Appendix D

Summary of Air Monitoring Data

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

Table D-1
1999 Airborne Radioactive Effluent Totals (curies)
Released from the Main Ventilation Stack (ANSTACK)

Month	Alpha	Beta	H-3
January	7.61±2.48E-08	4.51±0.14E-06	-4.64±8.15E-05
February	6.71±2.15E-08	4.83±0.13E-06	2.60±0.33E-04
March	7.20±2.37E-08	1.30±0.02E-05	1.64±0.41E-04
April	4.98±2.80E-08	8.75±0.19E-06	5.54±1.27E-04
May	3.15±3.31E-08	4.55±0.17E-06	5.11±1.05E-04
June	3.32±0.49E-07	1.59±0.01E-04	9.21±0.79E-04
July	1.01±0.31E-07	3.79±0.04E-05	2.01±0.10E-03
August	9.43±3.43E-08	4.31±0.15E-06	9.75±0.73E-04
September	1.00±0.31E-07	2.53±0.10E-06	1.04±0.05E-03
October	6.18±3.45E-08	3.75±0.13E-06	5.75±1.36E-04
November	8.56±3.17E-08	2.41±0.11E-06	2.34±1.45E-04
December	8.22±3.14E-08	3.71±0.13E-06	-0.43±1.00E-03
Annual Total	1.15±0.11E-06	2.49±0.01E-04	6.77±1.05E-03

Quarter	Co-60	Sr-90	I-129	Cs-137	Eu-154
1st Quarter	1.66±3.08E-08	2.18±0.08E-06	6.74±0.78E-04	1.10±0.15E-05	0.77±6.86E-08
2nd Quarter	2.80±2.87E-08	1.25±0.01E-05	5.65±0.75E-04	7.08±0.69E-05	1.38±0.88E-07
3rd Quarter	0.38±3.55E-08	2.00±0.07E-06	1.35±0.18E-04	1.91±0.19E-05	6.97±9.37E-08
4th Quarter	-0.93±4.59E-08	9.83±1.13E-07	5.23±0.70E-04	2.01±0.24E-06	0.00±1.38E-07
Annual Total	3.90±7.17E-08	1.77±0.02E-05	1.90±0.13E-03	1.03±0.07E-04	2.15±2.01E-07

	U-232	U-233/234	U-235/236	U-238	Total U (g)
1st Quarter	5.64±4.56E-09	2.11±0.62E-08	0.84±1.56E-09	1.75±0.55E-08	4.67±0.06E-02
2nd Quarter	1.61±3.27E-09	1.93±0.41E-08	6.74±9.84E-10	1.91±0.42E-08	5.29±0.07E-02
3rd Quarter	1.57±1.75E-09	1.56±0.37E-08	0.00±5.60E-10	1.65±0.38E-08	2.21±0.02E-02
4th Quarter	1.22±3.18E-09	1.39±0.38E-08	1.79±1.39E-09	1.50±0.39E-08	2.28±0.03E-02
Annual Total	1.00±0.67E-08	6.99±0.91E-08	3.31±2.37E-09	6.80±0.88E-08	1.44±0.01E-01

	Pu-238	Pu-239/240	Am-241
1st Quarter	2.87±0.97E-08	3.80±1.16E-08	1.05±0.14E-07
2nd Quarter	4.24±0.74E-08	3.41±0.64E-08	2.10±0.25E-07
3rd Quarter	2.77±0.56E-08	4.72±0.81E-08	1.03±0.14E-07
4th Quarter	1.87±0.45E-08	2.42±0.53E-08	8.59±1.44E-08
Annual Total	1.17±0.14E-07	1.44±0.16E-07	5.03±0.35E-07

Table D - 2
Comparison of 1999 Main Stack (ANSTACK) Exhaust Radioactivity Concentrations with Department of Energy Guidelines

Isotope [a]	Exhaust Activity [b] (Ci)	Radioactivity [c] (Becquerels)	Concentration (µCi/mL)	DCG [d] (µCi/mL)	% of DCG
Alpha	1.15±0.11E-06	4.27±0.41E+04	1.52±0.15E-15	NA [e]	NA
Beta	2.49±0.01E-04	9.21±0.04E+06	3.29±0.01E-13	NA [e]	NA
H-3	6.77±1.05E-03	2.50±0.39E+08	8.94±1.39E-12	1E-07	0.01
Co-60	3.90±7.17E-08	1.44±2.65E+03	5.16±9.47E-17	8E-11	<0.01
Sr-90	1.77±0.02E-05	6.54±0.07E+05	2.34±0.03E-14	9E-12	0.26
I-129	1.90±0.13E-03	7.02±0.48E+07	2.51±0.17E-12	7E-11	3.58
Cs-137	1.03±0.07E-04	3.81±0.27E+06	1.36±0.10E-13	4E-10	0.03
Eu-154	2.15±2.01E-07	7.96±7.42E+03	2.84±2.65E-16	5E-11	<0.01
U-232 [f]	1.00±0.67E-08	3.72±2.47E+02	1.33±0.88E-17	2E-14	0.07
U-233/234 [f]	6.99±0.91E-08	2.59±0.34E+03	9.24±1.21E-17	9E-14	0.10
U-235/236 [f]	3.31±2.37E-09	1.22±0.88E+02	4.37±3.14E-18	1E-13	<0.01
U-238 [f]	6.80±0.88E-08	2.52±0.33E+03	8.99±1.16E-17	1E-13	0.09
Pu-238	1.17±0.14E-07	4.35±0.53E+03	1.55±0.19E-16	3E-14	0.52
Pu-239/240	1.44±0.16E-07	5.31±0.61E+03	1.90±0.22E-16	2E-14	0.95
Am-241	5.03±0.35E-07	1.86±0.13E+04	6.66±0.46E-16	2E-14	3.33
Total % of DCGs					**8.94**

[a] *Half-lives are listed in Table K-1 (p. K-3)*

[b] *Total volume released at 50,000 cfm = 7.57E+14 mL/yr*

[c] *1 curie (Ci) = 3.7 E+10 Becquerels (Bq); 1Bq = 2.7E-11 Ci.*

[d] *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.*

[e] *NA - Not applicable: DCGs are not specified for gross alpha and gross beta activity.*

[f] *Total uranium = 1.44±0.01E-01 g ; average = 1.90E-10 µg/mL*

Table D - 3
1999 Airborne Radioactive Effluent Totals (curies) from the Vitrification System (HVAC) Ventilation Stack (ANVITSK)

Month	Alpha	Beta
January	3.87±8.00E-09	1.28±2.14E-08
February	5.28±7.83E-09	1.47±1.96E-08
March	1.02±0.99E-08	-1.61±2.03E-08
April	-0.33±1.05E-08	-2.31±2.18E-08
May	-1.71±9.05E-09	-1.27±1.93E-08
June	-1.24±8.02E-09	0.01±1.87E-08
July	3.34±9.83E-09	0.45±1.99E-08
August	7.27±9.76E-09	-1.98±1.81E-08
September	-3.30±9.99E-09	1.23±1.88E-08
October	-0.80±1.08E-08	1.94±2.02E-08
November	0.20±1.06E-08	0.61±1.90E-08
December	0.79±1.08E-08	1.40±2.08E-08
Annual Total	2.22±3.35E-08	1.22±6.87E-08

Quarter	Co-60	Sr-90	I-129	Cs-137	Eu-154
1st Quarter	0.27±1.91E-08	-0.63±1.03E-08	2.68±2.74E-08	0.08±1.94E-08	-0.27±5.51E-08
2nd Quarter	0.32±1.17E-08	0.08±1.03E-08	8.40±6.04E-08	0.69±1.11E-08	-0.81±3.28E-08
3rd Quarter	1.76±1.83E-08	-6.07±7.46E-09	1.38±0.52E-07	-0.09±1.76E-08	-4.13±5.81E-08
4th Quarter	0.17±2.13E-08	-3.00±6.97E-09	5.16±0.99E-07	-0.98±1.88E-08	-0.10±6.21E-08
Annual Total	2.52±3.59E-08	-1.46±1.78E-08	7.65±1.30E-07	-0.30±3.41E-08	-0.53±1.07E-07

