

6.0 REPORT PERIOD ANALYTICAL RESULTS TABLES

- 6.1 Environmental sample data is summarized in table format. Tables are provided for select sample media and contain data based on actual values obtained over the year. These values are comprised of both positive values and LLD values where applicable.
- 6.2 The LLD is the smallest concentration of radioactive material in a sample that will be detected with 95% probability and with 5% probability of falsely concluding that a blank observation represents a "real" signal (see Section 3.7.3 for detailed explanation).
- 6.3 When the initial count of a sample indicates the presence of radioactivity, two recounts are normally performed. When a radionuclide is positively identified in two or more counts, the analytical results for that radionuclide is reported as the mean of the positive detections and the associated error for that mean (see Section 3.7.2 for methodology).
- 6.4 Many of the tables are footnoted with the term "Plant Radionuclides". Plant related radionuclides are radionuclides that are produced in the reactor as a result of plant operation either through the activation or fission process.

TABLE 6-1

CONCENTRATIONS OF GAMMA EMITTERS IN SHORELINE SEDIMENT SAMPLES - 2000

Results in Units of pCi/g (dry) \pm 1 Sigma

STATION CODE*	COLLECTION DATE	GAMMA EMITTERS					
		K-40	Co-60	Cs-134	Cs-137	Zn-65	OTHERS**
Sunset Beach (05)	04/00	18.9 \pm 0.37	<0.063	<0.056	0.060 \pm 0.008	<0.013	<LLD
	10/00	21.4 \pm 0.38	<0.054	<0.044	0.076 \pm 0.011	<0.073	<LLD
Lang's Beach (06, Control)	04/00	15.0 \pm 0.42	<0.034	<0.030	<0.037	<0.052	<LLD
	10/00	14.2 \pm 0.35	<0.038	<0.042	<0.035	<0.073	<LLD

* Corresponds to sample locations noted on the maps in Section 3.3.

** Plant Related Isotopes

TABLE 6-2

CONCENTRATIONS OF GAMMA EMITTERS IN FISH SAMPLES - 2000

Results in Units of pCi/g (wet) \pm 1 Sigma

DATE	TYPE	K-40	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Cs-134	Cs-137	OTHERS*
<u>FITZPATRICK</u>										
06/13/00	Walleye	5.79 \pm 0.20	<0.023	<0.022	<0.054	<0.024	<0.053	<0.013	<0.022	<LLD
06/20/00	Lake Trout	4.43 \pm 0.22	<0.026	<0.024	<0.053	<0.026	<0.059	<0.022	<0.022	<LLD
06/20/00	Brown Trout	2.19 \pm 0.12	<0.013	<0.014	<0.031	<0.016	<0.029	<0.012	<0.014	<LLD
06/20/00	Smallmouth Bass	5.34 \pm 0.19	<0.024	<0.022	<0.044	<0.018	<0.054	<0.022	<0.020	<LLD
09/14/00	Brown Trout	4.70 \pm 0.24	<0.026	<0.026	<0.052	<0.020	<0.054	<0.021	<0.024	<LLD
09/14/00	Smallmouth Bass	5.39 \pm 0.27	<0.030	<0.033	<0.067	<0.034	<0.068	<0.035	<0.030	<LLD
09/14/00	Salmon	4.56 \pm 0.29	<0.025	<0.033	<0.083	<0.036	<0.074	<0.028	<0.026	<LLD

* Plant Related Radionuclides

TABLE 6-2 (Continued)

CONCENTRATIONS OF GAMMA EMITTERS IN FISH SAMPLES - 2000

Results in Units of pCi/g (wet) \pm 1 Sigma

DATE	TYPE	K-40	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Cs-134	Cs-137	OTHERS*
<u>NINE MILE POINT</u>										
05/23/00	Smallmouth Bass	5.05 \pm 0.26	<0.026	<0.032	<0.088	<0.031	<0.069	<0.026	<0.027	<LLD
06/08/00	Walleye	4.98 \pm 0.21	<0.020	<0.026	<0.059	<0.022	<0.051	<0.022	<0.020	<LLD
06/08/00	Lake Trout	4.51 \pm 0.25	<0.020	<0.026	<0.067	<0.028	<0.057	<0.030	<0.026	<LLD
06/08/00	Brown Trout	3.77 \pm 0.18	<0.020	<0.024	<0.047	<0.021	<0.046	<0.020	<0.020	<LLD
09/26/00	Smallmouth Bass	4.51 \pm 0.37	<0.034	<0.038	<0.087	<0.055	<0.107	<0.039	<0.036	<LLD
09/26/00	Brown Trout	5.58 \pm 0.27	<0.032	<0.031	<0.063	<0.030	<0.074	<0.020	<0.033	<LLD
09/26/00	Salmon	4.85 \pm 0.36	<0.036	<0.037	<0.089	<0.047	<0.113	<0.031	<0.038	<LLD

* Plant Related Radionuclides

TABLE 6-2 (Continued)

CONCENTRATIONS OF GAMMA EMITTERS IN FISH SAMPLES - 2000

Results in Units of pCi/g (wet) \pm 1 Sigma

DATE	TYPE	K-40	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Cs-134	Cs-137	OTHERS*
<u>OSWEGO HARBOR (Control)</u>										
05/17/00	Smallmouth Bass	4.64 \pm 0.21	<0.023	<0.034	<0.092	<0.022	<0.058	<0.021	<0.023	<LLD
05/17/00	Lake Trout	3.70 \pm 0.22	<0.026	<0.034	<0.108	<0.027	<0.065	<0.028	<0.025	<LLD
05/17/00	Brown Trout	5.85 \pm 0.20	<0.024	<0.030	<0.070	<0.023	<0.033	<0.023	<0.021	<LLD
05/17/00	Walleye	4.40 \pm 0.12	<0.019	<0.023	<0.070	<0.020	<0.052	<0.018	0.021 \pm 0.004	<LLD
09/20/00	Brown Trout	4.11 \pm 0.23	<0.021	<0.027	<0.064	<0.025	<0.060	<0.023	<0.025	<LLD
09/20/00	Salmon	4.22 \pm 0.22	<0.019	<0.021	<0.047	<0.022	<0.060	<0.021	<0.019	<LLD
09/20/00	Smallmouth Bass	4.31 \pm 0.25	<0.025	<0.027	<0.059	<0.029	<0.074	<0.022	<0.026	<LLD

* Plant Related Radionuclides

TABLE 6-3

CONCENTRATIONS OF TRITIUM IN SURFACE WATER
(QUARTERLY COMPOSITE SAMPLES)

Results in Units of pCi/liter \pm 1 Sigma

STATION CODE	PERIOD	DATE	TRITIUM
FITZPATRICK* (03, INLET)	First Quarter Second Quarter Third Quarter Fourth Quarter	12/30/99 - 03/31/00 03/31/00 - 07/05/00 07/05/00 - 09/28/00 09/28/00 - 01/02/01	198 \pm 87 <176 161 \pm 85 197 \pm 97
OSWEGO STEAM* STATION (08, CONTROL)	First Quarter Second Quarter Third Quarter Fourth Quarter	12/30/99 - 03/31/00 03/31/00 - 06/30/00 06/30/00 - 09/29/00 09/29/00 - 12/29/00	237 \pm 89 196 \pm 96 204 \pm 87 <180
NINE MILE POINT UNIT 1** (09, INLET)	First Quarter Second Quarter Third Quarter Fourth Quarter	12/30/99 - 03/31/00 03/31/00 - 06/30/00 06/30/00 - 09/29/00 09/29/00 - 12/29/00	<158 186 \pm 95 <157 188 \pm 97
NINE MILE POINT UNIT 2** (11, INLET)	First Quarter Second Quarter Third Quarter Fourth Quarter	12/30/99 - 03/31/00 03/31/00 - 06/30/00 06/30/00 - 09/29/00 09/29/00 - 12/29/00	196 \pm 87 229 \pm 97 179 \pm 86 <180
OSWEGO CITY** WATER (10)	First Quarter Second Quarter Third Quarter Fourth Quarter	12/30/99 - 03/31/00 03/31/00 - 06/30/00 06/30/00 - 09/29/00 09/29/00 - 12/29/00	224 \pm 88 246 \pm 98 <180 <180

* Samples required by Technical Specifications

** Optional samples

Oswego City Water samples are composites of twice per week grab samples

TABLE 6-4

CONCENTRATIONS OF GAMMA EMITTERS IN SURFACE WATER SAMPLES - 2000
Results in Units of pCi/liter \pm 1 Sigma

OSWEGO STEAM STATION* (08, CONTROL)**

NUCLIDE	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
I-131	<0.46	<0.42	<0.62	<0.55	<0.43	<0.67
Cs-134	<3.14	<2.59	<2.37	<3.99	<2.38	<3.74
Cs-137	<2.94	<2.79	<2.40	<4.01	<2.43	<4.11
Zr-95	<5.95	<6.06	<5.19	<8.58	<5.14	<7.34
Nb-95	<4.92	<4.15	<3.47	<4.84	<2.98	<4.40
Co-58	<4.41	<3.62	<2.81	<3.93	<2.36	<4.54
Mn-54	<3.45	<3.20	<2.36	<4.12	<2.48	<3.82
Fe-59	<8.65	<7.90	<6.36	<9.74	<5.72	<8.88
Zn-65	<8.50	<6.49	<5.24	<9.85	<4.61	<9.33
Co-60	<3.38	<3.47	<2.03	<4.66	<2.58	<4.43
K-40	174 \pm 18.8	174 \pm 16.9	65.9 \pm 9.36	233 \pm 21.5	61.9 \pm 8.96	196 \pm 19.5
Ba/La-140	<11.1	<7.81	<7.79	<10.30	<7.06	<7.37
NUCLIDE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
I-131	<0.48	<0.49	<0.84	<0.46	<0.49	<0.73
Cs-134	<2.24	<4.98	<1.35	<3.63	<2.31	<2.96
Cs-137	<2.16	<4.67	<2.15	<3.89	<2.15	<2.57
Zr-95	<4.86	<8.32	<4.87	<9.44	<4.05	<5.71
Nb-95	<2.82	<7.75	<3.34	<5.64	<2.78	<3.57
Co-58	<2.64	<5.43	<2.78	<5.26	<2.54	<3.14
Mn-54	<2.49	<5.38	<1.95	<4.93	<2.15	<2.58
Fe-59	<6.03	<13.1	<6.00	<10.3	<5.52	<6.27
Zn-65	<4.91	<13.4	<5.84	<12.6	<5.30	<6.01
Co-60	<2.47	<5.25	<2.57	<4.63	<2.41	<3.25
K-40	86.4 \pm 11.0	213 \pm 28.4	66.6 \pm 10.9	200 \pm 24.2	97.5 \pm 11.5	162 \pm 15.2
Ba/La-140	<7.03	<13.0	<6.66	<11.4	<4.80	<8.61

* Samples required by Technical Specifications.

** Corresponds to sample locations noted on the maps in Section 3.3.

TABLE 6-4 (Continued)

CONCENTRATIONS OF GAMMA EMITTERS IN SURFACE WATER SAMPLES - 2000
Results in Units of pCi/liter \pm 1 Sigma

FITZPATRICK* (03, INLET)**

NUCLIDE	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
I-131	<0.65	<0.45	<0.70	<0.41	<0.92	<0.40
Cs-134	<2.22	<3.60	<2.43	<1.36	<4.18	<2.33
Cs-137	<2.70	<3.15	<2.60	<2.32	<4.53	<2.28
Zr-95	<5.37	<6.59	<4.74	<4.25	<8.20	<4.57
Nb-95	<4.19	<3.83	<3.68	<2.80	<4.92	<3.13
Co-58	<3.39	<4.06	<3.11	<2.42	<4.44	<2.71
Mn-54	<2.71	<3.73	<2.69	<2.30	<4.00	<2.24
Fe-59	<7.11	<9.86	<6.01	<5.25	<8.36	<5.56
Zn-65	<6.52	<7.70	<6.81	<5.29	<7.38	<5.25
Co-60	<2.71	<4.00	<2.89	<2.13	<4.14	<2.65
K-40	153 \pm 14.5	209 \pm 19.4	162 \pm 13.9	254 \pm 13.4	189 \pm 20.7	74.1 \pm 10.2
Ba/La-140	<10.2	<7.94	<5.86	<5.20	<10.9	<6.20
NUCLIDE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
I-131	<0.42	<0.49	<0.63	<0.35	<0.40	<0.57
Cs-134	<2.50	<1.92	<1.31	<3.38	<2.68	<2.37
Cs-137	<2.69	<3.22	<2.20	<3.92	<2.76	<2.14
Zr-95	<5.74	<5.68	<5.26	<7.87	<5.47	<4.24
Nb-95	<3.38	<3.78	<3.29	<5.41	<4.26	<2.78
Co-58	<3.06	<3.54	<2.56	<4.69	<3.08	<2.50
Mn-54	<3.16	<2.96	<2.33	<3.94	<2.89	<2.28
Fe-59	<6.71	<7.78	<6.24	<9.39	<9.01	<6.20
Zn-65	<6.89	<6.95	<6.08	<9.24	<7.06	<5.56
Co-60	<2.86	<3.18	<2.35	<4.66	<3.10	<2.44
K-40	158 \pm 14.7	262 \pm 18.0	58.1 \pm 11.6	182 \pm 22.8	190 \pm 17.3	87.2 \pm 10.7
Ba/La-140	<7.70	<8.08	<9.38	<10.8	<7.93	<5.92

* Samples required by Technical Specifications.

** Corresponds to sample locations noted on the maps in Section 3.3.

TABLE 6-4 (Continued)

CONCENTRATIONS OF GAMMA EMITTERS IN SURFACE WATER SAMPLES - 2000
Results in Units of pCi/liter \pm 1 Sigma

NINE MILE POINT UNIT 1* (09, INLET)**

NUCLIDE	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
I-131	<11.7	<11.2	<10.7	<8.02	<8.25	<9.88
Cs-134	<2.34	<3.11	<2.87	<2.74	<2.52	<2.40
Cs-137	<2.73	<3.22	<2.92	<2.84	<2.45	<2.48
Zr-95	<5.11	<6.76	<5.48	<5.91	<4.71	<4.89
Nb-95	<4.06	<4.46	<3.86	<3.49	<3.15	<3.43
Co-58	<3.71	<3.62	<3.25	<3.05	<2.78	<2.75
Mn-54	<2.72	<3.45	<2.84	<3.27	<2.68	<2.32
Fe-59	<7.34	<9.18	<6.65	<6.90	<5.55	<5.96
Zn-65	<5.57	<7.44	<5.64	<6.76	<3.56	<4.90
Co-60	<3.24	<3.71	<3.23	<3.07	<2.21	<2.61
K-40	175 \pm 14.5	156 \pm 17.7	53.7 \pm 10.4	177 \pm 15.9	260 \pm 14.2	57.3 \pm 8.95
Ba/La-140	<11.6	<9.03	<9.71	<7.35	<6.16	<9.15
NUCLIDE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
I-131	<9.55	<8.69	<9.80	<11.1	<7.19	<8.20
Cs-134	<2.54	<2.45	<1.60	<3.76	<1.55	<2.33
Cs-137	<2.62	<2.32	<2.72	<3.60	<2.07	<2.09
Zr-95	<4.73	<4.82	<5.33	<6.34	<4.22	<4.12
Nb-95	<3.46	<3.06	<4.05	<4.41	<2.67	<3.10
Co-58	<3.08	<2.61	<2.79	<3.83	<2.57	<2.54
Mn-54	<2.80	<2.64	<2.60	<3.04	<2.38	<2.41
Fe-59	<6.99	<7.04	<6.52	<8.76	<5.31	<5.13
Zn-65	<5.35	<6.02	<6.78	<8.15	<3.14	<5.36
Co-60	<2.62	<2.67	<3.14	<3.30	<2.18	<2.63
K-40	155 \pm 13.9	186 \pm 15.6	182 \pm 16.7	150 \pm 17.8	273 \pm 14.4	66.2 \pm 10.6
Ba/La-140	<7.08	<6.84	<9.29	<9.80	<5.60	<6.68

* Optional sample location. Samples not required by Technical Specifications.

** Corresponds to sample locations noted on the maps in Section 3.3.

TABLE 6-4 (Continued)

CONCENTRATIONS OF GAMMA EMITTERS IN SURFACE WATER SAMPLES - 2000
Results in Units of pCi/liter \pm 1 Sigma

NINE MILE POINT UNIT 2* (11, INLET)**

NUCLIDE	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
I-131	<14.9	<13.4	<13.2	<6.71	<7.15	<8.52
Cs-134	<1.38	<3.57	<3.03	<1.35	<2.47	<2.10
Cs-137	<2.06	<3.98	<3.09	<2.17	<2.34	<2.31
Zr-95	<5.16	<6.43	<5.63	<4.29	<4.79	<4.39
Nb-95	<3.60	<4.40	<3.75	<2.60	<3.09	<2.68
Co-58	<2.56	<4.76	<3.36	<2.41	<2.94	<2.54
Mn-54	<2.25	<4.07	<2.94	<2.39	<2.30	<2.18
Fe-59	<6.70	<8.95	<9.36	<5.22	<6.22	<5.30
Zn-65	<5.81	<8.90	<6.78	<5.28	<5.30	<3.12
Co-60	<2.27	<3.42	<2.99	<2.40	<2.40	<2.21
K-40	209 \pm 13.2	188 \pm 19.3	176 \pm 18.2	271 \pm 13.8	62.1 \pm 10.1	251 \pm 12.9
Ba/La-140	<9.39	<9.16	<12.2	<5.09	<5.52	<5.44
NUCLIDE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
I-131	<11.4	<11.2	<9.90	<13.1	<7.61	<10.3
Cs-134	<2.70	<3.71	<2.04	<4.24	<2.84	<2.45
Cs-137	<2.42	<3.84	<2.15	<3.99	<2.63	<2.62
Zr-95	<6.07	<7.29	<4.88	<7.74	<6.24	<5.21
Nb-95	<3.64	<4.67	<2.95	<4.51	<3.95	<3.35
Co-58	<2.97	<4.69	<2.72	<4.06	<2.78	<3.12
Mn-54	<2.81	<3.69	<2.15	<3.73	<2.64	<2.90
Fe-59	<7.06	<9.39	<6.45	<10.9	<6.48	<6.96
Zn-65	<7.35	<8.36	<5.29	<8.59	<6.79	<5.87
Co-60	<3.74	<4.34	<2.24	<3.93	<3.47	<3.13
K-40	179 \pm 16.3	147 \pm 18.2	111 \pm 11.6	150 \pm 22.4	193 \pm 16.7	155 \pm 14.2
Ba/La-140	<8.84	<9.23	<8.54	<14.0	<7.02	<7.63

* Optional sample location. Samples not required by Technical Specifications.

** Corresponds to sample locations noted on the maps in Section 3.3.

TABLE 6-4 (Continued)

CONCENTRATIONS OF GAMMA EMITTERS IN SURFACE WATER SAMPLES - 2000
Results in Units of pCi/liter \pm 1 Sigma

OSWEGO CITY WATER* (10)**

NUCLIDE	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
I-131	<14.7	<11.2	<14.5	<12.2	<12.8	<9.81
Cs-134	<3.13	<3.13	<2.90	<3.76	<3.71	<2.27
Cs-137	<2.66	<2.92	<2.72	<4.30	<3.46	<2.34
Zr-95	<6.76	<5.99	<5.91	<7.74	<7.26	<5.03
Nb-95	<4.10	<4.79	<4.25	<4.53	<4.66	<3.33
Co-58	<3.78	<5.18	<3.36	<3.63	<4.32	<3.23
Mn-54	<2.86	<3.32	<3.60	<3.57	<3.57	<2.68
Fe-59	<8.79	<8.68	<7.36	<9.43	<9.86	<6.84
Zn-65	<6.89	<8.35	<8.05	<7.60	<7.61	<5.35
Co-60	<3.45	<4.53	<2.40	<4.26	<3.82	<3.21
K-40	216 \pm 16.7	126 \pm 17.9	264 \pm 17.2	245 \pm 21.8	212 \pm 20.7	167 \pm 15.2
Ba/La-140	<12.1	<11.2	<8.38	<10.7	<12.4	<7.83
NUCLIDE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
I-131	<9.78	<14.9	<13.9	<12.8	<10.6	<8.93
Cs-134	<2.49	<3.23	<1.83	<2.19	<2.69	<1.51
Cs-137	<2.60	<3.20	<3.13	<3.28	<4.00	<2.13
Zr-95	<5.40	<6.91	<5.33	<6.49	<7.15	<3.97
Nb-95	<3.61	<5.14	<3.76	<4.79	<4.87	<2.70
Co-58	<3.11	<4.10	<3.04	<4.07	<4.49	<2.55
Mn-54	<2.83	<3.29	<2.89	<3.22	<3.93	<2.35
Fe-59	<6.13	<8.63	<7.53	<7.80	<9.35	<5.68
Zn-65	<5.82	<7.71	<5.79	<8.69	<11.1	<3.08
Co-60	<2.71	<4.03	<2.83	<3.03	<4.15	<2.06
K-40	163 \pm 14.8	195 \pm 17.9	163 \pm 16.5	26.8 \pm 19.6	264 \pm 23.7	271 \pm 13.7
Ba/La-140	<8.09	<12.5	<9.83	<8.71	<10.7	<5.78

* Optional sample location. Samples not required by Technical Specifications.

** Corresponds to sample locations noted on the maps in Section 3.3.

TABLE 6-5

NMP/JAF SITE
ENVIRONMENTAL AIRBORNE PARTICULATE SAMPLES - OFF-SITE STATIONS
GROSS BETA ACTIVITY pCi/m³ ± 1 SIGMA
LOCATION

WEEK START DATE	R-1 OFF*	R-2 OFF*	R-3 OFF*	R-4 OFF*	R-5 OFF*	D-2 OFF	E-OFF	F-OFF	G-OFF
01/04/00	0.020±0.002	0.016±0.001	0.018±0.002	0.017±0.001	0.016±0.001	0.018±0.002	0.018±0.002	0.017±0.001	0.017±0.001
01/11/00	0.016±0.002	0.017±0.002	0.018±0.002	0.015±0.001	0.020±0.002	0.011±0.001	0.019±0.002	0.017±0.002	0.017±0.001
01/18/00	0.025±0.002	0.025±0.002	0.026±0.002	0.028±0.002	0.027±0.002	0.025±0.002	0.028±0.002	0.029±0.002	0.020±0.001
01/25/00	0.025±0.002	0.026±0.002	0.024±0.002	0.024±0.002	0.024±0.002	0.022±0.002	0.028±0.002	0.024±0.002	0.021±0.001
02/01/00	0.018±0.002	0.015±0.001	0.018±0.002	0.016±0.001	0.017±0.002	0.018±0.002	0.016±0.001	0.018±0.002	0.016±0.001
02/08/00	0.021±0.002	0.019±0.002	0.020±0.002	0.018±0.002	0.024±0.002	0.024±0.002	0.021±0.002	0.020±0.002	0.022±0.001
02/15/00	0.028±0.002	0.025±0.002	0.026±0.002	0.024±0.002	0.024±0.002	0.023±0.002	0.025±0.002	0.025±0.002	0.025±0.002
02/22/00	0.017±0.002	0.018±0.002	0.016±0.002	0.018±0.002	0.017±0.002	0.016±0.001	0.017±0.002	0.019±0.001	0.019±0.001
02/29/00	0.015±0.002	0.016±0.001	0.013±0.001	0.012±0.001	0.013±0.001	0.015±0.001	0.013±0.001	0.014±0.001	0.013±0.001
03/07/00	0.021±0.002	0.016±0.002	0.016±0.002	0.016±0.002	0.018±0.002	0.015±0.002	0.019±0.002	0.016±0.001	0.017±0.002
03/14/00	0.019±0.002	0.018±0.002	0.018±0.002	0.017±0.002	0.019±0.002	0.019±0.002	0.019±0.002	0.018±0.001	0.018±0.001
03/21/00	0.013±0.001	0.014±0.001	0.013±0.001	0.016±0.002	0.012±0.001	0.012±0.001	0.013±0.001	0.014±0.001	0.014±0.001
03/28/00	0.010±0.001	0.013±0.001	0.014±0.001	0.012±0.001	0.014±0.001	0.013±0.001	0.013±0.001	0.012±0.001	0.011±0.001
04/04/00	0.010±0.001	0.010±0.001	0.014±0.001	0.013±0.001	0.009±0.001	0.013±0.001	0.010±0.001	0.010±0.001	0.010±0.001
04/11/00	0.014±0.001	0.016±0.001	0.015±0.001	0.015±0.002	0.014±0.001	0.016±0.002	0.013±0.001	0.015±0.001	0.016±0.001
04/18/00	0.012±0.001	0.010±0.001	0.012±0.001	0.011±0.001	0.012±0.001	0.011±0.001	0.012±0.001	0.011±0.001	0.009±0.001
04/25/00	0.017±0.002	0.015±0.001	0.018±0.002	0.018±0.002	0.016±0.002	0.014±0.002	0.019±0.002	0.016±0.001	0.013±0.001
05/02/00	0.019±0.002	0.023±0.002	0.022±0.002	0.025±0.002	0.024±0.002	0.021±0.002	0.022±0.002	0.020±0.002	0.021±0.002
05/09/00	0.012±0.001	0.010±0.001	0.011±0.001	0.012±0.001	0.011±0.001	0.003±0.001	0.011±0.001	0.001±0.001	**NO SAMPLE
05/16/00	0.012±0.001	0.013±0.001	0.013±0.001	0.014±0.001	0.013±0.001	0.012±0.001	0.011±0.001	0.011±0.001	0.014±0.001
05/23/00	0.007±0.001	0.007±0.001	0.005±0.001	0.007±0.001	0.006±0.001	0.006±0.001	0.008±0.001	0.007±0.001	0.007±0.001
05/30/00	0.008±0.001	0.012±0.001	0.012±0.001	0.011±0.001	0.012±0.001	0.011±0.001	0.010±0.001	0.010±0.001	0.012±0.001
06/06/00	0.011±0.001	0.012±0.001	0.013±0.001	0.014±0.001	0.014±0.001	0.015±0.002	0.014±0.002	0.016±0.001	0.013±0.001
06/13/00	0.009±0.001	0.007±0.001	0.008±0.001	0.007±0.001	0.007±0.001	0.006±0.001	0.008±0.001	0.006±0.001	0.010±0.001
06/20/00	0.013±0.001	0.013±0.001	0.011±0.001	0.013±0.001	0.013±0.001	0.010±0.001	0.013±0.001	0.014±0.001	0.014±0.001
06/27/00	0.014±0.001	0.015±0.001	0.012±0.001	0.016±0.001	0.017±0.001	0.017±0.001	0.015±0.001	0.014±0.001	0.015±0.001

