



**Recording Air Flow at an Environmental Air Sampler**

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**APPENDIX C - 2**  
**Summary of Air Monitoring Data**

TABLE C - 2. 1			
1990 Airborne Radioactive Effluent Activity Monthly Totals (curies)			
from Main Ventilation Stack (ANSTACK)			
MONTH	Alpha	Beta	Tritium
January	7.69±4.8 E-08	3.55±0.3 E-06	2.08±0.2E-02
February	7.08±4.8 E-08	4.08±0.3 E-06	1.77±0.2E-02
March	1.27±0.7 E-07	5.49±0.4 E-06	2.22±0.2E-02
April	2.82±0.6 E-07	3.59±0.1 E-05	1.65±0.2E-02
May	1.03±0.5 E-07	4.80±0.3 E-06	1.31±0.1E-02
June	9.23±6.3 E-08	4.73±0.3 E-06	1.28±0.1E-02
July	7.21±1.4 E-07	3.53±0.1 E-05	1.06±0.1E-02
August	1.82±0.6 E-07	7.45±0.7 E-06	8.63±0.9E-03
September	4.47±1.0 E-07	1.53±0.1 E-05	1.06±0.1E-02
October	5.03±1.0 E-07	6.97±0.1 E-05	8.84±0.9E-03
November	5.02±4.1 E-08	1.68±0.1 E-06	8.97±0.9E-03
December	1.31±0.6 E-07	1.93±0.1 E-05	8.91 ± 0.9E03
1990 TOTALS	2.79 ± 0.3E-06	2.07±0.02E-04	1.60±0.1E-01

TABLE C - 2. 2						
1990 Airborne Radioactive Effluent Activity Quarterly Totals (curies)						
from Main Ventilation Stack (ANSTACK)						
QTR	Co-60	Sr-90	I-129	Cs-134	Cs-137	Eu-154
1ST QTR	<1.1 E-07	2.03 ± 0.2 E-06	9.40 ± 0.6 E-06	<6.3 E-08	4.42 ± 0.5 E-06	<7.7 E-08
2ND QTR	<1.2 E-07	9.77 ± 1.0 E-06	2.21 ± 0.1 E-05	<7.9 E-08	9.81 ± 1.0 E-06	<9.5 E-08
3RD QTR	<5.3 E-08	1.63 ± 0.7 E-05	1.32 ± 0.1 E-05	<4.2 E-08	1.95 ± 0.2 E-05	<6.5 E-08
4TH QTR	<4.9 E-08	3.37 ± 0.3 E-05	1.26 ± 0.1 E-05	<4.7 E-08	2.58 ± 0.3 E-05	<6.5 E-08
1990 TOTALS	<1.8 E-07	6.18 ± 0.8 E-05	5.73 ± 0.2 E-05	<1.2 E-07	5.95 ± 0.4 E-05	<1.5 E-07
	U-234	U-235/236	U-238	Pu-238	Pu-239/240	Am-241
1ST QTR	3.74 ± 1.6 E-08	<7.9 E-09	1.75 ± 1.2 E-08	4.05 ± 1.6 E-08	7.35 ± 2.3 E-08	1.42 ± 0.3 E-07
2ND QTR	***	***	Not available	***	***	***
3RD QTR	2.58 ± 0.9 E-08	9.65 ± 6.2 E-09	6.02 ± 5.4 E-09	3.28 ± 0.8 E-07	4.21 ± 1.0 E-07	9.53 ± 1.4 E-07
4TH QTR	2.09 ± 0.8 E-08	1.05 ± 0.6 E-08	6.98 ± 5.5 E-09	2.35 ± 0.6 E-07	2.17 ± 0.5 E-07	5.00 ± 0.7 E-07
1990 TOTALS	8.41 ± 2.0 E-08	2.80 ± 1.2 E-08	3.05 ± 1.4 E-08	6.04 ± 1.0 E-07	7.12 ± 1.1 E-07	1.60 ± 0.2 E-06