	U-232	U-233/234	U-235/236	U-238	Total U (g)
1st Quarter	-0.52±1.03E-09	8.77±3.21E-09	6.28±8.89E-10	8.15±2.90E-09	2.60±0.03E-02
2nd Quarter	0.31±1.10E-09	6.41±1.76E-09	5.45±6.39E-10	5.53±1.52E-09	1.79±0.03E-02
3rd Quarter	0.51±1.27E-09	5.29±1.68E-09	2.12±4.16E-10	5.82±1.57E-09	1.88±0.02E-02
4th Quarter	0.52±1.65E-09	7.72±2.28E-09	6.54±7.36E-10	6.27±1.92E-09	1.05±0.01E-02
Annual Total	0.82±2.57E-09	2.82±0.46E-08	2.04±1.38E-09	2.58±0.41E-08	7.32±0.05E-02

	Pu-238	Pu-239/240	Am-241
1st Quarter	1.23±1.83E-09	-2.02±4.05E-10	-0.93±5.72E-10
2nd Quarter	0.78±1.29E-09	2.60±3.90E-10	4.96±4.46E-10
3rd Quarter	3.86±5.48E-10	1.35±0.79E-09	6.89±6.57E-10
4th Quarter	-1.04±2.08E-10	1.04±4.64E-10	2.03±4.06E-10
Annual Total	2.30±2.32E-09	1.51±1.07E-09	1.30±1.06E-09

Table D - 4
1999 Airborne Radioactive Effluent Totals (curies) from the Seismic Sampler (ANSEISK) for the Vitrification System (HVAC) Ventilation Stack

Month	**Alpha**	**Beta**
January	9.43±8.20E-09	-0.46±1.90E-08
February	4.73±7.01E-09	2.15±1.80E-08
March	-1.16±7.57E-09	-0.20±1.90E-08
April	-0.27±1.00E-08	-2.49±2.08E-08
May	4.33±9.61E-09	-2.00±1.85E-08
June	6.42±8.92E-09	0.72±1.88E-08
July	0.97±1.08E-08	0.08±2.00E-08
August	0.66±1.00E-08	-1.71±1.89E-08
September	0.58±1.09E-08	-0.44±1.76E-08
October	-1.04±1.09E-08	1.77±2.10E-08
November	0.42±1.06E-08	0.20±1.83E-08
December	-3.58±9.75E-09	0.52±2.18E-08
Annual Total	3.34±3.33E-08	-1.85±6.70E-08

ANSEISK provides back-up samples for the primary vitrification sampler (ANVITSK).

Table D - 5
1999 Airborne Radioactive Effluent Totals (curies) from the 01-14 Building Ventilation Exhaust (ANCSSTK)

Month	Alpha	Beta
January	1.96±3.11E-09	1.23±0.85E-08
February	1.51±2.54E-09	1.15±0.68E-08
March	2.69±3.19E-09	-5.29±6.76E-09
April	1.66±4.46E-09	-4.46±8.87E-09
May	1.44±3.86E-09	0.46±7.88E-09
June	1.12±3.26E-09	2.66±7.24E-09
July	4.77±4.56E-09	1.39±0.88E-08
August	-0.96±3.94E-09	4.22±8.93E-09
September	0.23±4.70E-09	1.28±0.87E-08
October	-2.03±4.46E-09	1.12±0.83E-08
November	2.10±4.49E-09	1.88±7.69E-09
December	2.36±4.43E-09	2.05±8.73E-09
Annual Total	1.69±1.38E-08	6.32±2.82E-08

Quarter	Co-60	Sr-90	I-129	Cs-137	Eu-154
1st Quarter	-2.25±4.83E-09	-6.92±6.61E-09	5.35±1.78E-08	-1.04±4.44E-09	0.21±1.41E-08
2nd Quarter	1.75±5.38E-09	2.35±0.39E-08	1.34±0.44E-07	-1.17±7.28E-09	0.13±1.50E-08
3rd Quarter	6.34±7.41E-09	0.66±4.05E-09	5.09±2.01E-08	1.36±6.75E-09	0.71±1.68E-08
4th Quarter	-3.90±8.21E-09	0.37±2.93E-09	9.94±3.25E-08	-6.05±8.39E-09	-0.33±2.47E-08
Annual Total	0.20±1.32E-08	1.76±0.92E-08	3.38±0.61E-07	-0.69±1.37E-08	0.72±3.62E-08

	U-232	U-233/234	U-235/236	U-238	Total U (g)
1st Quarter	4.09±5.26E-10	2.52±1.05E-09	2.01±3.72E-10	2.78±1.08E-09	8.70±0.12E-03
2nd Quarter	0.96±3.30E-10	2.16±0.57E-09	1.05±1.19E-10	3.24±0.66E-09	8.44±0.13E-03
3rd Quarter	-0.37±3.39E-10	2.98±0.72E-09	2.05±2.12E-10	3.22±0.72E-09	8.98±0.11E-03
4th Quarter	1.30±6.75E-10	2.93±0.77E-09	2.21±2.26E-10	1.95±0.64E-09	5.58±0.07E-03
Annual Total	5.98±9.78E-10	1.06±0.16E-08	7.32±4.99E-10	1.12±0.16E-08	3.17±0.02E-02

	Pu-238	Pu-239/240	Am-241
1st Quarter	3.89±4.57E-10	-0.57±3.70E-10	1.34±2.28E-10
2nd Quarter	1.01±4.68E-10	-1.00±2.01E-10	1.36±1.58E-10
3rd Quarter	-0.92±3.18E-10	1.38±1.59E-10	1.76±1.77E-10
4th Quarter	-0.93±1.32E-10	0.00±1.86E-10	1.70±2.59E-10
Annual Total	3.05±7.39E-10	-0.20±4.87E-10	6.16±4.19E-10

Table D - 6
1999 Airborne Radioactive Effluent Totals (curies) from the Contact Size-reduction Facility Ventilation Stack (ANCSRFK)

Month	Alpha	Beta
January	NA	NA
February	NA	NA
March	NA	NA
April	7.59±8.58E-10	-0.62±1.83E-09
May	NA	NA
June	NA	NA
July	NA	NA
August	NA	NA
September	NA	NA
October	NA	NA
November	NA	NA
December	NA	NA
Annual Total	7.59±8.58E-10	-0.62±1.83E-09

Quarter	Co-60	Sr-90	I-129	Cs-137	Eu-154
1st Quarter	NA	NA	NA	NA	NA
2nd Quarter	0.84±2.44E-09	0.53±1.36E-09	-0.82±5.13E-09	0.73±2.14E-09	-2.84±6.17E-09
3rd Quarter	NA	NA	NA	NA	NA
4th Quarter	NA	NA	NA	NA	NA
Annual Total	0.84±2.44E-09	0.53±1.36E-09	-0.82±5.13E-09	0.73±2.14E-09	-2.84±6.17E-09

	U-232	U-233/234	U-235/236	U-238	Total U (g)
1st Quarter	NA	NA	NA	NA	NA
2nd Quarter	1.00±2.03E-10	2.68±1.35E-10	-3.17±4.39E-11	1.10±1.03E-10	2.88±0.11E-04
3rd Quarter	NA	NA	NA	NA	NA
4th Quarter	NA	NA	NA	NA	NA
Annual Total	1.00±2.03E-10	2.68±1.35E-10	-3.17±4.39E-11	1.10±1.03E-10	2.88±0.11E-04

	Pu-238	Pu-239/240	Am-241
1st Quarter	NA	NA	NA
2nd Quarter	0.87±1.05E-10	5.19±6.03E-11	1.34±1.10E-10
3rd Quarter	NA	NA	NA
4th Quarter	NA	NA	NA
Annual Total	0.87±1.05E-10	5.19±6.03E-11	1.34±1.10E-10

NA - Not applicable. Ventilation off.