* Sample locations required by Technical Specifications

** No Sample Results

TABLE 6-5 (Continued)

NMP/JAF SITE
ENVIRONMENTAL AIRBORNE PARTICULATE SAMPLES - OFF-SITE STATIONS
GROSS BETA ACTIVITY pCi/m³ ± 1 SIGMA
LOCATION

WEEK START DATE	R-1 OFF*	R-2 OFF*	R-3 OFF*	R-4 OFF*	R-5 OFF*	D-2 OFF	E-OFF	F-OFF	G-OFF
07/05/00	0.011±0.001	0.010±0.001	0.010±0.002	0.010±0.001	0.011±0.002	0.009±0.001	0.014±0.002	0.012±0.002	0.011±0.001
07/11/00	0.010±0.001	0.013±0.001	0.011±0.001	0.011±0.001	0.011±0.001	0.012±0.001	0.010±0.001	0.012±0.001	0.009±0.001
07/18/00	0.007±0.001	0.009±0.001	0.008±0.001	0.007±0.001	0.010±0.001	0.009±0.001	0.009±0.001	0.012±0.001	0.008±0.001
07/25/00	0.010±0.001	0.010±0.001	0.008±0.001	0.008±0.001	0.007±0.001	0.008±0.001	0.010±0.001	0.009±0.001	0.011±0.001
08/01/00	0.015±0.002	0.015±0.002	0.015±0.002	0.017±0.002	0.012±0.002	0.016±0.002	0.012±0.001	0.015±0.002	0.016±0.002
08/08/00	0.016±0.001	0.014±0.001	0.013±0.001	0.013±0.001	0.014±0.001	0.014±0.001	0.016±0.001	0.017±0.002	0.015±0.001
08/15/00	0.011±0.001	0.011±0.001	0.011±0.001	0.010±0.001	0.008±0.001	0.008±0.001	0.007±0.001	0.012±0.001	0.011±0.001
08/22/00	0.014±0.002	0.016±0.002	0.018±0.002	0.013±0.002	0.017±0.002	0.018±0.002	0.017±0.002	0.015±0.002	0.018±0.002
08/29/00	0.016±0.002	0.014±0.001	0.017±0.002	0.015±0.002	0.016±0.002	0.016±0.002	0.013±0.001	0.013±0.001	0.014±0.001
09/05/00	0.017±0.002	0.019±0.002	0.020±0.002	0.018±0.002	0.018±0.002	0.020±0.002	0.019±0.002	0.018±0.002	0.015±0.001
09/12/00	0.016±0.002	0.021±0.002	0.016±0.002	0.013±0.001	0.017±0.002	0.017±0.002	0.016±0.002	0.017±0.002	0.016±0.001
09/19/00	0.014±0.001	0.014±0.001	0.015±0.001	0.016±0.002	0.016±0.001	0.014±0.001	0.014±0.001	0.014±0.001	0.015±0.001
09/26/00	0.018±0.002	0.033±0.002	0.020±0.002	0.020±0.002	0.023±0.002	0.020±0.002	0.021±0.002	0.020±0.002	0.016±0.004
10/03/00	0.012±0.001	0.013±0.001	0.015±0.001	0.014±0.001	0.012±0.001	0.011±0.001	0.012±0.001	0.011±0.001	0.011±0.001
10/10/00	0.026±0.002	0.029±0.002	0.026±0.002	0.029±0.002	0.025±0.002	0.025±0.002	0.025±0.002	0.024±0.002	0.027±0.002
10/17/00	0.020±0.002	0.021±0.002	0.018±0.002	0.018±0.002	0.019±0.002	0.020±0.002	0.021±0.002	0.018±0.002	0.018±0.002
10/24/00	0.022±0.002	0.024±0.002	0.020±0.002	0.021±0.002	0.025±0.002	0.023±0.002	0.022±0.001	0.020±0.002	0.021±0.002
10/31/00	0.014±0.001	0.011±0.001	0.011±0.001	0.013±0.002	0.014±0.001	0.013±0.001	0.014±0.001	0.014±0.001	0.012±0.001
11/07/00	0.007±0.001	0.008±0.001	0.006±0.001	0.005±0.001	0.006±0.001	0.009±0.001	0.007±0.001	0.007±0.001	0.006±0.001
11/14/00	0.017±0.002	0.014±0.001	0.017±0.002	0.019±0.002	0.017±0.002	0.019±0.002	0.017±0.002	0.019±0.002	0.016±0.001
11/21/00	0.009±0.001	0.011±0.001	0.011±0.001	0.010±0.001	0.010±0.001	0.008±0.001	0.011±0.001	0.013±0.001	0.009±0.001
11/28/00	0.013±0.001	0.012±0.001	0.012±0.001	0.013±0.002	0.010±0.001	0.010±0.001	0.011±0.001	0.011±0.001	0.011±0.001
12/05/00	0.012±0.001	0.015±0.001	0.012±0.001	0.012±0.001	0.012±0.001	0.013±0.001	0.013±0.001	0.013±0.001	0.015±0.001
12/12/00	0.014±0.002	0.012±0.001	0.011±0.002	0.014±0.001	0.014±0.001	0.013±0.001	0.013±0.001	0.016±0.001	0.014±0.001
12/19/00	0.017±0.002	0.021±0.002	0.018±0.001	0.019±0.002	0.022±0.002	0.015±0.001	0.022±0.001	0.021±0.002	0.020±0.002
12/26/00	0.010±0.001	0.010±0.001	0.009±0.001	0.010±0.001	0.007±0.001	0.009±0.001	0.011±0.001	0.011±0.001	0.008±0.001

* Sample locations required by Technical Specifications

TABLE 6-6

NMP/JAF SITE
ENVIRONMENTAL AIRBORNE PARTICULATE SAMPLES - ON-SITE STATIONS
GROSS BETA ACTIVITY pCi/m³ ± 1 SIGMA
LOCATION

WEEK START DATE	D1 ON-SITE	G ON-SITE	H ON-SITE	I ON-SITE	J ON-SITE	K ON-SITE
01/03/00	0.016±0.002	0.018±0.001	0.017±0.002	0.015±0.002	0.017±0.002	0.017±0.002
01/10/00	0.017±0.002	0.017±0.002	0.016±0.002	0.018±0.002	0.019±0.002	0.018±0.002
01/17/00	0.025±0.002	0.024±0.002	0.024±0.002	*NO SAMPLE	0.021±0.002	0.023±0.002
01/24/00	0.033±0.002	0.029±0.002	0.031±0.002	0.030±0.002	0.025±0.002	0.029±0.002
01/31/00	0.020±0.002	0.019±0.002	0.022±0.002	0.020±0.002	0.019±0.002	0.018±0.002
02/07/00	0.026±0.002	0.022±0.002	0.021±0.002	0.022±0.002	0.019±0.002	0.021±0.002
02/14/00	0.028±0.002	0.028±0.002	0.023±0.002	0.027±0.002	0.022±0.002	0.025±0.002
02/22/00	0.021±0.002	0.018±0.002	0.021±0.002	0.020±0.002	0.020±0.002	0.017±0.002
02/28/00	0.011±0.001	0.012±0.001	0.013±0.001	0.013±0.001	0.013±0.001	0.011±0.001
03/06/00	0.014±0.001	0.016±0.001	0.018±0.002	0.016±0.002	0.018±0.002	0.014±0.001
03/13/00	0.017±0.002	0.018±0.001	0.018±0.002	0.016±0.002	0.016±0.001	0.016±0.001
03/20/00	0.012±0.001	0.015±0.001	0.012±0.001	0.013±0.001	0.015±0.001	0.013±0.001
03/27/00	0.012±0.001	0.013±0.001	0.012±0.001	0.014±0.001	0.014±0.001	0.014±0.001
04/03/00	0.011±0.001	0.012±0.001	0.009±0.001	0.013±0.001	0.012±0.001	0.013±0.001
04/10/00	0.015±0.001	0.016±0.002	0.013±0.001	0.014±0.001	0.016±0.002	0.015±0.001
04/17/00	0.013±0.001	0.007±0.001	0.012±0.001	0.009±0.001	0.009±0.001	0.011±0.001
04/24/00	0.020±0.002	0.014±0.001	0.016±0.002	0.017±0.002	0.018±0.002	0.016±0.002
05/01/00	0.020±0.002	0.020±0.002	0.018±0.002	0.019±0.002	0.020±0.002	0.018±0.002
05/08/00	0.011±0.001	0.010±0.001	0.010±0.001	0.010±0.001	0.014±0.001	0.001±0.001
05/15/00	*NO SAMPLE	0.014±0.001	0.012±0.001	0.011±0.001	0.011±0.001	0.012±0.001
05/22/00	0.004±0.001	0.005±0.001	0.006±0.001	0.006±0.001	0.004±0.001	0.005±0.001
05/30/00	0.010±0.001	0.011±0.001	0.008±0.001	0.010±0.001	0.009±0.001	0.009±0.001
06/05/00	0.016±0.002	0.014±0.001	0.015±0.001	0.013±0.001	0.013±0.001	0.014±0.002
06/12/00	0.008±0.001	0.008±0.001	0.006±0.001	0.006±0.001	0.008±0.001	0.009±0.001
06/19/00	0.012±0.001	0.010±0.001	0.013±0.001	0.016±0.001	0.010±0.001	0.011±0.001
06/26/00	0.010±0.001	0.011±0.001	0.012±0.001	0.013±0.001	0.011±0.001	0.012±0.001

* No sample results

TABLE 6-6 (Continued)

NMP/JAF SITE
ENVIRONMENTAL AIRBORNE PARTICULATE SAMPLES - ON-SITE STATIONS
GROSS BETA ACTIVITY pCi/m³ ± 1 SIGMA
LOCATION

WEEK START DATE	D1 ON-SITE	G ON-SITE	H ON-SITE	I ON-SITE	J ON-SITE	K ON-SITE
07/03/00	0.011±0.001	0.008±0.001	0.012±0.001	0.013±0.001	0.011±0.001	0.010±0.001
07/10/00	0.013±0.001	0.009±0.001	0.009±0.001	0.011±0.001	0.009±0.001	0.009±0.001
07/17/00	0.008±0.001	0.007±0.001	0.008±0.001	0.007±0.001	0.007±0.001	0.006±0.001
07/24/00	0.011±0.001	0.011±0.001	0.010±0.001	0.008±0.001	0.010±0.001	0.009±0.001
07/31/00	0.012±0.001	0.012±0.001	0.012±0.001	0.014±0.001	0.012±0.001	0.011±0.001
08/07/00	0.013±0.001	0.014±0.001	0.015±0.001	0.012±0.001	0.013±0.002	0.011±0.001
08/14/00	0.011±0.001	0.009±0.001	0.009±0.001	0.007±0.001	0.010±0.001	0.010±0.001
08/21/00	0.014±0.001	0.010±0.001	0.013±0.001	0.014±0.002	0.013±0.001	0.015±0.002
08/28/00	0.017±0.001	0.017±0.001	0.016±0.001	0.013±0.001	0.014±0.001	0.015±0.001
09/05/00	0.020±0.002	0.015±0.002	0.019±0.002	0.019±0.002	0.022±0.002	0.017±0.002
09/11/00	0.012±0.001	0.012±0.001	0.012±0.001	0.014±0.001	0.014±0.002	0.014±0.001
09/18/00	0.019±0.002	0.013±0.002	0.014±0.001	0.016±0.002	0.017±0.002	0.018±0.002
09/25/00	0.017±0.002	0.021±0.002	0.019±0.002	0.015±0.001	0.020±0.002	0.020±0.002
10/02/00	0.018±0.002	0.016±0.001	0.014±0.001	0.014±0.001	0.016±0.002	0.016±0.002
10/09/00	0.029±0.002	0.029±0.002	0.027±0.002	0.028±0.002	0.029±0.002	0.024±0.002
10/16/00	0.018±0.002	0.018±0.002	0.018±0.002	0.018±0.002	0.019±0.002	0.020±0.002
10/23/00	0.027±0.002	0.023±0.002	0.024±0.002	0.022±0.002	0.022±0.002	0.020±0.002
10/30/00	0.011±0.001	0.011±0.001	0.011±0.001	0.009±0.001	0.011±0.001	0.010±0.001
11/06/00	0.009±0.001	0.008±0.001	0.009±0.001	0.006±0.001	0.007±0.001	0.008±0.001
11/14/00	0.018±0.002	0.015±0.002	0.019±0.002	0.015±0.002	0.016±0.002	0.016±0.002
11/20/00	0.010±0.001	0.009±0.001	0.008±0.001	0.008±0.001	0.008±0.001	0.009±0.001
11/27/00	0.012±0.001	0.011±0.001	0.012±0.001	0.010±0.001	0.013±0.002	0.012±0.001
12/04/00	0.014±0.001	0.014±0.001	0.016±0.002	0.013±0.002	0.014±0.002	0.016±0.002
12/11/00	0.012±0.001	0.013±0.001	0.015±0.002	0.014±0.002	0.012±0.001	0.014±0.002
12/18/00	0.023±0.002	0.019±0.001	0.024±0.002	0.021±0.002	0.016±0.001	0.022±0.002
12/26/00	0.009±0.001	0.010±0.001	0.010±0.001	0.008±0.001	0.009±0.001	0.010±0.001

TABLE 6-7

NMP/JAF SITE
ENVIRONMENTAL CHARCOAL CARTRIDGE SAMPLES - OFF-SITE STATIONS
I-131 ACTIVITY pCi/m³ ± 1 SIGMA
LOCATION

WEEK START DATE	R-1* OFF-SITE	R-2* OFF-SITE	R-3* OFF-SITE	R-4* OFF-SITE	R-5* OFF-SITE	D-2 OFF-SITE	E OFF-SITE	F OFF-SITE	G OFF-SITE
01/04/00	<0.019	<0.014	<0.017	<0.017	<0.021	<0.016	<0.014	<0.011	<0.012
01/11/00	<0.011	<0.016	<0.014	<0.007	<0.017	<0.014	<0.013	<0.019	<0.012
01/18/00	<0.018	<0.012	<0.014	<0.018	<0.018	<0.014	<0.018	<0.016	<0.016
01/25/00	<0.017	<0.014	<0.020	<0.012	<0.024	<0.014	<0.020	<0.016	<0.016
02/01/00	<0.018	<0.012	<0.018	<0.013	<0.014	<0.014	<0.020	<0.017	<0.011
02/08/00	<0.015	<0.020	<0.018	<0.012	<0.018	<0.038	<0.012	<0.015	<0.014
02/15/00	<0.025	<0.017	<0.015	<0.016	<0.015	<0.016	<0.024	<0.013	<0.017
02/22/00	<0.013	<0.013	<0.020	<0.016	<0.018	<0.022	<0.018	<0.016	<0.020
02/29/00	<0.014	<0.013	<0.014	<0.016	<0.018	<0.014	<0.018	<0.014	<0.018
03/07/00	<0.014	<0.015	<0.014	<0.017	<0.017	<0.014	<0.009	<0.015	<0.019
03/14/00	<0.015	<0.014	<0.012	<0.015	<0.019	<0.015	<0.018	<0.015	<0.011
03/21/00	<0.018	<0.013	<0.019	<0.021	<0.014	<0.016	<0.021	<0.017	<0.012
03/28/00	<0.016	<0.013	<0.017	<0.018	<0.017	<0.014	<0.020	<0.012	<0.014
04/04/00	<0.014	<0.014	<0.017	<0.015	<0.016	<0.019	<0.018	<0.017	<0.019
04/11/00	<0.013	<0.018	<0.019	<0.016	<0.019	<0.018	<0.016	<0.016	<0.017
04/18/00	<0.015	<0.018	<0.023	<0.015	<0.020	<0.016	<0.017	<0.017	<0.024
04/25/00	<0.016	<0.012	<0.017	<0.021	<0.019	<0.013	<0.016	<0.013	<0.019
05/02/00	<0.016	<0.022	<0.016	<0.013	<0.024	<0.018	<0.014	<0.010	<0.017
05/09/00	<0.014	<0.018	<0.014	<0.016	<0.012	<0.017	<0.015	<0.016	<0.013
05/16/00	<0.011	<0.016	<0.020	<0.017	<0.014	<0.013	<0.018	<0.016	<0.011
05/23/00	<0.010	<0.012	<0.018	<0.012	<0.014	<0.018	<0.017	<0.012	<0.012
05/30/00	<0.023	<0.011	<0.019	<0.015	<0.015	<0.020	<0.016	<0.017	<0.011
06/06/00	<0.015	<0.021	<0.021	<0.015	<0.020	<0.020	<0.012	<0.010	<0.013
06/13/00	<0.015	<0.015	<0.018	<0.019	<0.014	<0.013	<0.014	<0.018	<0.015
06/20/00	<0.016	<0.016	<0.024	<0.021	<0.018	<0.015	<0.015	<0.013	<0.015
06/27/00	<0.015	<0.014	<0.020	<0.010	<0.014	<0.017	<0.015	<0.011	<0.012

* Sample locations required by Technical Specifications

** Sample volume insufficient

TABLE 6-7 (Continued)

NMP/JAF SITE
ENVIRONMENTAL CHARCOAL CARTRIDGE SAMPLES - OFF-SITE STATIONS
I-131 ACTIVITY pCi/m³ ± 1 SIGMA
LOCATION

WEEK START DATE	R-1* OFF-SITE	R-2* OFF-SITE	R-3* OFF-SITE	R-4* OFF-SITE	R-5* OFF-SITE	D-2 OFF-SITE	E OFF-SITE	F OFF-SITE	G OFF-SITE
07/05/00	<0.016	<0.018	<0.019	<0.019	<0.024	<0.017	<0.023	<0.016	<0.021
07/11/00	<0.011	<0.013	<0.021	<0.018	<0.024	<0.012	<0.009	<0.016	<0.016
07/18/00	<0.017	<0.014	<0.017	<0.020	<0.014	<0.010	<0.015	<0.019	<0.014
07/25/00	<0.013	<0.014	<0.011	<0.017	<0.019	<0.022	<0.011	<0.015	<0.014
08/01/00	<0.017	<0.015	<0.014	<0.020	<0.013	<0.014	<0.015	<0.014	<0.013
08/08/00	<0.015	<0.016	<0.014	<0.015	<0.015	<0.015	<0.018	<0.014	<0.014
08/15/00	<0.016	<0.014	<0.020	<0.017	<0.015	<0.020	<0.013	<0.016	<0.015
08/22/00	<0.017	<0.013	<0.018	<0.017	<0.013	<0.015	<0.014	<0.017	<0.015
08/29/00	<0.021	<0.026	<0.025	<0.020	<0.022	<0.020	<0.027	<0.024	<0.024
09/05/00	<0.022	<0.020	<0.017	<0.021	<0.019	<0.015	<0.025	<0.020	<0.018
09/12/00	<0.019	<0.013	<0.015	<0.014	<0.018	<0.020	<0.011	<0.014	<0.014
09/19/00	<0.015	<0.012	<0.015	<0.016	<0.014	<0.015	<0.020	<0.012	<0.012
09/26/00	<0.008	<0.017	<0.015	<0.015	<0.014	<0.018	<0.014	<0.011	<0.057
10/03/00	<0.014	<0.016	<0.012	<0.021	<0.019	<0.016	<0.014	<0.018	<0.016
10/10/00	<0.010	<0.015	<0.013	<0.015	<0.017	<0.018	<0.019	<0.012	<0.017
10/17/00	<0.013	<0.013	<0.012	<0.013	<0.021	<0.018	<0.011	<0.010	<0.014
10/24/00	<0.017	<0.013	<0.015	<0.017	<0.012	<0.014	<0.020	<0.012	<0.016
10/31/00	<0.013	<0.016	<0.019	<0.021	<0.017	<0.011	<0.015	<0.013	<0.017
11/07/00	<0.013	<0.016	<0.020	<0.013	<0.015	<0.018	<0.017	<0.014	<0.010
11/14/00	<0.012	<0.010	<0.015	<0.016	<0.016	<0.012	<0.010	<0.017	<0.012
11/21/00	<0.012	<0.015	<0.018	<0.015	<0.014	<0.013	<0.015	<0.015	<0.016
11/28/00	<0.017	<0.018	<0.016	<0.016	<0.014	<0.016	<0.012	<0.014	<0.012
12/05/00	<0.015	<0.013	<0.008	<0.017	<0.016	<0.019	<0.010	<0.013	<0.016
12/12/00	<0.014	<0.014	<0.014	<0.016	<0.020	<0.018	<0.013	<0.015	<0.012
12/19/00	<0.009	<0.015	<0.014	<0.014	<0.016	<0.013	<0.012	<0.012	<0.013
12/26/00	<0.016	<0.012	<0.015	<0.014	<0.013	<0.016	<0.013	<0.014	<0.016

* Sample locations required by Technical Specifications

+ No sample results due to pump failure (Occurrence Report 3-00, 4-00 5-00 & 7-00)

TABLE 6-8

NMP/JAF SITE
ENVIRONMENTAL CHARCOAL CARTRIDGE SAMPLES - ON-SITE STATIONS

I-131 ACTIVITY pCi/m³ ± 1 SIGMA
LOCATION

WEEK START DATE	D1 ON-SITE	G ON-SITE	H ON-SITE	I ON-SITE	J ON-SITE	K ON-SITE
01/03/00	<0.016	<0.018	<0.018	<0.023	<0.022	<0.019
01/10/00	<0.015	<0.024	<0.018	<0.026	<0.012	<0.026
01/17/00	<0.017	<0.017	<0.013	*NO SAMPLE	<0.014	<0.018
01/24/00	<0.023	<0.013	<0.014	<0.019	<0.015	<0.018
01/31/00	<0.022	<0.023	<0.018	<0.031	<0.017	<0.017
02/07/00	<0.017	<0.020	<0.018	<0.018	<0.018	<0.021
02/14/00	<0.004	<0.013	<0.013	<0.012	<0.017	<0.014
02/22/00	<0.011	<0.015	<0.021	<0.021	<0.018	<0.014
02/28/00	<0.013	<0.010	<0.016	<0.018	<0.018	<0.014
03/06/00	<0.014	<0.012	<0.021	<0.016	<0.012	<0.013
03/13/00	<0.011	<0.015	<0.014	<0.020	<0.012	<0.013
03/20/00	<0.010	<0.010	<0.014	<0.018	<0.019	<0.011
03/27/00	<0.016	<0.015	<0.016	<0.015	<0.020	<0.021
04/03/00	<0.014	<0.016	<0.016	<0.011	<0.018	<0.016
04/10/00	<0.014	<0.013	<0.013	<0.014	<0.017	<0.016
04/17/00	<0.011	<0.014	<0.023	<0.017	<0.014	<0.015
04/24/00	<0.016	<0.013	<0.023	<0.017	<0.012	<0.013
05/01/00	<0.014	<0.014	<0.013	<0.017	<0.017	<0.017
05/08/00	<0.012	<0.014	<0.015	<0.019	<0.018	<0.017
05/15/00	<0.013	<0.015	<0.015	<0.015	<0.010	<0.016
05/22/00	<0.013	<0.012	<0.012	<0.012	<0.015	<0.013
05/30/00	<0.014	<0.019	<0.017	<0.017	<0.022	<0.018
06/05/00	<0.016	<0.017	<0.013	<0.015	<0.016	<0.017
06/12/00	<0.011	<0.014	<0.014	<0.014	<0.013	<0.012
06/19/00	<0.019	<0.011	<0.015	<0.018	<0.016	<0.020
06/26/00	<0.014	<0.016	<0.015	<0.015	<0.017	<0.023

* No Sample Results

TABLE 6-8 (Continued)

