



Recording Air Flow at an Environmental Air Sampler

Appendix C - 2

Summary of Air Monitoring Data

Table C - 2.1
1991 Airborne Radioactive Effluent Monthly Totals (curies)
from the Main Ventilation Stack (ANSTACK)

MONTH	ALPHA	BETA	H-3
January	1.80±0.6E-07	4.53±0.3E-06	7.85±1.7E-03
February	4.35±3.3E-08	1.78±0.2E-06	1.03±0.2E-02
March	6.82±4.8E-08	6.47±0.3E-06	1.12±0.2E-02
April	4.85±3.4E-08	2.61±0.2E-05	9.16±1.7E-03
May	1.15±0.6E-07	3.53±0.3E-06	7.91±1.7E-03
June	1.15±0.7E-07	3.53±0.4E-06	1.09±0.1E-02
July	5.05±3.4E-08	2.32±0.2E-06	1.01±0.1E-02
August	8.01±4.8E-08	1.71±0.2E-06	9.97±0.7E-03
September	6.30±4.0E-08	2.02±0.2E-06	1.00±0.1E-02
October	4.08±3.0E-08	7.26±1.0E-07	8.59±0.6E-03
November	8.43±4.9E-08	1.31±0.1E-05	1.10±0.1E-02
December	5.49±3.1E-08	2.83±0.2E-06	6.88±0.6E-03
TOTALS	9.44±1.6E-07	6.86±0.1E-05	1.14±0.01E-01

Table C - 2.2
1991 Airborne Radioactive Effluent Quarterly Totals (curies)
from the Main Ventilation Stack (ANSTACK)

QTR	CO-60	SR-90	I-129	CS-134	CS-137	EU-154	
1st Qtr	<3.18E-08	4.20±0.1E-06	9.84±0.2E-06	<3.57E-08	7.87±0.8E-06	<1.08E-07	
2nd Qtr	<4.25E-08	1.71±0.1E-06	1.28±0.03E-05	<4.46E-08	8.29±0.8E-06	<1.31E-07	
3rd Qtr	<2.83E-08	1.13±0.1E-06	1.99±0.05E-05	<3.15E-08	5.46±0.5E-06	<9.45E-08	
4th Qtr	<2.81E-08	5.51±0.3E-06	8.37±0.2E-06	<3.15E-08	1.00±0.8E-06	<8.66E-08	
TOTALS	<6.64E-08	1.26±0.04E-05	5.09±0.1E-05	<7.24E-08	2.26±0.1E-05	<2.13E-07	
QTR	U-232	U-234	U-235	U-238	PU-238	PU-239/240	AM-241
1st Qtr	6.80±3.4E-08	<1.20E-08	<7.27E-09	<1.15E-08	<1.39E-08	3.41±3.1E-08	1.15±0.5E-07
2nd Qtr	<2.1E-08	<1.92E-08	<1.50E-08	<1.55E-08	4.72±2.9E-08	5.77±2.1E-08	1.39±0.4E-07
3rd Qtr	<4.8E-08	<8.14E-09	<3.60E-09	<1.65E-08	1.65±1.6E-08	1.63±1.1E-08	<8.66E-08
4th Qtr	<3.3E-09	<5.51E-09	<3.96E-09	<5.51E-09	4.20±1.8E-08	7.35±2.6E-08	1.99±0.4E-07
TOTALS	9.19±6.3E-08	<2.47E-08	<1.75E-08	<2.60E-08	1.20±0.4E-07	1.82±0.5E-07	5.40±1.2E-07

Table C - 2.3
Comparison of 1991 Main Stack Exhaust Radioactivity Concentrations
with Department of Energy Guidelines