Table D - 7
1999 Airborne Radioactive Effluent Totals (curies) from the Supernatant Treatment System Ventilation Stack (ANSTSTK)

Month	Alpha	Beta	H-3
January	1.56±1.72E-09	5.31±4.44E-09	1.01±0.35E-06
February	0.79±1.50E-09	2.74±3.84E-09	3.77±2.25E-07
March	0.61±1.77E-09	0.36±4.17E-09	1.57±0.23E-06
April	0.31±2.25E-09	-0.54±4.61E-09	4.20±4.42E-07
May	0.02±1.95E-09	-1.23±4.12E-09	3.21±0.52E-06
June	1.84±1.93E-09	1.85±0.03E-06	-1.27±1.45E-06
July	1.99±2.27E-09	1.75±0.50E-08	2.94±0.27E-05
August	0.89±2.01E-09	-2.39±3.98E-09	1.37±0.04E-04
September	-0.44±2.11E-09	1.20±0.44E-08	1.19±0.04E-04
October	0.20±2.61E-09	1.32±0.48E-08	4.69±0.23E-05
November	-0.04±2.22E-09	6.48±4.30E-09	5.15±2.60E-06
December	1.43±2.32E-09	5.10±4.69E-09	2.75±3.53E-06
Annual Total	9.16±7.19E-09	1.91±0.03E-06	3.45±0.08E-04

Quarter	Co-60	Sr-90	I-129	Cs-137	Eu-154
1st Quarter	1.76±1.92E-09	-1.70±2.31E-09	1.92±0.45E-07	2.92±3.02E-09	5.75±8.77E-09
2nd Quarter	-0.30±2.01E-09	1.99±1.85E-09	4.83±0.62E-07	0.00±3.38E-09	2.55±6.02E-09
3rd Quarter	5.02±3.63E-09	0.18±1.98E-09	1.46±0.20E-06	1.69±0.58E-08	0.22±1.08E-08
4th Quarter	-0.37±5.32E-09	1.53±1.54E-09	3.00±0.40E-07	7.26±6.01E-09	-0.24±1.23E-08
Annual Total	6.11±7.01E-09	2.00±3.88E-09	2.44±0.22E-06	2.71±0.95E-08	0.82±1.95E-08

	U-232	U-233/234	U-235/236	U-238	Total U (g)
1st Quarter	0.57±2.41E-10	1.56±0.63E-09	3.77±3.02E-10	1.91±0.69E-09	5.20±0.07E-03
2nd Quarter	-1.57±2.22E-10	2.14±1.57E-10	0.00±4.97E-11	2.33±1.26E-10	7.59±0.10E-04
3rd Quarter	1.71±2.42E-10	1.20±0.34E-09	1.78±1.38E-10	8.90±2.82E-10	3.71±0.04E-03
4th Quarter	0.12±3.29E-10	1.24±0.40E-09	0.57±9.71E-11	1.52±0.43E-09	1.87±0.02E-03
Annual Total	0.84±5.24E-10	4.22±0.84E-09	5.61±3.50E-10	4.55±0.87E-09	1.15±0.01E-02

	Pu-238	Pu-239/240	Am-241
1st Quarter	3.64±3.59E-10	0.69±1.39E-10	1.10±0.99E-10
2nd Quarter	0.35±2.33E-10	0.35±1.11E-10	2.39±1.70E-10
3rd Quarter	2.15±4.30E-11	6.45±7.49E-11	2.26±7.83E-11
4th Quarter	0.71±1.07E-10	0.71±1.57E-10	-0.70±9.76E-11
Annual Total	4.92±4.43E-10	2.40±2.49E-10	3.64±2.33E-10

Table D - 8
1999 Airborne Radioactive Effluent Totals (curies) from the Container Sorting and Packaging Facility (ANCSPFK)

Month	Alpha	Beta
January	1.54±3.67E-10	1.03±1.02E-09
February	3.79±3.82E-10	7.57±8.30E-10
March	1.15±3.94E-10	-3.05±9.21E-10
April	1.98±5.25E-10	-0.42±1.03E-09
May	0.07±4.26E-10	-2.82±8.98E-10
June	3.86±3.97E-10	-1.80±7.24E-10
July	NA	NA
August	NA	NA
September	NA	NA
October	NA	NA
November	2.90±2.66E-10	1.71±4.76E-10
December	2.57±5.35E-10	0.56±1.07E-09
Annual Total	1.79±1.19E-09	1.33±2.52E-09

Quarter	Co-60	Sr-90	I-129	Cs-137	Eu-154
1st Quarter	1.69±2.19E-09	0.45±4.46E-10	0.00±2.09E-09	0.00±1.82E-09	0.53±2.77E-09
2nd Quarter	-1.40±6.28E-10	0.53±4.34E-10	0.00±1.22E-09	-4.81±5.78E-10	0.17±1.83E-09
3rd Quarter	NA	NA	NA	NA	NA
4th Quarter	-0.05±2.49E-09	-0.39±1.13E-09	7.34±3.34E-09	0.00±3.93E-09	4.05±7.42E-09
Annual Total	1.50±3.38E-09	-0.29±1.29E-09	7.34±4.13E-09	-0.48±4.37E-09	4.74±8.13E-09

	U-232	U-233/234	U-235/236	U-238	Total U (g)
1st Quarter	5.88±5.15E-11	3.42±1.31E-10	0.54±3.66E-11	5.71±1.57E-10	9.28±0.12E-04
2nd Quarter	4.82±6.77E-11	4.25±0.97E-10	1.62±2.80E-11	2.59±0.73E-10	9.00±0.13E-04
3rd Quarter	NA	NA	NA	NA	NA
4th Quarter	1.30±2.40E-10	3.72±1.51E-10	7.62±6.25E-11	3.28±1.33E-10	4.65±0.06E-04
Annual Total	2.37±2.55E-10	1.14±0.22E-09	9.78±7.77E-11	1.16±0.22E-09	2.29±0.02E-03

	Pu-238	Pu-239/240	Am-241
1st Quarter	-1.78±2.53E-11	1.58±3.92E-11	0.55±2.55E-11
2nd Quarter	0.43±2.28E-11	-0.86±1.22E-11	3.79±2.89E-11
3rd Quarter	NA	NA	NA
4th Quarter	-4.03±6.10E-11	-1.31±6.10E-11	5.77±8.89E-11
Annual Total	-5.38±6.99E-11	-0.58±7.35E-11	1.01±0.97E-10

NA - Not applicable. Ventilation off.