TABLE C - 2.3

**Comparison of 1990 Main Stack Exhaust Radioactivity Concentrations  
with Department of Energy Guidelines**

ISOTOPE	Half-life	Total $\mu\text{Ci}$ Released <sup>(a)</sup>	Avg Conc. ( $\mu\text{Ci}/\text{mL}$ )	DCG ( $\mu\text{Ci}/\text{mL}$ )	% of DCG <sup>(c)</sup>
Alpha	N/A	2.79 E+00 (1.03 E+05 Bq)	3.1 E-15	N/A <sup>(b)</sup>	--
Beta	N/A	2.07 E+02 (7.66 E+06 Bq)	2.3 E-13	N/A <sup>(b)</sup>	--
H-3	12.35 yrs	1.60 E+05 (5.92 E+09 Bq)	1.8 E-10 <sup>(d)</sup>	1 E-07	0.2
Co-60	5.27 yrs	<1.8 E-01 (<6.7 E+03 Bq)	<2.0 E-16	8 E-11	<0.1
Sr-90	29.124 yrs	6.18 E+01 (2.29 E+06 Bq)	6.9 E-14	9 E-12	0.8
I-129	1.57 E+07 yrs	5.73 E+01 (2.12 E+06 Bq)	6.4 E-14	7 E-11	<0.1
Cs-134	2.06 yrs	<1.2 E-01 (<4.4 E+03 Bq)	<1.3 E-16	2 E-10	<0.1
Cs-137	30 yrs	5.95 E+01 (2.20 E+06 Bq)	6.7 E-14	4 E-10	<0.1
Eu-154	8.8 yrs	<1.5 E-01 (<5.6 E+03 Bq)	<1.7 E-16	5 E-11	<0.1
U-234 <sup>(e)</sup>	2.45 E+05 yrs	8.41 E-02 (3.11 E+03 Bq)	9.4 E-17	9 E-14	0.1
U-235 <sup>(e)</sup>	7.1 E+08 yrs	2.81 E-02 (1.04 E+03 Bq)	3.2 E-17	1 E-13	<0.1
U-238 <sup>(e)</sup>	4.47 E+09 yrs	3.05 E-02 (1.13 E+03 Bq)	3.4 E-17	1 E-13	<0.1
Pu-238	87.07 yrs	6.04 E-01 (2.23 E+04 Bq)	6.8 E-16	3 E-14	2.3
Pu-239	2.4 E+04 yrs	7.12 E-01 (2.63 E+04 Bq)	8.0 E-16	2 E-14	4.0
Am-241	432 yrs	1.60 E+00 (5.92 E+04 Bq)	1.8 E-15	2 E-14	9.0
					16.7

## Notes:

- <sup>a</sup> Total volume released at 60,000 cfm = 8.92E+14 mL/year.  $\mu\text{Ci}$  values are expressed also in Bq.
- <sup>b</sup> Derived Concentration Guides (DCGs) are not specified for gross alpha or gross beta activity.
- <sup>c</sup> Total percent DCG for applicable measured radionuclides. The percent DCG at the site boundary location with the highest annual average concentration is only 8E-05.
- <sup>d</sup> Tritium reported in pCi/mL = 1.8E-04.
- <sup>e</sup> Total U ( $\mu\text{g}$ ) = 1.05E+05; average U (pg/mL) = 1.17E-04.

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**

**1990 Airborne Radioactive Effluent Activity Monthly Totals (curies)  
from the Cement Solidification System Ventilation Stack (ANCSSTK)**

<b>MONTH</b>	<b>Alpha</b>	<b>Beta</b>
<b>January</b>	<5.2E-09	2.43±1.5E-08
<b>February</b>	<4.6E-09	<1.5E-08
<b>March</b>	<6.0E-09	2.28±1.9E-08
<b>April</b>	<5.4E-09	2.61±1.7E-08
<b>May</b>	<5.7E-09	1.23 ± 0.2E-07
<b>June</b>	<7.8E-09	2.74±2.1E-08
<b>July</b>	<5.8E-09	4.87±2.1E-08
<b>August</b>	<5.6E-09	3.40±1.9E-08
<b>September</b>	<5.4E-09	3.07±2.1E-08
<b>October</b>	<4.8E-09	1.55±2.1E-08
<b>November</b>	<3.8E-09	1.57±1.5E-08
<b>December</b>	<4.1E-09	<1.7E-08
<b>1990 TOTALS</b>	<1.9E-08	4.00±0.6E-07

**TABLE C - 2. 5**

**1990 Airborne Radioactive Effluent Activity Quarterly Totals (curies)  
from the Cement Solidification System Ventilation Stack (ANCSSTK)**