ISOTOPE	HALF-LIFE	TOTAL μ Ci RELEASED ^(a)	AVG CONC (μ Ci/mL)	DCG(μ Ci/ML)	% OF DCG ^(c)
Alpha	N/A	9.44 E-01 (2.50 E+04 Bq)	1.3E-15	N/A ^(b)	—
Beta	N/A	6.86 E+01 (1.67 E+06 Bq)	6.1 E-14	N/A ^(b)	—
H-3	12.35 yrs	1.14 E+05 (3.92 E+09 Bq)	1.5 E-10 ^(d)	1 E-07	0.2
Co-60	5.27 yrs	<6.6E-02 (<2.5 E+03 Bq)	< 8.9E-17	8 E-11	0.0
Sr-90	29.124 yrs	1.26 E+01 (4.67 E+05 Bq)	1.7E-14	9 E-12	0.2
I-129	1.57 E+07 yrs	5.09 E+01 (1.89 E+06 Bq)	6.8E-14	7 E-11	0.1
Cs-134	2.06 yrs	<7.2E-02 (<9.7E+03 Bq)	< 9.7E-17	2 E-10	0.0
Cs-137	30 yrs	2.26 E+01 (8.37 E+05 Bq)	3.0 E-14	4 E-10	0.0
Eu-154	8.8 yrs	<2.1E-01 (<7.9 E+03 Bq)	< 2.9E-16	5 E-11	0.0
U-234 ^(e)	2.45 E+05 yrs	<2.5E-02 (<9.2E+02 Bq)	< 3.3E-17	9 E-14	0.0
U-235 ^(e)	7.1 E+08 yrs	<1.8E-02 (<6.5 E+02 Bq)	< 2.4E-17	1 E-13	0.0
U-238 ^(e)	4.47 E+09 yrs	<2.6E-02 (<9.6E+02 Bq)	3.5E-17	1 E-13	0.0
Pu-238	87.07 yrs	1.20 E-01 (4.44 E+03 Bq)	1.6E-16	3 E-14	0.5
Pu-239/240	2.4 E+04 yrs	1.82 E-01 (6.73 E+03 Bq)	2.4E-16	2 E-14	1.2
Am-241	432 yrs	5.40 E-01 (2.00 E+04 Bq)	7.3E-16	2 E-14	3.7
					5.9 ^(f)

Notes:

- a) Total volume released at 50,000 cfm = 7.44E+14 mL/year. μ Ci values are expressed also in Bq.
- b) Derived concentration guides (DCGs) are not specified for gross alpha or gross beta activity.
- c) Total percent DCGs for applicable measured radionuclides.
- d) Tritium reported in pCi/mL = 1.4E-04
- e) Total U (μ g) = 1.42E+05; average U (pg/mL) = 1.91E-04
- f) Total percent DCGs for specific measured radionuclides does not include % of DCG for U-232 because of analytical uncertainties. Total % of DCGs including provisional reporting of U-232 would be 6.5% for 1991.

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.

Table C - 2.4
1991 Airborne Radioactive Effluent Monthly Totals (curies)
from the Cement Solidification System Ventilation Stack (ANCSSTK)

MONTH	ALPHA	BETA
January	<6.4E-09	<1.6E-08
February	<3.7E-09	2.00±1.6E-08
March	<5.4E-09	2.67±2.1E-08
April	<3.9E-09	<1.8E-08
May	<5.7E-09	2.60±1.9E-08
June	<5.2E-09	<2.2E-08
July	<6.0E-09	1.87±1.7E-08
August	<5.6E-09	2.38±2.3E-08
September	<4.7E-09	1.92±1.8E-08
October	<3.4E-09	<1.3E-08
November	<4.3E-09	<1.2E-08
December	<4.9E-09	1.72±1.6E-08
TOTALS	<1.7E-08	2.34±0.6E-07

Table C - 2.5
1991 Airborne Radioactive Effluent Quarterly Totals (curies)
from the Cement Solidification System Ventilation Stack (ANCSSTK)

QTR	CO-60	SR-90	I-129	CS-134	CS-137	EU-154
1st Qtr	<5.6E-09	<2.2E-09	<4.6E-09	<5.6E-09	<5.5E-09	<1.6E-09
2nd Qtr	<7.6E-09	<4.7E-09	3.96±1.1E-08	<7.5E-09	<6.9E-09	<2.4E-08
3rd Qtr	<5.6E-09	5.59±4.6E-09	2.17±1.1E-08	<5.8E-09	<5.7E-09	<1.5E-08
4th Qtr	<6.3E-09	<3.8E-09	4.72±1.2E-08	<5.8E-09	<5.2E-09	<2.0E-08
TOTALS	<1.3E-08	1.63±0.8E-08	1.13±0.2E-07	<1.2E-08	<1.2E-08	<3.5E-08

QTR	U-232	U-234	U-235	U-238	PU-238	PU-239/240	AM-241
1st Qtr	<4.9E-09	6.09±4.1E-09	<1.9E-09	3.76±2.6E-09	<4.3E-09	1.98±1.9E-08	2.49±1.0E-08
2nd Qtr	<3.0E-09	<4.7E-10	<3.8E-10	1.17±0.8E-09	7.11±6.1E-09	<1.4E-09	9.65±4.1E-09
3rd Qtr	<1.8E-09	<4.2E-10	<4.2E-10	<5.6E-10	<2.9E-09	<5.8E-10	9.14±7.6E-09
4th Qtr	<6.2E-10	<6.4E-10	<6.6E-10	<6.8E-10	<8.2E-10	<8.7E-10	<4.1E-09
TOTALS	<6.1E-09	7.62±4.2E-09	3.36±2.1E-09	6.17±2.9E-09	1.51±0.8 E-08	2.26±1.0E-08	4.78±1.4 E-08