Table D - 9
1999 Airborne Radioactive Effluent Totals (curies) from the Former Low-level Waste Treatment Facility Hot Side Ventilation (ANLLWTVH)

Month	Alpha	Beta
January	1.67±5.17E-10	2.00±1.32E-09
February	-1.64±4.54E-10	1.52±1.32E-09
March	5.52±6.37E-10	-0.13±1.38E-09
April	3.84±7.04E-10	0.34±1.68E-09
May	NA	NA
June	NA	NA
July	0.09±1.45E-09	5.89±3.07E-09
August	2.82±8.90E-10	1.60±2.02E-09
September	1.94±5.37E-10	0.20±1.43E-09
October	NA	NA
November	NA	NA
December	NA	NA
Annual Total	1.50±2.13E-09	1.14±0.49E-08

Table D - 10
1999 Airborne Radioactive Effluent Totals (curies) from the New Low-level Waste Treatment Facility Ventilation (ANLLW2V)*

Month	Alpha	Beta
January	0.83±1.80E-10	-0.21±3.70E-10
February	NA	NA
March	2.02±2.33E-10	-2.37±4.86E-10
April	NA	NA
May	NA	NA
June	0.53±1.26E-10	-2.49±2.77E-10
July	NA	NA
August	NA	NA
September	0.00±1.68E-10	-1.89±4.94E-10
October	NA	NA
November	NA	NA
December	0.80±2.98E-10	-0.57±6.18E-10
Annual Total	4.19±4.69E-10	-0.75±1.04E-09

NA - Not applicable. Ventilation off.

** Air filters from LLW2 were also analyzed isotopically for a one-year characterization period ending in March 1999. Results of these analyses showed no positive detection for non-natural isotopes.*

Table D - 11
1999 Airborne Radioactive Effluent Totals (curies) from the Laundry Change Room (ANLAUNV)

Month	Alpha	Beta
January	0.00±8.97E-10	1.50±2.33E-09
February	-5.70±8.84E-10	-0.35±2.33E-09
March	-3.11±3.73E-10	0.13±1.38E-09
April	-0.86±3.77E-10	-0.42±1.25E-09
May	0.12±1.04E-09	-0.30±1.95E-09
June	0.00±2.97E-10	-0.79±8.02E-10
July	-1.81±3.92E-10	1.06±0.83E-09
August	1.59±2.85E-10	-1.30±5.33E-10
September	3.06±4.74E-10	-0.72±1.05E-09
October	-5.69±6.43E-10	1.72±1.32E-09
November	2.53±3.92E-10	-0.85±7.92E-10
December	-1.46±4.95E-10	-0.36±1.01E-09
Annual Total	-1.02±2.08E-09	1.96±4.92E-09

Table D - 12
1999 Radioactivity Concentrations (µCi/mL) in Airborne Particulates at the Lag Storage Area Air Sampler (ANLAGAM)

Month	Alpha	Beta
January	1.38±0.82E-15	2.05±0.27E-14
February	8.48±7.18E-16	1.90±0.26E-14
March	1.28±0.89E-15	1.69±0.26E-14
April	6.87±8.70E-16	1.34±0.24E-14
May	4.55±7.97E-16	1.29±0.24E-14
June	1.05±0.86E-15	1.82±0.26E-14
July	8.28±9.34E-16	2.02±0.30E-14
August	1.15±2.87E-15	2.06±0.70E-14
September	5.27±9.45E-16	2.33±0.30E-14
October	6.33±9.82E-16	1.70±0.26E-14
November	1.38±1.12E-15	3.06±0.33E-14
December	8.42±9.30E-16	1.94±0.28E-14

Quarter	K-40	Co-60	Sr-90	Cs-137	U-232
1st Quarter	3.71±4.14E-15	0.78±1.70E-16	-2.13±1.54E-16	0.47±1.40E-16	1.26±1.77E-17
2nd Quarter	1.40±3.64E-15	0.62±1.00E-16	-0.25±1.28E-16	0.05±1.21E-16	6.64±9.04E-18
3rd Quarter	4.98±3.04E-15	-1.30±2.75E-16	-0.99±1.39E-16	2.43±2.21E-16	-0.30±1.40E-17
4th Quarter	0.21±6.51E-15	-0.32±2.36E-16	-0.15±1.11E-16	3.81±6.58E-16	0.13±1.87E-17

	U-233/234	U-235/236	U-238	Total U (µg/mL)	Pu-238
1st Quarter	7.38±2.82E-17	-3.87±4.38E-18	1.27±0.36E-16	2.57±0.03E-10	6.20±8.09E-18
2nd Quarter	9.49±2.27E-17	-1.21±4.09E-18	9.72±2.14E-17	2.28±0.03E-10	0.00±5.57E-18
3rd Quarter	8.48±2.26E-17	3.04±7.29E-18	8.63±2.31E-17	2.77±0.03E-10	-0.32±1.11E-17
4th Quarter	8.45±2.32E-17	1.00±0.84E-17	8.61±2.37E-17	1.27±0.02E-10	0.01±3.06E-18

	Pu-239/240	Am-241
1st Quarter	0.53±4.66E-18	0.24±7.47E-18
2nd Quarter	9.10±7.93E-18	1.45±0.88E-17
3rd Quarter	4.78±5.55E-18	6.18±7.58E-18
4th Quarter	3.27±4.87E-18	7.65±9.63E-18

Table D - 13
1999 Radioactivity Concentrations (µCi/mL) in Airborne Particulates at the NDA Air Sampler (ANNDAAM)

Month	Alpha	Beta
January	9.89±7.35E-16	2.10±0.27E-14
February	1.36±0.86E-15	1.93±0.27E-14
March	1.03±0.87E-15	1.55±0.26E-14
April	4.29±8.39E-16	1.39±0.25E-14
May	4.73±8.31E-16	1.29±0.25E-14
June	8.23±8.30E-16	1.51±0.25E-14
July	7.39±8.58E-16	1.87±0.27E-14
August	4.87±8.36E-16	1.69±0.27E-14
September	0.73±1.01E-15	2.32±0.30E-14
October	0.66±1.03E-15	1.63±0.26E-14
November	1.41±1.16E-15	2.78±0.33E-14
December	1.10±1.01E-15	1.88±0.28E-14

Quarter	K-40	Co-60	Sr-90	Cs-137	U-232
1st Quarter	7.21±2.48E-15	0.23±1.42E-16	-1.11±1.08E-16	-0.13±1.22E-16	-1.22±1.32E-17
2nd Quarter	0.71±4.76E-15	-1.70±2.03E-16	1.33±1.04E-16	-0.19±2.03E-16	-0.54±1.22E-17
3rd Quarter	0.73±3.80E-15	-0.34±1.98E-16	-0.02±1.25E-16	0.23±1.69E-16	0.37±1.29E-17
4th Quarter	0.09±6.90E-15	-0.14±2.29E-16	-4.71±9.00E-17	1.06±2.22E-16	-1.01±1.80E-17

	U-233/234	U-235/236	U-238	Total U (µg/mL)	Pu-238
1st Quarter	7.60±2.89E-17	0.81±1.13E-17	1.07±0.34E-16	2.60±0.04E-10	4.70±9.44E-18
2nd Quarter	8.91±2.27E-17	7.33±8.62E-18	9.64±2.36E-17	2.22±0.03E-10	5.14±6.19E-18
3rd Quarter	5.72±1.86E-17	8.02±6.41E-18	8.12±2.11E-17	2.35±0.03E-10	-1.17±4.06E-18
4th Quarter	7.79±2.26E-17	1.01±0.77E-17	8.48±2.35E-17	1.03±0.01E-10	-2.28±3.23E-18

	Pu-239/240	Am-241
1st Quarter	-0.90±1.29E-17	1.10±1.33E-17
2nd Quarter	3.07±3.56E-18	8.70±7.51E-18
3rd Quarter	-1.17±2.34E-18	0.11±1.81E-17
4th Quarter	6.94±6.56E-18	4.73±7.19E-18

Table D - 14
1999 Airborne Radioactivity Concentrations (µCi/mL) at the SDA Trench 9 Air Sampler (ANSDAT9)