<b>QTR</b>	<b>Co-60</b>	<b>Sr-90</b>	<b>I-129</b>	<b>Cs-134</b>	<b>Cs-137</b>	<b>Eu-154</b>
<b>1ST QTR</b>	<2.0 E-08	<1.52 E-09	6.18 ± 1.1 E-08	<1.2 E-08	<1.2 E-08	<1.1 E-08
<b>2ND QTR</b>	<2.1 E-08	2.55 ± 0.5 E-09	<1.2 E-08	<1.4 E-08	<1.9 E-08	<1.1 E-08
<b>3RD QTR</b>	8.44 ± 4.4 E-09	2.58 ± 0.8 E-09	<7.5 E-09	<7.1 E-09	<7.1 E-09	<8.5 E-09
<b>4TH QTR</b>	<1.6 E-08	2.69 ± 1.2 E-09	<9.4 E-09	<8.5 E-09	<1.3 E-08	<6.6 E-09
<b>1990 TOTALS</b>	<3.3 E-08	9.34 ± 2.2 E-09	9.07 ± 2.0 E-08	<2.2 E-08	<2.7 E-08	<1.9 E-08
	<b>U-234</b>	<b>U-235</b>	<b>U-238</b>	<b>Pu-238</b>	<b>Pu-239/240</b>	<b>Am-241</b>
<b>1ST QTR</b>	4.24 ± 2.1 E-09	<1.3 E-09	2.65 ± 1.8 E-09	<8.0 E-10	<6.5 E-10	2.64 ± 1.6 E-09
<b>2ND QTR</b>	***	***	Not available	***	***	***
<b>3RD QTR</b>	1.29 ± 1.1 E-09	<8.8 E-10	<7.8 E-10	1.16 ± 1.0 E-09	<6.8 E-10	1.12 ± 1.0 E-09
<b>4TH QTR</b>	1.46 ± 1.2 E-09	<8.1 E-10	1.10 ± 1.1 E-09	<7.5 E-10	<7.4 E-10	1.76 ± 1.3 E-09
<b>1990 TOTALS</b>	6.99 ± 2.7 E-09	<1.8 E-09	4.53 ± 2.2 E-09	2.71 ± 1.48 E-09	<1.2 E-09	5.52 ± 2.3 E-09

TABLE C - 2. 6		
1990 Airborne Radioactive Effluent Activity Monthly Totals (curies) from the Contact Size Reduction Facility Ventilation Stack (ANCSRFK)		
MONTH	Alpha	Beta
January	<2.5E-09	8.42±6.8 E-09
February	<2.0E-09	7.60±6.8 E-09
March	<3.3E-09	1.44±1.0 E-08
April	<2.7E-09	2.06±1.0 E-08
May	<2.2E-09	1.73±1.0 E-08
June	<5.5E-09	3.20±1.4 E-08
July	<3.1E-09	1.09±0.8 E-08
August	<2.9E-09	<9.8E-09
September	<4.2E-09	4.78±1.6 E-08
October	<3.4E-09	1.36±1.0 E-08
November	<2.7E-09	1.69±1.0 E-08
December	<3.3E-09	2.19±1.2 E-08
1990 TOTALS	<1.1E-08	2.21±0.4E-07

TABLE C - 2. 7						
1990 Airborne Radioactive Effluent Activity 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	<1.2 E-08	<9.5 E-10	4.50 ± 0.7 E-08	<1.0 E-08	<1.0 E-08	<6.8 E-09
2ND QTR	<1.0 E-08	3.93 ± 0.5 E-09	<6.5 E-09	<7.1 E-09	<8.8 E-09	<5.9 E-09
3RD QTR	<6.5 E-09	<5.3 E-10	<5.7 E-09	<3.4 E-09	<4.0 E-09	<4.5 E-09
4TH QTR	<6.2 E-09	1.81 ± 0.8 E-09	<5.1 E-09	<4.0 E-09	<4.5 E-08	<3.1 E-09
1990 TOTALS	<1.8 E-08	7.22 ± 1.4 E-09	6.25 ± 1.2 E-08	<1.3 E-08	<1.5 E-08	<1.1 E-08
	U-234	U-235	U-238	Pu-238	Pu-239/240	Am-241
1ST QTR	<9.5 E-10	5.94 ± 5.3 E-10	<9.2 E-10	<5.3 E-10	7.92 ± 6.6 E-10	6.71 ± 5.1 E-10
2ND QTR	***	***	Not available	***	***	***
3RD QTR	<6.7 E-10	<5.3 E-10	8.04 ± 7.2 E-10	<3.8 E-10	<5.4 E-10	6.28 ± 5.2 E-10
4TH QTR	7.95 ± 6.3 E-10	<4.4 E-10	7.95 ± 6.3 E-10	<3.3 E-10	<6.3 E-10	1.17 ± 0.7 E-09
1990 TOTALS	<1.3 E-09	<8.7 E-10	2.52 ± 1.3 E-09	<7.3 E-10	<1.1 E-09	2.47 ± 1.1 E-09

TABLE C - 2. 8		
1990 Airborne Radioactive Effluent Activity Monthly Totals (curies) from the Supernatant Treatment System Ventilation Stack (ANSTSTK)		
MONTH	Alpha	Beta
January	<1.5E-09	6.98±4.6 E-09
February	<1.9E-09	8.78±5.1 E-09
March	<2.7E-09	9.05±6.4 E-09
April	<1.8E-09	6.42±5.6 E-09
May	<1.5E-09	7.91±5.1 E-09
June	<3.1E-09	8.60±7.1 E-09
July	<2.1E-09	6.98±5.6 E-09
August	<1.5E-09	1.40±0.7 E-08
September	<2.1E-09	<7.1E-09
October	<2.0E-09	1.44±0.7 E-08
November	<1.9E-09	1.00±0.6 E-08
December	<1.9E-09	1.01±0.7 E-08
1990 TOTALS	<7.1E-09	1.10±0.2E-07

