-17	3E-14
Pu-239/240	3	-0.46±7.47E-18	<8.04E-18	3	<7.68E-18–<2.27E-17	2E-14
Am-241	3	0.89±1.16E-17	1.32E-17	3	<4.21E-18–9.49E-18	2E-14

N - Number of samples; Composite samples to be analyzed for isotopic constituents for the second quarter of 2003 were lost. Averages and Maxima are based on samples from three quarters.

-- DCGs are not specified for gross alpha and gross beta activity.

[a] Background air sampling location

[b] Derived concentration guides (DCGs) are applicable to average concentrations at the site boundary.

[c] Total Uranium: ANNDAAM average = 1.25±0.03E-10 µg/mL; AFGRVAL average = 2.81±0.80E-10 µg/mL

Table D-12
2003 Airborne Radioactivity at SDA Trench 9 (ANSDAT9)

Isotope	N	ANSDAT9 µCi/mL		N	AFGRVAL[a] µCi/mL	DCG[b]
		Average	Maximum		Background Range	
Gross Alpha	52	0.24±1.75E-15	1.85E-15	52	<7.71E-16–6.15E-15	--
Gross Beta	52	1.54±0.39E-14	3.04E-14	52	8.97E-15–3.38E-14	--
Tritium	52	7.56±7.29E-13	2.14E-12	50	<5.41E-14–2.95E-12	1E-07
K-40	3	2.51±4.26E-15	<4.82E-15	3	<3.44E-15–<6.45E-15	9E-10
Co-60	3	0.87±2.17E-16	<2.43E-16	3	<2.38E-16–<4.80E-16	8E-11
I-129	4	1.95±3.26E-16	5.96E-16	4	<2.38E-16–3.90E-16	7E-11
Cs-137	3	0.25±2.14E-16	<2.53E-16	3	<1.87E-16–<2.43E-16	4E-10

N - Number of samples; Composite samples to be analyzed for isotopic constituents for the second quarter of 2003 were lost. Averages and Maxima are based on samples from three quarters.

-- DCGs are not specified for gross alpha and gross beta activity.

[a] Background air sampling location

[b] Derived concentration guides (DCGs) are applicable to average concentrations at the site boundary.

Table D-13
2003 Airborne Radioactivity at Rock Springs Road (AFRSPRD)

Isotope	N	AFRSPRD µCi/mL		N	AFGRVAL[a] µCi/mL	DCG[b]
		Average	Maximum		Background Range	
Gross Alpha	52	0.51±1.16E-15	1.73E-15	52	<7.71E-16–6.15E-15	--
Gross Beta	52	1.71±0.32E-14	3.22E-14	52	8.97E-15–3.38E-14	--
Tritium	52	-0.59±6.91E-13	1.66E-12	50	<5.41E-14–2.95E-12	1E-07
K-40	3	2.18±2.51E-15	3.12E-15	3	<3.44E-15–<6.45E-15	9E-10
Co-60	3	-0.41±2.31E-16	<2.52E-16	3	<2.38E-16–<4.80E-16	8E-11
Sr-90	3	-0.32±1.15E-16	<1.37E-16	3	<1.01E-16–2.84E-16	9E-12
I-129	4	1.29±4.18E-16	<4.83E-16	4	<2.38E-16–3.90E-16	7E-11
Cs-137	3	0.10±1.91E-16	<2.21E-16	3	<1.87E-16–<2.43E-16	4E-10
Eu-154	3	1.04±5.73E-16	<6.79E-16	3	<7.08E-16–<1.34E-15	5E-11
U-232[c]	3	0.32±2.01E-17	<2.27E-17	3	<1.53E-17–<2.22E-17	2E-14
U-233/234[c]	3	7.95±3.24E-17	9.33E-17	3	6.20E-17–1.21E-16	9E-14
U-235/236[c]	3	0.23±2.17E-17	<2.69E-17	3	<1.09E-17–1.95E-17	1E-13
U-238[c]	3	6.37±2.45E-17	8.27E-17	3	7.43E-17–1.48E-16	1E-13
Pu-238	3	-0.09±1.01E-17	<1.67E-17	3	<7.06E-18–<1.80E-17	3E-14
Pu-239/240	3	-0.11±9.00E-18	<1.06E-17	3	<7.68E-18–<2.27E-17	2E-14
Am-241	3	-0.39±1.17E-17	<1.51E-17	3	<4.21E-18–9.49E-18	2E-14