Month	Alpha	Beta	H-3
January	6.99±8.86E-16	2.20±0.35E-14	2.58±2.26E-13
February	1.14±1.00E-15	1.75±0.32E-14	1.25±0.25E-12
March	0.67±1.03E-15	1.69±0.33E-14	2.81±0.29E-12
April	0.33±1.09E-15	1.21±0.30E-14	1.49±0.28E-12
May	0.49±1.19E-15	1.07±0.31E-14	4.64±5.40E-13
June	1.08±1.41E-15	1.50±0.37E-14	3.67±7.35E-13
July	1.11±1.19E-15	2.02±0.35E-14	1.47±1.04E-12
August	0.41±1.03E-15	1.53±0.31E-14	2.04±1.00E-12
September	0.69±1.21E-15	2.42±0.35E-14	9.44±9.14E-13
October	0.66±1.26E-15	2.13±0.34E-14	5.74±6.02E-13
November	1.09±1.34E-15	2.92±0.39E-14	1.09±0.38E-12
December	1.07±1.22E-15	2.14±0.35E-14	4.89±4.11E-13

Quarter	K-40	Co-60	I-129	Cs-137
1st Quarter	2.89±4.44E-15	0.70±2.43E-16	0.48±1.32E-16	0.53±1.95E-16
2nd Quarter	4.43±4.57E-15	-1.49±1.96E-16	1.77±1.71E-16	0.71±1.68E-16
3rd Quarter	7.47±6.87E-15	3.80±2.63E-16	-0.82±1.59E-16	-0.51±2.39E-16
4th Quarter	7.97±2.88E-15	0.93±1.73E-16	0.45±9.53E-17	-0.68±1.84E-16

Table D - 15
1999 Airborne Radioactive Effluent Totals (curies) from Outdoor Ventilation Enclosures/Portable Ventilation Units

Month	Alpha	Beta
January	NA	NA
February	2.69±3.45E-10	-2.21±6.17E-10
March	NA	NA
April	-9.55±8.10E-11	1.37±2.14E-10
May	NA	NA
June	NA	NA
July	-2.58±6.52E-11	0.28±1.36E-10
August	NA	NA
September	0.87±1.49E-10	0.44±2.74E-10
October	-0.60±7.30E-10	0.47±1.23E-09
November	NA	NA
December	3.36±2.93E-10	1.83±0.73E-09
Annual Total	5.11±8.78E-10	2.28±1.61E-09

Quarter	Co-60	Sr-90	Cs-137	Eu-154	U-232
1st Quarter	-4.20±9.38E-10	7.32±7.99E-10	-3.92±8.07E-10	0.86±2.53E-09	3.55±7.92E-11
2nd Quarter	2.58±4.24E-10	1.19±1.75E-10	0.00±3.60E-10	1.29±5.72E-10	0.21±1.81E-11
3rd Quarter	1.30±3.46E-10	0.95±1.40E-10	-0.55±2.88E-10	1.07±9.85E-10	1.31±1.00E-11
4th Quarter	-0.13±1.14E-09	-3.48±4.61E-10	2.71±2.19E-09	1.42±3.32E-09	-2.77±7.71E-11
Annual Total	-0.17±1.58E-09	5.97±9.50E-10	2.26±2.38E-09	2.52±4.32E-09	0.23±1.12E-10

	U-233/234	U-235/236	U-238	Total U	Pu-238
1st Quarter	9.15±9.22E-11	0.00±5.53E-11	1.01±0.90E-10	1.48±0.03E-04	0.00±5.68E-11
2nd Quarter	1.49±0.37E-10	0.67±1.15E-11	1.44±0.35E-10	4.32±0.07E-04	1.39±2.50E-11
3rd Quarter	1.24±1.66E-11	4.65±8.05E-12	1.39±1.00E-11	2.20±0.03E-05	5.40±9.54E-12
4th Quarter	1.48±0.69E-10	-0.42±2.66E-11	1.21±0.59E-10	1.64±0.02E-04	-1.21±7.08E-11
Annual Total	4.00±1.22E-10	0.71±6.29E-11	3.80±1.14E-10	7.65±0.08E-04	0.71±9.46E-11

	Pu-239/240	Am-241
1st Quarter	0.53±4.67E-11	2.33±2.70E-11
2nd Quarter	0.00±9.78E-12	1.88±1.64E-11
3rd Quarter	0.00±5.07E-12	1.36±2.18E-11
4th Quarter	0.61±3.22E-11	4.00±4.22E-11
Annual Total	1.14±5.77E-11	9.58±5.70E-11

NA - Not applicable. Ventilation units not in use.

Table D - 16
1999 Airborne Radioactivity Concentrations (µCi/mL) at the Rock Springs Road Air Sampler (AFRSPRD)

Month	Alpha	Beta	H-3
January	4.66±8.20E-16	1.84±0.33E-14	0.10±2.31E-13
February	1.70±1.14E-15	1.61±0.31E-14	-0.44±2.97E-13
March	0.91±1.08E-15	1.41±0.31E-14	3.47±2.55E-13
April	0.47±1.12E-15	1.09±0.29E-14	-0.63±3.74E-13
May	0.65±1.13E-15	1.17±0.30E-14	-2.61±5.99E-13
June	3.99±9.55E-16	1.73±0.32E-14	-1.81±9.47E-13
July	0.62±1.06E-15	2.02±0.34E-14	0.30±1.28E-12
August	0.29±1.03E-15	1.52±0.32E-14	0.41±1.05E-12
September	0.56±1.20E-15	2.24±0.35E-14	-4.81±8.65E-13
October	0.23±1.20E-15	1.98±0.34E-14	-3.05±6.76E-13
November	0.85±1.32E-15	3.20±0.41E-14	6.59±4.97E-13
December	1.02±1.24E-15	1.97±0.35E-14	-1.31±3.75E-13

Quarter	K-40	Co-60	Sr-90	I-129	Cs-137
1st Quarter	2.24±4.73E-15	1.99±2.05E-16	-1.27±1.82E-16	-0.67±2.15E-16	0.60±1.95E-16
2nd Quarter	3.83±2.32E-15	-0.64±1.92E-16	0.65±1.62E-16	1.02±2.42E-16	0.16±1.77E-16
3rd Quarter	5.37±5.41E-15	-1.24±2.63E-16	-0.82±1.50E-16	0.37±3.74E-16	0.28±2.38E-16
4th Quarter	1.71±0.68E-14	-0.30±2.94E-16	-0.48±1.65E-16	-0.09±1.04E-16	-1.14±3.06E-16

	U-232	U-233/234	U-235/236	U-238	Total U (µg/mL)
1st Quarter	0.97±2.20E-17	9.71±4.44E-17	0.69±1.37E-17	7.87±3.91E-17	3.52±0.04E-10
2nd Quarter	-0.20±1.38E-17	1.05±0.26E-16	-4.72±5.35E-18	9.73±2.42E-17	3.05±0.04E-10
3rd Quarter	0.47±1.48E-17	1.08±0.28E-16	6.75±8.11E-18	1.08±0.26E-16	3.19±0.03E-10
4th Quarter	0.48±2.49E-17	7.14±2.56E-17	3.63±6.69E-18	7.75±2.49E-17	2.20±0.03E-10

	Pu-238	Pu-239/240	Am-241
1st Quarter	2.45±2.76E-17	1.07±9.44E-18	1.13±0.93E-17
2nd Quarter	-0.67±1.96E-17	1.08±0.77E-17	1.58±1.17E-17
3rd Quarter	1.59±7.13E-18	1.59±5.52E-18	3.52±4.99E-18
4th Quarter	-3.40±8.34E-18	5.10±7.62E-18	1.13±1.19E-17

Table D - 17
1999 Radioactivity Concentrations (µCi/mL) in Airborne Particulates at the Dutch Hill Air Sampler (AFBOEHN)