TABLE C - 2. 9						
1990 Airborne Radioactive Effluent Activity Quarterly Totals (curies) from the Supernatant Treatment System Ventilation System (ANSTSTK)						
QTR	Co-60	Sr-90	I-129	Cs-134	Cs-137	Eu-154
1ST QTR	<5.9 E-09	<6.7 E-10	7.11 ± 0.5 E-07	<4.7 E-09	<4.2 E-09	<4.2 E-09
2ND QTR	<1.1 E-08	7.35 ± 2.5 E-10	7.03 ± 0.4 E-07	<7.2 E-09	<8.3 E-09	<5.3 E-09
3RD QTR	<4.7 E-09	1.75 ± 0.4 E-09	3.46 ± 0.2 E-07	<3.0 E-09	<2.8 E-09	<3.8 E-09
4TH QTR	2.80 ± 2.1 E-09	1.25 ± 0.6 E-09	3.97 ± 0.3 E-07	<2.8 E-09	<3.0 E-09	<3.6 E-09
1990 TOTALS	<1.4 E-08	4.40 ± 1.0 E-09	2.16 ± 0.1 E-06	<9.5 E-09	<1.0 E-08	<8.6 E-09
	U-234	U-235	U-238	Pu-238	Pu-239/240	Am-241
1ST QTR	3.91 ± 2.1 E-09	<1.1 E-09	4.27 ± 2.1 E-09	1.08 ± 0.8 E-09	<6.1 E-10	2.67 ± 1.1 E-09
2ND QTR	***	***	Not available	***	***	***
3RD QTR	8.45 ± 5.5 E-10	<3.0 E-10	<4.5 E-10	<2.2 E-11	<2.2 E-11	<3.1 E-10
4TH QTR	5.16 ± 5.0 E-10	<4.1 E-10	<4.4 E-10	5.63 ± 4.1 E-10	<2.0 E-10	3.31 ± 1.0 E-09
1990 TOTALS	5.27 ± 2.2 E-09	<1.2 E-09	5.16 ± 2.2 E-09	1.67 ± 0.9 E-09	<6.4 E-10	6.29 ± 1.5 E-09

TABLE C - 2.10		
1990 Airborne Radioactive Effluent Activity Monthly Totals (curies) from the Supercompactor Ventilation System (ANSUPCV)		
MONTH	Alpha	Beta
January	< 1.4E-10	2.54±0.6E-09
February	2.66±1.8E-10	1.76±0.4E-09
March	< 2.0E-10	2.68±0.6E-09
April	< 8.1E-11	1.57±0.5E-09
May	< 1.4E-10	1.65±0.5E-09
June	< 1.7E-10	1.65±0.4E-09
July	< 1.4E-10	1.06±0.3E-09
August	< 1.5E-10	2.40±0.5E-09
September	< 1.7E-10	3.00±0.7E-09
October	< 1.9E-10	1.94±0.6E-09
November	< 1.1E-10	1.78±0.5E-09
December	< 1.6E-10	1.45 ±0.6E-09
1990 TOTALS	< 5.4E-10	2.35±0.2E-08

TABLE C - 2.11						
1990 Airborne Radioactive Effluent Activity Quarterly Totals (curies) from the Supercompactor Ventilation System (ANSUPCV)						
QTR	Co-60	Sr-90	Cs-134	Cs-137	Eu-154	
1ST QTR	< 3.0 E-09	7.22 ± 1.7 E-10	< 1.4 E-09	< 2.2 E-09	< 1.2 E-09	
2ND QTR	< 1.9 E-09	1.22 ± 0.1 E-09	< 1.8 E-09	< 1.8 E-09	< 1.2 E-09	
3RD QTR	< 1.0 E-09	< 3.8 E-10	< 6.6 E-10	< 7.1 E-10	< 7.6 E-10	
4TH QTR	< 1.5 E-09	< 1.2 E-10	< 8.0 E-10	< 5.7 E-10	< 6.1 E-10	
1990 TOTALS	< 4.0 E-09	2.44 ± 0.4 E-09	< 2.5 E-09	< 3.0 E-09	< 2.0 E-09	
	U-234	U-235	U-238	Pu-238	Pu-239/240	Am-241
1ST QTR	< 1.1 E-10	< 1.1 E-10	< 1.1 E-10	< 1.5 E-10	< 1.0 E-10	4.27 ± 2.0 E-10
2ND QTR	***	***	Not available	***	***	***
3RD QTR	2.24 ± 1.2 E-10	1.01 ± 1.0 E-10	1.12 ± 1.0 E-10	8.87 ± 6.4 E-11	< 4.5 E-11	< 4.4 E-11
4TH QTR	1.26 ± 1.1 E-10	< 7.3 E-11	< 7.6 E-11	6.32 ± 5.8 E-10	< 3.6 E-10	1.15 ± 0.7 E-10
1990 TOTALS	4.60 ± 2.0 E-10	< 1.6 E-10	< 1.7 E-10	8.71 ± 6.0 E-10	< 3.8 E-10	5.86 ± 2.2 E-10