Table C - 2.6
1991 Airborne Radioactive Effluent Monthly Totals (curies)
from the Contact Size-Reduction Facility Ventilation Stack (ANCSRFK)

MONTH	ALPHA	BETA
January	<2.9E-09	1.29±1.0E-08
February	<3.0E-09	1.50±1.1E-08
March	<4.7E-09	3.05±1.3E-08
April	<2.5E-09	1.70±1.0E-08
May	<3.4E-09	1.67±1.0E-08
June	<3.4E-09	2.05±1.1E-08
July	<2.6E-09	2.50±1.0E-08
August	<3.5E-09	2.07±1.2E-08
September	<2.4E-09	1.25±0.9E-08
October	<2.0E-09	1.47±0.8E-08
November	<2.2E-09	1.56±0.8E-08
December	<2.4E-09	1.29±0.8E-08
TOTALS	<1.05E-08	2.14±0.4E-07

Table C - 2.7
1991 Airborne Radioactive Effluent Quarterly Totals (curies)
from the Contact Size-Reduction Facility Ventilation Stack (ANCSRFK)

QTR	CO-60	SR-90	I-129	CS-134	CS-137	EU-154
1st Qtr	<4.0E-09	<1.3E-09	<3.5E-09	<4.0E-09	<4.0E-09	<1.0E-08
2nd Qtr	<2.8E-09	<2.0E-09	3.25±1.2E-08	<2.9E-09	<2.8E-09	<9.9E-09
3rd Qtr	4.25±3.7E-09	<2.3E-09	1.09±0.7E-08	<4.1E-09	6.24±3.7E-09	<1.2E-08
4th Qtr	<3.8E-09	<1.9E-09	3.84±0.9E-08	<3.7E-09	<3.7E-09	<1.2E-08
TOTALS	1.48±0.7E-08	<3.8E-09	8.53±1.7E-08	<7.4E-09	1.67±0.7E-08	<2.2E-08

QTR	U-232	U-234	U-235	U-238	PU-238	PU-239/240	AM-241
1st Qtr	<1.1E-09	<1.1E-09	<6.0E-10	9.07±7.9E-10	<1.6E-09	2.04±0.8E-08	2.83 ±2.6E-09
2nd Qtr	<5.4E-09	<8.2E-10	<3.4E-10	<6.8E-10	<2.7E-09	<8.8E-10	3.97 ±2.0E-09
3rd Qtr	<2.2E-09	<2.8E-10	<2.7E-10	<2.8E-10	<1.8E-09	<4.8E-10	5.10 ±3.4E-09
4th Qtr	<4.5E-10	<3.7E-10	<3.7E-10	<3.8E-10	2.30±1.5E-09	5.39±2.3E-09	7.09 ±2.3E-09
TOTALS	<6.0E-09	<1.4E-09	<8.3E-10	2.25±1.1E-09	8.40±3.9E-09	2.72±0.8E-08	1.90 ±0.5E-08

Table C - 2.8
1991 Airborne Radioactive Effluent Monthly Totals (curies)
from the Supernatant Treatment System Ventilation Stack (ANSTSTK)

MONTH	ALPHA	BETA
January	<2.0E-09	<6.5E-09
February	<2.0E-09	<6.5E-09
March	<3.0E-09	1.32±0.8E-08
April	<1.8E-09	9.70±7.6E-09
May	<2.5E-09	7.38±7.2E-09
June	<1.9E-09	1.23±0.8E-08
July	<2.1E-09	8.74±7.0E-09
August	<2.3E-09	8.42±8.1E-09
September	<2.2E-09	<6.9E-09
October	<1.7E-09	<6.0E-09
November	<2.2E-09	1.10±0.6E-08
December	<2.1E-09	<6.2E-09
TOTALS	<7.5E-09	1.02±0.2E-07

Table C - 2.9
1991 Airborne Radioactive Effluent Quarterly Totals (curies)
from the Supernatant Treatment System Ventilation Stack (ANSTSTK)