NMP/JAF SITE
 ENVIRONMENTAL CHARCOAL CARTRIDGE SAMPLES - ON-SITE STATIONS
 I-131 ACTIVITY pCi/m³ ± 1 SIGMA
 LOCATION

WEEK START DATE	D1 ON-SITE	G ON-SITE	H ON-SITE	I ON-SITE	J ON-SITE	K ON-SITE
07/03/00	<0.023	<0.013	<0.014	<0.014	<0.016	<0.013
07/10/00	<0.008	<0.013	<0.009	<0.015	<0.018	<0.020
07/17/00	<0.011	<0.018	<0.016	<0.014	<0.020	<0.015
07/24/00	<0.016	<0.015	<0.017	<0.012	<0.018	<0.016
07/31/00	<0.016	<0.013	<0.016	<0.015	<0.019	<0.015
08/07/00	<0.012	<0.012	<0.014	<0.011	<0.014	<0.015
08/14/00	<0.009	<0.014	<0.014	<0.011	<0.013	<0.013
08/21/00	<0.017	<0.016	<0.013	<0.014	<0.013	<0.016
08/28/00	<0.016	<0.018	<0.016	<0.015	<0.016	<0.016
09/05/00	<0.026	<0.028	<0.017	<0.036	<0.029	<0.019
09/11/00	<0.014	<0.016	<0.017	<0.017	<0.010	<0.017
09/18/00	<0.010	<0.012	<0.017	<0.014	<0.014	<0.022
09/25/00	<0.015	<0.011	<0.016	<0.015	<0.016	<0.017
10/02/00	<0.018	<0.017	<0.014	<0.021	<0.017	<0.023
10/09/00	<0.009	<0.013	<0.012	<0.016	<0.018	<0.022
10/16/00	<0.013	<0.014	<0.012	<0.015	<0.019	<0.017
10/23/00	<0.011	<0.015	<0.016	<0.013	<0.013	<0.015
10/30/00	<0.014	<0.014	<0.016	<0.014	<0.017	<0.015
11/06/00	<0.011	<0.012	<0.012	<0.015	<0.016	<0.012
11/14/00	<0.021	<0.016	<0.019	<0.017	<0.022	<0.017
11/20/00	<0.014	<0.018	<0.016	<0.016	<0.020	<0.020
11/27/00	<0.013	<0.017	<0.016	<0.020	<0.016	<0.018
12/04/00	<0.013	<0.015	<0.011	<0.020	<0.022	<0.014
12/11/00	<0.018	<0.015	<0.018	<0.024	<0.010	<0.020
12/18/00	<0.009	<0.012	<0.013	<0.013	<0.018	<0.023
12/26/00	<0.016	<0.013	<0.015	<0.017	<0.009	<0.013

TABLE 6-9

CONCENTRATIONS OF GAMMA EMITTERS IN MONTHLY COMPOSITES
OF JAF/NMP SITE AIR PARTICULATE SAMPLES - 2000

Results in Units of $10^{-3}\text{pCi/m}^3 \pm 1 \text{ Sigma}$

R1 OFF-SITE COMPOSITE*

NUCLIDES	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Be-7	116±24.6	89.5±13.0	86.9±10.5	126±14.8	94.0±11.7	59.0±10.3
Zn-65	<6.65	<4.89	<5.44	<9.29	<7.18	<7.81
Cs-134	<4.17	<2.41	<1.71	<3.63	<2.60	<2.38
Cs-137	<4.99	<2.37	<2.56	<3.28	<2.35	<1.89
Zr-95	<12.7	<5.03	<3.62	<4.16	<5.71	<1.07
Nb-95	<10.9	<2.64	<2.96	<3.65	<3.69	<2.65
Co-58	<9.59	<2.93	<2.76	<3.91	<2.68	<2.36
Mn-54	<2.31	<3.17	<1.32	<3.13	<2.29	<2.96
Co-60	<4.01	<3.39	<3.31	<3.14	<2.64	<0.80
K-40	<41.8	<29.6	<7.20	87.9±17.3	88.8±16.1	<33.8
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
NUCLIDES	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Be-7	46.7±12.1	72.2±15.3	68.9±11.4	<43.5	37.0±10.8	71.3±10.4
Zn-65	<1.88	<11.8	<5.54	<2.73	<5.16	<5.83
Cs-134	<3.31	<4.67	<1.69	<2.43	<2.71	<2.30
Cs-137	<2.44	<3.45	<2.08	<3.01	<2.66	<2.13
Zr-95	<4.65	<7.20	<5.72	<8.98	<6.24	<4.37
Nb-95	<5.32	<4.20	<2.55	<7.30	<4.83	<3.78
Co-58	<2.72	<4.18	<1.84	<5.58	<2.46	<3.09
Mn-54	<2.78	<3.12	<1.56	<5.23	<1.85	<2.39
Co-60	<4.85	<4.63	<0.66	<6.88	<3.26	<1.95
K-40	<31.5	<38.5	38.2±10.8	<43.0	<22.6	52.8±12.9
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

* Sample Location Required by Technical Specifications.

† Plant Related Radionuclides.

TABLE 6-9 (Continued)
CONCENTRATIONS OF GAMMA EMITTERS IN MONTHLY COMPOSITES
OF JAF/NMP SITE AIR PARTICULATE SAMPLES - 2000

Results in Units of $10^{-3}\text{pCi/m}^3 \pm 1 \text{ Sigma}$

R2 OFF-SITE COMPOSITE*

NUCLIDES	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Be-7	<46.1	88.6±12.7	91.3±12.5	153±16.3	82.6±12.2	49.3±9.25
Zn-65	<22.3	<6.11	<6.27	<6.66	<4.86	<3.85
Cs-134	<4.09	<2.42	<2.26	<2.72	<1.89	<1.52
Cs-137	<4.88	<2.59	<2.82	<2.77	<1.29	<2.03
Zr-95	<4.32	<4.25	<3.28	<6.89	<4.98	<4.44
Nb-95	<8.37	<3.53	<2.92	<4.62	<3.68	<2.73
Co-58	<7.39	<3.02	<3.04	<2.75	<1.61	<2.59
Mn-54	<2.26	<2.14	<1.87	<1.66	<2.26	<2.94
Co-60	<3.93	<3.73	<2.61	<3.44	<0.81	<3.10
K-40	<40.9	<24.2	<25.6	<45.3	<29.4	<22.5
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
NUCLIDES	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Be-7	75.5±13.2	55.9±14.7	73.0±6.45	56.0±13.9	44.0±15.2	39.8±8.29
Zn-65	<7.94	<12.6	<6.53	<11.9	<5.91	<4.43
Cs-134	<2.58	<4.13	<2.07	<2.75	<2.61	<2.13
Cs-137	<3.18	<2.96	<1.98	<3.19	<2.25	<1.64
Zr-95	<7.32	<9.02	<4.77	<10.8	<2.94	<4.96
Nb-95	<4.55	<4.66	<2.58	<4.54	<3.30	<2.61
Co-58	<3.82	<5.23	<2.96	<4.18	<2.93	<2.21
Mn-54	<3.56	<2.98	<1.95	<3.81	<2.86	<1.73
Co-60	<2.90	<5.14	**4.76±0.72	<5.04	<3.62	<2.69
K-40	<29.4	<46.6	<2.51	<53.9	44.0±15.2	52.9±11.3
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

* Sample Location Required by Technical Specifications.

** Individual filters showed no Co-60. Independent Lab analysis detected no Co-60. DER 01090.
Plant Related Radionuclides.

TABLE 6-9 (Continued)
CONCENTRATIONS OF GAMMA EMITTERS IN MONTHLY COMPOSITES
OF JAF/NMP SITE AIR PARTICULATE SAMPLES - 2000

Results in Units of $10^{-3}\text{pCi/m}^3 \pm 1 \text{ Sigma}$

R3 OFF-SITE COMPOSITE*

NUCLIDES	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Be-7	<13.9	88.6±12.4	109±12.3	109±14.3	86.2±11.7	69.5±10.4
Zn-65	<23.2	<6.67	<7.46	<8.24	<5.48	<3.85
Cs-134	<6.20	<2.33	<3.29	<3.09	<2.40	<1.97
Cs-137	<1.86	<2.57	<2.55	<2.66	<2.44	<1.96
Zr-95	<16.4	<4.87	<5.35	<6.15	<5.76	<5.86
Nb-95	<3.02	<3.91	<2.95	<5.00	<2.98	<3.21
Co-58	<2.66	<3.94	<3.68	<2.96	<2.57	<0.62
Mn-54	<2.35	<1.88	<2.57	<1.77	<2.24	<2.51
Co-60	<14.7	<4.00	<2.40	<3.49	<3.50	<3.24
K-40	<11.0	<22.6	106±16.0	<48.3	<41.7	<8.27
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
NUCLIDES	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Be-7	57.1±12.2	75.5±14.6	64.6±11.2	83.1±18.6	<28.0	49.9±9.47
Zn-65	<7.08	<12.4	<5.17	<11.1	<1.97	<5.45
Cs-134	<2.70	<4.94	<2.87	<3.44	<3.17	<2.77
Cs-137	<2.97	<4.27	<2.17	<3.39	<2.83	<2.05
Zr-95	<6.27	<6.15	<4.86	<7.15	<6.43	<3.58
Nb-95	<4.92	<6.73	<3.24	<6.76	<3.11	<1.67
Co-58	<2.84	<5.77	<2.99	<3.26	<4.59	<2.08
Mn-54	<3.23	<5.55	<2.63	<2.67	<3.20	<1.53
Co-60	<3.09	<3.64	<2.33	<1.41	<1.15	<2.21
K-40	<41.6	89.0±21.3	82.5±14.1	<14.4	86.1±20.7	<18.7
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

* Sample Location Required by Technical Specifications.

† Plant Related Radionuclides.

TABLE 6-9 (Continued)
CONCENTRATIONS OF GAMMA EMITTERS IN MONTHLY COMPOSITES
OF JAF/NMP SITE AIR PARTICULATE SAMPLES - 2000

Results in Units of $10^{-3}\text{pCi/m}^3 \pm 1 \text{ Sigma}$

R4 OFF-SITE COMPOSITE*

NUCLIDES	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Be-7	62.1±13.6	83.7±12.2	103±12.8	119±18.4	94.3±11.9	73.1±12.8
Zn-65	<8.09	<7.12	<8.39	<8.67	<4.65	<5.15
Cs-134	<2.50	<2.43	<2.94	<4.69	<1.89	<2.30
Cs-137	<3.50	<2.09	<2.94	<2.79	<2.05	<2.41
Zr-95	<8.22	<4.52	<5.80	<8.53	<5.52	<7.69
Nb-95	<5.56	<3.62	<3.96	<4.52	<2.68	<3.06
Co-58	<2.91	<2.88	<2.80	<3.42	<3.26	<2.08
Mn-54	<3.29	<2.85	<2.56	<4.21	<2.83	<2.59
Co-60	<3.88	<0.80	<3.93	<5.35	<2.13	<1.10
K-40	<13.9	<29.3	102±16.6	<41.2	<28.8	<44.8
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
NUCLIDES	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Be-7	49.9±11.2	<37.1	81.2±12.1	102±19.3	57.5±11.7	53.3±11.2
Zn-65	<7.68	<16.4	<7.89	<11.9	<9.66	<5.96
Cs-134	<3.36	<3.64	<2.23	<4.24	<4.23	<2.64
Cs-137	<2.95	<5.53	<3.00	<4.27	<3.25	<2.35
Zr-95	<7.36	<2.96	<3.19	<11.9	<5.78	<1.20
Nb-95	<4.96	<8.54	<3.90	<7.84	<2.65	<3.77
Co-58	<4.04	<7.38	<2.87	<6.94	<2.94	<2.80
Mn-54	<3.79	<15.1	<2.97	<6.18	<3.80	<2.67
Co-60	<3.64	<6.38	<4.11	<3.46	<2.94	<3.46
K-40	77.3±18.1	<69.8	<27.20	111±25.6	109±18.7	<9.80
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

* Sample Location Required by Technical Specifications.

† Antineutrino Emission.

TABLE 6-9 (Continued)
CONCENTRATIONS OF GAMMA EMITTERS IN MONTHLY COMPOSITES
OF JAF/NMP SITE AIR PARTICULATE SAMPLES - 2000

Results in Units of $10^{-3}\text{pCi/m}^3 \pm 1 \text{ Sigma}$

R5 OFF-SITE COMPOSITE (CONTROL)*

NUCLIDES	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Be-7	<37.2	100±13.5	102±14.5	117±14.8	89.0±14.2	89.3±11.1
Zn-65	<6.56	<7.72	<7.76	<7.23	<9.52	<8.34
Cs-134	<4.11	<2.92	<2.50	<4.03	<2.40	<2.87
Cs-137	<4.91	<2.31	<2.73	<3.17	<3.53	<2.03
Zr-95	<12.6	<4.92	<6.57	<4.16	<5.14	<5.33
Nb-95	<2.98	<3.67	<4.22	<3.40	<4.95	<4.54
Co-58	<2.60	<3.12	<3.09	<4.08	<4.75	<2.78
Mn-54	<2.28	<1.90	<2.67	<4.58	<3.51	<3.06
Co-60	<3.95	<3.31	<2.90	<4.38	<3.27	<3.07
K-40	<41.1	<22.8	<41.4	121±20.6	<5.71	54.3±13.8
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
NUCLIDES	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Be-7	75.5±13.3	<32.1	81.7±10.8	108±18.3	175±54.0	71.6±10.8
Zn-65	<6.73	<11.2	<4.87	<8.99	<34.1	<5.78
Cs-134	<2.92	<4.70	<1.80	<2.18	<13.6	<2.23
Cs-137	<2.44	<4.26	<1.17	<3.75	<11.6	<1.72
Zr-95	<7.48	<8.50	<3.02	<9.56	<20.1	<5.01
Nb-95	<5.03	<7.33	<2.44	<4.92	<21.0	<3.78
Co-58	<3.56	<4.98	<1.76	<3.91	<12.8	<2.40
Mn-54	<3.11	<5.50	<2.12	<4.14	<8.56	<2.21
Co-60	<3.89	<6.82	<2.27	<4.80	<3.39	<1.75
K-40	<41.8	<24.4	<30.3	<56.4	<115.6	<22.3
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

* Sample Location Required by Technical Specifications.

† Plant Related Radionuclides.

TABLE 6-9 (Continued)
 CONCENTRATIONS OF GAMMA EMITTERS IN MONTHLY COMPOSITES
 OF JAF/NMP SITE AIR PARTICULATE SAMPLES - 2000

Results in Units of $10^{-3}\text{pCi/m}^3 \pm 1 \text{ Sigma}$

D2 OFF-SITE COMPOSITE*

NUCLIDES	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Be-7	87.1±14.4	99.2±14.2	87.0±10.9	89.4±14.7	50.6±10.2	78.3±11.4
Zn-65	<8.98	<5.58	<6.63	<4.82	<8.10	<3.98
Cs-134	<3.92	<2.28	<2.44	<2.56	<3.42	<2.36
Cs-137	<1.99	<2.33	<2.43	<3.55	<2.87	<2.19
Zr-95	<4.93	<6.29	<4.47	<7.77	<4.99	<5.23
Nb-95	<4.88	<4.03	<3.23	<3.72	<3.79	<3.58
Co-58	<3.63	<3.67	<2.27	<3.24	<3.57	<2.73
Mn-54	<3.16	<2.54	<2.07	<2.20	<3.43	<2.55
Co-60	<4.94	<2.42	<3.05	<1.02	<1.94	<0.83
K-40	<74.7	<42.3	78.9±12.8	<36.9	104±18.1	<35.1
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
NUCLIDES	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Be-7	62.9±13.0	<29.2	59.0±12.0	69.4±16.3	29.7±9.05	46.3±8.25
Zn-65	<8.86	<10.1	<8.24	<11.0	<5.08	<3.07
Cs-134	<2.12	<4.63	<2.72	<3.28	<2.32	<1.77
Cs-137	<3.21	<5.43	<2.04	<3.35	<2.06	<1.21
Zr-95	<6.63	<7.73	<3.05	<7.41	<5.32	<2.92
Nb-95	<3.67	<7.80	<3.73	<7.00	<3.60	<2.01
Co-58	<5.16	<4.53	<3.06	<4.91	<2.72	<2.12
Mn-54	<3.39	<5.79	<2.01	<2.49	<1.69	<1.95
Co-60	<3.75	<2.16	<3.52	<1.49	<3.24	<2.76
K-40	<11.2	<22.1	<9.52	<41.2	<28.5	64.0±15.0
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

* Optional Sample Location. Not Required by Technical Specifications.

TABLE 6-9 (Continued)
CONCENTRATIONS OF GAMMA EMITTERS IN MONTHLY COMPOSITES
OF JAF/NMP SITE AIR PARTICULATE SAMPLES - 2000

Results in Units of $10^{-3}\text{pCi/m}^3 \pm 1 \text{ Sigma}$

E OFF-SITE COMPOSITE*

NUCLIDES	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Be-7	65.9±13.1	58.4±10.3	82.0±11.0	102±14.6	73.8±11.1	65.8±10.5
Zn-65	<6.68	<7.33	<4.06	<10.6	<5.86	<6.67
Cs-134	<3.64	<3.68	<1.70	<3.01	<2.50	<2.10
Cs-137	<2.20	<2.76	<1.94	<1.81	<3.09	<1.99
Zr-95	<6.59	<5.12	<4.95	<4.47	<4.64	<5.09
Nb-95	<6.34	<3.10	<2.87	<4.24	<3.51	<2.86
Co-58	<4.47	<3.39	<2.57	<3.38	<2.43	<2.10
Mn-54	<2.97	<3.22	<1.89	<2.96	<2.11	<3.08
Co-60	<5.96	<2.57	<3.69	<2.84	<4.91	<2.81
K-40	<47.5	108±17.2	<28.4	<38.2	<24.1	<8.34
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
NUCLIDES	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Be-7	51.7±11.2	<42.1	83.2±11.9	77.1±16.6	47.1±10.9	64.6±10.9
Zn-65	<7.25	<13.1	<5.91	<8.96	<8.65	<5.70
Cs-134	<2.17	<3.38	<2.71	<4.33	<3.32	<2.83
Cs-137	<1.55	<3.96	<2.16	<2.29	<0.62	<2.53
Zr-95	<6.46	<2.76	<3.62	<5.87	<7.22	<4.92
Nb-95	<3.58	<5.98	<3.33	<6.19	<3.25	<3.49
Co-58	<3.71	<5.92	<2.39	<3.83	<5.57	<1.92
Mn-54	<2.49	<6.67	<2.15	<4.04	<3.34	<2.52
Co-60	<4.19	<6.34	<2.62	<1.48	<3.94	<2.44
K-40	<30.6	<64.9	93.3±14.7	<57.1	<33.5	<22.5
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

* Optional Sample Location. Not Required by Technical Specifications.

† Plant Related Radionuclides.

TABLE 6-9 (Continued)
CONCENTRATIONS OF GAMMA EMITTERS IN MONTHLY COMPOSITES
OF JAF/NMP SITE AIR PARTICULATE SAMPLES - 2000

Results in Units of $10^{-3}\text{pCi/m}^3 \pm 1 \text{ Sigma}$

F OFF-SITE COMPOSITE*

NUCLIDES	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Be-7	89.1±21.8	67.2±10.2	101±10.5	82.3±15.3	86.2±11.8	69.7±10.4
Zn-65	<6.29	<6.44	<4.20	<11.7	<5.98	<6.75
Cs-134	<3.95	<2.63	<1.70	<3.45	<1.96	<1.19
Cs-137	<6.89	<2.61	<1.86	<4.29	<2.42	<1.79
Zr-95	<15.4	<3.62	<4.41	<5.85	<6.39	<4.29
Nb-95	<2.86	<3.78	<1.97	<5.90	<2.79	<2.63
Co-58	<7.20	<2.45	<2.30	<4.88	<2.94	<1.62
Mn-54	<8.00	<2.36	<1.97	<3.44	<1.43	<2.51
Co-60	<3.79	<2.15	<2.15	<3.76	<2.24	<2.55
K-40	<39.4	<21.8	<6.08	<13.5	<34.9	<2.15
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
NUCLIDES	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Be-7	48.6±11.0	<23.4	63.1±10.8	86.1±18.5	40.6±10.3	54.7±9.19
Zn-65	<10.1	<10.1	<4.14	<6.63	<6.23	<3.73
Cs-134	<3.36	<3.80	<2.01	<2.56	<3.66	<2.34
Cs-137	<2.58	<3.85	<1.96	<2.56	<2.81	<2.08
Zr-95	<5.28	<12.8	<4.79	<9.09	<6.34	<3.46
Nb-95	<4.67	<5.28	<2.53	<6.60	<4.29	<3.53
Co-58	<3.45	<1.57	<1.62	<6.19	<2.91	<2.01
Mn-54	<3.54	<1.36	<1.93	<0.90	<3.29	<1.72
Co-60	<3.64	<2.16	<0.66	<3.93	<2.83	<0.62
K-40	<38.8	<63.1	49.0±12.8	<14.0	105±18.2	42.4±12.2
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

* Optional Sample Location Not Required by Technical Specifications

TABLE 6-9 (Continued)

CONCENTRATIONS OF GAMMA EMITTERS IN MONTHLY COMPOSITES
OF JAF/NMP SITE AIR PARTICULATE SAMPLES - 2000Results in Units of $10^{-3}\text{pCi/m}^3 \pm 1 \text{ Sigma}$

G OFF-SITE COMPOSITE*

NUCLIDES	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Be-7	72.9±13.6	93.2±11.4	78.7±10.4	124±14.2	98.0±12.6	70.0±12.1
Zn-65	<8.91	<5.69	<5.12	<8.93	<4.45	<6.01
Cs-134	<2.67	<2.57	<1.74	<3.20	<1.93	<1.64
Cs-137	<1.70	<1.95	<1.46	<2.69	<2.38	<2.73
Zr-95	<6.87	<4.94	<4.09	<6.47	<5.59	<4.65
Nb-95	<3.59	<2.95	<2.79	<4.15	<2.57	<3.97
Co-58	<2.46	<2.52	<1.68	<4.06	<2.89	<3.11
Mn-54	<3.13	<2.63	<1.44	<2.62	<1.39	<1.66
Co-60	<3.34	<2.79	<2.20	<4.21	<3.32	<4.28
K-40	<44.9	<33.3	<22.3	104±18.6	<27.6	<35.8
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
NUCLIDES	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Be-7	58.4±10.6	56.2±13.7	63.5±11.0	84.9±18.9	31.4±8.59	63.9±10.6
Zn-65	<5.58	<3.50	<5.85	<11.8	<4.66	<5.42
Cs-134	<2.81	<4.36	<1.95	<4.00	<1.78	<2.40
Cs-137	<2.66	<3.62	<1.74	<4.12	<1.99	<2.52
Zr-95	<4.74	<9.25	<4.23	<7.19	<5.92	<5.69
Nb-95	<3.56	<4.97	<2.93	<7.57	<2.89	<1.95
Co-58	<3.90	<7.71	<3.56	<4.79	<2.71	<2.19
Mn-54	<3.16	<5.45	<1.86	<3.20	<1.93	<1.88
Co-60	<4.90	<5.80	<1.93	<3.84	<2.01	<0.87
K-40	<27.3	<59.4	<28.6	149±25.9	<20.4	<35.4
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

* Optional Sample Location. Not Required by Technical Specifications.

† Plant Related Radionuclides.

TABLE 6-9 (Continued)
CONCENTRATIONS OF GAMMA EMITTERS IN MONTHLY COMPOSITES
OF JAF/NMP SITE AIR PARTICULATE SAMPLES - 1999

Results in Units of $10^{-3}\text{pCi/m}^3 \pm 1 \text{ Sigma}$

D1 ON-SITE COMPOSITE*

NUCLIDES	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Be-7	79.5±15.4	63.1±11.6	97.0±12.5	90.5±14.5	61.7±10.3	77.9±13.0
Zn-65	<3.76	<7.00	<4.24	<5.66	<4.80	<5.33
Cs-134	<2.98	<2.85	<2.23	<2.21	<2.37	<2.12
Cs-137	<3.55	<2.04	<2.42	<2.48	<2.30	<2.78
Zr-95	<7.23	<4.57	<5.90	<3.52	<3.80	<6.81
Nb-95	<4.90	<2.68	<2.03	<0.84	<2.57	<4.85
Co-58	<1.49	<3.25	<2.77	<3.78	<2.81	<2.72
Mn-54	<5.56	<2.29	<2.37	<3.28	<2.94	<2.68
Co-60	<2.26	<2.33	<0.90	<3.38	<4.06	<4.77
K-40	<23.6	<34.9	<31.7	<34.3	<29.0	<46.3
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
NUCLIDES	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Be-7	75.5±12.2	<41.3	82.6±11.1	101±19.1	50.1±11.1	65.4±9.53
Zn-65	<8.14	<6.10	<6.15	<9.10	<5.77	<3.86
Cs-134	<2.25	<5.04	<1.64	<3.08	<2.60	<1.59
Cs-137	<2.26	<4.23	<1.52	<2.68	<2.27	<1.63
Zr-95	<4.55	<9.33	<3.99	<5.48	<5.37	<4.21
Nb-95	<3.08	<4.86	<3.03	<4.01	<3.12	<2.21
Co-58	<2.78	<5.41	<2.32	<3.99	<3.69	<1.87
Mn-54	<3.35	<3.55	<2.46	<3.24	<3.03	<1.60
Co-60	<2.72	<5.26	<1.80	<4.85	<4.36	<0.61
K-40	<27.5	<37.7	56.3±12.4	<14.3	<7.69	<27.4
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

* Optional Sample Location Not Required by Technical Specifications

TABLE 6-9 (Continued)
CONCENTRATIONS OF GAMMA EMITTERS IN MONTHLY COMPOSITES
OF JAF/NMP SITE AIR PARTICULATE SAMPLES - 2000

Results in Units of $10^{-3}\text{pCi/m}^3 \pm 1 \text{ Sigma}$

G ON-SITE COMPOSITE*

NUCLIDES	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Be-7	<42.9	62.7±9.87	108±10.8	93.3±13.3	86.5±11.0	73.4±10.9
Zn-65	<6.01	<6.87	<5.53	<8.99	<4.72	<5.92
Cs-134	<1.39	<2.11	<2.19	<2.05	<1.93	<2.55
Cs-137	<1.65	<1.72	<2.22	<2.46	<1.84	<2.34
Zr-95	<4.01	<5.12	<4.11	<4.07	<5.30	<2.91
Nb-95	<2.72	<3.50	<2.58	<3.19	<3.14	<2.56
Co-58	<2.38	<3.53	<2.17	<3.36	<2.70	<2.50
Mn-54	<6.01	<2.91	<2.33	<2.40	<2.15	<2.80
Co-60	<3.62	<3.07	<2.07	<2.56	<3.66	<2.71
K-40	<98.4	<32.8	77.3±11.9	<40.0	<7.70	<31.9
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
NUCLIDES	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Be-7	48.1±9.64	82.9±15.1	83.1±11.8	97.9±20.2	<32.0	46.5±8.46
Zn-65	<7.02	<8.67	<6.57	<8.25	<8.18	<4.69
Cs-134	<2.10	<4.48	<2.24	<3.99	<2.56	<2.06
Cs-137	<2.16	<4.37	<3.10	<2.93	<3.50	<2.04
Zr-95	<4.18	<7.78	<3.74	<10.4	<6.40	<3.03
Nb-95	<5.08	<5.80	<4.17	<7.60	<3.60	<2.09
Co-58	<3.71	<5.30	<3.26	<5.36	<3.99	<2.79
Mn-54	<3.82	<3.88	<1.96	<4.64	<3.16	<2.38
Co-60	<4.30	<5.16	<3.43	<5.59	<4.30	<2.56
K-40	<41.1	<13.1	<25.2	95.4±23.7	<46.3	57.5±12.5
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

* Optional Sample Location. Not Required by Technical Specifications.