TABLE C - 2.12				
1990 Radioactivity Concentrations in Airborne Particulates at Fox Valley Air Sampler (AFFXVRD) in $\mu\text{Ci/mL}$				
MONTH	Alpha	Beta	Strontium-90	Cesium-137
JAN	<3.3E-15	2.77±0.4E-14		
FEB	3.80±1.1E-15	2.51±0.4E-14		
MAR	1.20±1.1E-15	2.20±0.4E-14		
1st Qtr			<1.49E-16	<6.01E-16
APR	1.89±1.3E-15	2.33±0.4E-14		
MAY	8.62±7.4E-16	3.50±0.9E-14		
JUN	<8.4E-16	1.67±0.3E-14		
2nd Qtr			4.88±2.6E-17	<6.52E-16
JUL	<9.5E-16	1.34±0.4E-14		
AUG	<7.1E-16	2.02±0.4E-14		
SEP	9.72±8.7E-16	2.03±0.4E-14		
3rd Qtr			9.70 ± 1.2E-16	<2.80E-16
OCT	<8.7E-16	1.62±0.4E-14		
NOV	1.35±1.0E-15	2.11±0.4E-14		
DEC	9.45±7.6E-16	1.77±0.3E-14		
4th Qtr			2.12 ± 0.5E-16	<2.27E-16

TABLE C - 2.13					
1990 Radioactivity Concentrations in Airborne Particulates at Rock Springs Road Sampler (AFRSPRD) in $\mu\text{Ci/mL}$					
MONTH	Alpha	Beta	Strontium-90	Iodine-129	Cesium-137
JAN	<5.2E-16	1.87±0.3E-14			
FEB	7.40±7.2E-16	1.69±0.3E-14			
MAR	8.08±7.6E-16	1.56±0.3E-14			
1st Qtr			4.01±0.8E-16	<3.94E-16	<5.56E-16
APR	7.06±6.4E-16	1.71±0.3E-14			
MAY	8.25±6.7E-16	9.26±0.2E-15			
JUN	<7.0E-16	1.30±0.3E-14			
2nd Qtr			4.81±2.0E-17	Not available	4.98 ± 3.6E-16
JUL	<6.8E-16	1.65±0.3E-14			
AUG	<5.9E-16	1.43±0.3E-14			
SEP	5.79 ± 5.6E-16	1.59±0.3E-14			
3rd Qtr			5.74 ± 3.9E-17	<3.63E-16	<1.98E-16
OCT	<6.4E-16	1.57±0.3E-14			
NOV	1.10±0.9E-15	2.43±0.4E-14			
DEC	1.04±0.8E-15	1.78±0.3E-14			
4th Qtr			1.60 ± 0.5E-16	<2.96E-16	<2.96E-16

**TABLE C - 2.14**

**1990 Radioactivity Concentrations in Airborne Particulates  
at Route 240 Air Sampler (AFRT240) in  $\mu\text{Ci/mL}$**

MONTH	Alpha	Beta	Strontium-90	Cesium-137
JAN	$8.04 \pm 7.9\text{E-}16$	$2.05 \pm 0.3\text{E-}14$		
FEB	$< 6.9\text{E-}16$	$1.96 \pm 0.3\text{E-}14$		
MAR	$< 6.9\text{E-}16$	$1.75 \pm 0.3\text{E-}14$		
<b>1st Qtr</b>			$< 1.20\text{E-}16$	$< 5.67\text{E-}16$
APR	$1.15 \pm 1.0\text{E-}15$	$1.79 \pm 0.3\text{E-}14$		
MAY	$< 7.4\text{E-}16$	$1.25 \pm 0.3\text{E-}14$		
JUN	$< 9.2\text{E-}16$	$1.90 \pm 0.4\text{E-}14$		
<b>2nd Qtr</b>			$4.51 \pm 2.4\text{E-}17$	$< 6.02\text{E-}16$
JUL	$< 1.0\text{E-}15$	$2.18 \pm 0.4\text{E-}14$		
AUG	$9.49 \pm 9.2\text{E-}16$	$1.87 \pm 0.4\text{E-}14$		
SEP	$1.18 \pm 1.0\text{E-}15$	$2.16 \pm 0.4\text{E-}14$		
<b>3rd Qtr</b>			$3.20 \pm 0.6\text{E-}16$	$< 2.91\text{E-}16$
OCT	$< 8.7\text{E-}16$	$1.64 \pm 0.4\text{E-}14$		
NOV	$1.02 \pm 0.9\text{E-}15$	$2.59 \pm 0.4\text{E-}14$		
DEC	$< 7.1\text{E-}16$	$1.76 \pm 0.3\text{E-}14$		
<b>4th Qtr</b>			$2.56 \pm 0.6\text{E-}16$	$< 3.35\text{E-}16$