QTR	CO-60	SR-90	I-129	CS-134	CS-137	EU-154	
1st Qtr	<2.4E-09	<9.8E-10	1.14±0.02E-06	<2.2E-10	<2.4E-10	<7.2E-09	
2nd Qtr	<3.1E-09	<1.3E-09	4.72±0.2E-07	<2.5E-09	<1.8E-09	<7.8E-09	
3rd Qtr	<2.2E-09	<2.2E-09	4.52±0.4E-07	2.67±2.0E-09	<1.6E-09	<5.8E-09	
4th Qtr	<2.5E-09	<2.0E-09	2.56±0.2E-07	<2.3E-09	6.44±2.8E-09	<7.1E-09	
TOTALS	<5.1E-09	<3.4E-09	2.32±0.05E-06	7.67±3.9E-09	1.00±0.3E-08	<1.4E-08	
QTR	U-232	U-234	U-235	U-238	PU-238	PU-239/240	AM-241
1st Qtr	<3.6E-09	<1.2E-10	<1.2E-09	<2.5E-09	<2.3E-09	3.78±3.1E-09	1.47±0.5E-08
2nd Qtr	<7.8E-10	<2.1E-10	<1.6E-10	5.11±3.3E-10	<1.5E-09	<5.1E-10	4.44±1.6E-09
3rd Qtr	<6.5E-10	<4.5E-10	<2.6E-10	<6.4E-10	<1.4E-09	<2.8E-10	<1.5E-09
4th Qtr	<2.7E-10	<3.6E-10	<2.7E-09	<5.0E-10	<4.1E-10	<4.3E-10	1.11±1.0E-09
TOTALS	<3.8E-09	<6.2E-10	<3.0E-09	<2.6E-09	<3.1E-09	4.99±3.2E-09	2.13±0.6E-08

Table C - 2.10
1991 Airborne Radioactive Effluent Monthly Totals (curies)
from the Supercompactor Ventilation Stack (ANSUPCV)

MONTH	ALPHA	BETA
January	<1.3E-10	1.08±0.5E-09
February	<1.0E-10	1.53±0.4E-09
March	<1.9E-10	1.20±0.5E-09
April	1.2±1.1E-10	1.44±0.6E-09
May	<2.2E-10	1.76±0.6E-09
June	<8.6E-11	2.65±0.6E-09
July	1.24±1.2E-10	1.65±0.5E-09
August	<1.5E-10	1.44±0.5E-09
September	3.06±2.1E-10	2.16±0.6E-09
October	2.14±1.7E-10	5.49±3.3E-10
November	<8.8E-11	9.79±3.0E-10
December	<1.2E-10	6.00±3.5E-10
TOTALS	1.73±0.5E-09	1.70±0.2E-08

Table C - 2.11
1991 Airborne Radioactive Effluent Quarterly Totals (curies)
from the Supercompactor Ventilation Stack (ANSUPCV)

QTR	CO-60	SR-90	CS-134	CS-137	EU-154	AM-241
1st Qtr	<4.4E-10	<2.3E-10	<3.6E-10	1.86±0.6E-09	<1.3E-09	2.84±1.2E-09
2nd Qtr	<5.3E-10	<3.9E-10	<5.5E-10	1.49±0.8E-09	<1.6E-09	2.00±1.8E-10
3rd Qtr	<5.5E-10	<4.2E-10	<6.2E-10	<6.2E-10	<1.8E-09	<1.4E-09
4th Qtr	<5.5E-10	<3.3E-10	<5.8E-10	<5.4E-10	<1.8E-09	8.00±4.0E-10
TOTALS	<1.0E-09	<7.0E-10	<1.1E-09	4.51±1.3E-09	<3.3E-09	5.22±1.9E-09
QTR	U-232	U-234	U-235	U-238	PU-238	PU-239/240
1st Qtr	5.33±4.0E-10	<4.8E-10	<2.9E-10	<2.9E-10	<5.2E-10	8.00±7.6E-10
2nd Qtr	<4.9E-10	2.84±2.7E-10	<1.2E-10	<1.2E-10	<3.2E-10	<1.5E-10
3rd Qtr	<8.7E-10	<4.8E-11	<4.8E-11	<4.8E-11	<2.4E-10	<7.1E-11
4th Qtr	<8.7E-11	<4.6E-11	<4.6E-11	<4.6E-11	5.78±2.2E-10	<1.2E-10
TOTALS	<1.1E-09	8.53±5.5E-10	<3.2E-10	<3.2E-10	1.65±0.7E-09	1.14±0.8E-09

Table C - 2.12
1991 Radioactivity Concentrations in Airborne Particulates ($\mu\text{Ci}/\text{mL}$)
at the Fox Valley Air Sampler (AFFXVRD)

	ALPHA	BETA	SR-90	CS-137
January	1.12 \pm 1.56E-15	1.84 \pm 0.33E-14		
February	7.87 \pm 7.26E-16	1.70 \pm 0.33E-14		
March	9.12 \pm 8.31E-16	1.59 \pm 0.32E-14		
1ST QTR			<8.19E-17	<1.97E-16
April	7.19 \pm 6.96E-16	1.42 \pm 0.30E-14		
July	9.26 \pm 8.23E-16	1.54 \pm 0.31E-14		
June	1.16 \pm 0.85E-15	1.52 \pm 0.30E-14		
2ND QTR			<6.9E-17	<2.58E-16
July	8.76 \pm 6.88E-16	1.77 \pm 0.32E-14		
August	< 8.43E-16	1.96 \pm 0.39E-14		
September	1.03 \pm 0.96E-15	1.94 \pm 0.39E-14		
3RD QTR			<7.67E-17	<3.21E-16
October	1.43 \pm 1.07E-15	2.52 \pm 0.39E-14		
November	< 4.30E-16	5.14 \pm 1.52E-15		
December*	< 1.73E-14	<1.14E-13		
4TH QTR			<5.54E-17	<2.27E-16

* December detection limits are elevated because of a sample failure.