N - Number of samples; Composite samples to be analyzed for isotopic constituents for the second quarter of 2003 were lost. Averages and Maxima are based on samples from three quarters.

-- DCGs are not specified for gross alpha and gross beta activity.

[a] Background air sampling location

[b] Derived concentration guides (DCGs) are applicable to average concentrations at the site boundary.

[c] Total Uranium: AFRSPRD average = 1.85±0.05E-10 µg/mL; AFGRVAL average = 2.81±0.80E-10 µg/mL

Table D-14
2003 Airborne Radioactivity at Dutch Hill Road (AFBOEHN)

Isotope	N	AFBOEHN µCi/mL		N	AFGRVAL[a] µCi/mL	DCG[b]
		Average	Maximum		Background Range	
Gross Alpha	52	0.43±1.12E-15	2.00E-15	52	<7.71E-16–6.15E-15	--
Gross Beta	52	1.82±0.32E-14	3.39E-14	52	8.97E-15–3.38E-14	--
K-40	3	2.56±3.87E-15	4.28E-15	3	<3.44E-15–<6.45E-15	9E-10
Co-60	3	-0.74±2.34E-16	<2.61E-16	3	<2.38E-16–<4.80E-16	8E-11
Sr-90	3	-0.79±1.15E-16	<1.33E-16	3	<1.01E-16–2.84E-16	9E-12
Cs-137	3	0.33±2.15E-16	<2.48E-16	3	<1.87E-16–<2.43E-16	4E-10

N - Number of samples; Composite samples to be analyzed for isotopic constituents for the second quarter of 2003 were lost. Averages and Maxima are based on samples from three quarters.

-- DCGs are not specified for gross alpha and gross beta activity.

[a] Background air sampling location

[b] Derived concentration guides (DCGs) are applicable to average concentrations at the site boundary.

Table D-15
2003 Airborne Radioactivity at Fox Valley Road (AFFXVRD)

Isotope	N	AFFXVRD µCi/mL		N	AFGRVAL[a] µCi/mL	DCG[b]
		Average	Maximum		Background Range	
Gross Alpha	52	0.50±1.25E-15	2.14E-15	52	<7.71E-16–6.15E-15	--
Gross Beta	52	1.69±0.34E-14	3.06E-14	52	8.97E-15–3.38E-14	--
K-40	3	5.95±3.90E-15	9.30E-15	3	<3.44E-15–<6.45E-15	9E-10
Co-60	3	-0.17±2.82E-16	<3.37E-16	3	<2.38E-16–<4.80E-16	8E-11
Sr-90	3	0.93±1.18E-16	<1.30E-16	3	<1.01E-16–2.84E-16	9E-12
Cs-137	3	-0.25±2.36E-16	<2.86E-16	3	<1.87E-16–<2.43E-16	4E-10

N - Number of samples; Composite samples to be analyzed for isotopic constituents for the second quarter of 2003 were lost. Averages and Maxima are based on samples from three quarters.

-- DCGs are not specified for gross alpha and gross beta activity.

[a] Background air sampling location

[b] Derived concentration guides (DCGs) are applicable to average concentrations at the site boundary.