**TABLE C - 2.15**

**1990 Radioactivity Concentrations in Airborne Particulates  
at Springville Air Sampler (AFSPRVL) in  $\mu\text{Ci/mL}$**

MONTH	Alpha	Beta	Strontium-90	Cesium-137
JAN	$1.40 \pm 1.2\text{E-}15$	$3.75 \pm 0.6\text{E-}14$		
FEB	$8.74 \pm 8.1\text{E-}16$	$1.75 \pm 0.3\text{E-}14$		
MAR	$9.70 \pm 8.7\text{E-}16$	$1.58 \pm 0.3\text{E-}14$		
<b>1st Qtr</b>			$< 1.20\text{E-}16$	$< 8.40\text{E-}16$
APR	$1.19 \pm 0.9\text{E-}15$	$1.70 \pm 0.3\text{E-}14$		
MAY	$6.82 \pm 6.3\text{E-}16$	$8.84 \pm 2.3\text{E-}15$		
JUN	$< 6.2\text{E-}16$	$1.04 \pm 0.2\text{E-}14$		
<b>2nd Qtr</b>			$3.68 \pm 1.4\text{E-}17$	$< 6.83\text{E-}16$
JUL	$< 6.4\text{E-}16$	$1.36 \pm 0.3\text{E-}14$		
AUG	$6.72 \pm 5.6\text{E-}16$	$1.50 \pm 0.3\text{E-}14$		
SEP	$6.52 \pm 5.3\text{E-}16$	$1.63 \pm 0.3\text{E-}14$		
<b>3rd Qtr</b>			$< 3.65\text{E-}17$	$< 1.67\text{E-}16$
OCT	$< 6.7\text{E-}16$	$1.50 \pm 0.3\text{E-}14$		
NOV	$1.34 \pm 0.9\text{E-}15$	$2.09 \pm 0.3\text{E-}14$		
DEC	$1.11 \pm 0.8\text{E-}15$	$1.93 \pm 0.3\text{E-}14$		
<b>4th Qtr</b>			$7.35 \pm 4.0\text{E-}17$	$4.44 \pm 2.6\text{E-}16$

TABLE C - 2.16				
1990 Radioactivity Concentrations in Airborne Particulates at Thomas Corners Road Air Sampler (AFTCORD) in $\mu\text{Ci/mL}$				
MONTH	Alpha	Beta	Strontium-90	Cesium-137
JAN	8.81±6.8E-16	1.84±0.3E-14		
FEB	8.75±6.7E-16	1.59±0.3E-14		
MAR	8.09±7.1E-16	1.46±0.3E-14		
1st Qtr			<9.30E-17	<6.69E-16
APR	9.31±7.9E-16	1.33±0.3E-14		
MAY	6.70±4.4E-16	1.12±0.2E-14		
JUN	<6.5E-16	1.26±0.3E-14		
2nd Qtr			4.41±1.5E-17	<3.98E-16
JUL	<7.3E-16	1.36±0.3E-14		
AUG	7.25±7.2E-16	1.48±0.3E-14		
SEP	9.29±8.4E-16	1.98±0.4E-14		
3rd Qtr			1.82 ± 0.5E-16	<2.27E-16
OCT	<8.3E-16	1.89±0.4E-14		
NOV	8.51±8.5E-16	2.33±0.4E-14		
DEC	7.79±7.6E-16	1.85±0.3E-14		
4th Qtr			1.18 ± 0.4E-16	<2.32E-16

TABLE C - 2.17				
1990 Radioactivity Concentrations in Airborne Particulates at West Valley Air Sampler (AFWEVAL) in $\mu\text{Ci/mL}$				
MONTH	Alpha	Beta	Strontium-90	Cesium-137
JAN	9.62±0.1E-16	2.75±0.5E-14		
FEB	1.45±1.1E-15	2.60±0.5E-14		
MAR	1.41±1.2E-15	2.39±0.4E-14		
1st Qtr			<1.60E-16	<6.50E-16
APR	1.33±1.1E-15	2.40±0.4E-14		
MAY	8.20±7.5E-16	1.09±0.3E-14		
JUN	<7.6E-16	1.58±0.3E-14		
2nd Qtr			9.57±3.3E-17	<9.62E-16
JUL	<8.5E-16	1.61±0.3E-14		
AUG	8.20±7.3E-16	2.07±0.3E-14		
SEP	1.09±0.8E-15	2.63±0.4E-14		
3rd Qtr			1.13 ± 0.5E-16	<2.14E-16
OCT	<7.7E-16	1.95±0.4E-14		
NOV	1.40±1.0E-15	2.49±0.4E-14		
DEC	1.04±0.9E-15	2.34±0.4E-14		
4th Qtr			1.28 ± 0.5E-16	<2.99E-16