Table C - 2.13
1991 Radioactivity Concentrations in Airborne Particulates ($\mu\text{Ci}/\text{mL}$)
at the Rock Springs Road Air Sampler (AFRSPRD)

	ALPHA	BETA	SR-90	CS-137	I-129
January	9.56 \pm 9.27E-16	2.06 \pm 0.41E-14			
February	<7.34E-16	1.77 \pm 0.34E-14			
March	<8.65E-16	1.60 \pm 0.36E-14			
1ST QTR			<8.40E-17	<2.29E-16	<2.84E-16
April	1.13 \pm 0.85E-15	1.61 \pm 0.33E-14			
May	8.27 \pm 7.53E-16	1.70 \pm 0.31E-14			
June	8.69 \pm 7.78E-16	1.42 \pm 0.30E-14			
2ND QTR			<1.03E-16	<2.53E-16	<1.98E-16
July	9.30 \pm 6.89E-16	2.15 \pm 0.33E-14			
August	8.02 \pm 6.78E-16	1.81 \pm 0.32E-14			
September	7.89 \pm 7.33E-16	1.83 \pm 0.33E-14			
3RD QTR			<6.92E-17	<1.65E-16	<1.04E-16
October	1.35 \pm 0.88E-15	2.16 \pm 0.30E-14			
November	<9.37E-16	2.02 \pm 0.33E-14			
December	9.73 \pm 8.56E-16	1.90 \pm 0.31E-14			
4TH QTR			2.75 \pm 1.1E-16	<2.68E-16	3.12 \pm 2.20E-16

Table C - 2.14**1991 Radioactivity Concentrations in Airborne Particulates ($\mu\text{Ci}/\text{mL}$)
at the Route 240 Air Sampler (AFRT240)**

	ALPHA	BETA	SR-90	CS-137
January	9.38 \pm 8.10E-16	1.90 \pm 0.34E-14		
February	8.76 \pm 7.54E-16	1.74 \pm 0.33E-14		
March	<1.38E-15	2.02 \pm 0.61E-14		
1ST QTR			<6.24E-17	<2.27E-16
April	9.41 \pm 7.81E-16	1.54 \pm 0.31E-14		
May	<7.40E-16	1.74 \pm 0.34E-14		
June	8.99 \pm 7.98E-16	1.62 \pm 0.32E-14		
2ND QTR			<9.79E-17	<3.05E-16
July	1.15 \pm 0.79E-15	1.94 \pm 0.34E-14		
August	8.00 \pm 7.39E-16	1.98 \pm 0.34E-14		
September	<6.53E-16	1.79 \pm 0.33E-14		
3RD QTR			<7.39E-17	3.14 \pm 2.77E-16
October	1.60 \pm 0.98E-15	2.06 \pm 0.31E-14		
November	1.07 \pm 0.94E-15	2.15 \pm 0.33E-14		
December	<2.45E-15	2.78 \pm 1.01E-14		
4TH QTR			<9.00E-17	<1.74E-16

Table C - 2.15**1991 Radioactivity Concentrations in Airborne Particulates ($\mu\text{Ci}/\text{mL}$)
at the Springville Air Sampler (AFSPRVL)**

	ALPHA	BETA	SR-90	CS-137
January	1.34 \pm 0.94E-15	1.87 \pm 0.34E-14		
February	1.32 \pm 0.87E-15	1.72 \pm 0.32E-14		
March	8.96 \pm 7.87E-16	1.4 \pm 0.29E-14		
1ST QTR			<6.11E-17	2.65 \pm 2.30E-16
April	9.51 \pm 7.47E-16	1.42 \pm 0.29E-14		
May	<7.03E-16	1.51 \pm 0.30E-14		
June	1.13 \pm 0.83E-15	1.49 \pm 0.29E-14		
2ND QTR			<5.66E-17	<2.63E-16
July	9.98 \pm 7.13E-16	1.76 \pm 0.31E-14		
August	1.04 \pm 0.77E-15	1.87 \pm 0.32E-14		
September	<6.36E-16	1.72 \pm 0.31E-14		
3RD QTR			<5.63E-17	<2.05E-16
October	1.95 \pm 1.04E-15	2.26 \pm 0.31E-14		
November	8.96 \pm 7.51E-16	1.86 \pm 0.26E-14		
December	1.10 \pm 0.78E-15	1.65 \pm 0.26E-14		
4TH QTR			<5.25E-17	<1.78E-16