† Plant Related Radionuclides.

TABLE 6-9 (Continued)
CONCENTRATIONS OF GAMMA EMITTERS IN MONTHLY COMPOSITES
OF JAF/NMP SITE AIR PARTICULATE SAMPLES - 2000

Results in Units of $10^{-3}\text{pCi/m}^3 \pm 1 \text{ Sigma}$

H ON-SITE COMPOSITE*

NUCLIDES	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Be-7	<14.1	86.3±11.9	84.3±10.9	89.5±15.9	91.7±11.5	67.6±10.7
Zn-65	<18.4	<7.64	<5.04	<2.46	<5.09	<4.78
Cs-134	<4.23	<3.10	<1.16	<3.54	<2.27	<2.31
Cs-137	<1.86	<2.49	<2.13	<3.53	<1.72	<1.32
Zr-95	<4.51	<5.05	<3.55	<9.16	<5.66	<4.77
Nb-95	<8.81	<3.44	<2.11	<4.98	<3.60	<4.00
Co-58	<9.80	<3.92	<2.71	<4.70	<2.12	<2.29
Mn-54	<2.35	<2.97	<2.15	<3.38	<2.23	<2.37
Co-60	<11.6	<3.26	<2.37	<4.10	<2.62	<2.07
K-40	<111.0	141±21.0	<35.8	<40.1	<30.8	<27.7
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
NUCLIDES	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Be-7	61.2±11.5	75.2±16.5	64.3±11.0	62.0±16.0	38.5±10.8	53.2±8.91
Zn-65	<5.42	<7.23	<7.97	<7.32	<5.69	<3.81
Cs-134	<2.42	<4.17	<2.08	<1.80	<4.02	<2.24
Cs-137	<2.80	<4.22	<1.78	<2.83	<2.56	<1.92
Zr-95	<3.37	<9.38	<3.88	<5.78	<7.26	<3.94
Nb-95	<3.76	<6.76	<3.13	<5.38	<3.94	<2.96
Co-58	<3.62	<3.90	<2.77	<3.78	<2.67	<2.36
Mn-54	<2.27	<4.39	<2.95	<3.95	<2.93	<1.88
Co-60	<0.90	<1.25	<2.01	<3.97	<1.81	<0.64
K-40	<38.1	<45.1	120±15.8	<14.9	86.8±18.1	<24.6
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

* Optional Sample Location. Not Required by Technical Specifications.

TABLE 6-9 (Continued)

CONCENTRATIONS OF GAMMA EMITTERS IN MONTHLY COMPOSITES
OF JAF/NMP SITE AIR PARTICULATE SAMPLES - 2000Results in Units of $10^{-3}\text{pCi/m}^3 \pm 1 \text{ Sigma}$

I ON-SITE COMPOSITE*

NUCLIDES	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Be-7	<68.5	73.9±12.7	78.9±10.5	83.8±12.9	84.9±11.9	91.0±12.3
Zn-65	<9.58	<4.11	<4.11	<7.44	<7.26	<4.84
Cs-134	<7.58	<2.43	<2.03	<2.90	<2.70	<1.82
Cs-137	<2.64	<1.31	<1.38	<2.57	<2.52	<2.12
Zr-95	<6.40	<6.30	<4.30	<6.28	<5.74	<2.88
Nb-95	<12.5	<3.65	<2.96	<4.04	<4.52	<3.26
Co-58	<3.80	<3.40	<2.24	<2.63	<2.93	<2.63
Mn-54	<9.59	<2.68	<2.38	<3.36	<3.37	<1.92
Co-60	<5.77	<3.09	<3.46	<3.03	<3.96	<2.77
K-40	<60.1	<40.8	<24.7	98.7±17.3	<2.36	<8.24
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
NUCLIDES	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Be-7	64.8±11.1	78.0±15.6	86.2±10.5	101±19.3	45.5±10.6	48.8±9.19
Zn-65	<5.03	<13.4	<5.49	<10.2	<5.87	<4.01
Cs-134	<2.95	<3.76	<1.77	<3.53	<2.39	<2.52
Cs-137	<1.77	<3.80	<2.44	<2.13	<2.15	<2.24
Zr-95	<6.71	<8.94	<4.46	<7.42	<5.47	<3.20
Nb-95	<3.87	<7.76	<3.11	<7.74	<3.47	<1.73
Co-58	<3.65	<4.25	<2.37	<5.00	<2.43	<2.17
Mn-54	<2.25	<4.08	<1.80	<4.06	<2.34	<1.25
Co-60	<2.78	<4.68	<2.34	<8.02	<3.18	<2.30
K-40	<29.5	<38.8	<33.9	<5.34	<27.8	29.0±13.0
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

* Optional Sample Location. Not Required by Technical Specifications.

† Plant Related Radionuclides.

TABLE 6-9 (Continued)
CONCENTRATIONS OF GAMMA EMITTERS IN MONTHLY COMPOSITES
OF JAF/NMP SITE AIR PARTICULATE SAMPLES - 2000

Results in Units of $10^{-3}\text{pCi/m}^3 \pm 1 \text{ Sigma}$

J ON-SITE COMPOSITE*

NUCLIDES	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Be-7	<14.2	71.7±13.6	95.5±11.4	128±16.1	85.9±11.9	59.7±13.1
Zn-65	<6.82	<5.57	<4.15	<10.0	<7.65	<10.1
Cs-134	<1.57	<3.05	<2.01	<3.39	<2.47	<2.75
Cs-137	<6.44	<2.33	<1.84	<3.02	<2.09	<2.64
Zr-95	<13.1	<7.59	<4.45	<6.00	<5.30	<8.51
Nb-95	<11.3	<4.77	<2.61	<3.63	<4.80	<3.42
Co-58	<7.80	<3.67	<2.41	<4.34	<9.34	<4.88
Mn-54	<8.68	<2.98	<2.22	<2.97	<1.88	<2.84
Co-60	<4.11	<4.64	<1.80	<3.50	<4.14	<4.35
K-40	<140.0	<42.3	<19.0	<9.88	<29.20	<33.6
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
NUCLIDES	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Be-7	76.8±14.2	92.7±19.3	78.5±12.4	79.6±18.4	<29.6	65.8±11.9
Zn-65	<7.23	<14.1	<4.77	<2.71	<4.61	<4.63
Cs-134	<2.94	<4.40	<2.96	<2.36	<2.67	<2.81
Cs-137	<3.63	<4.85	<2.99	<2.29	<2.79	<2.07
Zr-95	<5.73	<7.73	<3.59	<7.43	<7.09	<1.18
Nb-95	<3.87	<4.55	<4.64	<5.44	<3.45	<3.40
Co-58	<3.92	<7.55	<2.71	<3.98	<3.16	<3.07
Mn-54	<2.26	<5.38	<2.53	<4.04	<2.93	<2.64
Co-60	<2.94	<3.91	<27.0	<5.21	<2.55	<0.94
K-40	<29.8	128±28.5	103±24.2	<15.30	79.7±18.0	<33.1
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

* Optional Sample Location. Not Required by Technical Specifications.
† Antineutrino related radionuclides.

TABLE 6-9 (Continued)
CONCENTRATIONS OF GAMMA EMITTERS IN MONTHLY COMPOSITES
OF JAF/NMP SITE AIR PARTICULATE SAMPLES - 2000

Results in Units of $10^{-3}\text{pCi/m}^3 \pm 1 \text{ Sigma}$

K ON-SITE COMPOSITE*

NUCLIDES	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Be-7	<13.6	78.8±12.5	90.9±11.3	113±13.8	84.3±13.9	57.1±10.9
Zn-65	<6.55	<7.75	<5.36	<8.22	<9.88	<8.13
Cs-134	<6.70	<3.54	<1.90	<1.97	<2.48	<3.03
Cs-137	<1.80	<2.30	<2.12	<2.03	<2.61	<3.18
Zr-95	<4.38	<4.81	<3.30	<3.47	<6.22	<5.53
Nb-95	<14.1	<3.50	<2.72	<4.18	<4.15	<3.83
Co-58	<2.60	<2.79	<1.77	<3.31	<3.22	<3.51
Mn-54	<2.28	<2.87	<1.51	<3.14	<3.88	<3.30
Co-60	<3.94	<3.03	<2.67	<2.76	<5.00	<0.68
K-40	<10.7	111±18.4	<23.4	<10.3	<12.2	77.1±14.6
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
NUCLIDES	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Be-7	45.3±10.4	57.9±14.1	86.6±13.1	47.7±18.6	56.9±10.8	35.8±9.40
Zn-65	<8.87	<9.54	<7.06	<12.5	<7.56	<4.25
Cs-134	<2.80	<5.43	<1.97	<4.92	<4.26	<2.01
Cs-137	<2.66	<5.71	<2.63	<4.21	<2.08	<1.65
Zr-95	<7.65	<9.35	<4.71	<6.30	<5.77	<4.64
Nb-95	<4.14	<6.87	<1.08	<6.51	<4.43	<2.96
Co-58	<3.90	<5.42	<2.45	<7.23	<2.86	<2.51
Mn-54	<1.90	<4.66	<2.77	<4.40	<2.21	<2.14
Co-60	<1.09	<4.89	<2.45	<3.41	<3.35	<1.82
K-40	<31.5	100±26.1	114±17.4	105±23.8	<8.54	<23.3
Otherst	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

* Optional Sample Location. Not Required by Technical Specifications.

† Plant Related Radionuclides.

TABLE 6-10

DIRECT RADIATION MEASUREMENT RESULTS (2000)
Results in Units of mrem/std. Month \pm 1 Sigma

STATION NUMBER	LOCATION	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	LOCATION (DISTANCE AND DIRECTION)**
3	D1 On-site	16.5 \pm 1.3	12.4 \pm 0.7	12.7 \pm 1.4	8.9 \pm 0.2	0.2 miles @ 69
4	D2 On-site	4.4 \pm 0.2	4.3 \pm 0.2	7.1 \pm 1.0	4.7 \pm 0.1	0.4 miles @ 140
5	E On-site	5.0 \pm 0.4	4.5 \pm 0.3	5.2 \pm 0.5	5.2 \pm 0.7	0.4 miles @ 175
6	F On-site	3.7 \pm 0.3	4.3 \pm 0.3	6.5 \pm 0.4	3.9 \pm 0.2	0.5 miles @ 210
7*	G On-site	3.9 \pm 0.2	3.9 \pm 0.1	4.4 \pm 0.5	3.9 \pm 0.3	0.7 miles @ 250
8	R-5 Off-site Control	4.8 \pm 0.2	5.0 \pm 0.3	7.3 \pm 0.6	5.6 \pm 0.5	16.4 miles @ 42
9	D1 Off-site	4.1 \pm 0.1	4.0 \pm 0.2	5.1 \pm 1.0	4.1 \pm 0.2	11.4 miles @ 80
10	D2 Off-site	4.4 \pm 0.3	4.5 \pm 0.2	4.8 \pm 0.5	4.3 \pm 0.2	9.0 miles @ 117
11	E Off-site	4.7 \pm 0.3	4.3 \pm 0.2	5.0 \pm 0.3	4.4 \pm 0.3	7.2 miles @ 160
12	F Off-site	4.5 \pm 0.2	3.9 \pm 0.1	3.8 \pm 0.2	4.3 \pm 0.1	7.7 miles @ 190
13	G Off-site	4.5 \pm 0.2	4.3 \pm 0.2	4.3 \pm 0.3	4.4 \pm 0.2	5.3 miles @ 225
14*	DeMass Rd., SW Oswego-Control	4.5 \pm 0.3	4.1 \pm 0.2	4.4 \pm 0.3	4.3 \pm 0.1	12.6 miles @ 226
15*	Pole 66, W. Boundary-Bible Camp	4.0 \pm 0.1	3.6 \pm 0.1	3.9 \pm 0.3	3.8 \pm 0.1	0.9 miles @ 237
18*	Energy Info. Center-Lamp Post, SW	4.8 \pm 0.1	4.2 \pm 0.3	4.2 \pm 0.4	4.7 \pm 0.3	0.4 miles @ 265
19	East Boundary-JAF, Pole 9	4.6 \pm 0.4	4.2 \pm 0.1	4.3 \pm 0.4	4.7 \pm 0.2	1.3 miles @ 81
23*	H On-site	5.4 \pm 0.3	5.2 \pm 0.3	4.8 \pm 0.4	5.2 \pm 0.2	0.8 miles @ 70
24	I On-site	4.5 \pm 0.4	4.4 \pm 0.3	4.7 \pm 0.4	4.6 \pm 0.2	0.8 miles @ 98
25	J On-site	4.2 \pm 0.3	4.2 \pm 0.4	4.8 \pm 0.2	4.6 \pm 0.3	0.9 miles @ 110
26	K On-site	4.7 \pm 0.2	4.3 \pm 0.2	4.1 \pm 0.3	4.8 \pm 0.1	0.5 miles @ 132
27	N. Fence, N. of Switchyard, JAF	23.7 \pm 1.1	19.7 \pm 1.2	17.5 \pm 1.0	11.4 \pm 0.5	0.4 miles @ 60
28	N. Light Pole, N. of Screenhouse, JAF	30.6 \pm 3.3	22.5 \pm 1.1	23.2 \pm 0.9	21.6 \pm 0.6	0.5 miles @ 68
29	N. Fence, N. of W. Side	29.7 \pm 1.7	23.9 \pm 1.9	21.2 \pm 1.2	14.7 \pm 0.4	0.5 miles @ 65
30	N. Fence, (NW) JAF	17.2 \pm 1.0	13.0 \pm 0.3	15.7 \pm 2.3	9.6 \pm 0.3	0.4 miles @ 57
31	N. Fence, (NW) NMP-1	6.7 \pm 0.3	6.7 \pm 0.3	9.4 \pm 0.8	7.8 \pm 0.1	0.2 miles @ 276
39	N. Fence, Rad. Waste-NMP-1	8.1 \pm 0.4	8.2 \pm 0.3	Lost	11.2 \pm 0.4	0.2 miles @ 292
47	N. Fence, (NE) JAF	7.7 \pm 0.5	6.4 \pm 0.4	8.5 \pm 1.7	5.9 \pm 0.3	0.6 miles @ 69
49*	Phoenix, NY-Control	3.8 \pm 0.3	3.7 \pm 0.1	5.5 \pm 0.4	4.2 \pm 0.1	19.8 miles @ 170
51	Liberty & Bronson Sts., E of OSS	4.1 \pm 0.3	4.5 \pm 0.2	5.8 \pm 0.7	4.7 \pm 0.4	7.4 miles @ 233
52	East 12 th & Cayuga Sts., Oswego School	4.4 \pm 0.2	4.3 \pm 0.4	5.3 \pm 0.3	4.6 \pm 0.2	5.8 miles @ 227

TABLE 6-10 (Continued)

DIRECT RADIATION MEASUREMENT RESULTS (2000)
Results in Units of mrem/std. Month \pm 1 Sigma

STATION NUMBER	LOCATION	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	LOCATION (DISTANCE AND DIRECTION)**
53	Broadwell & Chestnut Sts. - Fulton H.S.	4.4 \pm 0.3	4.5 \pm 0.2	5.8 \pm 0.8	4.7 \pm 0.2	13.7 miles @ 183
54	Liberty St. & Co. Rt. 16 - Mexico H.S.	4.2 \pm 0.5	4.3 \pm 0.2	5.4 \pm 0.6	4.4 \pm 0.2	9.3 miles @ 115
55	Gas Substation Co. Rt. 5-Pulaski	4.2 \pm 0.4	4.3 \pm 0.4	5.5 \pm 1.2	4.5 \pm 0.2	13.0 miles @ 75
56*	Rt. 104-New Haven SCH. (SE Corner)	5.5 \pm 0.9	4.7 \pm 0.3	4.9 \pm 0.4	4.6 \pm 0.2	5.3 miles @ 123
58*	Co.Rt. 1A-Alcan (E.of E. Entrance Rd.)	4.3 \pm 0.5	4.8 \pm 0.2	5.5 \pm 0.5	4.6 \pm 0.2	3.1 miles @ 220
75*	Unit 2, N. Fence, N. of Reactor Bldg.	6.6 \pm 0.3	6.6 \pm 0.2	9.1 \pm 0.8	7.0 \pm 0.4	0.1 miles @ 5
76*	Unit 2, N. Fence, N. of Change House	5.1 \pm 0.3	6.0 \pm 0.6	8.4 \pm 1.7	5.7 \pm 0.4	0.1 miles @ 25
77*	Unit 2, N. Fence, N. of Pipe Bldg.	6.4 \pm 0.1	6.3 \pm 0.5	8.3 \pm 0.9	6.2 \pm 0.2	0.2 miles @ 45
78*	JAF, E. of E. Old Lay Down Area	4.3 \pm 0.0	4.6 \pm 0.3	6.8 \pm 0.8	4.8 \pm 0.3	1.0 miles @ 90
79*	Co.Rt. 29, Pole #63, 0.2 mi. S. of Lake Rd.	3.7 \pm 0.2	4.4 \pm 0.4	6.2 \pm 1.1	4.2 \pm 0.2	1.1 miles @ 115
80*	Co.Rt. 29, Pole #54, 0.7 mi. S. of Lake Rd.	3.7 \pm 0.2	4.2 \pm 0.4	5.5 \pm 1.3	4.5 \pm 0.2	1.4 miles @ 133
81*	Miner Rd., Pole #16, 0.5 mi. W. of Rt. 29	4.2 \pm 0.3	3.8 \pm 0.2	4.6 \pm 0.2	4.4 \pm 0.1	1.6 miles @ 159
82*	Miner Rd., Pole #1 1/2, 1.1 mi. W. of Rt. 29	4.0 \pm 0.2	4.0 \pm 0.2	5.5 \pm 1.0	4.5 \pm 0.2	1.6 miles @ 181
83*	Lakeview Rd., Tree 0.45 mi. N. of Miner Rd.	4.2 \pm 0.4	3.6 \pm 0.2	5.1 \pm 0.3	4.5 \pm 0.2	1.2 miles @ 200
84*	Lakeview Rd., N., Pole #6117, 200 ft. N. of Lake Rd.	4.0 \pm 0.4	3.9 \pm 0.2	5.7 \pm 0.4	4.5 \pm 0.1	1.1 miles @ 225
85*	Unit 1, N. Fence, N. of W. Side of Screen House	8.4 \pm 0.5	8.2 \pm 0.3	10.0 \pm 0.6	9.4 \pm 0.4	0.2 miles @ 294
86*	Unit 2, N. Fence, N. of W. Side of Screen House	6.3 \pm 0.3	5.9 \pm 0.3	8.3 \pm 0.4	7.1 \pm 0.3	0.1 miles @ 315

TABLE 6-10 (Continued)

DIRECT RADIATION MEASUREMENT RESULTS (2000)
Results in Units of mrem/std. Month \pm 1 Sigma

STATION NUMBER	LOCATION	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	LOCATION (DISTANCE AND DIRECTION)**
87*	Unit 2, N. Fence, N. of E. Side of Screen House	6.1 \pm 0.4	6.1 \pm 0.3	8.4 \pm 1.0	7.6 \pm 0.4	0.1 miles @ 341
88*	Hickory Grove Rd., Pole #2, 0.6 mi. N. of Rt. 1	4.4 \pm 0.3	4.0 \pm 0.1	3.6 \pm 0.1	4.4 \pm 0.1	4.8 miles @ 97
89*	Leavitt Rd., Pole #16, 0.4 mi. S. of Rt. 1	4.7 \pm 0.4	4.3 \pm 0.2	5.9 \pm 0.6	4.9 \pm 0.2	4.1 miles @ 111
90*	Rt. 104, Pole #300, 150 Ft. E. of Keefe Rd.	3.9 \pm 0.4	3.8 \pm 0.4	5.0 \pm 0.8	4.3 \pm 0.1	4.2 miles @ 135
91*	Rt. 51A, Pole #59, 0.8 mi. W. of Rt. 51	3.8 \pm 0.3	4.1 \pm 0.3	5.7 \pm 1.1	4.2 \pm 0.3	4.8 miles @ 156
92*	Maiden Lane Rd., Power Pole, 0.6 mi. S. of Rt. 104	4.9 \pm 0.5	4.8 \pm 0.2	5.9 \pm 0.9	4.9 \pm 0.2	4.4 miles @ 183
93*	Rt. 53, Pole 1-1, 120 ft. S. of Rt. 104	3.7 \pm 0.2	3.8 \pm 0.2	6.6 \pm 0.4	4.4 \pm 0.4	4.4 miles @ 205
94*	Rt. 1, Pole #82, 250 ft. E. of Kocher Rd. (Co. Rt. #63)	3.7 \pm 0.2	3.7 \pm 0.2	5.4 \pm 0.8	4.1 \pm 0.2	4.7 miles @ 223
95*	Lakeshore Camp Site, from Alcan W. access Rd., Pole #21, 1.2 mi. N. of Rt. 1	3.9 \pm 0.3	3.4 \pm 0.3	4.5 \pm 0.4	3.9 \pm 0.2	4.1 miles @ 237
96*	Creamery Rd., 0.3 mi. S. of Middle Rd., Pole 1 $\frac{1}{2}$	3.8 \pm 0.2	3.7 \pm 0.2	5.5 \pm 0.5	4.3 \pm 0.2	3.6 miles @ 199
97*	Rt. 29, Pole #50, 200 ft. N. of Miner Rd.	3.8 \pm 0.2	4.1 \pm 0.2	6.3 \pm 0.9	4.4 \pm 0.2	1.8 miles @ 143
98*	Lake Rd., Pole #145, 0.15 mi. E. of Rt. 29	4.0 \pm 0.5	4.0 \pm 0.2	5.6 \pm 0.6	4.2 \pm 0.1	1.2 miles @ 101
99	NMP Rd., 0.4 mi. N. of Lake Rd., Env. Station R1 Off-site	3.9 \pm 0.3	4.3 \pm 0.1	5.5 \pm 0.7	4.6 \pm 0.3	1.8 miles @ 88
100	Rt. 29 and Lake Rd., Env. Station R2 Off-site	3.7 \pm 0.1	4.5 \pm 0.2	6.5 \pm 0.9	4.5 \pm 0.1	1.1 miles @ 104
101	Rt. 29, 0.7 mi. S. of Lake Rd., Env. Station R3 Off-site	3.5 \pm 0.2	4.4 \pm 0.2	5.1 \pm 0.4	4.2 \pm 0.1	1.5 miles @ 132

TABLE 6-10 (Continued)

DIRECT RADIATION MEASUREMENT RESULTS (2000)
Results in Units of mrem/std. Month \pm 1 Sigma