**TABLE C - 2.18**

**1990 Radioactivity Concentrations in Airborne Particulates  
at Great Valley Air Sampler (AFGRVAL) in  $\mu\text{Ci}/\text{mL}$**

MONTH	Alpha	Beta	Strontium-90	Iodine-129	Cesium-137
JAN	1.39±0.9E-15	1.83±0.3E-14			
FEB	1.04±0.8E-15	1.80±0.3E-14			
MAR	1.12±0.9E-15	1.63±0.3E-14			
1st Qtr			1.63±0.6E-16	<4.08E-16	5.18±3.3E-16
APR	1.17±0.9E-15	1.67±0.3E-14			
MAY	<6.3E-16	1.04±0.3E-14			
JUN	<8.3E-16	2.00±0.3E-14			
2nd Qtr			<3.37E-17	<3.01E-16	<6.74E-16
JUL	<6.2E-16	1.27±0.2E-14			
AUG	<9.5E-16	1.61±0.6E-14			
SEP	9.00±6.9E-16	1.35±0.3E-14			
3rd Qtr			<4.81E-17	<2.42E-16	<2.05E-16
OCT	<7.4E-16	1.43±0.3E-14			
NOV	9.75±9.5E-16	2.23±0.4E-14			
DEC	1.29±1.0E-15	1.94±0.4E-14			
4th Qtr			1.38 ± 0.5E-16	<3.79E-16	<2.20E-16

**TABLE C - 2.19**

**1990 Radioactivity Concentrations in Airborne Particulates  
at Dunkirk Air Sampler (AFDNKRK) in  $\mu\text{Ci}/\text{mL}$**

MONTH	Alpha	Beta	Strontium-90	Cesium-137
JAN	8.84±7.8E-16	2.05±0.3E-14		
FEB	<7.6E-16	1.93±0.4E-14		
MAR	9.83±9.0E-16	1.66±0.3E-14		
1st Qtr			<1.24E-16	<5.19E-16
APR	1.20±0.9E-15	1.69±0.3E-14		
MAY	<6.2E-16	1.04±0.3E-14		
JUN	<7.7E-16	1.30±0.3E-14		
2nd Qtr			3.68±1.9E-17	<4.82E-16
JUL	<8.1E-16	1.83±0.3E-14		
AUG	8.51±7.1E-16	1.56±0.3E-14		
SEP	1.17±0.8E-15	1.72±0.3E-14		
3rd Qtr			<4.44E-17	<2.03E-16
OCT	<7.6E-16	1.70±0.3E-14		
NOV	1.24±1.2E-15	2.67±0.4E-14		
DEC	1.42±1.1E-15	2.27±0.4E-14		
4th Qtr			1.65 ± 0.5E-16	<5.89E-16

TABLE C - 2.20

1990 Radioactivity Concentrations in Airborne Particulates  
at Dutch Hill Air Sampler (AFBOEHN) in  $\mu\text{Ci/mL}$

MONTH	Alpha	Beta	Strontium-90	Cesium-137
JAN	<6.5E-16	1.78±0.3E-14		
FEB	<7.4E-16	1.61±0.3E-14		
MAR	1.07 ± 0.8E-15	1.66±0.3E-14		
<b>1st Qtr</b>			< 1.14E-16	< 7.43E-16
APR	1.13±0.9E-15	1.88±0.3E-14		
MAY	1.13±0.9E-15	1.29±0.3E-14		
JUN	<1.6E-15	1.63±0.4E-14		
<b>2nd Qtr</b>			<4.65E-17	<4.65E-16
JUL	<1.1E-15	2.54±0.5E-14		
AUG	<1.2E-15	2.35±0.5E-14		
SEP	<1.2E-15	2.57±0.5E-14		
<b>3rd Qtr</b>			1.97 ± 0.7E-16	< 3.44E-16
OCT	<1.5E-15	2.59±0.6E-14		
NOV	1.38±1.1E-15	2.31±0.4E-14		
DEC	<8.9E-16	2.19±0.4E-14		
<b>4th Qtr</b>			7.31 ± 6.0E-17	<3.87E-16

TABLE C - 2. 21

Radioactivity in Fallout During 1990 (nCi/m<sup>2</sup>/mo)