Table C - 2.16

**1991 Radioactivity Concentrations in Airborne Particulates ($\mu\text{Ci}/\text{mL}$)
at the Thomas Corners Road Air Sampler (AFTCORD)**

	ALPHA	BETA	SR-90	CS-137
January	1.12±0.87E-15	2.06±0.36E-14		
February	1.01±0.72E-15	1.64±0.33E-14		
March	1.04±0.92E-15	1.57±0.33E-14		
1ST QTR			<6.90E-17	3.61±2.47E-16
April	8.64±6.99E-16	1.29±0.29E-14		
May	7.26±6.81E-16	1.17±0.28E-14		
June	9.08±7.90E-16	1.44±0.29E-14		
2ND QTR			<6.73E-17	<1.90E-16
July	6.77±5.00E-16	1.56±0.33E-14		
August	1.19±0.91E-15	2.22±0.42E-14		
September	1.12±1.02E-15	2.09±0.44E-14		
3RD QTR			<9.40E-17	4.31±3.35E-16
October	1.02±0.87E-15	2.05±0.35E-14		
November	1.31±0.93E-15	1.93±0.31E-14		
December	1.25±0.91E-15	1.79±0.29E-14		
4TH QTR			<3.93E-17	<2.37E-16

Table C - 2.17

**1991 Radioactivity Concentrations in Airborne Particulates ($\mu\text{Ci}/\text{mL}$)
at the West Valley Air Sampler (AFWEVAL)**

	ALPHA	BETA	SR-90	CS-137
January	1.54±1.06E-15	2.27±0.40E-14		
February	1.21±0.91E-15	2.14±0.37E-14		
March	9.09±8.64E-16	1.76±0.34E-14		
1ST QTR			<6.83E-17	<1.96E-16
April	1.15±0.84E-15	1.59±0.32E-14		
May	8.62±7.47E-16	1.59±0.30E-14		
June	8.53±7.32E-16	1.53±0.29E-14		
2ND QTR			<5.71E-17	<2.77E-16
July	1.03±0.71E-15	1.84±0.31E-14		
August	7.23±6.68E-16	1.68±0.30E-14		
September	<6.62E-16	1.51±0.30E-14		
3RD QTR			<1.08E-16	<1.85E-16
October	1.78±0.98E-15	2.04±0.29E-14		
November	8.70±7.11E-16	1.75±0.25E-14		
December	8.76±6.80E-16	1.62±0.24E-14		
4TH QTR			<4.18E-17	<1.96E-16

Table C - 2.18**1991 Radioactivity Concentrations in Airborne Particulates ($\mu\text{Ci}/\text{mL}$)
at the Great Valley Air Sampler (AFGRVAL)**

	ALPHA	BETA	SR-90	CS-137	I-129
January	1.38 \pm 1.07E-15	1.95 \pm 0.39E-14			
February	8.70 \pm 8.25E-16	1.85 \pm 0.37E-14			
March	< 8.63E-16	1.57 \pm 0.34E-14			
1ST QTR			< 8.98E-17	< 2.41E-16	4.05 \pm 2.73E-16
April	1.07 \pm 0.86E-15	1.40 \pm 0.32E-14			
May	9.28 \pm 7.58E-16	1.50 \pm 0.29E-14			
June	8.27 \pm 7.09E-16	1.35 \pm 0.27E-14			
2ND QTR			< 6.87E-17	< 2.90E-16	< 2.08E-16
July	1.11 \pm 0.73E-15	1.69 \pm 0.29E-14			
August	8.22 \pm 6.91E-16	1.54 \pm 0.29E-14			
September	7.97 \pm 7.05E-16	1.52 \pm 0.29E-14			
3RD QTR			< 1.64E-17	< 2.07E-16	< 2.13E-16
October	1.45 \pm 0.93E-15	2.04 \pm 0.31E-14			
November	9.15 \pm 7.61E-16	1.62 \pm 0.25E-14			
December	< 6.13E-16	1.50 \pm 0.25E-14			
4TH QTR			< 4.65E-17	< 2.00E-16	2.24 \pm 2.08E-16

Table C - 2.19**1991 Radioactivity Concentrations in Airborne Particulates ($\mu\text{Ci}/\text{mL}$)
at the Dunkirk Air Sampler (AFDNKRK)**