Month	Alpha	Beta
January	9.86±9.48E-16	2.47±0.36E-14
February	1.04±0.97E-15	2.21±0.34E-14
March	0.83±1.52E-15	1.82±0.43E-14
April	0.15±1.02E-15	1.57±0.32E-14
May	0.41±1.07E-15	1.45±0.31E-14
June	1.07±1.11E-15	1.77±0.33E-14
July	0.94±1.13E-15	2.41±0.36E-14
August	0.73±1.32E-15	1.72±0.37E-14
September	0.46±1.19E-15	2.57±0.37E-14
October	0.85±1.28E-15	2.20±0.34E-14
November	1.70±1.48E-15	3.18±0.40E-14
December	1.23±1.26E-15	2.06±0.35E-14

Quarter	Sr-90	Cs-137
1st Quarter	-0.54±2.43E-16	-1.28±2.00E-16
2nd Quarter	-0.26±1.07E-16	1.33±1.60E-16
3rd Quarter	0.18±1.30E-16	0.62±2.49E-16
4th Quarter	1.07±1.27E-16	0.59±2.95E-16

Table D - 18
1999 Radioactivity Concentrations (µCi/mL) in Airborne Particulates at the Fox Valley Air Sampler (AFFXVRD)

Month	Alpha	Beta
January	1.30±1.03E-15	2.60±0.37E-14
February	8.19±9.21E-16	1.96±0.33E-14
March	0.93±1.07E-15	1.90±0.34E-14
April	0.22±1.05E-15	1.44±0.31E-14
May	0.84±1.17E-15	1.25±0.31E-14
June	1.07±1.08E-15	1.88±0.32E-14
July	0.91±1.11E-15	2.18±0.34E-14
August	1.08±1.17E-15	1.61±0.31E-14
September	0.75±1.21E-15	2.31±0.34E-14
October	0.42±1.22E-15	2.01±0.33E-14
November	0.80±1.30E-15	3.05±0.40E-14
December	0.47±1.08E-15	2.19±0.35E-14

Quarter	Sr-90	Cs-137
1st Quarter	-0.91±2.45E-16	1.01±1.91E-16
2nd Quarter	-0.11±1.30E-16	0.71±1.58E-16
3rd Quarter	3.72±9.73E-17	-0.19±2.41E-16
4th Quarter	-1.25±1.24E-16	0.00±5.75E-16

Table D - 19
1999 Radioactivity Concentrations (µCi/mL) in Airborne Particulates at the Bulk Storage Warehouse Air Sampler (AFBLKST)

Month	Alpha	Beta
January	9.98±9.60E-16	1.92±0.33E-14
February	7.66±9.13E-16	1.78±0.32E-14
March	0.78±1.04E-15	1.54±0.32E-14
April	0.33±1.10E-15	1.21±0.30E-14
May	0.63±1.14E-15	1.28±0.31E-14
June	1.13±1.12E-15	1.81±0.33E-14
July	0.81±1.08E-15	2.11±0.34E-14
August	1.20±1.53E-15	2.54±0.45E-14
September	1.07±1.31E-15	2.37±0.35E-14
October	-0.13±1.10E-15	1.94±0.33E-14
November	0.84±1.31E-15	3.18±0.41E-14
December	1.03±1.22E-15	2.04±0.35E-14

Quarter	Sr-90	Cs-137
1st Quarter	-1.36±2.86E-16	-1.27±1.99E-16
2nd Quarter	-0.70±1.47E-16	-0.41±1.69E-16
3rd Quarter	0.93±1.36E-16	0.80±3.15E-16
4th Quarter	0.31±1.34E-16	-0.09±2.70E-16

Table D - 20
1999 Radioactivity Concentrations (µCi/mL) in Airborne Particulates at the Route 240 Air Sampler (AFRT240)

Month	Alpha	Beta
January	1.28±1.05E-15	2.38±0.36E-14
February	1.13±1.02E-15	2.35±0.36E-14
March	0.67±1.03E-15	1.68±0.33E-14
April	0.45±1.12E-15	1.44±0.32E-14
May	0.41±1.06E-15	1.46±0.31E-14
June	1.14±1.13E-15	1.76±0.33E-14
July	1.15±1.25E-15	2.13±0.36E-14
August	0.55±1.18E-15	1.79±0.35E-14
September	1.06±1.41E-15	2.33±0.37E-14
October	-0.29±1.12E-15	1.99±0.35E-14
November	1.42±1.47E-15	2.94±0.40E-14
December	0.88±1.22E-15	1.91±0.35E-14

Quarter	Sr-90	Cs-137
1st Quarter	-1.37±1.96E-16	0.66±1.76E-16
2nd Quarter	-0.07±1.02E-16	0.71±1.67E-16
3rd Quarter	-0.56±1.63E-16	-1.16±2.69E-16
4th Quarter	0.90±9.90E-17	4.04±4.54E-16

Table D - 21
1999 Radioactivity Concentrations (µCi/mL) in Airborne Particulates at the Thomas Corners Road Air Sampler (AFTCORD)

Month	Alpha	Beta
January	9.81±9.57E-16	1.94±0.33E-14
February	6.81±8.68E-16	1.84±0.32E-14
March	1.01±1.06E-15	1.42±0.31E-14
April	0.69±1.15E-15	1.23±0.30E-14
May	0.76±1.17E-15	1.35±0.32E-14
June	1.01±1.12E-15	1.87±0.34E-14
July	1.11±1.20E-15	2.32±0.36E-14
August	1.08±1.53E-15	4.08±0.53E-14
September	1.23±1.40E-15	4.22±0.46E-14
October	0.32±1.22E-15	1.89±0.33E-14
November	1.13±1.39E-15	3.02±0.40E-14
December	0.89±1.20E-15	2.21±0.36E-14

Quarter	Sr-90	Cs-137
1st Quarter	-2.95±2.67E-16	-0.43±2.17E-16
2nd Quarter	-0.15±1.13E-16	1.22±1.59E-16
3rd Quarter	0.97±1.88E-16	0.92±2.50E-16
4th Quarter	0.58±1.14E-16	0.00±5.09E-16

Table D - 22
1999 Radioactivity Concentrations (µCi/mL) in Airborne Particulates at the West Valley Air Sampler (AFWEVAL)

Month	Alpha	Beta
January	1.19±1.01E-15	2.43±0.36E-14
February	1.02±0.98E-15	1.93±0.33E-14
March	0.69±1.02E-15	1.70±0.33E-14
April	0.65±1.17E-15	1.40±0.31E-14
May	1.41±1.30E-15	1.41±0.32E-14
June	0.82±1.07E-15	1.84±0.34E-14
July	0.82±1.19E-15	2.18±0.36E-14
August	0.76±1.24E-15	1.58±0.34E-14
September	0.79±1.38E-15	2.17±0.37E-14
October	0.43±1.28E-15	1.90±0.34E-14
November	1.19±1.39E-15	3.01±0.40E-14
December	0.86±1.19E-15	1.98±0.34E-14

Quarter	Sr-90	Cs-137
1st Quarter	0.46±1.56E-16	1.03±5.41E-16
2nd Quarter	0.22±1.28E-16	0.99±1.65E-16
3rd Quarter	1.66±1.89E-16	-0.58±2.85E-16
4th Quarter	0.50±1.72E-16	0.70±2.72E-16

Table D - 23
1999 Radioactivity Concentrations (µCi/mL) in Airborne Particulates at the Springville Air Sampler (AFSPRVL)

Month	Alpha	Beta
January	8.76±9.54E-16	2.17±0.35E-14
February	6.62±9.10E-16	2.03±0.34E-14
March	0.65±1.04E-15	1.49±0.33E-14
April	0.34±1.11E-15	1.22±0.31E-14
May	0.56±1.09E-15	1.16±0.29E-14
June	0.79±1.03E-15	1.73±0.32E-14
July	0.86±1.13E-15	2.23±0.35E-14
August	0.48±1.06E-15	1.78±0.33E-14
September	1.15±1.30E-15	2.34±0.35E-14
October	0.67±1.30E-15	2.02±0.34E-14
November	1.40±1.42E-15	2.81±0.39E-14
December	1.09±1.23E-15	2.03±0.34E-14