STATION NUMBER	LOCATION	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	LOCATION (DISTANCE AND DIRECTION)**
102	EOF/Env. Lab, Oswego Co. Airport (Fulton Airport, Rt. 176) E. Driveway, Lamp Post	3.6 \pm 0.3	4.5 \pm 0.2	6.6 \pm 0.8	4.3 \pm 0.3	11.9 miles @ 175
103	EIC, East Garage Rd., Lamp Post R3 Off-site	4.0 \pm 0.4	5.1 \pm 0.3	6.9 \pm 1.2	4.8 \pm 0.2	0.4 miles @ 267
104	Parkhurst Road, Pole #148 1/2-A, 0.1 miles South of Lake Rd.	3.7 \pm 0.4	4.2 \pm 0.3	5.3 \pm 0.7	4.3 \pm 0.2	1.4 miles @ 102
105	Lakeview Rd., Pole #6125, 0.6 mi. South of Lake Road	4.2 \pm 0.2	4.5 \pm 0.3	5.3 \pm 0.8	4.4 \pm 0.2	1.4 miles @ 198
106	Shoreline Cove, West of NMP-1, Tree on West Edge	5.0 \pm 0.3	5.6 \pm 0.3	6.8 \pm 0.7	5.8 \pm 0.4	0.3 miles @ 274
107	Shoreline Cove, West of NMP-1	4.8 \pm 0.3	5.4 \pm 0.4	6.2 \pm 0.7	5.6 \pm 0.2	0.3 miles @ 272
108	Lake Road, Pole #142, 300 ft. East of Rt. 29 S.	4.2 \pm 0.5	4.4 \pm 0.2	5.8 \pm 0.2	4.3 \pm 0.2	1.1 miles @ 104
109	Tree North of Lake Road, 300 ft. East of Route 29 N.	4.2 \pm 0.2	4.6 \pm 0.2	5.8 \pm 0.5	4.6 \pm 0.3	1.1 miles @ 103
111	Sterling, NY	4.7 \pm 0.7	4.2 \pm 0.3	5.4 \pm 0.3	4.1 \pm 0.2	26.4 miles @ 166
112	EOF/Env. Lab, Oswego Co. Airport	4.4 \pm 0.4	4.1 \pm 0.2	5.7 \pm 0.8	4.4 \pm 0.3	11.9 miles @ 175
113	Control, Baldwinsville, NY	4.9 \pm 0.2	4.0 \pm 0.2	5.7 \pm 0.6	4.0 \pm 0.2	21.8 miles @ 214

* Technical Specification Location

** Direction and distance based on NMP-2 reactor centerline and sixteen 22.5 degree sector grid.

*** TLD lost in field

TABLE 6-11
CONCENTRATIONS OF IODINE-131 AND GAMMA EMITTERS IN MILK
 Results in Units of pCi/liter \pm 1 Sigma

SAMPLE LOCATION NO. 4						
COLLECTION DATE	I-131	K-40	Cs-134	Cs-137	Ba/La-40	OTHERS*
04/03/00	<0.47	1670 \pm 51	<2.36	<4.38	<3.42	LLD
04/17/00	<0.48	1750 \pm 52	<3.81	<4.10	<3.43	LLD
05/08/00	<0.53	1530 \pm 82	<7.79	<7.57	<7.80	LLD
05/22/00	<0.39	1540 \pm 59	<4.36	<4.91	<5.49	LLD
06/05/00	<0.50	1420 \pm 57	<4.72	<5.02	<4.09	LLD
06/19/00	<0.44	1650 \pm 85	<7.88	<7.16	<9.77	LLD
07/10/00	<0.42	1560 \pm 84	<7.42	<7.30	<9.12	LLD
07/24/00	<0.35	1360 \pm 55	<4.15	<4.35	<5.65	LLD
08/07/00	<0.37	1700 \pm 86	<6.70	<7.43	<9.49	LLD
08/21/00	<0.54	1640 \pm 85	<5.46	<5.72	<7.50	LLD
09/05/00	<0.57	1830 \pm 53	<2.74	<4.18	<3.80	LLD
09/18/00	<0.44	1640 \pm 87	<6.44	<7.31	<7.37	LLD
10/09/00	<0.35	1740 \pm 53	<2.56	<4.45	<4.06	LLD
10/23/00	<0.35	1730 \pm 68	<4.90	<4.32	<5.22	LLD
11/06/00	<0.38	1570 \pm 60	<4.36	<4.28	<5.47	LLD
11/20/00	<0.34	1630 \pm 68	<5.50	<5.78	<6.84	LLD
12/04/00	<0.53	1580 \pm 69	<5.21	<4.70	<5.81	LLD
12/18/00	<0.37	1510 \pm 66	<6.15	<6.06	<6.63	LLD

SAMPLE LOCATION NO. 50						
COLLECTION DATE	I-131	K-40	Cs-134	Cs-137	Ba/La-40	OTHERS*
04/03/00	<0.39	1340 \pm 55	<4.65	<5.13	<5.45	LLD
04/17/00	<0.51	1490 \pm 64	<3.96	<4.89	<6.21	LLD
05/08/00	<0.42	1560 \pm 67	<5.39	<4.90	<4.96	LLD
05/22/00	<0.51	1400 \pm 57	<3.87	<4.85	<5.27	LLD
06/05/00	<0.50	1550 \pm 83	<6.91	<6.57	<7.80	LLD
06/19/00	<0.41	1590 \pm 65	<4.84	<4.32	<4.22	LLD
07/10/00	<0.42	1570 \pm 64	<4.38	<4.54	<5.23	LLD
07/24/00	<0.39	1550 \pm 66	<4.83	<5.82	<6.13	LLD
08/07/00	<0.47	1570 \pm 65	<4.38	<4.32	<5.68	LLD
08/21/00	<0.38	1500 \pm 68	<4.58	<5.48	<5.50	LLD
09/05/00	<0.52	1430 \pm 63	<4.54	<4.82	<4.78	LLD
09/18/00	<0.46	1250 \pm 53	<4.36	<4.54	<4.89	LLD
10/09/00	<0.40	1590 \pm 68	<5.33	<6.34	<4.98	LLD
10/23/00	<0.31	1440 \pm 58	<3.91	<4.22	<3.97	LLD
11/06/00	<0.34	1740 \pm 52	<2.65	<3.78	<4.50	LLD
11/20/00	<0.35	1460 \pm 63	<4.33	<4.62	<4.98	LLD
12/04/00	<0.46	1500 \pm 82	<6.39	<6.72	<7.66	LLD
12/18/00	<0.48	1470 \pm 58	<4.20	<4.34	<4.78	LLD

TABLE 6-11 (Continued)
CONCENTRATIONS OF IODINE-131 AND GAMMA EMITTERS IN MILK
 Results in Units of pCi/liter \pm 1 Sigma

SAMPLE LOCATION NO. 55						
COLLECTION DATE	I-131	K-40	Cs-134	Cs-137	Ba/La-40	OTHERS*
04/03/00	<0.46	1540 \pm 83	<6.47	<6.42	<9.07	LLD
04/17/00	<0.42	1620 \pm 87	<7.41	<7.31	<9.89	LLD
05/08/00	<0.46	1440 \pm 62	<5.04	<3.99	<5.81	LLD
05/22/00	<0.45	1470 \pm 81	<6.47	<7.30	<10.1	LLD
06/05/00	<0.39	1550 \pm 63	<6.43	<4.89	<4.15	LLD
06/19/00	<0.49	1460 \pm 57	<4.72	<4.97	<4.60	LLD
07/10/00	<0.38	1590 \pm 67	<5.15	<5.97	<6.14	LLD
07/24/00	<0.45	1360 \pm 79	<6.59	<8.07	<7.82	LLD
08/07/00	<0.38	1520 \pm 83	<6.81	<7.30	<8.71	LLD
08/21/00	<0.46	1560 \pm 90	<5.75	<7.06	<7.38	LLD
09/05/00	<0.40	1560 \pm 83	<5.05	<7.31	<7.43	LLD
09/18/00	<0.31	1650 \pm 51	<2.77	<4.01	<3.80	LLD
10/09/00	<0.49	1540 \pm 85	<8.32	<7.15	<6.24	LLD
10/23/00	<0.37	1560 \pm 67	<4.50	<4.51	<5.56	LLD
11/06/00	<0.38	1480 \pm 66	<3.33	<5.23	<6.22	LLD
11/20/00	<0.44	1460 \pm 66	<3.11	<4.62	<6.27	LLD
12/04/00	<0.48	1600 \pm 68	<5.92	<5.32	<6.03	LLD
12/18/00	<0.35	1540 \pm 66	<5.17	<5.22	<7.49	LLD

SAMPLE LOCATION NO. 60						
COLLECTION DATE	I-131	K-40	Cs-134	Cs-137	Ba/La-40	OTHERS*
04/02/00	<0.54	1600 \pm 69	<6.20	<6.43	<6.77	LLD
04/16/00	<0.46	1540 \pm 59	<4.61	<4.79	<4.23	LLD
05/07/00	<0.53	1430 \pm 57	<4.41	<4.29	<5.41	LLD
05/21/00	<0.54	1700 \pm 87	<7.12	<6.87	<7.97	LLD
06/04/00	<0.44	1340 \pm 56	<4.33	<4.55	<4.45	LLD
06/18/00	<0.54	1480 \pm 65	<5.88	<5.32	<5.41	LLD
07/09/00	<0.57	1730 \pm 51	<4.11	<3.86	<4.08	LLD
07/23/00	<0.45	1750 \pm 52	<4.02	<4.10	<4.89	LLD
08/06/00	<0.46	1550 \pm 83	<7.80	<7.16	<7.47	LLD
08/20/00	<0.40	1560 \pm 65	<4.94	<4.96	<6.00	LLD
09/04/00	<0.54	1410 \pm 62	<4.09	<5.09	<5.60	LLD
09/17/00	<0.37	1360 \pm 56	<4.21	<4.02	<5.03	LLD
10/08/00	<0.36	1390 \pm 62	<4.44	<3.83	<6.03	LLD
10/22/00	<0.41	1480 \pm 65	<5.56	<5.47	<5.43	LLD
11/05/00	<0.43	1470 \pm 63	<4.81	<4.24	<6.05	LLD
11/19/00	<0.38	1480 \pm 70	<5.09	<5.17	<5.66	LLD
12/03/00	<0.49	1660 \pm 83	<6.43	<6.30	<7.95	LLD
12/17/00	<0.50	1470 \pm 67	<5.15	<5.53	<4.74	LLD

TABLE 6-11 (Continued)
CONCENTRATIONS OF IODINE-131 AND GAMMA EMITTERS IN MILK
 Results in Units of pCi/liter \pm 1 Sigma

SAMPLE LOCATION NO. 73						
COLLECTION DATE	I-131	K-40	Cs-134	Cs-137	Ba/La-40	OTHERS*
04/03/00	<0.52	1510 \pm 64	<4.43	<4.47	<5.20	LLD
04/17/00	<0.40	1410 \pm 63	<4.62	<4.62	<6.53	LLD
05/08/00	<0.35	1740 \pm 52	<2.34	<4.16	<3.80	LLD
05/22/00	<0.45	1680 \pm 51	<4.25	<4.24	<3.69	LLD
06/05/00	<0.40	1550 \pm 83	<7.52	<6.57	<6.90	LLD
06/19/00	<0.36	1360 \pm 55	<3.77	<4.29	<4.05	LLD
07/10/00	<0.51	1700 \pm 51	<2.54	<3.73	<4.58	LLD
07/24/00	<0.44	1600 \pm 66	<4.99	<4.61	<4.99	LLD
08/07/00	<0.40	1510 \pm 64	<4.43	<4.61	<5.04	LLD
08/21/00	<0.34	1590 \pm 67	<5.44	<4.96	<4.95	LLD
09/05/00	<0.52	1620 \pm 85	<6.25	<7.86	<7.38	LLD
09/18/00	<0.35	1540 \pm 67	<4.72	<5.95	<5.57	LLD
10/09/00	<0.50	1390 \pm 65	<4.26	<4.41	<5.85	LLD
10/23/00	<0.46	1590 \pm 85	<7.31	<7.29	<7.80	LLD
11/06/00	<0.48	1370 \pm 65	<4.67	<5.76	<5.28	LLD
11/20/00	<0.37	1460 \pm 58	<3.87	<4.05	<5.41	LLD
12/04/00	<0.36	1510 \pm 72	<5.11	<5.06	<6.61	LLD
12/18/00	<0.32	1570 \pm 68	<5.26	<5.98	<7.14	LLD

SAMPLE LOCATION NO. 7						
COLLECTION DATE	I-131	K-40	Cs-134	Cs-137	Ba/La-40	OTHERS*
04/03/00	<0.40	1580 \pm 67	<4.70	<5.71	<6.86	LLD
04/17/00	<0.51	1740 \pm 52	<3.95	<4.51	<4.49	LLD
05/08/00	<0.46	1320 \pm 60	<5.18	<5.02	<5.65	LLD
05/22/00	<0.45	1490 \pm 65	<5.02	<5.32	<5.28	LLD
06/05/00	<0.50	1760 \pm 52	<4.54	<4.30	<5.02	LLD
06/19/00	<0.50	1510 \pm 48	<3.70	<4.18	<4.45	LLD
07/10/00	<0.53	1180 \pm 52	<4.15	<4.55	<3.62	LLD
07/24/00	<0.39	956 \pm 47	<4.76	<4.01	<4.10	LLD
08/07/00	<0.37	1120 \pm 56	<4.75	<4.76	<5.26	LLD

TABLE 6-12

MILK ANIMAL CENSUS 2000

TOWN OR AREA(a)	NUMBER ON CENSUS MAP(1)	DEGREES(2)	DISTANCE(2)	NUMBER OF MILK ANIMALS
Scriba	3 62 63	190° 183° 185°	4.5 miles 6.7 8.0	NONE 1G(3) NONE
New Haven	9 4* 7* 64 75	95° 113° 107° 107° 146°	5.2 7.8 5.5 7.9 7.5	45C 80C NONE 48C 2G(3)
Mexico	72 14 19 60* 50* 55* 21 49	98° 120° 132° 90° 93° 95° 112° 88°	9.9 9.8 10.5 9.5 9.1 9.0 10.5 7.9	30C 56C 42C 30C 125C 57C 80C NONE
Richland	22	85°	10.2	NONE
Sterling (Control)	73**	234°	13.9	50C
Volney	70 25	147° 182°	9.4 9.5	NONE NONE

TABLE 6-12 (Continued)

MILK ANIMAL CENSUS 2000

MILKING ANIMAL TOTALS (including control locations)	MILKING ANIMAL TOTALS (excluding control locations)
<p>643 Cows 3 Goats</p>	<p>593 Cows 3 Goats</p>

C = Cows
G = Goats
* = Milk sample location
** = Milk sample control location
(1) = References Section 3.3
(2) = Based on Nine Mile Point Unit 2 Reactor Centerline
(3) = Goats are not currently producing milk or milk products for human consumption.
NONE = No cows or goats at that location. Location was a previous location with cows and/or goats.
(a) = Census performed out to a distance of approximately ten miles.

TABLE 6-13

CONCENTRATIONS OF GAMMA EMITTERS IN VARIOUS FOOD PRODUCTS

Results in Units of pCi/g (wet) \pm 1 Sigma

COLLECTION SITE	SAMPLE DATE	DESCRIPTION	Be-7	K-40	I-131	Cs-134	Cs-137	Zn-65
R*	09/00	COLLARDS	0.16 \pm 0.02	5.38 \pm 0.08	<0.013	<0.008	<0.008	<0.024
K*	09/00	PEPPER LEAVES	0.34 \pm 0.01	3.66 \pm 0.06	<0.009	<0.003	<0.004	<0.007
		COLLARDS	0.14 \pm 0.03	3.98 \pm 0.12	<0.009	<0.008	<0.009	<0.025
		TOMATOES	<0.048	1.78 \pm 0.04	<0.011	<0.006	<0.005	<0.018
		SQUASH LEAVES	0.67 \pm 0.02	2.37 \pm 0.04	<0.009	<0.004	<0.004	<0.012
L	09/00	SQUASH LEAVES	0.46 \pm 0.04	3.59 \pm 0.11	<0.009	<0.009	<0.008	<0.023
		CUCUMBER LEAVES	1.00 \pm 0.05	3.11 \pm 0.13	<0.012	<0.012	<0.013	<0.032
		PEPPER LEAVES	0.38 \pm 0.03	7.40 \pm 0.12	<0.010	<0.006	<0.009	<0.014
		COLLARDS	0.19 \pm 0.04	4.94 \pm 0.16	<0.015	<0.007	<0.015	<0.040
V*	09/00	PEPPER LEAVES	0.36 \pm 0.03	6.69 \pm 0.15	<0.009	<0.009	<0.010	<0.030
		SQUASH LEAVES	0.82 \pm 0.03	2.75 \pm 0.07	<0.006	<0.005	<0.005	<0.014
M* (CONTROL)	09/00	SQUASH LEAVES	0.66 \pm 0.02	2.98 \pm 0.06	<0.010	<0.004	<0.004	<0.012
		GRAPE LEAVES	1.19 \pm 0.03	3.17 \pm 0.07	<0.010	<0.007	<0.007	<0.018
		TOMATOES	<0.030	2.07 \pm 0.05	<0.005	<0.003	<0.004	<0.010
		PEPPER LEAVES	0.21 \pm 0.02	7.86 \pm 0.09	<0.006	<0.005	<0.005	<0.016
		CUCUMBER LEAVES	0.74 \pm 0.03	2.50 \pm 0.07	<0.006	<0.005	<0.006	<0.016
S*	09/00	PEPPER LEAVES	0.44 \pm 0.03	6.57 \pm 0.13	<0.008	<0.008	<0.008	<0.025
Z*	09/00	SQUASH LEAVES	2.08 \pm 0.06	2.86 \pm 0.10	<0.009	<0.009	<0.009	<0.023
		GRAPE LEAVES	0.70 \pm 0.05	3.40 \pm 0.13	<0.012	<0.012	<0.012	<0.032
P	09/00	COLLARDS	0.21 \pm 0.02	3.52 \pm 0.09	<0.009	<0.008	<0.009	<0.022

NOTE: Other Plant Related Radionuclides <LLD

* Samples required by Technical Specifications

TABLE 6-14

2000 RESIDENCE CENSUS

LOCATION	MAP DESIGNATION ^(b)	METEROLOGICAL SECTOR	DEGREES ^(a)	DISTANCE ^(a)
W		N	-	-
W		NNE	-	-
W		NE	-	-
W		ENE	-	-
Sunset Bay	A	E	82°	0.9 miles
Lake Road	B	ESE	119°	0.7 miles
Parkhurst Road	C	SE	127°	1.2 miles
County Route 29	D	SSE	149°	1.2 miles
Miner Road	E	S	173°	1.6 miles
Lakeview Road	F	SSW	210°	1.7 miles
Lakeview Road	G	SW	233°	1.5 miles
Bible Camp Retreat	H	WSW	249°	1.3 miles
W		W	-	-
W		WNW	-	-
W		NW	-	-
W		NNW	-	-

W This meteorological sector is over Lake Ontario. There are no residences within three miles.

^(a) Based on J.A. FitzPatrick Nuclear Power Plant Reactor Centerline.

^(b) See the maps in Section 3.3.

7.0 HISTORICAL DATA TABLES

Sample Statistics from Previous Environmental Sampling

The mean, minimum value and maximum value were calculated for selected sample mediums and isotopes.

Special Considerations:

1. Sample data listed as 1969 was taken from the NINE MILE POINT, PREOPERATION SURVEY, 1969 and ENVIRONMENTAL MONITORING REPORT FOR NIAGARA MOHAWK POWER CORPORATION NINE MILE POINT NUCLEAR STATION, NOVEMBER, 1970.
2. Sample data listed as 1974 and 1978 through 1997 was taken from the respective environmental operating reports for Nine Mile Point Nuclear Station and James A. FitzPatrick Nuclear Power Plant.
3. Only measured values were used for statistical calculations.
4. The term MDL was used prior to 1979 to represent the concept of Lower Limit of Detection (LLD). MDL = Minimum Detectable Level.

TABLE 7-1

HISTORICAL ENVIRONMENTAL SAMPLE DATA
SHORELINE SEDIMENT

Results in pCi/g (dry)

LOCATION: CONTROL *									
Isotope	Cs-134			Cs-137			Co-60		
Year	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean
1969†	**	**	**	**	**	**	**	**	**
1974†	**	**	**	**	**	**	**	**	**
1975†	**	**	**	**	**	**	**	**	**
1981	**	**	**	**	**	**	**	**	**
1982	**	**	**	**	**	**	**	**	**
1983	**	**	**	**	**	**	**	**	**
1984	**	**	**	**	**	**	**	**	**
1985	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1986	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1987	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1988	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1989	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1990	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1991	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1992	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1993	<LLD	<LLD	<LLD	0.027	0.027	0.027	<LLD	<LLD	<LLD
1994	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1995	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1996	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1997	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1998	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1999	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
2000	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

* Langs Beach - beyond influence of the site in a westerly direction.

** No data. Sample not required until new technical specifications implemented in 1985.

† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

TABLE 7-2

HISTORICAL ENVIRONMENTAL SAMPLE DATA

SHORELINE SEDIMENT

Results in pCi/g (dry)

LOCATION: INDICATOR *									
Isotope	Cs-134			Cs-137			Co-60		
Year	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean
1969†	**	**	**	**	**	**	**	**	**
1974†	**	**	**	**	**	**	**	**	**
1975†	**	**	**	**	**	**	**	**	**
1981	**	**	**	**	**	**	**	**	**
1982	**	**	**	**	**	**	**	**	**
1983	**	**	**	**	**	**	**	**	**
1984	**	**	**	**	**	**	**	**	**
1985	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1986	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1987	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1988	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1989	<LLD	<LLD	<LLD	0.25	0.32	0.29	<LLD	<LLD	<LLD
1990	<LLD	<LLD	<LLD	0.28	0.30	0.29	<LLD	<LLD	<LLD
1991	<LLD	<LLD	<LLD	0.12	0.14	0.13	<LLD	<LLD	<LLD
1992	<LLD	<LLD	<LLD	0.12	0.14	0.13	<LLD	<LLD	<LLD
1993	<LLD	<LLD	<LLD	0.18	0.46	0.32	<LLD	<LLD	<LLD
1994	<LLD	<LLD	<LLD	0.06	0.37	0.22	<LLD	<LLD	<LLD
1995	<LLD	<LLD	<LLD	0.14	0.15	0.15	<LLD	<LLD	<LLD
1996	<LLD	<LLD	<LLD	0.15	0.17	0.16	<LLD	<LLD	<LLD
1997	<LLD	<LLD	<LLD	0.11	0.17	0.14	<LLD	<LLD	<LLD
1998	<LLD	<LLD	<LLD	0.06	0.06	0.06	<LLD	<LLD	<LLD
1999	<LLD	<LLD	<LLD	0.06	0.10	0.08	<LLD	<LLD	<LLD
2000	<LLD	<LLD	<LLD	0.06	0.07	0.06	<LLD	<LLD	<LLD

* Sunset Beach - closest off-site location with recreational value.

** No data. Sample not required until new technical specifications implemented in 1985.

† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

TABLE 7-3

HISTORICAL ENVIRONMENTAL SAMPLE DATA

FISH

Results in pCi/g (wet)

LOCATION: CONTROL *			
Isotope	Cs-137		
Year	Min.	Max.	Mean
1969†	No Data	No Data	No Data
1974†	0.94	0.94	0.94
1975†	<MDL	<MDL	<MDL
1976	1.2	1.2	1.2
1981	0.028	0.062	0.043
1982	0.027	0.055	0.047
1983	0.040	0.060	0.050
1984	0.015	0.038	0.032
1985	0.026	0.047	0.034
1986	0.021	0.032	0.025
1987	0.017	0.040	0.031
1988	0.023	0.053	0.034
1989	0.028	0.043	0.034
1990	0.033	0.079	0.045
1991	0.021	0.034	0.029
1992	0.019	0.026	0.022
1993	0.030	0.036	0.033
1994	0.014	0.031	0.022
1995	0.017	0.023	0.019
1996	0.018	0.022	0.020
1997	0.012	0.030	0.021
1998	0.013	0.013	0.013
1999	<LLD	<LLD	<LLD
2000	0.021	0.021	0.021

* Control location was at an area beyond the influence of the site (westerly direction).

† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

TABLE 7-4
HISTORICAL ENVIRONMENTAL SAMPLE DATA
FISH
 Results in pCi/g (wet)

LOCATION: INDICATOR * (NMP/JAF)			
Isotope	Cs-137		
Year	Min.	Max.	Mean
1969†	0.01	0.13	0.06
1974†	0.08	4.40	0.57
1975†	1.10	1.70	1.38
1976	0.50	3.90	1.4
1981	0.027	0.10	0.061
1982	0.034	0.064	0.050
1983	0.030	0.060	0.050
1984	0.033	0.061	0.043
1985	0.018	0.045	0.030
1986	0.009	0.051	0.028
1987	0.024	0.063	0.033
1988	0.022	0.054	0.032
1989	0.020	0.044	0.034
1990	0.027	0.093	0.040
1991	0.018	0.045	0.029
1992	0.014	0.030	0.024
1993	0.018	0.035	0.028
1994	0.015	0.023	0.019
1995	0.016	0.022	0.019
1996	0.016	0.025	0.020
1997	0.014	0.023	0.018
1998	0.021	0.021	0.021
1999	0.018	0.021	0.020
2000	<LLD	<LLD	<LLD

* Indicator locations are in the general area of the NMP-1 and J.A. FitzPatrick cooling water discharge structures.

† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

TABLE 7-5

HISTORICAL ENVIRONMENTAL SAMPLE DATA
SURFACE WATER

Results in pCi/liter

LOCATION: CONTROL †						
Isotope	Cs-137			Co-60		
Year	Min.	Max.	Mean	Min.	Max.	Mean
1969††	*	*	*	*	*	*
1974††	*	*	*	*	*	*
1975††	*	*	*	*	*	*
1981	<LLD	<LLD	<LLD	1.4	1.4	1.4
1982	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1983	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1984	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1985	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1986	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1987	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1988	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1989	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1990	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1991	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1992	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1993	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1994	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1995	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1996	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1997	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1998	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1999	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
2000	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

* No gamma analysis performed (not required).