	ALPHA	BETA	SR-90	CS-137
January	1.14 \pm 1.03E-15	2.32 \pm 0.43E-14		
February	9.31 \pm 8.84E-16	2.26 \pm 0.41E-14		
March	1.23 \pm 1.04E-15	1.91 \pm 0.38E-14		
1ST QTR			< 7.90E-17	1.92 \pm 0.2E-17
April	9.90 \pm 8.39E-16	1.63 \pm 0.35E-14		
May	1.37 \pm 0.92E-15	1.52 \pm 0.30E-14		
June	9.11 \pm 7.69E-16	1.38 \pm 0.28E-14		
2ND QTR			< 6.99E-17	< 2.67E-16
July	7.55 \pm 6.29E-16	1.75 \pm 0.31E-14		
August	8.79 \pm 7.40E-16	1.63 \pm 0.31E-14		
September	8.28 \pm 7.50E-16	1.61 \pm 0.31E-14		
3RD QTR			< 5.33E-17	< 1.39E-16
October	1.50 \pm 0.94E-15	2.01 \pm 0.30E-14		
November	1.84 \pm 1.15E-15	2.39 \pm 0.34E-14		
December	1.34 \pm 0.97E-15	2.30 \pm 0.34E-14		
4TH QTR			< 4.91E-17	< 2.00E-16

Table C - 2.20
1991 Radioactivity Concentrations in Airborne Particulates ($\mu\text{Ci}/\text{mL}$)
at the Dutch Hill Air Sampler (AFBOEHN)

	ALPHA	BETA	SR-90	CS-137
<i>January</i>	1.65± 1.25E-15	2.34± 0.46E-14		
<i>February</i>	< 9.04E-16	2.07± 0.42E-14		
<i>March</i>	< 1.11E-15	1.99± 0.44E-14		
1ST QTR			< 7.37E-17	4.05± 3.54E-16
<i>April</i>	< 8.2E-16	1.86± 0.39E-14		
<i>May</i>	1.09± 0.97E-15	2.00± 0.38E-14		
<i>June</i>	1.25± 1.00E-15	1.61± 0.35E-14		
2ND QTR			< 7.61E-17	< 2.77E-16
<i>July</i>	< 7.04E-16	1.75± 0.37E-14		
<i>August</i>	9.77± 8.99E-16	1.88± 0.38E-14		
<i>September</i>	< 7.76E-16	1.68± 0.37E-14		
3RD QTR			< 9.73E-17	< 2.40E-16
<i>October</i>	1.74± 1.14E-15	2.06± 0.36E-14		
<i>November</i>	< 8.08E-16	1.94± 0.32E-14		
<i>December</i>	1.12± 0.92E-15	1.63± 0.30E-14		
4TH QTR			< 6.27E-17	< 2.51E-16

Table C - 2.21
Radioactivity in Fallout in 1991 (nCi/m2/month)

DUTCH HILL (AFDHFOP)				FOX VALLEY ROAD (AFFXFOP)			
MONTH	Gross Alpha	Gross Beta	H-3 (μCi/mL)	MONTH	Gross Alpha	Gross Beta	H-3 (μCi/mL)
<i>January</i>	<4.9E-03	1.1E-01	<1.0E-07	<i>January</i>	<8.4E-03	1.4E-01	<1.0E-07
<i>February</i>	4.8E-02	1.8E-01	<1.0E-07	<i>February</i>	8.5E-02	3.6E-01	<1.0E-07
<i>March</i>	<3.7E-02	4.3E-01	2.73±1.3E-07	<i>March</i>	<3.9E-02	5.6E-01	1.67±1.2E-07
<i>April</i>	<2.0E-02	3.1E-01	1.42±1.3E-07	<i>April</i>	4.1E-02	3.7E-01	1.83±1.3E-07
<i>May</i>	4.4E-02	2.8E-01	<1.0E-07	<i>May</i>	7.4E-02	3.3E-01	<1.0E-07
<i>June</i>	4.2E-02	1.3E-01	SAMPLE DRY	<i>June</i>	1.8E-02	1.6E-01	SAMPLE DRY
<i>July</i>	4.1E-02	3.7E-01	<1.0E-07	<i>July</i>	4.3E-02	3.5E-01	<1.0E-07
<i>August</i>	<1.7E-02	2.9E-01	<1.0E-07	<i>August</i>	<2.4E-02	1.4E-01	<1.0E-07
<i>September</i>	3.8E-02	3.2E-01	<1.0E-07	<i>September</i>	2.5E-02	3.0E-01	<1.0E-07
<i>October</i>	6.2E-02	5.1E-01	<1.0E-07	<i>October</i>	6.79E-02	5.5E-01	<1.0E-07
<i>November</i>	<1.3E-02	1.9E-01	4.28±1.5E-07	<i>November</i>	<2.1E-02	1.9E-01	<1.0E-07
<i>December</i>	<1.6E-02	2.1E-01	<1.0E-07	<i>December</i>	2.5E-02	1.6E-01	<1.0E-07