Quarter	Sr-90	Cs-137
1st Quarter	0.87±1.53E-16	3.95±3.65E-16
2nd Quarter	1.24±1.06E-16	-0.67±1.62E-16
3rd Quarter	1.89±1.68E-16	1.63±2.49E-16
4th Quarter	-0.91±1.23E-16	1.74±8.00E-16

Table D - 24
1999 Airborne Radioactivity Concentrations (µCi/mL) at the Great Valley Background Air Sampler (AFGRVAL)

Month	Alpha	Beta	H-3
January	7.99±9.13E-16	2.17±0.34E-14	-0.17±2.66E-13
February	9.52±9.63E-16	1.93±0.33E-14	0.37±4.52E-13
March	5.00±9.76E-16	1.59±0.32E-14	4.56±2.58E-13
April	0.49±1.13E-15	1.32±0.31E-14	-1.82±4.29E-13
May	0.34±1.05E-15	1.27±0.30E-14	-3.79±5.84E-13
June	0.80±1.05E-15	1.74±0.32E-14	-2.14±7.90E-13
July	0.59±1.06E-15	2.16±0.34E-14	-0.55±1.15E-12
August	0.70±1.12E-15	1.68±0.33E-14	0.42±1.05E-12
September	1.01±1.31E-15	2.17±0.34E-14	-3.61±9.44E-13
October	1.13±1.37E-15	1.98±0.33E-14	2.16±5.22E-13
November	0.33±1.16E-15	2.49±0.37E-14	2.84±4.29E-13
December	0.98±1.19E-15	1.83±0.33E-14	-1.79±3.46E-13

Quarter	K-40	Co-60	Sr-90	I-129	Cs-137
1st Quarter	4.31±5.15E-15	-0.65±1.84E-16	-1.11±2.38E-16	0.21±2.68E-16	0.00±3.38E-16
2nd Quarter	2.07±3.68E-15	0.01±1.70E-16	0.26±1.30E-16	-0.60±1.20E-16	-0.78±1.50E-16
3rd Quarter	0.53±5.09E-15	-0.80±2.44E-16	1.05±1.35E-16	-2.19±4.31E-16	-1.51±2.34E-16
4th Quarter	2.36±7.60E-15	-1.26±2.90E-16	0.19±1.28E-16	0.98±1.45E-16	-0.41±2.86E-16

	U-232	U-233/234	U-235/236	U-238	Total U (µg/mL)
1st Quarter	1.06±1.96E-17	1.62±0.56E-16	1.50±1.69E-17	1.37±0.52E-16	4.04±0.05E-10
2nd Quarter	0.38±2.11E-17	9.96±2.52E-17	5.71±5.60E-18	8.95±2.24E-17	3.28±0.06E-10
3rd Quarter	0.20±1.20E-17	1.03±0.27E-16	0.00±8.83E-18	1.10±0.27E-16	3.25±0.04E-10
4th Quarter	0.41±2.67E-17	8.17±2.71E-17	2.41±9.11E-18	1.14±0.31E-16	1.45±0.02E-10

	Pu-238	Pu-239/240	Am-241
1st Quarter	-1.02±6.60E-18	-1.66±3.34E-18	1.34±1.14E-17
2nd Quarter	0.75±1.69E-17	1.25±9.65E-18	1.46±1.09E-17
3rd Quarter	9.43±7.77E-18	1.57±3.14E-18	1.10±0.91E-17
4th Quarter	0.00±5.66E-18	4.23±4.93E-18	3.70±8.05E-18

Table D - 25
1999 Radioactivity Concentrations (µCi/mL) in Airborne Particulates at the Nashville Background Air Sampler (AFNASHV)

Month	Alpha	Beta
January	1.28±1.05E-15	2.62±0.37E-14
February	1.33±1.06E-15	1.97±0.33E-14
March	1.28±1.17E-15	1.81±0.34E-14
April	0.25±1.08E-15	1.34±0.31E-14
May	0.73±1.14E-15	1.30±0.30E-14
June	1.29±1.15E-15	1.56±0.31E-14
July	0.83±1.11E-15	2.13±0.34E-14
August	1.09±9.81E-16	1.67±0.32E-14
September	0.82±1.26E-15	2.20±0.35E-14
October	0.07±1.16E-15	1.94±0.33E-14
November	0.90±1.35E-15	3.31±0.42E-14
December	0.85±1.20E-15	2.11±0.36E-14

Quarter	Sr-90	Cs-137
1st Quarter	-1.24±1.72E-16	2.32±1.85E-16
2nd Quarter	0.95±1.17E-16	0.31±1.54E-16
3rd Quarter	0.09±1.24E-16	-0.17±2.29E-16
4th Quarter	-0.29±1.20E-16	1.28±3.04E-16

Table D - 26
1999 Radioactivity (nCi/m²/month) and pH in Fallout
Dutch Hill (AFDHFOP)

Month	Alpha	Beta	H-3 (µCi/mL)	K-40	Cs-137	pH (standard units)
January	4.56±0.96E-02	8.30±0.50E-01	-1.02±0.75E-07	1.41±1.35E+01	-0.31±1.04E+00	4.18
February	1.95±0.34E-02	1.69±0.11E-01	7.75±7.76E-08	0.52±1.08E+00	0.78±1.37E-01	NA
March	2.02±0.34E-02	2.39±0.13E-01	-1.10±0.82E-07	-7.24±9.80E-01	1.77±9.17E-02	3.66
April	3.21±0.50E-02	4.08±0.17E-01	2.91±8.54E-08	-0.28±8.73E-01	0.71±4.81E-02	3.00
May	2.09±0.60E-02	1.76±0.18E-01	-1.03±0.85E-07	0.69±3.37E+00	0.44±2.20E-01	6.43
June	1.75±0.46E-02	1.56±0.12E-01	-7.79±8.65E-08	0.63±1.31E+00	1.60±7.72E-02	3.80
July	5.35±0.65E-02	5.15±0.19E-01	-3.00±0.91E-07	-3.55±8.69E-01	0.24±5.36E-02	3.45
August	2.78±0.84E-02	6.52±0.40E-01	9.42±8.09E-08	4.44±5.20E+00	-2.19±3.39E-01	4.52
September	3.04±1.13E-02	4.08±0.34E-01	-1.59±0.86E-07	-1.80±6.03E+00	1.15±3.80E-01	4.49
October	2.89±1.00E-02	7.13±0.38E-01	-1.90±0.87E-07	0.42±4.26E+00	-0.64±2.65E-01	3.88
November	5.04±0.97E-02	3.87±0.30E-01	8.20±8.32E-08	0.14±4.71E+00	1.84±3.55E-01	4.13
December	2.69±1.01E-02	5.77±0.48E-01	-1.73±0.81E-07	-4.51±6.79E+00	1.37±5.18E-01	5.19

NA - Not available.