† Location was the City of Oswego Water Supply for 1969 - 1984 and the Oswego Steam Station inlet canal for 1985 - 2000.

†† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

TABLE 7-6
HISTORICAL ENVIRONMENTAL SAMPLE DATA
SURFACE WATER
 Results in pCi/liter

LOCATION: INDICATOR †						
Isotope	Cs-137			Co-60		
Year	Min.	Max.	Mean	Min.	Max.	Mean
1969††	*	*	*	*	*	*
1974††	*	*	*	*	*	*
1975††	*	*	*	*	*	*
1981	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1982	0.43	0.43	0.43	1.6	2.4	1.9
1983	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1984	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1985	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1986	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1987	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1988	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1989	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1990	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1991	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1992	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1993	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1994	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1995	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1996	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1997	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1998	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1999	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
2000	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

* No gamma analysis performed (not required).

† Indicator location was the NMP 1 Inlet Canal for the period 1969 - 1973, and the JAF Inlet Canal for 1974 - 2000.

†† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

TABLE 7-7

HISTORICAL ENVIRONMENTAL SAMPLE DATA

SURFACE WATER TRITIUM

Results in pCi/liter

LOCATION: CONTROL *			
Isotope	Tritium		
Year	Min.	Max.	Mean
1969†	No Data	No Data	No Data
1974†	<MDL	<MDL	<MDL
1975†	311	414	362
1981	211	357	293
1982	112	307	165
1983	230	280	250
1984	190	220	205
1985	230	430	288
1986	250	550	373
1987	140	270	210
1988	240	460	320
1989	143	217	186
1990	260	320	290
1991	180	200	190
1992	190	310	243
1993	160	230	188
1994	250	250	250
1995	230	230	230
1996	<LLD	<LLD	<LLD
1997	<LLD	<LLD	<LLD
1998	190	190	190
1999	220	510	365
2000	196	237	212

* Control location is the City of Oswego, drinking water for 1969 - 1984 and the Oswego Steam Station inlet canal for 1985 - 2000.

† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

TABLE 7-8

HISTORICAL ENVIRONMENTAL SAMPLE DATA
SURFACE WATER TRITIUM

Results in pCi/liter

LOCATION: INDICATOR *			
Isotope	Tritium		
Year	Min.	Max.	Mean
1969†	No Data	No Data	No Data
1974†	380	500	440
1975†	124	482	335
1981	183	388	258
1982	194	2780	641
1983	190	560	317
1984	110	370	282
1985	250	1200**	530
1986	260	500	380
1987	160	410	322
1988	430	480	460
1989	135	288	225
1990	220	290	250
1991	250	390	310
1992	240	300	273
1993	200	280	242
1994	180	260	220
1995	320	320	320
1996	<LLD	<LLD	<LLD
1997	160	160	160
1998	190	190	190
1999	180	270	233
2000	161	198	185

* Indicator location was the NMP-1 Inlet Canal during the period 1969-1973, and the JAF Inlet Canal for 1974-2000.

** Suspect sample contamination. Recollected samples showed normal levels of tritium.

† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

TABLE 7-9

HISTORICAL ENVIRONMENTAL SAMPLE DATA

AIR PARTICULATE GROSS BETA

Results in pCi/m³

LOCATION: CONTROL *			
Isotope	Gross Beta		
Year	Min.	Max.	Mean
1969†	0.130	0.540	0.334
1974†	0.001	0.808	0.121
1975†	0.008	0.294	0.085
1981	0.016	0.549	0.165
1982	0.011	0.078	0.033
1983	0.007	0.085	0.024
1984	0.013	0.051	0.026
1985	0.013	0.043	0.024
1986	0.008	0.272	0.039
1987	0.009	0.037	0.021
1988	0.008	0.039	0.018
1989	0.007	0.039	0.017
1990	0.003	0.027	0.013
1991	0.007	0.028	0.014
1992	0.006	0.020	0.012
1993	0.007	0.022	0.013
1994	0.008	0.025	0.015
1995	0.006	0.023	0.014
1996	0.008	0.023	0.014
1997	0.006	0.025	0.013
1998	0.004	0.034	0.014
1999	0.010	0.032	0.017
2000	0.006	0.027	0.015

* Locations used for 1977 - 1984 were C off-site, D1 off-site, D2 off-site, E off-site, F off-site, and G off-site. Control location R-5 off-site was used for 1985-2000 (formerly C off-site location).

† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

TABLE 7-10

HISTORICAL ENVIRONMENTAL SAMPLE DATA
AIR PARTICULATE GROSS BETA

Results in pCi/m³

LOCATION: INDICATOR *			
Isotope	Gross Beta		
Year	Min.	Max.	Mean
1969†	0.130	0.520	0.320
1974†	0.003	0.885	0.058
1975†	0.001	0.456	0.067
1981	0.004	0.528	0.151
1982	0.001	0.113	0.031
1983	0.003	0.062	0.023
1984	0.001	0.058	0.025
1985	0.001	0.044	0.021
1986	0.007	0.289	0.039
1987	0.009	0.040	0.021
1988	0.007	0.040	0.018
1989	0.007	0.041	0.017
1990	0.006	0.023	0.014
1991	0.006	0.033	0.015
1992	0.005	0.024	0.013
1993	0.005	0.023	0.014
1994	0.006	0.024	0.015
1995	0.004	0.031	0.014
1996	0.006	0.025	0.013
1997	0.001	0.018	0.010
1998	0.002	0.040	0.015
1999	0.009	0.039	0.017
2000	0.005	0.033	0.015

* Locations used for 1969 - 1973 were D1 on-site, D2 on-site, E on-site, F on-site and G on-site. Locations used for 1974 - 1984 were D1 on-site, D2 on-site, E on-site, F on-site, G on-site, H on-site, I on-site, J on-site and K on-site, as applicable. 1985 - 2000 locations were R-1 off-site, R-2 off-site, R-3 off-site, and R-4 off-site.

† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

TABLE 7-11

HISTORICAL ENVIRONMENTAL SAMPLE DATA

AIR PARTICULATES

Results in pCi/m³

LOCATION: CONTROL **						
Isotope	Cs-137			Co-60		
Year	Min.	Max.	Mean	Min.	Max.	Mean
1969†	*	*	*	*	*	*
1974†	*	*	*	*	*	*
1975†	*	*	*	*	*	*
1981	0.0003	0.0042	0.0017	0.0003	0.0012	0.0008
1982	0.0002	0.0009	0.0004	0.0004	0.0007	0.0006
1983	0.0002	0.0002	0.0002	0.0007	0.0007	0.0007
1984	<LLD	<LLD	<LLD	0.0004	0.0012	0.0008
1985	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1986	0.0075	0.0311	0.0193	<LLD	<LLD	<LLD
1987	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1988	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1989	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1990	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1991	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1992	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1993	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1994	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1995	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1996	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1997	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1998	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1999	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
2000	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

* No data available (not required prior to 1977).

** Locations included composites of off-site air monitoring locations for 1977 - 1984. Sample location included only R-5 air monitoring location for 1985 - 2000.

† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

TABLE 7-12

HISTORICAL ENVIRONMENTAL SAMPLE DATA

AIR PARTICULATES

Results in pCi/m³

LOCATION: INDICATOR **						
Isotope	Cs-137			Co-60		
Year	Min.	Max.	Mean	Min.	Max.	Mean
1969†	*	*	*	*	*	*
1974†	*	*	*	*	*	*
1975†	*	*	*	*	*	*
1981	0.0002	0.0045	0.0014	0.0002	0.0017	0.0006
1982	0.0001	0.0006	0.0004	0.0003	0.0010	0.0005
1983	0.0002	0.0003	0.0002	0.0003	0.0017	0.0007
1984	<LLD	<LLD	<LLD	0.0007	0.0017	0.0012
1985	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1986	0.0069	0.0364	0.0183	<LLD	<LLD	<LLD
1987	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1988	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1989	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1990	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1991	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1992	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1993	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1994	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1995	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1996	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1997	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1998	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1999	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
2000	<LLD	<LLD	<LLD	0.0048	0.0048	0.0048

* No data available (not required prior to 1977).

** Locations included composites of on-site air monitoring locations for 1977 - 1984. Sample locations included R-1 through R-4 air monitoring locations for 1985 - 2000.

† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

TABLE 7-13

HISTORICAL ENVIRONMENTAL SAMPLE DATA

AIR RADIOIODINE

Results in pCi/m³

LOCATION: CONTROL *			
Isotope	Iodine-131		
Year	Min.	Max.	Mean
1969†	**	**	**
1974†	**	**	**
1975†	<MDL	<MDL	<MDL
1981	<LLD	<LLD	<LLD
1982	0.039	0.039	0.039
1983	<LLD	<LLD	<LLD
1984	<LLD	<LLD	<LLD
1985	<LLD	<LLD	<LLD
1986	0.041	0.332	0.151
1987	<LLD	<LLD	<LLD
1988	<LLD	<LLD	<LLD
1989	<LLD	<LLD	<LLD
1990	<LLD	<LLD	<LLD
1991	<LLD	<LLD	<LLD
1992	<LLD	<LLD	<LLD
1993	<LLD	<LLD	<LLD
1994	<LLD	<LLD	<LLD
1995	<LLD	<LLD	<LLD
1996	<LLD	<LLD	<LLD
1997	<LLD	<LLD	<LLD
1998	<LLD	<LLD	<LLD
1999	<LLD	<LLD	<LLD
2000	<LLD	<LLD	<LLD

* Locations D1 off-site, D2 off-site, E off-site, F off-site and G off-site used for 1976 - 1984. Location R-5 off-site used for 1985 -2000.

** No results - I-131 analysis not required.

† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

TABLE 7-14

HISTORICAL ENVIRONMENTAL SAMPLE DATA
AIR RADIOIODINEResults in pCi/m³

LOCATION: INDICATOR *			
Isotope	Iodine-131		
Year	Min.	Max.	Mean
1969†	**	**	**
1974†	**	**	**
1975†	0.25	0.30	0.28
1981	0.016	0.042	0.029
1982	0.002	0.042	0.016
1983	0.022	0.035	0.028
1984	<LLD	<LLD	<LLD
1985	<LLD	<LLD	<LLD
1986	0.023	0.360	0.119
1987	0.011	0.018	0.014
1988	<LLD	<LLD	<LLD
1989	<LLD	<LLD	<LLD
1990	<LLD	<LLD	<LLD
1991	<LLD	<LLD	<LLD
1992	<LLD	<LLD	<LLD
1993	<LLD	<LLD	<LLD
1994	<LLD	<LLD	<LLD
1995	<LLD	<LLD	<LLD
1996	<LLD	<LLD	<LLD
1997	<LLD	<LLD	<LLD
1998	<LLD	<LLD	<LLD
1999	<LLD	<LLD	<LLD
2000	<LLD	<LLD	<LLD

* Locations used for 1976 - 1984 were D1 on-site, D2 on-site, E on-site, F on-site, G on-site, H on-site, I on-site, J on-site and K on-site, as applicable. Locations used for 1985 - 2000 were R-1 off-site, R-2 off-site, R-3 off-site, and R-4 off-site.

** No results - I-131 analysis not required.

† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

TABLE 7-15A

HISTORICAL ENVIRONMENTAL SAMPLE DATA

ENVIRONMENTAL TLD

Results in mrem/standard month

LOCATION: CONTROL **			
Year	Min.	Max.	Mean
Preopt	*	*	*
1974†	2.7	8.9	5.6
1975†	4.8	6.0	5.5
1981	3.5	5.9	4.8
1982	3.8	6.1	5.1
1983	4.9	7.2	5.8
1984	4.7	8.2	6.2
1985	4.5	7.6	5.6
1986	5.3	7.5	6.3
1987	4.6	6.6	5.4
1988	4.4	6.8	5.6
1989	2.9	6.4	4.7
1990	3.7	6.0	4.7
1991	3.8	5.8	4.7
1992	2.6	5.1	4.1
1993	3.4	5.7	4.4
1994	3.1	5.0	4.1
1995	3.4	5.7	4.4
1996	3.4	5.6	4.3
1997	3.7	6.2	4.7
1998	3.7	5.6	4.4
1999	3.6	7.1	4.6
2000	3.7	7.3	4.7

* Data not available.

** TLD #8 and 14 established 1974, TLD #49 established 1980, TLD #111 established 1988, TLD #113 established 1991.

† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

TABLE 7-15B

HISTORICAL ENVIRONMENTAL SAMPLE DATA

ENVIRONMENTAL TLD

Results in mrem per standard month

LOCATION: RETS CONTROL **			
Year	Min.	Max.	Mean
Preopt†	*	*	*
1974†	2.7	8.9	5.6
1975†	4.8	6.0	5.5
1981	3.5	5.9	4.8
1982	3.8	6.1	5.1
1983	4.9	7.2	5.8
1984	4.7	8.2	6.2
1985	4.4	6.8	5.4
1986	5.5	7.2	6.3
1987	4.6	5.8	5.2
1988	4.8	6.8	5.4
1989	2.9	6.4	4.1
1990	3.7	6.0	4.8
1991	3.8	5.3	4.6
1992	2.6	4.7	3.9
1993	3.4	5.3	4.4
1994	3.1	4.6	3.9
1995	3.4	4.9	4.2
1996	3.4	5.6	4.2
1997	3.9	5.2	4.6
1998	3.7	4.8	4.2
1999	3.7	4.7	4.4
2000	3.7	5.5	4.3

* Data not available.

** TLD #14 established 1974, TLD #49 established 1980.

† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

TABLE 7-16A

HISTORICAL ENVIRONMENTAL SAMPLE DATA
ENVIRONMENTAL TLD

Results in mrem per standard month

LOCATION: SITE BOUNDARY **			
Year	Min.	Max.	Mean
Preopt†	*	*	*
1974†	*	*	*
1975†	*	*	*
1981	*	*	*
1982	*	*	*
1983	*	*	*
1984	*	*	*
1985	4.9(4.1)	5.9(12.6)	5.3(6.2)
1986	5.4(4.4)	6.8(18.7)	5.9(7.0)
1987	4.7(4.4)	5.9(14.3)	5.3(6.1)
1988	5.0(3.4)	6.1(17.9)	5.4(6.4)
1989	4.5(2.8)	5.2(15.4)	4.8(5.9)
1990	4.5(3.6)	5.4(14.9)	4.8(6.4)
1991	4.3(3.2)	5.5(16.7)	4.8(6.0)
1992	3.7(3.2)	4.6(10.4)	4.2(5.1)
1993	3.8(3.3)	4.8(11.7)	4.3(5.4)
1994	2.8(2.8)	4.9(12.4)	4.0(5.2)
1995	3.5(3.5)	5.1(9.6)	4.4(5.4)
1996	3.2(3.2)	5.3(9.1)	4.1(5.2)
1997	3.5(3.5)	5.9(10.2)	4.6(5.9)
1998	3.7(3.7)	5.1(9.4)	4.4(5.4)
1999	3.3(3.3)	7.5(12.3)	4.7(5.8)
2000	3.6(3.6)	6.8(10.0)	4.5(5.6)

* Data not available (not required prior to 1985).

** TLD #7, 18 and 23 established 1972 - 1974.

TLD # 75-87 established 1985.

TLD #23, 75, 76, 77, 85, 86 and 87 are in close proximity to operational buildings along the north boundary. This boundary is the lakeshore and is considered to be generally not accessible to the public. The doses from these locations are not included in the historical data statistics, but are shown in the summary table as () data.

† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

TABLE 7-16B

HISTORICAL ENVIRONMENTAL SAMPLE DATA

ENVIRONMENTAL TLD

Results in mrem per standard month

LOCATION: OFF-SITE SECTORS **			
Year	Min.	Max.	Mean
Preopt	*	*	*
1974†	*	*	*
1975†	*	*	*
1981	*	*	*
1982	*	*	*
1983	*	*	*
1984	*	*	*
1985	4.0	7.1	5.0
1986	4.6	8.6	6.0
1987	4.3	6.0	5.2
1988	3.8	7.0	5.3
1989	2.5	6.8	4.9
1990	3.6	6.3	4.7
1991	3.6	5.8	4.7
1992	2.9	5.0	4.1
1993	3.4	6.3	4.5
1994	3.0	5.1	4.0
1995	3.2	5.2	4.3
1996	3.2	5.3	4.2
1997	3.5	5.8	4.4
1998	3.5	5.0	4.2
1999	3.6	5.6	4.4
2000	3.4	6.6	4.5

* Data not available (not required prior to 1985).

** TLD locations initiated in 1985 as required by the New Technical Specifications. Includes TLD numbers 88, 89, 90, 91, 92, 93, 94 and 95.

† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

TABLE 7-16C

HISTORICAL ENVIRONMENTAL SAMPLE DATA

ENVIRONMENTAL TLD

Results in mrem per standard month

LOCATION: SITE INTEREST **			
Year	Min.	Max.	Mean
Preopt†	*	*	*
1974†	*	*	*
1975†	*	*	*
1981	*	*	*
1982	*	*	*
1983	*	*	*
1984	*	*	*
1985	3.9	6.8	5.3
1986	4.8	8.2	6.1
1987	3.5	6.0	5.1
1988	3.9	6.6	5.3
1989	2.1	6.4	4.9
1990	3.2	6.3	4.8
1991	2.9	5.6	4.4
1992	3.0	4.8	4.1
1993	3.2	5.8	4.5
1994	2.9	4.8	4.1
1995	3.6	4.8	4.2
1996	3.2	5.1	4.2
1997	3.5	6.2	4.6
1998	3.7	5.6	4.4
1999	3.6	7.1	4.6
2000	3.6	7.3	4.7

* Data not available (not required prior to 1985).

** TLD locations initiated in 1985 as required by the New Technical Specifications. Includes TLD numbers 8, 15, 56, 58, 96, 97 and 98, which are located near critical residences and populated areas near the site.

† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

TABLE 7-16D

HISTORICAL ENVIRONMENTAL SAMPLE DATA

ENVIRONMENTAL TLD

Results in mrem per standard month

LOCATION: ON-SITE INDICATOR **			
Year	Min.	Max.	Mean
Preopt†	*	*	*
1974†	3.1	10.6	5.7
1975†	4.6	16.0	7.3
1981	4.1	11.8	5.8
1982	3.9	13.0	6.3
1983	5.0	16.5	6.9
1984	4.6	13.2	7.0
1985	4.7	15.9	6.3
1986	4.7	16.1	7.0
1987	4.0	11.4	5.8
1988	4.4	11.9	6.0
1989	2.7	13.1	6.0
1990	3.6	12.9	5.5
1991	3.2	11.6	5.4
1992	3.2	5.6	4.3
1993	3.1	13.6	5.2
1994	2.8	14.3	5.1
1995	3.5	28.6	6.2
1996	3.1	32.6	6.4
1997	3.5	28.8	8.1
1998	3.6	28.8	6.2
1999	3.3	28.4	6.6
2000	3.7	16.5	5.6

* No data available.

** Includes TLD numbers 3, 4, 5, 6 and 7 (1970 - 1973). Includes TLD numbers 3, 4, 5, 6, 7, 23, 24, 25 and 26 (1974 - 2000). Locations are existing or previous on-site environmental air monitoring locations.

† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

TABLE 7-16E

HISTORICAL ENVIRONMENTAL SAMPLE DATA

ENVIRONMENTAL TLD

Results in mrem per standard month

LOCATION: OFF-SITE INDICATOR **			
Year	Min.	Max.	Mean
Preopt	*	*	*
1974†	2.4	8.9	5.3
1975†	4.5	7.1	5.5
1981	3.6	5.9	4.7
1982	4.0	6.2	5.2
1983	4.6	7.2	5.6
1984	4.6	8.2	6.1
1985	4.6	7.7	5.5
1986	5.0	7.6	6.1
1987	4.4	6.6	5.2
1988	4.2	6.6	5.4
1989	2.8	6.4	4.6
1990	3.8	6.1	4.8
1991	3.4	5.8	4.5
1992	3.1	5.2	4.1
1993	3.2	5.7	5.0
1994	3.0	5.1	4.1
1995	3.9	5.7	4.4
1996	3.3	5.5	4.1
1997	3.7	6.2	4.7
1998	3.9	5.6	4.5
1999	3.8	7.1	4.6
2000	3.8	7.3	4.6

* No data available.

** Includes TLD numbers 8, 9, 10, 11, 12 and 13 (off-site environmental air monitoring locations).

† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

TABLE 7-17
HISTORICAL ENVIRONMENTAL SAMPLE DATA
MILK
 Results in pCi/liter

LOCATION: CONTROL **						
Isotope	Cs-137			I-131		
Year	Min.	Max.	Mean	Min.	Max.	Mean
1969†	*	*	*	*	*	*
1974†	*	*	*	*	*	*
1975†	*	*	*	*	*	*
1981	7.0	7.0	7.0	<LLD	<LLD	<LLD
1982	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1983	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1984	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1985	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1986	5.3	12.4	8.4	0.8	29.0	13.6
1987	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1988	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1989	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1990	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1991	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1992	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1993	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1994	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1995	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1996	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1997	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1998	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1999	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
2000	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

* No data available (sample not required).

** Location used was an available milk sample location in a least prevalent wind direction greater than ten miles from the site.

† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

TABLE 7-18

HISTORICAL ENVIRONMENTAL SAMPLE

MILK

Results in pCi/liter

LOCATION: INDICATOR *						
Isotope	Cs-137			I-131		
Year	Min.	Max.	Mean	Min.	Max.	Mean
1969†	**	**	**	**	**	**
1974†	1.6	39	10.5	0.70	2.00	1.23
1975†	6.0	22	16	0.01	2.99	0.37
1981	4.3	29.0	7.6	<LLD	<LLD	<LLD
1982	3.1	18.0	6.3	<LLD	<LLD	<LLD
1983	5.1	5.1	5.1	<LLD	<LLD	<LLD
1984	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1985	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1986	6.1	11.1	8.6	0.3	30.0	5.2
1987	5.5	9.4	7.4	<LLD	<LLD	<LLD
1988	10.0	10.0	10.0	<LLD	<LLD	<LLD
1989	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1990	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1991	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1992	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1993	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1994	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1995	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1996	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1997	<LLD	<LLD	<LLD	0.25	0.44	0.35
1998	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
1999	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
2000	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

* Locations sampled were available downwind locations within ten miles with high deposition potential.

** No data available (samples not required).

† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

TABLE 7-19
HISTORICAL ENVIRONMENTAL SAMPLE DATA
FOOD PRODUCTS ††
Results in pCi/g (wet)

LOCATION: CONTROL *			
Isotope	Cs-137		
Year	Min.	Max.	Mean
1969†	**	**	**
1974†	**	**	**
1975†	**	**	**
1981	<LLD	<LLD	<LLD
1982	<LLD	<LLD	<LLD
1983	<LLD	<LLD	<LLD
1984	<LLD	<LLD	<LLD
1985	<LLD	<LLD	<LLD
1986	<LLD	<LLD	<LLD
1987	<LLD	<LLD	<LLD
1988	<LLD	<LLD	<LLD
1989	<LLD	<LLD	<LLD
1990	<LLD	<LLD	<LLD
1991	<LLD	<LLD	<LLD
1992	<LLD	<LLD	<LLD
1993	0.008	0.008	0.008
1994	<LLD	<LLD	<LLD
1995	<LLD	<LLD	<LLD
1996	<LLD	<LLD	<LLD
1997	<LLD	<LLD	<LLD
1998	<LLD	<LLD	<LLD
1999	<LLD	<LLD	<LLD
2000	<LLD	<LLD	<LLD

* Locations was an available food product sample location in a least prevalent wind direction greater than ten miles from the site.

** No data available (control samples not required).

† 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.

†† Data comprised of broadleaf and non-broadleaf vegetation (1980-1984). Data comprised of broadleaf vegetation only (1985-2000).

TABLE 7-20
HISTORICAL ENVIRONMENTAL SAMPLE DATA
FOOD PRODUCTS ††
Results in pCi/g (wet)

LOCATION: INDICATOR *			
Isotope	Cs-137		
Year	Min.	Max.	Mean
1969†	**	**	**
1974†	0.04	0.34	0.142
1975†	<MDL	<MDL	<MDL
1981	<LLD	<LLD	<LLD
1982	<LLD	<LLD	<LLD
1983	<LLD	<LLD	<LLD
1984	<LLD	<LLD	<LLD
1985	0.047	0.047	0.047
1986	<LLD	<LLD	<LLD
1987	<LLD	<LLD	<LLD
1988	0.008	0.008	0.008
1989	0.011	0.011	0.011
1990	<LLD	<LLD	<LLD
1991	0.039	0.039	0.039
1992	<LLD	<LLD	<LLD
1993	<LLD	<LLD	<LLD
1994	0.006	0.012	0.010
1995	0.011	0.012	0.012
1996	<LLD	<LLD	<LLD
1997	0.013	0.013	0.013
1998	<LLD	<LLD	<LLD
1999	0.007	0.007	0.007
2000	<LLD	<LLD	<LLD

- * Indicator locations were available downwind locations within ten miles of the site and with high deposition potential.
- ** No data available (control samples not required).
- † 1969 data is considered to be pre-operational for the site. 1974 and 1975 data is considered to be pre-operational for the JAFNPP.
- †† Data comprised of broadleaf and non-broadleaf vegetation (1976-1984). Data comprised of broadleaf vegetation only (1985-2000).