ROUTE 240 (AF24FOP)				THOMAS CORNERS ROAD (AFTCFOP)			
MONTH	Gross Alpha	Gross Beta	H-3 (μCi/mL)	MONTH	Gross Alpha	Gross Beta	H-3 (μCi/mL)
<i>January</i>	2.9E-02	3.4E-01	<1.0E-07	<i>January</i>	4.1E-02	3.2E-01	<1.0E-07
<i>February</i>	5.5E-02	2.7E-01	<1.0E-07	<i>February</i>	9.6E-02	3.3E-01	<1.0E-07
<i>March</i>	5.8E-02	6.6E-01	<1.0E-07	<i>March</i>	<5.0E-02	8.2E-01	2.28±1.2E-07
<i>April</i>	5.6E-02	4.0E-01	<1.0E-07	<i>April</i>	6.4E-02	4.1E-01	<1.2E-07
<i>May</i>	3.6E-02	2.0E-01	<1.0E-07	<i>May</i>	4.7E-02	8.0E-01	<1.0E-07
<i>June</i>	2.1E-02	1.7E-01	SAMPLE DRY	<i>June</i>	2.0E-02	1.4E-01	SAMPLE DRY
<i>July</i>	2.8E-02	3.7E-01	<1.0E-07	<i>July</i>	4.8E-02	3.9E-01	<1.0E-07
<i>August</i>	<1.4E-02	2.2E-01	SAMPLE DRY	<i>August</i>	<7.5E-03	7.4E-02	<1.0E-07
<i>September</i>	3.0E-02	4.0E-01	<1.0E-07	<i>September</i>	<3.3E-02	3.6E-01	<1.0E-07
<i>October</i>	7.9E-02	5.5E-01	<1.0E-07	<i>October</i>	5.7E-02	5.9E-01	<1.0E-07
<i>November</i>	2.0E-02	2.9E-01	<1.0E-07	<i>November</i>	<2.0E-02	2.6E-01	2.58±1.4E-07
<i>December</i>	<1.6E-02	2.4E-01	<1.4E-07	<i>December</i>	<1.0E-02	3.0E-01	<1.0E-07

RAIN GAGE (ANRGFOP)			
MONTH	Gross Alpha	Gross Beta	H-3 (μCi/mL)
<i>January</i>	1.8E-02	5.0E-01	<1.0E-07
<i>February</i>	3.0E-02	2.5E-01	<1.0E-07
<i>March</i>	6.0E-02	8.8E-01	3.31±1.3E-07
<i>April</i>	<2.9E-02	3.5E-01	2.59±1.3E-07
<i>May</i>	1.2E-01	5.2E-01	<1.0E-07
<i>June</i>	7.2E-02	2.0E-01	SAMPLE DRY
<i>July</i>	6.7E-02	3.9E-01	<1.0E-07
<i>August</i>	<1.4E-02	1.8E-01	<1.0E-07
<i>September</i>	<2.2E-02	2.7E-01	<1.0E-07
<i>October</i>	7.9E-02	6.7E-01	<1.0E-07
<i>November</i>	<1.6E-02	3.2E-01	2.88±1.5E-07
<i>December</i>	2.6E-02	2.7E-01	<1.4E-07

Table C - 2.22
pH of Precipitation Collected in Fallout Pots in 1991

MONTH	DUTCH HILL (AFDHFOP)	FOX VALLEY ROAD (AFFXFOP)	ROUTE 240 (AF24FOP)	THOMAS CORNERS ROAD (AFTCFOP)	RAIN GAGE (ANRGFOP)
<i>January</i>	3.74	4.14	3.91	3.93	3.86
<i>February</i>	3.93	4.17	3.83	3.98	3.96
<i>March</i>	3.93	4.27	4.09	3.99	3.96
<i>April</i>	3.96	4.13	6.63	4.15	4.09
<i>May</i>	5.18	5.83	8.07	4.84	7.54
<i>June</i>	DRY	DRY	DRY	DRY	DRY
<i>July</i>	3.54	3.44	3.49	3.84	3.90
<i>August</i>	3.67	3.78	DRY	3.14	3.54
<i>September</i>	3.61	3.80	4.16	4.16	3.80
<i>October</i>	3.62	3.82	4.05	3.93	4.09
<i>November</i>	3.72	4.17	3.71	3.97	4.17
<i>December</i>	3.51	4.37	3.58	3.58	3.45