Table D-27
1999 Radioactivity (nCi/m²/month) and pH in Fallout
Rain Gauge (ANRGFOP)

Month	Alpha	Beta	H-3 (µCi/mL)	K-40	Cs-137	pH (standard units)
January	4.90±1.30E-02	7.47±0.64E-01	4.35±5.35E-08	-0.32±1.58E+01	0.19±1.42E+00	4.22
February	2.98±0.45E-02	2.07±0.13E-01	5.39±7.52E-08	1.30±3.00E+00	0.54±1.79E-01	4.52
March	1.79±0.74E-02	1.76±0.26E-01	-8.44±8.13E-08	-0.77±3.36E+00	-2.89±4.07E-01	6.03
April	1.66±0.78E-02	3.91±0.29E-01	-1.02±0.84E-07	-0.11±3.63E+00	-1.16±4.86E-01	7.15
May	2.47±0.69E-02	2.26±0.20E-01	-3.57±1.04E-07	0.64±3.51E+00	-1.14±2.28E-01	5.71
June	4.47±0.67E-02	2.83±0.15E-01	-4.09±8.78E-08	-0.28±1.06E+00	0.91±8.20E-02	3.53
July	6.25±0.72E-02	5.27±0.19E-01	-2.80±0.94E-07	3.26±7.91E-01	0.98±5.46E-02	3.71
August	2.37±0.87E-02	6.16±0.46E-01	7.23±8.09E-08	-1.03±0.61E+01	-0.20±4.28E-01	4.28
September	6.07±9.09E-03	3.33±0.35E-01	-1.69±0.86E-07	-0.49±5.93E+00	0.03±4.14E-01	4.11
October	4.08±1.31E-02	5.25±0.47E-01	-3.84±8.31E-08	-2.29±6.93E+00	-0.20±5.05E-01	4.53
November	6.56±1.48E-02	5.43±0.51E-01	2.31±8.19E-08	7.44±9.19E+00	-0.66±6.38E-01	4.42
December	3.54±1.50E-02	7.09±0.68E-01	-2.06±0.81E-07	-0.24±1.00E+01	2.48±7.06E-01	4.45

Table D-28
1999 Radioactivity (nCi/m²/month) and pH in Fallout
Route 240 (AF24FOP)

Month	Alpha	Beta	H-3 (µCi/mL)	K-40	Cs-137	pH (standard units)
January	3.25±0.88E-02	4.86±0.43E-01	2.59±7.48E-08	1.39±0.79E+01	2.38±6.51E-01	4.24
February	2.41±0.38E-02	2.46±0.13E-01	1.78±7.54E-08	-8.73±8.48E-01	-3.12±6.09E-02	3.87
March	1.73±0.38E-02	2.36±0.14E-01	-6.56±8.35E-08	-0.49±2.42E+00	0.83±2.26E-01	4.10
April	2.96±0.63E-02	4.05±0.23E-01	-2.72±8.25E-08	-3.04±3.12E+00	-1.26±1.65E-01	3.86
May	2.45±0.68E-02	3.18±0.23E-01	-1.78±0.87E-07	0.01±3.24E+00	-0.20±2.12E-01	4.55
June	3.93±0.64E-02	2.23±0.14E-01	-6.34±8.82E-08	0.94±1.10E+00	-1.99±8.84E-02	3.64
July	1.02±0.42E-02	2.19±0.14E-01	-3.36±0.69E-07	0.84±1.23E+00	1.42±7.90E-02	6.79
August	4.45±1.11E-02	5.41±0.40E-01	6.66±8.07E-08	1.86±5.59E+00	0.52±3.90E-01	4.65
September	9.08±8.16E-03	3.77±0.32E-01	-9.47±8.61E-08	-0.98±1.56E+01	-0.08±1.19E+00	4.07
October	3.57±1.04E-02	3.95±0.35E-01	0.60±8.23E-08	-1.28±6.71E+00	5.61±4.34E-01	4.58
November	3.79±0.98E-02	5.58±0.42E-01	-3.52±8.17E-08	-3.27±4.17E+00	1.56±2.99E-01	3.92
December	4.87±1.54E-02	7.36±0.64E-01	-1.99±0.81E-07	-0.23±1.02E+01	-3.38±8.14E-01	4.79

Table D-29
1999 Radioactivity (nCi/m²/month) and pH in Fallout
Thomas Corners Road (AFTCFOP)

Month	Alpha	Beta	H-3 (µCi/mL)	K-40	Cs-137	pH (standard units)
January	6.94±1.50E-02	6.56±0.60E-01	-2.16±7.57E-08	0.00±1.03E+01	-3.32±9.37E-01	4.37
February	4.55±0.93E-02	1.87±0.13E-01	7.56±7.62E-08	0.39±1.93E+00	0.35±1.31E-01	6.95
March	1.91±0.74E-02	2.14±0.26E-01	1.24±8.28E-08	3.85±6.51E+00	2.63±6.12E-01	6.28
April	2.03±0.68E-02	4.42±0.31E-01	-3.36±8.25E-08	3.20±6.49E+00	2.49±3.95E-01	4.35
May	2.90±0.81E-02	2.31±0.24E-01	-1.05±0.59E-07	3.15±6.38E+00	-0.41±4.95E-01	4.70
June	4.07±0.61E-02	1.63±0.12E-01	-5.14±8.95E-08	-1.06±8.14E-01	-1.72±6.26E-02	3.75
July	2.98±0.67E-02	5.05±0.29E-01	-2.04±0.86E-07	-0.97±4.17E+00	1.21±2.09E-01	3.63
August	2.39±1.07E-02	5.67±0.55E-01	1.24±0.81E-07	-0.74±8.98E+00	0.36±4.87E-01	5.27
September	7.85±9.55E-03	2.61±0.32E-01	-1.53±0.85E-07	-0.56±6.07E+00	-2.44±4.87E-01	4.27
October	4.43±1.21E-02	4.24±0.38E-01	-1.40±0.81E-07	-1.94±4.99E+00	0.93±4.18E-01	5.34
November	4.38±1.23E-02	3.68±0.44E-01	1.11±0.83E-07	3.72±5.71E+00	0.62±4.85E-01	4.57
December	3.32±1.49E-02	6.89±0.67E-01	-1.08±0.82E-07	0.25±8.30E+00	-2.54±7.50E-01	4.62

Table D-30
1999 Radioactivity (nCi/m²/month) and pH in Fallout
Fox Valley Road (AFFXFOP)

Month	Alpha	Beta	H-3 (µCi/mL)	K-40	Cs-137	pH (standard units)
January	5.23±1.22E-02	5.72±0.53E-01	0.64±7.56E-08	0.34±1.27E+01	0.26±1.30E+00	4.39
February	3.37±0.73E-02	1.60±0.12E-01	6.56±7.65E-08	-9.12±9.46E-01	0.16±1.12E-01	6.86
March	1.08±0.65E-02	1.55±0.23E-01	-4.81±8.13E-08	-0.49±5.38E+00	4.32±4.47E-01	5.96
April	2.19±0.54E-02	3.15±0.20E-01	-3.18±8.23E-08	1.61±2.63E+00	-0.67±1.92E-01	5.05
May	7.92±1.22E-02	3.43±0.26E-01	-9.22±8.84E-08	0.98±4.95E+00	-0.57±3.73E-01	4.38
June	6.53±1.01E-02	2.77±0.15E-01	-3.87±6.37E-08	1.06±8.04E-01	-0.59±5.69E-02	4.27
July	2.38±0.57E-02	4.73±0.24E-01	-2.40±0.96E-07	-0.86±2.42E+00	1.28±1.96E-01	3.82
August	3.51±0.92E-02	5.87±0.41E-01	1.08±0.81E-07	0.64±5.18E+00	0.91±4.18E-01	5.29
September	2.48±1.11E-02	2.78±0.32E-01	-8.16±8.65E-08	-1.98±6.26E+00	-2.08±4.01E-01	4.75
October	1.07±0.19E-01	4.45±0.40E-01	-4.96±8.31E-08	-1.42±6.45E+00	0.33±3.91E-01	5.64
November	7.54±1.50E-02	6.42±0.50E-01	7.08±8.27E-08	3.38±5.13E+00	0.54±3.52E-01	4.55
December	6.50±1.70E-02	6.48±0.62E-01	-1.21±0.83E-07	-0.32±1.06E+01	-5.90±6.65E-01	6.50