8.0 GRAPHICAL PRESENTATIONS

1. DATA GRAPHS

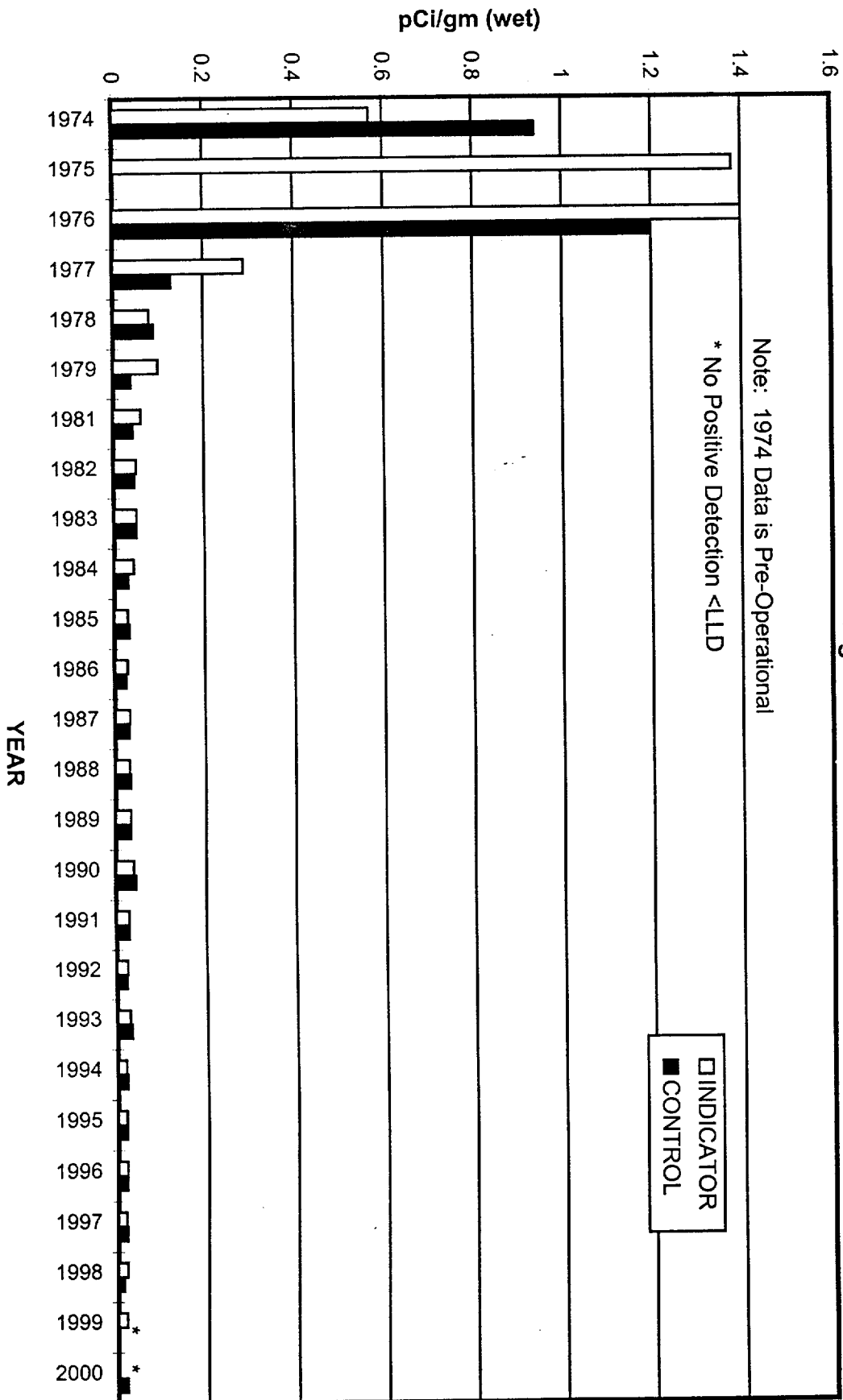
This section includes graphic representation of selected sample results.

For graphic representation, results reported as MDL or LLD were considered to be at the "zero" level of activity. MDL and LLD results were indicated where possible.

2. SAMPLE LOCATIONS

Sample location results specified as "indicator" and "control" on the graphs can be referenced back to Section 3.3 for specific locations.

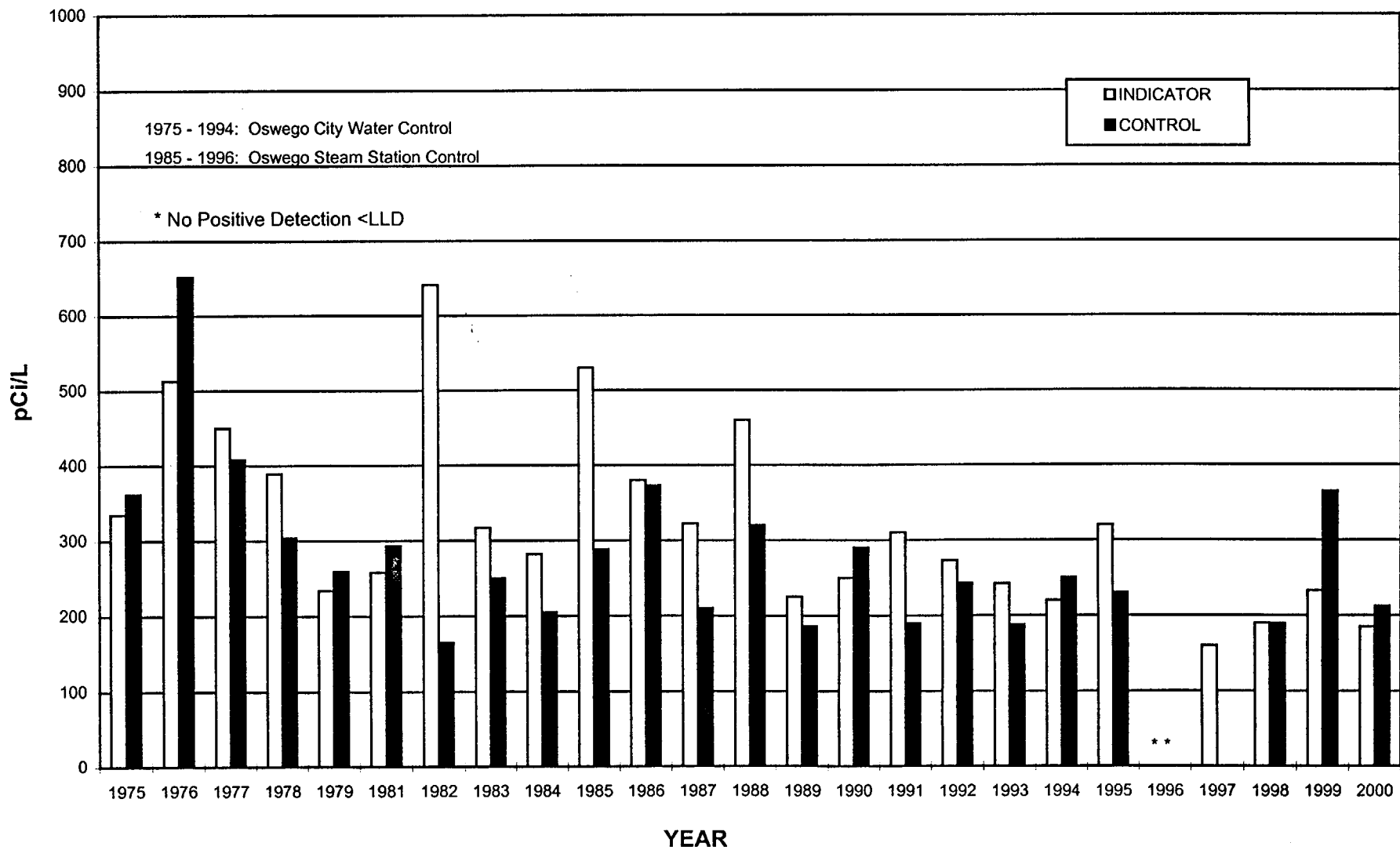
JAMES A. FITZPATRICK N.P.P.
FISH Cs-137
Figure 8.1



JAMES A. FITZPATRICK N.P.P.

SURFACE WATER - TRITIUM

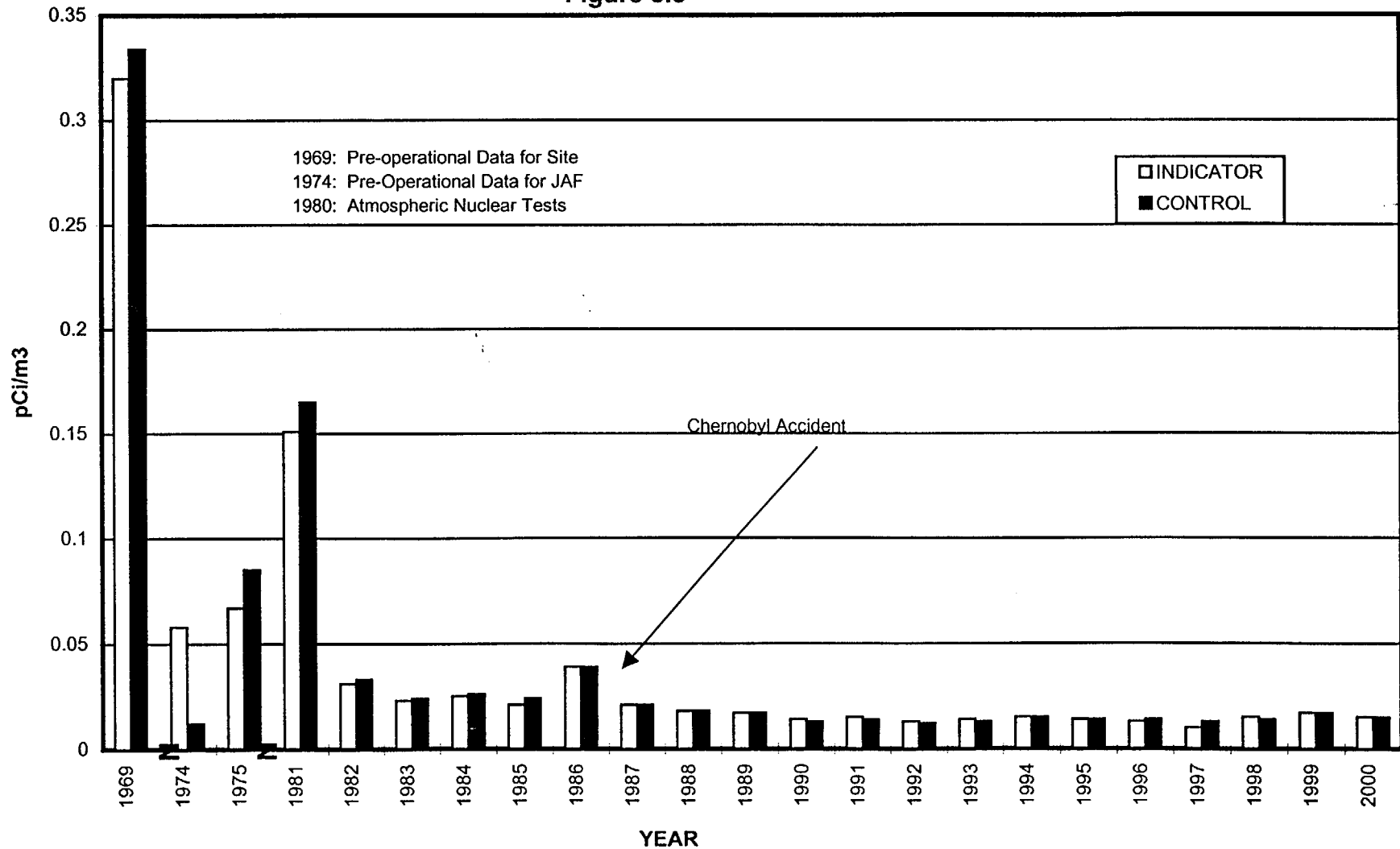
Figure 8.2



JAMES A. FITZPATRICK N.P.P.