Table D-16
2003 Airborne Radioactivity at the Bulk Storage Warehouse (AFBLKST)

Isotope	N	AFBLKST µCi/mL		N	AFGRVAL[a] µCi/mL	DCG[b]
		Average	Maximum		Background Range	
Gross Alpha	52	0.49±1.13E-15	2.50E-15	52	<7.71E-16–6.15E-15	--
Gross Beta	52	1.74±0.31E-14	3.33E-14	52	8.97E-15–3.38E-14	--
K-40	3	5.67±3.62E-15	6.45E-15	3	<3.44E-15–<6.45E-15	9E-10
Co-60	3	-0.46±2.75E-16	<2.89E-16	3	<2.38E-16–<4.80E-16	8E-11
Sr-90	3	0.81±1.43E-16	<1.65E-16	3	<1.01E-16–2.84E-16	9E-12
Cs-137	3	-0.04±2.15E-16	<2.49E-16	3	<1.87E-16–<2.43E-16	4E-10

N - Number of samples; Composite samples to be analyzed for isotopic constituents for the second quarter of 2003 were lost. Averages and Maxima are based on samples from three quarters.

-- DCGs are not specified for gross alpha and gross beta activity.

[a] Background air sampling location

[b] Derived concentration guides (DCGs) are applicable to average concentrations at the site boundary.

Table D-17
2003 Airborne Radioactivity at Route 240 (AFRT240)

Isotope	N	AFRT240 µCi/mL		N	AFGRVAL[a] µCi/mL	DCG[b]
		Average	Maximum		Background Range	
Gross Alpha	52	0.52±1.14E-15	2.39E-15	52	<7.71E-16–6.15E-15	--
Gross Beta	52	1.66±0.31E-14	3.39E-14	52	8.97E-15–3.38E-14	--
K-40	3	2.64±4.90E-15	5.84E-15	3	<3.44E-15–<6.45E-15	9E-10
Co-60	3	-1.15±2.63E-16	<3.13E-16	3	<2.38E-16–<4.80E-16	8E-11
Sr-90	3	0.97±1.22E-16	1.61E-16	3	<1.01E-16–2.84E-16	9E-12
Cs-137	3	0.80±4.16E-16	2.41E-16	3	<1.87E-16–<2.43E-16	4E-10

N - Number of samples; Composite samples to be analyzed for isotopic constituents for the second quarter of 2003 were lost. Averages and Maxima are based on samples from three quarters.

-- DCGs are not specified for gross alpha and gross beta activity.

[a] Background air sampling location

[b] Derived concentration guides (DCGs) are applicable to average concentrations at the site boundary.

Table D-18
2003 Airborne Radioactivity at Thomas Corners Road (AFTCORD)

Isotope	N	AFTCORD µCi/mL		N	AFGRVAL[a] µCi/mL	DCG[b]
		Average	Maximum		Background Range	
Gross Alpha	52	0.52±1.14E-15	2.28E-15	52	<7.71E-16–6.15E-15	--
Gross Beta	52	1.66±0.31E-14	3.30E-14	52	8.97E-15–3.38E-14	--
K-40	3	1.59±5.25E-15	<6.24E-15	3	<3.44E-15–<6.45E-15	9E-10
Co-60	3	1.42±1.95E-16	3.52E-16	3	<2.38E-16–<4.80E-16	8E-11
Sr-90	3	0.93±1.27E-16	<1.54E-16	3	<1.01E-16–2.84E-16	9E-12
Cs-137	3	0.24±1.83E-16	<2.14E-16	3	<1.87E-16–<2.43E-16	4E-10

N - Number of samples; Composite samples to be analyzed for isotopic constituents for the second quarter of 2003 were lost. Averages and Maxima are based on samples from three quarters.

-- DCGs are not specified for gross alpha and gross beta activity.

[a] Background air sampling location

[b] Derived concentration guides (DCGs) are applicable to average concentrations at the site boundary.