<i>Dutch Hill (AFDHFOP)</i>				<i>Fox Valley Road (AFFXFOP)</i>			
MONTH	Gross Alpha	Gross Beta	H-3	MONTH	Gross Alpha	Gross Beta	H-3
			( $\mu$ Ci/mL)				( $\mu$ Ci/mL)
JAN	2.1 E-02	1.5 E-01	<1.0 E-07	JAN	6.1 E-02	4.3 E-01	<1.0 E-07
FEB	4.6 E-02	3.0 E-01	<1.0 E-07	FEB	1.1 E-01	4.3 E-01	1.77 $\pm$ 1.2 E-07
MAR	2.5 E-02	1.2 E-01	<1.0 E-07	MAR	6.2 E-02	2.0 E-01	<1.0 E-07
APR	4.0 E-02	2.2 E-01	<1.0 E-07	APR	4.9 E-02	2.6 E-01	<1.0 E-07
MAY	5.0 E-02	4.0 E-01	<1.0 E-07	MAY	9.1 E-02	5.5 E-01	<1.0 E-07
JUN	3.1 E-02	2.2 E-01	<1.0 E-07	JUN	3.6 E-02	2.0 E-01	<1.0 E-07
JUL	8.3 E-02	3.4 E-01	<1.0 E-07	JUL	8.4 E-02	3.2 E-01	<1.0 E-07
AUG	3.9 E-03	6.1 E-01	<1.0 E-07	AUG	2.8 E-02	2.2 E-01	<1.0 E-07
SEP	7.1 E-02	3.2 E-01	<1.0 E-07	SEP	2.6 E-02	3.0 E-01	<1.0 E-07
OCT	9.8 E-02	1.6 E+00	9.70 $\pm$ 1.3 E-07	OCT	1.0 E-01	5.5 E-01	<1.0 E-07
NOV	2.5 E-02	3.0 E-01	<1.0 E-07	NOV	5.4 E-02	5.3 E-01	<1.0 E-07
DEC	2.4 E-02	2.1 E-01	<1.0 E-07	DEC	3.7 E-02	4.1 E-01	<1.0 E-07
<i>Route 240 (AF24FOP)</i>				<i>Thomas Corners Road (AFTCFOP)</i>			
MONTH	Gross Alpha	Gross Beta	H-3	MONTH	Gross Alpha	Gross Beta	H-3
			( $\mu$ Ci/mL)				( $\mu$ Ci/mL)
JAN	2.4 E-02	3.1 E-01	<1.0 E-07	JAN	6.4 E-02	4.1 E-01	<1.0 E-07
FEB	5.7 E-02	3.3 E-01	<1.0 E-07	FEB	6.4 E-02	3.4 E-01	<1.0 E-07
MAR	3.7 E-02	1.5 E-01	<1.0 E-07	MAR	3.7 E-02	1.9 E-01	<1.0 E-07
APR	2.8 E-02	2.5 E-01	<1.0 E-07	APR	5.6 E-02	3.2 E-01	<1.0 E-07
MAY	1.2 E-01	6.1 E-01	<1.0 E-07	MAY	6.5 E-02	4.9 E-01	<1.0 E-07
JUN	3.9 E-02	3.8 E-01	SAMPLE DRY	JUN	3.0 E-02	1.5 E-01	SAMPLE DRY
JUL	1.4 E-01	5.9 E-01	<1.0 E-07	JUL	7.3 E-02	3.2 E-01	<1.0 E-07
AUG	1.0 E-02	7.8 E-02	<1.0 E-07	AUG	9.6 E-03	4.9 E-02	<1.0 E-07
SEP	3.5 E-02	5.2 E-02	<1.0 E-07	SEP	4.6 E-02	5.4 E-01	<1.0 E-07
OCT	3.8 E-02	9.7 E-01	<1.0 E-07	OCT	3.9 E-02	5.1 E-01	3.91 $\pm$ 1.2 E-07
NOV	1.7 E-02	3.2 E-01	<1.0 E-07	NOV	1.8 E-02	3.1 E-01	2.67 $\pm$ 1.3 E-07
DEC	4.0 E-02	3.0 E-01	<1.0 E-07	DEC	5.5 E-02	3.4 E-01	<1.0 E-07
<i>Rain Gage (ANRGFOP)</i>							
MONTH	Gross Alpha	Gross Beta	H-3				
			( $\mu$ Ci/mL)				
JUN	<2.7 E-02	2.4 E-01	1.44 $\pm$ 1.2 E-07				
JUL	<1.1 E-02	1.4 E-01	<1.0 E-07				
AUG	9.0 E-03	1.1 E-01	<1.0 E-07				
SEP	3.8 E-02	4.8 E-01	<1.0 E-07				
OCT	6.3 E-02	4.1 E-01	3.17 $\pm$ 1.2 E-07				
NOV	4.2 E-02	3.5 E-01	<1.0 E-07				
DEC	7.5 E-02	4.3 E-01	<1.0 E-07				