Table D-19
2003 Airborne Radioactivity at West Valley (AFWEVAL)

Isotope	N	AFWEVAL µCi/mL		N	AFGRVAL[a] µCi/mL	DCG[b]
		Average	Maximum		Background Range	
Gross Alpha	52	0.52±1.13E-15	1.96E-15	52	<7.71E-16–6.15E-15	--
Gross Beta	52	1.72±0.31E-14	3.09E-14	52	8.97E-15–3.38E-14	--
K-40	3	4.05±3.04E-15	4.56E-15	3	<3.44E-15–<6.45E-15	9E-10
Co-60	3	0.59±3.09E-16	<4.05E-16	3	<2.38E-16–<4.80E-16	8E-11
Sr-90	3	0.04±1.15E-16	<1.26E-16	3	<1.01E-16–2.84E-16	9E-12
Cs-137	3	-0.16±1.99E-16	<2.41E-16	3	<1.87E-16–<2.43E-16	4E-10

N - Number of samples; Composite samples to be analyzed for isotopic constituents for the second quarter of 2003 were lost. Averages and Maxima are based on samples from three quarters.

-- DCGs are not specified for gross alpha and gross beta activity.

[a] Background air sampling location

[b] Derived concentration guides (DCGs) are applicable to average concentrations at the site boundary.

Table D-20
2003 Airborne Radioactivity at Springville (AFSPRVL)

Isotope	N	AFSPRVL µCi/mL		N	AFGRVAL[a] µCi/mL	DCG[b]
		Average	Maximum		Background Range	
Gross Alpha	52	0.44±1.21E-15	1.83E-15	52	<7.71E-16–6.15E-15	--
Gross Beta	52	1.71±0.32E-14	3.76E-14	52	8.97E-15–3.38E-14	--
K-40	3	2.13±4.09E-15	5.02E-15	3	<3.44E-15–<6.45E-15	9E-10
Co-60	3	1.95±2.31E-16	4.27E-16	3	<2.38E-16–<4.80E-16	8E-11
Sr-90	3	-0.05±1.23E-16	1.67E-16	3	<1.01E-16–2.84E-16	9E-12
Cs-137	3	0.62±1.91E-16	<2.16E-16	3	<1.87E-16–<2.43E-16	4E-10

N - Number of samples; Composite samples to be analyzed for isotopic constituents for the second quarter of 2003 were lost. Averages and Maxima are based on samples from three quarters.

-- DCGs are not specified for gross alpha and gross beta activity.

[a] Background air sampling location

[b] Derived concentration guides (DCGs) are applicable to average concentrations at the site boundary.

Table D-21
2003 Airborne Radioactivity at the Nashville Background (AFNASHV)

Isotope	N	AFNASHV µCi/mL		N	AFGRVAL[a] µCi/mL	DCG[b]
		Average	Maximum		Background Range	
Gross Alpha	13	0.74±1.33E-15	2.07E-15	52	<7.71E-16–6.15E-15	--
Gross Beta	13	2.06±0.34E-14	3.11E-14	52	8.97E-15–3.38E-14	--
K-40	1	1.64±2.79E-15	<2.79E-15	3	<3.44E-15–<6.45E-15	9E-10
Co-60	1	-0.46±1.79E-16	<1.79E-16	3	<2.38E-16–<4.80E-16	8E-11
Sr-90	1	0.29±1.38E-16	<1.38E-16	3	<1.01E-16–2.84E-16	9E-12
Cs-137	1	0.78±1.48E-16	<1.48E-16	3	<1.87E-16–<2.43E-16	4E-10

N - Number of samples; Composite samples to be analyzed for isotopic constituents for the second quarter of 2003 were lost. Averages and Maxima are based on samples from three quarters for AFGRVAL. Sampling for AFNASHV was discontinued after the first quarter of 2003.

-- DCGs are not specified for gross alpha and gross beta activity.

[a] Background air sampling location

[b] Derived concentration guides (DCGs) are applicable to average concentrations at the site boundary.

Table D-22
2003 Results in Fallout: Dutch Hill (AFDHFOP)

Analyte	Units	N	Minimum	Average	Maximum
Gross Alpha	nCi/m^2	11	2.12E-02	3.85±1.23E-02	7.07E-02
Gross Beta	nCi/m^2	11	2.32E-01	4.86±0.41E-01	8.27E-01
H-3	µCi/mL	12	4.66E-08	2.71±8.24E-08	1.20E-07
K-40	nCi/m^2	12	1.68E+00	-1.03±5.34E+00	8.47E+00
Cs-137	nCi/m^2	12	8.95E-02	-0.02±4.05E-01	6.46E-01
pH	standard units	12	3.93	4.31	7.87

N - Number of samples
Note: Samples taken in June 2003 are rejected for gross alpha and gross beta.

Table D-23
2003 Results in Fallout: Rain Gauge (ANRGFOP)

Analyte	Units	N	Minimum	Average	Maximum
Gross Alpha	nCi/m^2	11	1.16E-02	4.29±4.39E-02	1.43E-01
Gross Beta	nCi/m^2	11	2.02E-01	5.63±0.68E-01	1.05E+00
H-3	µCi/mL	12	8.12E-08	5.10±8.29E-08	1.27E-07
K-40	nCi/m^2	12	1.19E+00	-0.97±7.65E+00	6.78E+00
Cs-137	nCi/m^2	12	2.12E-01	0.39±5.49E-01	7.88E-01
pH	standard units	12	4.43	4.82	7.10

N - Number of samples
Note: Samples taken in June 2003 are rejected for gross alpha and gross beta.

Table D-24
2003 Results in Fallout: Route 240 (AF24FOP)

Analyte	Units	N	Minimum	Average	Maximum
Gross Alpha	nCi/m^2	11	1.10E-02	3.69±1.20E-02	6.47E-02
Gross Beta	nCi/m^2	11	2.93E-01	5.09±0.46E-01	9.24E-01
H-3	µCi/mL	12	5.84E-08	5.29±8.33E-08	1.68E-07
K-40	nCi/m^2	12	1.79E+00	-1.50±6.41E+00	9.24E+00
Cs-137	nCi/m^2	12	1.26E-01	0.17±4.52E-01	3.89E-01
pH	standard units	12	4.14	4.45	5.35

N - Number of samples
Note: Samples taken in June 2003 are rejected for gross alpha and gross beta.

Table D-25
2003 Results in Fallout: Thomas Corners (AFTCFOP)

Analyte	Units	N	Minimum	Average	Maximum
Gross Alpha	nCi/m^2	11	2.27E-02	5.58±1.81E-02	1.02E-01
Gross Beta	nCi/m^2	11	2.31E-01	5.42±0.55E-01	1.04E+00
H-3	µCi/mL	12	5.96E-08	3.57±7.90E-08	1.09E-07
K-40	nCi/m^2	12	2.76E+00	0.23±7.51E+00	1.44E+01
Cs-137	nCi/m^2	12	2.08E-01	-0.79±6.16E-01	1.13E+00
pH	standard units	12	3.85	4.56	7.04

N - Number of samples
Note: Samples taken in June 2003 are rejected for gross alpha and gross beta.

Table D-26
2003 Results in Fallout: Fox Valley Road (AFFXFOP)

Analyte	Units	N	Minimum	Average	Maximum
Gross Alpha	nCi/m^2	11	2.13E-02	5.88±2.38E-02	1.16E-01
Gross Beta	nCi/m^2	11	1.89E-01	5.16±0.56E-01	8.67E-01
Tritium	µCi/mL	12	7.97E-08	2.86±8.52E-08	1.67E-07
K-40	nCi/m^2	12	2.06E+00	-0.56±7.67E+00	1.41E+01
Cs-137	nCi/m^2	12	1.73E-01	-0.27±4.70E-01	7.63E-01
pH	standard units	12	4.50	4.85	6.96

N - Number of samples
Note: Samples taken in June 2003 are rejected for gross alpha and gross beta.