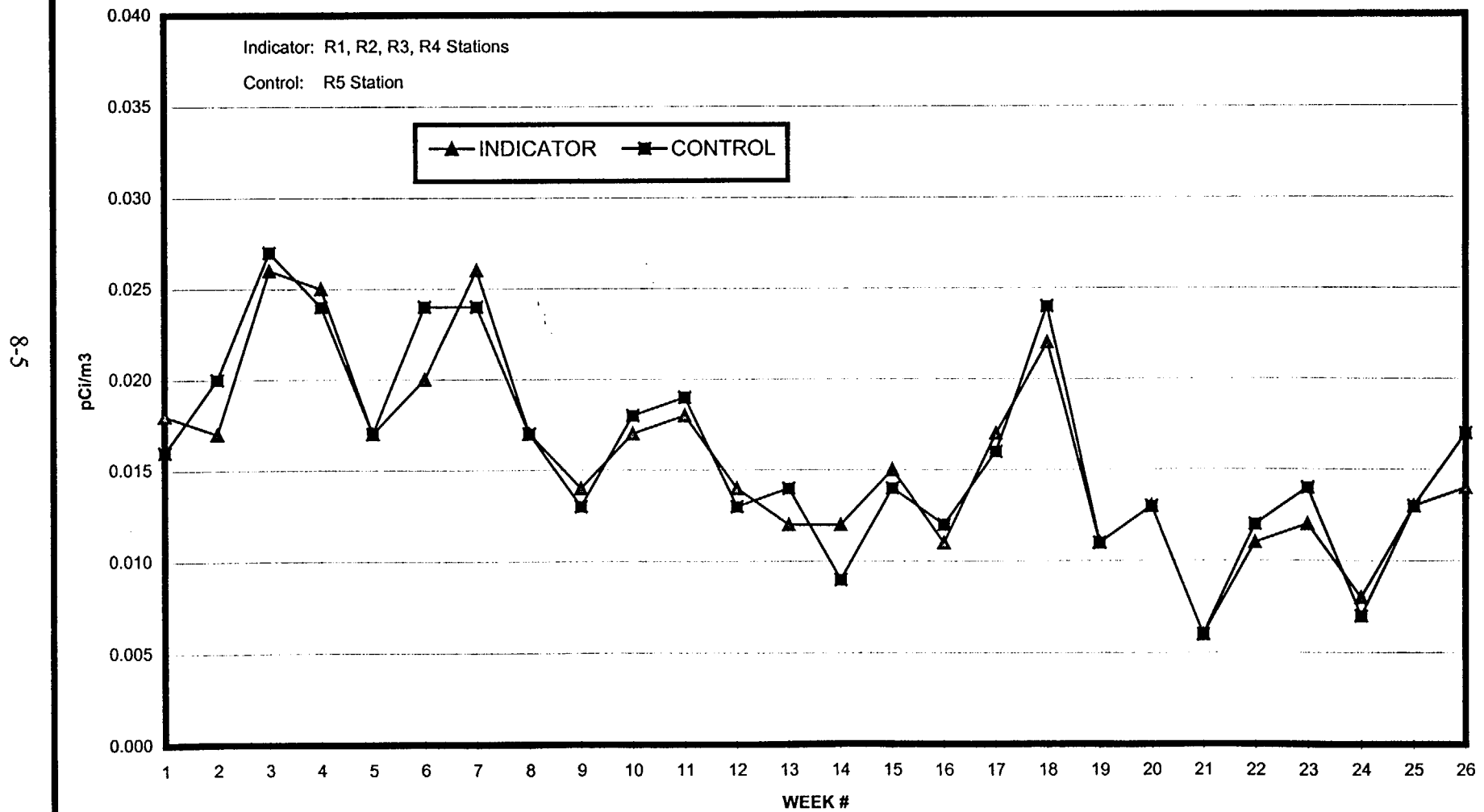
AIR PARTICULATE FILTER - GROSS

Figure 8.3



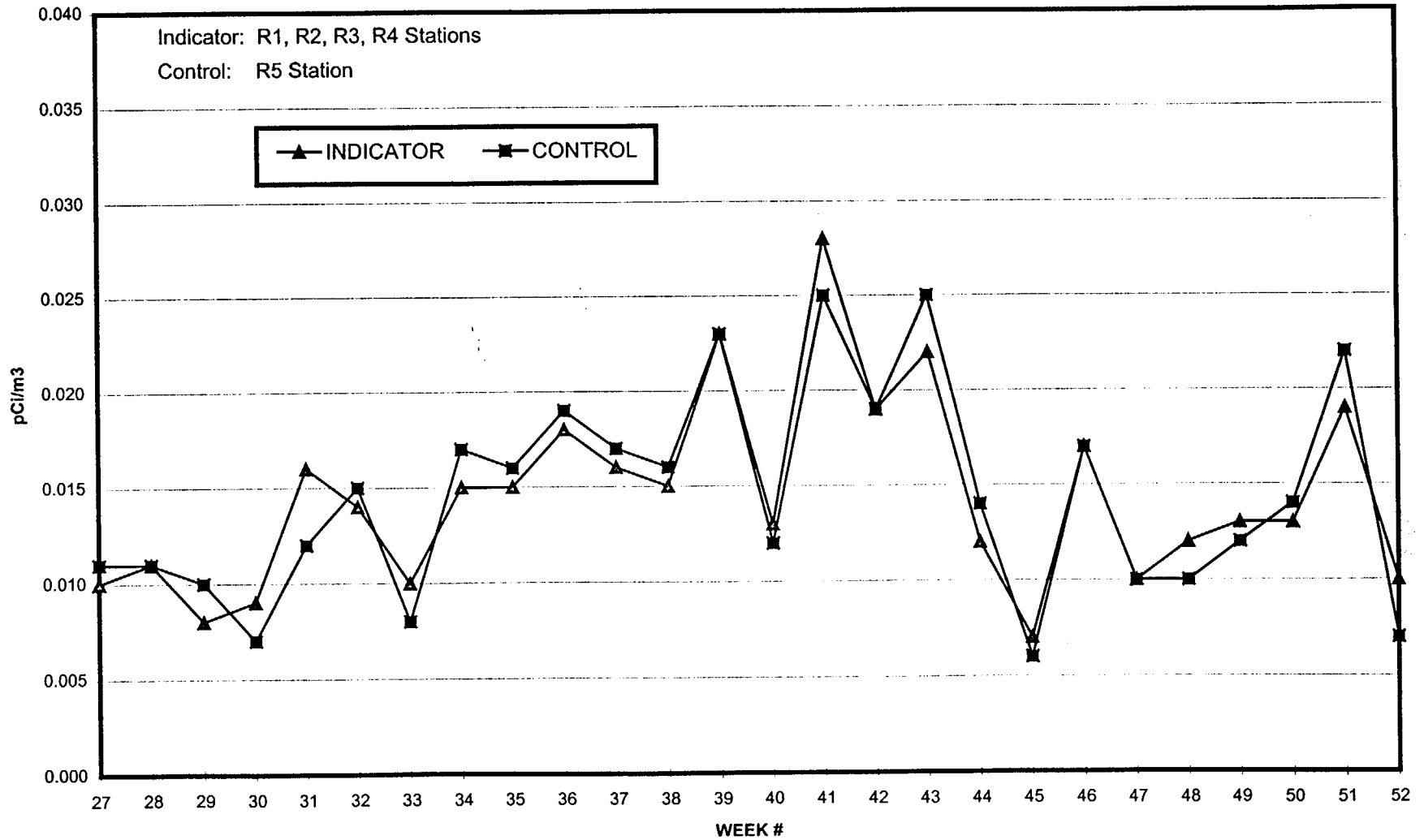
JAMES A. FITZPATRICK N.P.P.
AIR PARTICULATE FILTER - GROSS BETA

Figure 8.4

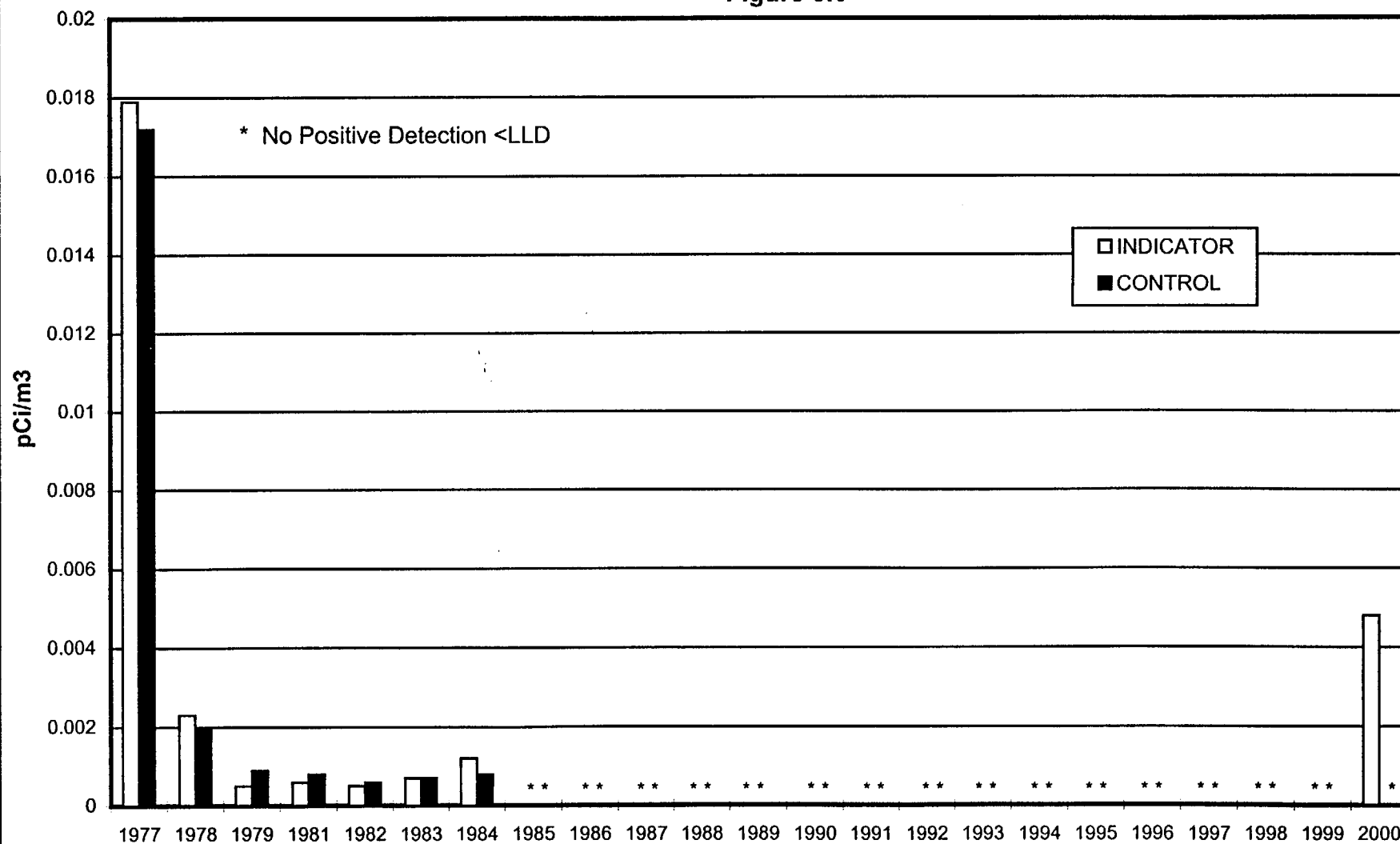


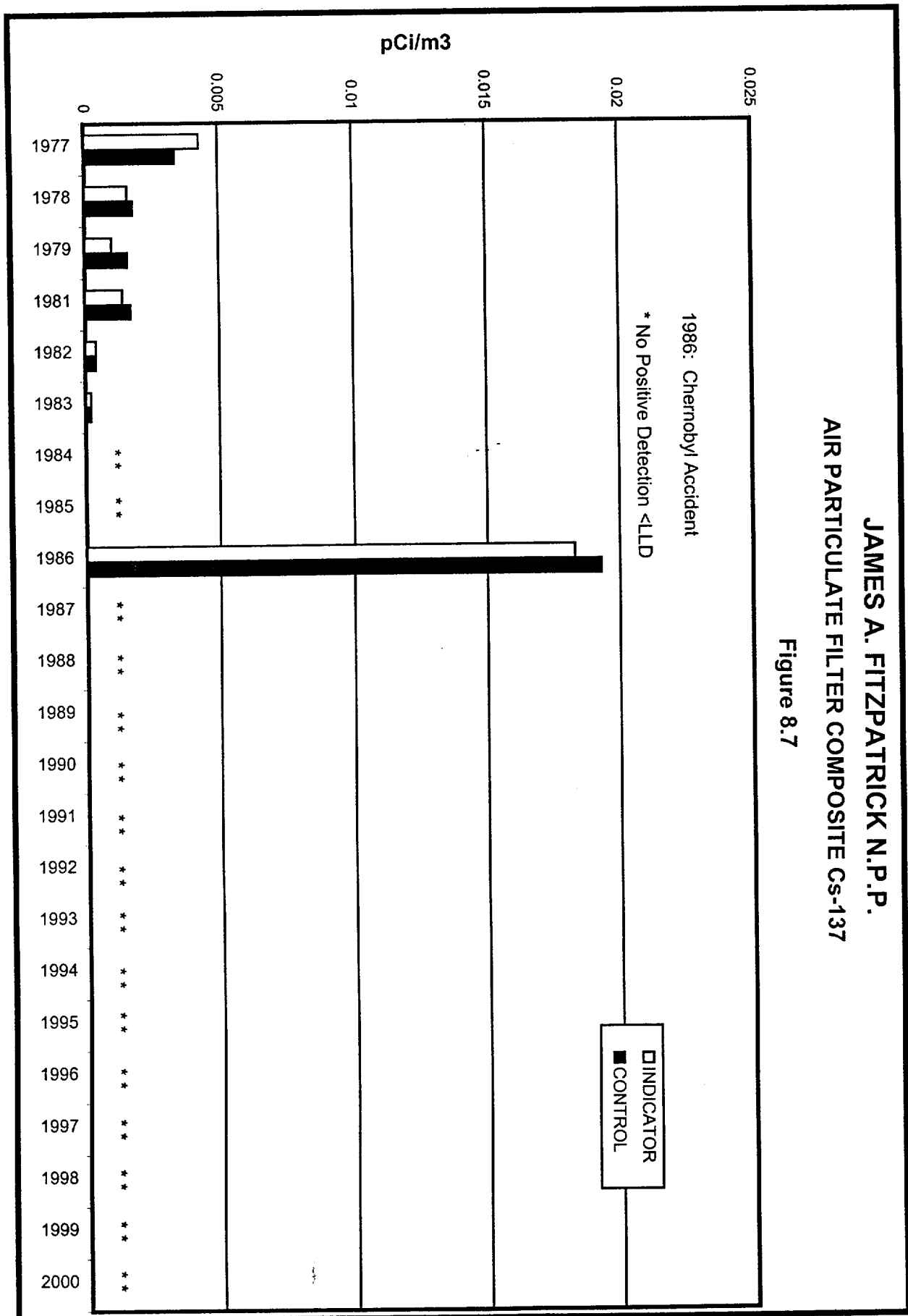
JAMES A. FITZPATRICK N.P.P.
AIR PARTICULATE FILTER - GROSS BETA

Figure 8.5



JAMES A. FITZPATRICK N.P.P.
AIR PARTICULATE FILTER COMPOSITE Co-60
Figure 8.6

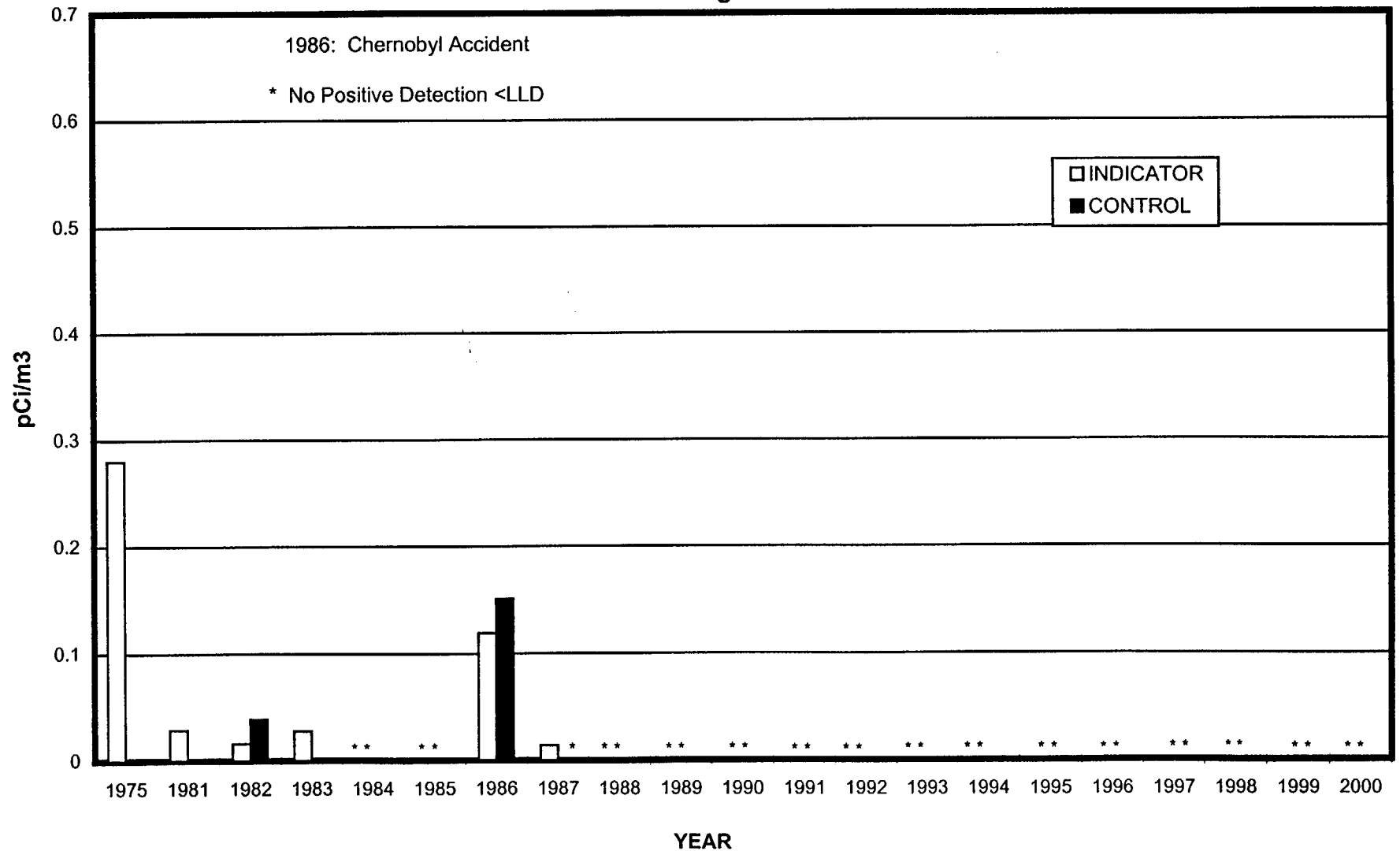




JAMES A. FITZPATRICK N.P.P.

AIR-RADIOIODINE I-131

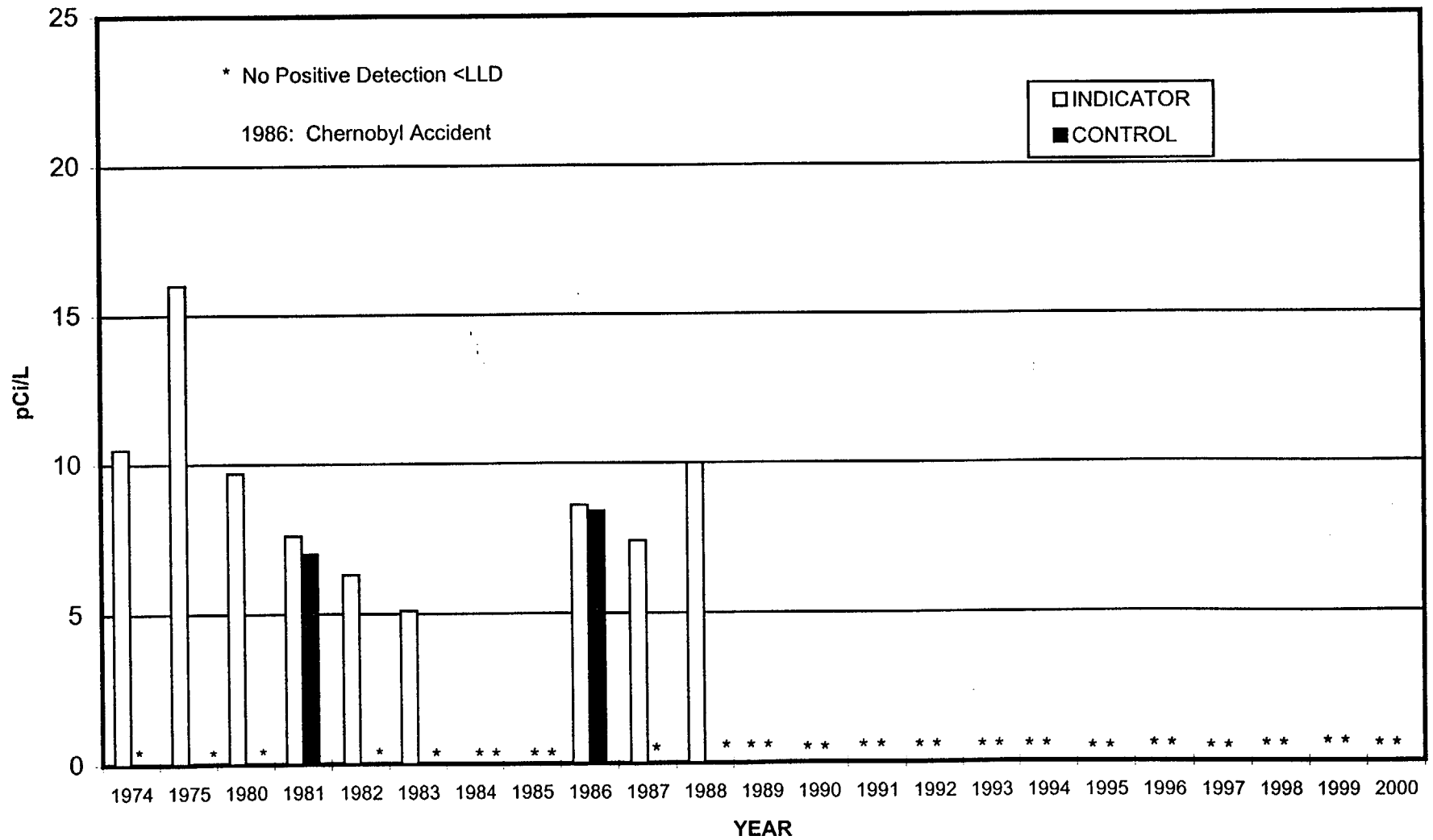
Figure 8.8



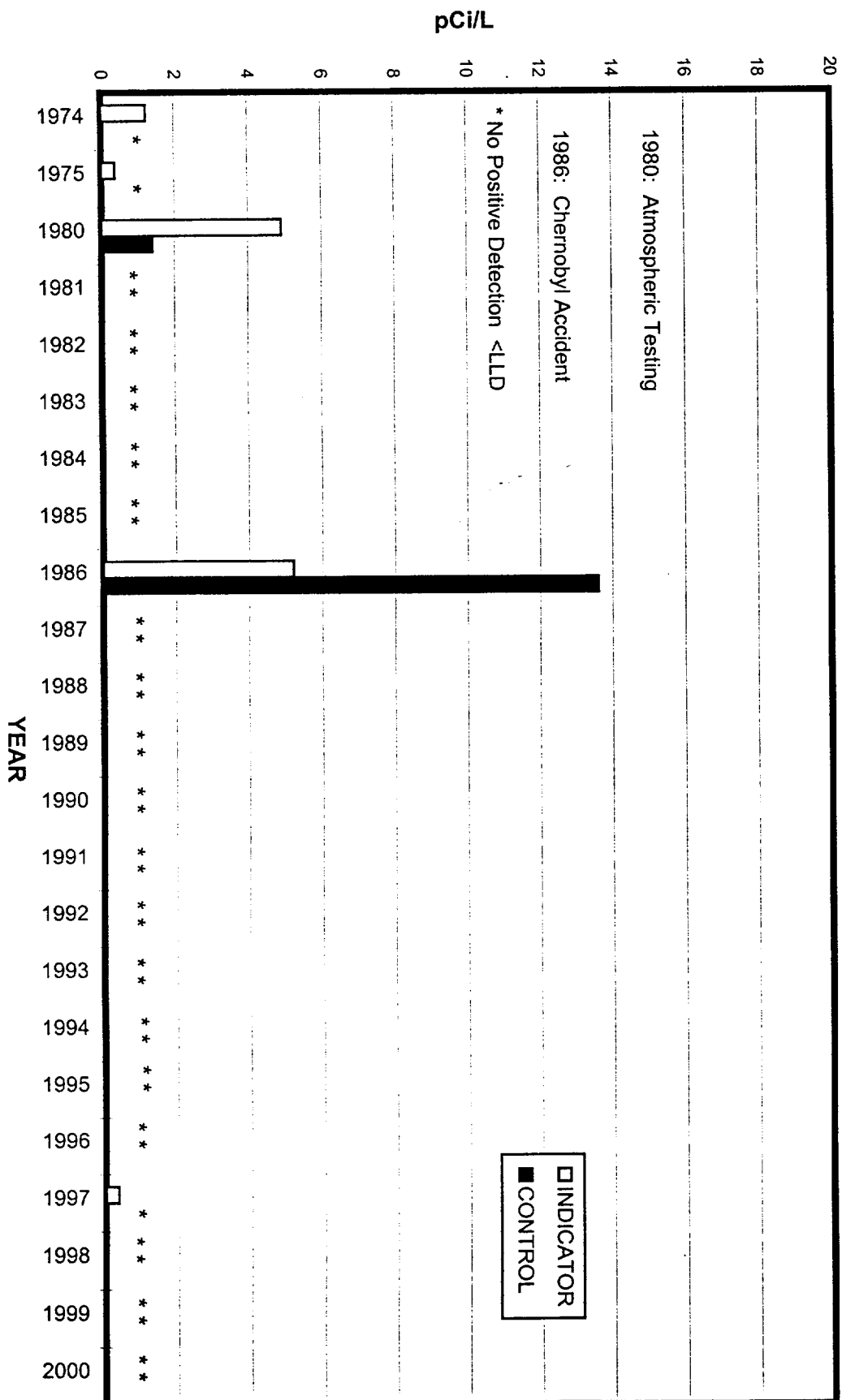
JAMES A. FITZPATRICK N.P.P.

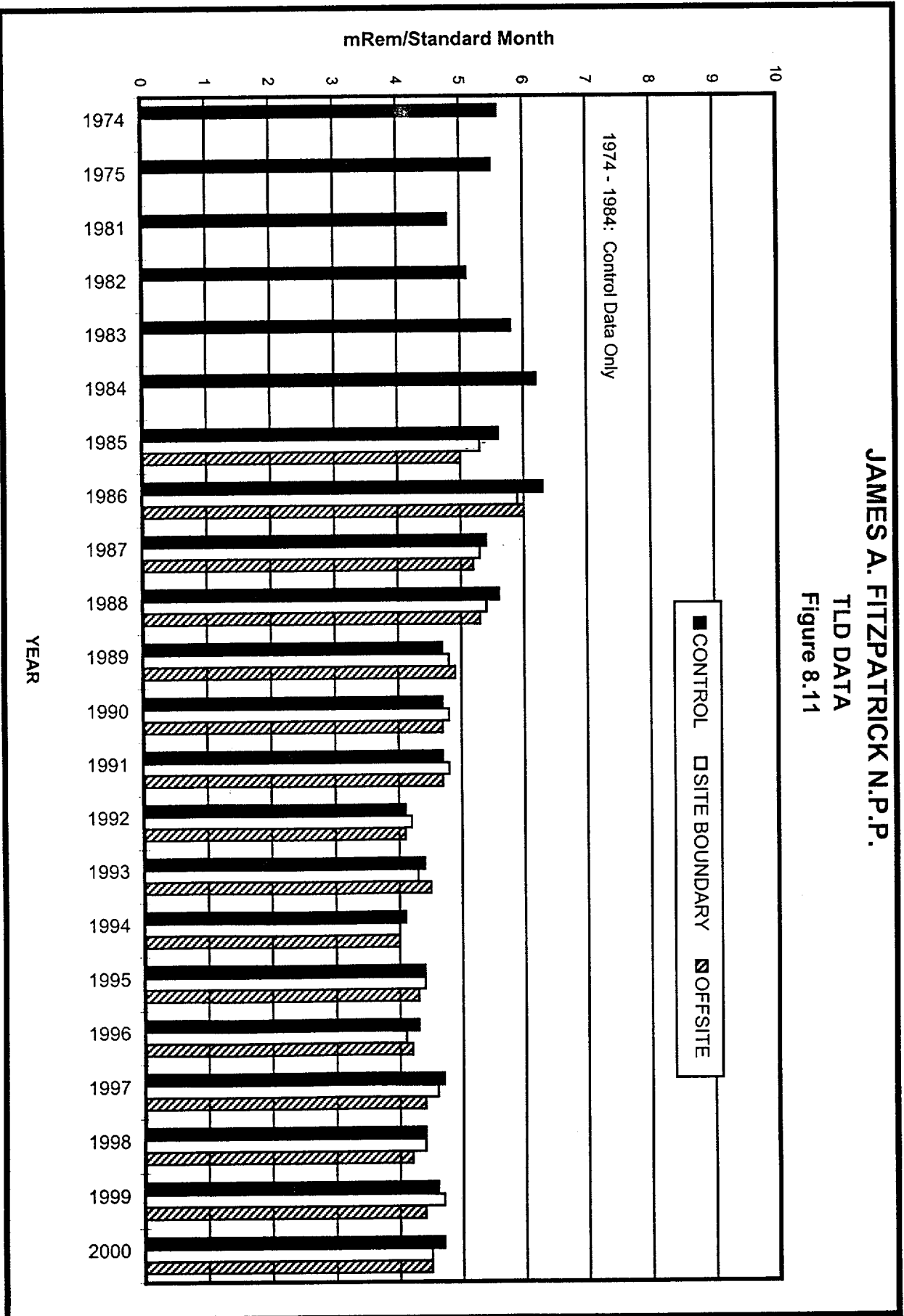
MILK Cs-137

Figure 8.9



JAMES A. FITZPATRICK N.P.P.
MILK RADIOIODINE I-131
Figure 8.10





9.0 QA/QC PROGRAM

9.1 PROGRAM DESCRIPTION

Section 6.3 of the Radiological Effluent Technical Specification (RETS) requires that each licensee participate in an Interlaboratory Comparison Program. The Interlaboratory Comparison Program shall include sample media for which samples are routinely collected and for which cross-check samples are commercially available. Participation in an Interlaboratory Comparison Program ensures that independent checks on the precision and accuracy of the measurement of radioactive material in the environmental samples are performed as part of the Quality Assurance Program for environmental monitoring. To fulfill the Technical Specification requirement for an Interlaboratory Comparison Program, the JAF Environmental Laboratory has engaged the services of two independent laboratories to provide quality assurance cross-check samples. The two laboratories are Analytics, Incorporated in Atlanta, Georgia and the U.S. Department of Energy's Environmental Measurements Laboratory (EML) in New York City.

Analytics supplies requested sample media as blind sample spikes, which contain known levels of radioactivity. These samples are prepared and analyzed using standard laboratory procedures. The results are submitted to Analytics which issues a statistical summary report. The JAFNPP Environmental Laboratory uses predetermined acceptance criteria methodology for evaluating the laboratory's performance for Analytic's sample results.

In addition to the Analytics Program, the JAF Environmental Laboratory participated in the Environmental Measurements Laboratory (EML) Quality Assessment Program (QAP). EML supplies sample media as blind sample spikes to approximately 127 laboratories worldwide. These samples containing known amounts of low level activity are analyzed using standard laboratory procedures. The results are submitted to the Environmental Measurements Laboratory for statistical evaluation. Reports are provided to each participating laboratory, which provide an evaluation of the laboratory's performance.

Environmental Midwest Laboratory performs the tritium analysis for the JAF Environmental Laboratory samples. To provide a quality assurance check on the Midwest Lab, tritium samples from Analytics and EML are provided by the JAF laboratory.

9.2 PROGRAM SCHEDULE

SAMPLE MEDIA	LABORATORY ANALYSIS	SAMPLE PROVIDER		YEARLY TOTAL
		ANALYTICS	EML	
Water	Gross Beta	0	2	2
Water	Tritium	1	2	3
Water	I-131	2	0	2
Water	Mixed Gamma	2	2	4
Air	Gross Beta	2	2	4
Air	I-131	2	0	2
Air	Mixed Gamma	2	2	4
Milk	I-131	2	0	2
Milk	Mixed Gamma	2	0	2
Soil	Mixed Gamma	1	0	1
Vegetation	Mixed Gamma	1	0	1
TOTAL SAMPLE INVENTORY		17	10	27

9.3 ACCEPTANCE CRITERIA

Each sample result is evaluated to determine the accuracy and precision of the laboratory's analysis result. The evaluation method for the QA sample results is dependent on the supplier of the cross-check sample. The sample evaluation methods are discussed below.

9.3.1 ANALYTICS SAMPLE RESULTS

Samples provided by Analytics are evaluated using what is specified as the NRC method. This method is based on the calculation of the ratio of results reported by the participating laboratory (QC result) to the Vendor Laboratory Known Value (reference result).

An Environmental Laboratory analytical result is evaluated using the following calculation:

The value for the error resolution is calculated.

$$\text{The error resolution} = \frac{\text{Reference Result}}{\text{Reference Error}}$$

Using the appropriate row under the Error Resolution column in Table 9.3.1 below, a corresponding Ratio of Agreement interval is given.

The value for the ratio is then calculated.

$$\text{Ratio} = \frac{\text{QC Result}}{\text{Reference Result}}$$

If the value falls within the agreement interval, the result is acceptable.

TABLE 9.3.1

ERROR RESOLUTION	RATIO OF AGREEMENT
<3	0.4-2.5
3.1 to 7.5	0.5-2.0
7.6 to 15.5	0.6-1.66
15.6 to 50.5	0.75-1.33
50.6 to 200	0.8-1.25
>200	0.85-1.18

Again, this acceptance test is generally referred to as the "NRC" method. The acceptance criteria is contained in Procedure DVP-04.01 and was taken from the Criteria of Comparing Analytical Results (USNRC) and Bevington, P.R., Data Reduction and Error Analysis for the Physical Sciences, McGraw-Hill, New York, (1969). The NRC method generally results in an acceptance range of approximately $\pm 25\%$ of the Known Value when applied to sample results from the Analytics Inc. Interlaboratory Comparison Program. This method is used as the procedurally required assessment method and requires the generation of a nonconformity report when results are unacceptable.

9.3.2 ENVIRONMENTAL MEASUREMENTS LABORATORY (QAP)

The laboratory's analytical performance is evaluated by EML based on the historical analytical capabilities for individual analyte/matrix pairs. The statistical criteria for Acceptable Performance, "A", has been chosen by EML to be between the 15th and 85th percentile of the cumulative normalized distribution, which can be viewed as the middle 70% of all historic measurements. The Acceptable With Warning criteria, "W", is between the 5th

and 15th percentile and between the 85th and 95th percentile. In other words, the middle 70% of all reported values are acceptable, while the other 5th-15th (10%) and 85th-95th percentiles (10%) are in the warning area. The Not Acceptable criteria, "N", is established at less than the 5th percentile and greater than the 95th percentile, that is, the outer 10% of the historical data. Using five years worth of historical analytical data, the EML, determined performance results using the percentile criteria summarized below:

<u>Result</u>	<u>Cumulative Normalized Distribution</u>
Acceptable ("A")	15% - 85%
Acceptable with Warning ("W")	5% - 15% or 85% - 95%
Not Acceptable ("N")	<5% or >95%

9.4 PROGRAM RESULTS SUMMARY

The Interlaboratory Cross-Check Program numerical results are provided in Table 9-1.

9.4.1 ANALYTICS QA SAMPLES RESULTS

Seventeen QA blind spike samples were analyzed as part of Analytics' 2000 Interlaboratory Comparison Program. The following sample media were evaluated as part of the Cross-Check Program.

- Air Charcoal Cartridge, I-131
- Air Particulate Filter, Mixed Gamma Emitters/Gross Beta
- Water, I-131/Mixed Gamma Emitters/Tritium
- Soil, Mixed Gamma Emitters
- Milk, I-131 Mixed Gamma Emitters
- Vegetation, Mixed Gamma Emitters

The JAF Environmental Laboratory performed 81 individual analysis on the seventeen QA samples. Of the 81 analysis performed, 79 were in agreement using the NRC acceptance criteria for a 97.5% agreement ratio.

Sample non-conformities are discussed in Section 9.4.2 below.

9.4.2 ANALYTICS SAMPLE NONCONFORMITIES

9.4.2.1 Analytics Sample E-2094-05

Nonconformity No. 2000-04, Cs-134 in Air Filter

A single air filter from Analytics was analyzed for gamma emitters. Eight of the nine isotopes present were in agreement with the reference value. Cs-134 activity was not in agreement. The cause of the nonconformity was determined to be coincidence summing of the Cs-134 peak at 604 KeV, which is the primary peak for quantifying this isotope. This coincidence summing causes the counts observed for Cs-134 to be lower than expected with a resulting under reporting of activity. ACTS No. 00-53189 was generated to provide a corrective action to address the coincidence counting bias on a program level. In response to this requirement, coincidence counting correction factors were determined using the QA sample results data base. The correction factors were implemented using gamma analysis software.

9.4.2.2 Analytics Sample E-2354-05

Nonconformity No. 2000-09, Cs-134 in Air Filter

A single air filter from Analytics was analyzed for gamma emitters. Eight of the nine isotopes were in agreement with the reference value. Cs-134 was not in agreement. The cause of the nonconformity was the coincident summing of the Cs-134 peak at 604 KeV. The corrective action was discussed in 9.4.2.1. A re-analysis of the original gamma spectrums using the coincidence summing correction factors produced results that were in agreement with the known value.

9.4.3 ENVIRONMENTAL MEASUREMENTS LABORATORY (EML)

In 2000, JAF Environmental Laboratory participated in both the EML Quality Assessment Programs, QAP-52 and QAP-53. Sample sets consisted of the following sample media:

- Water - Gross Beta/Mixed Gamma Emitters
- Water - Tritium
- Air Particulate Filter - Mixed Gamma Emitters/Gross Beta

A total of 19 radionuclides were evaluated for the samples included in QAP-52 and QAP-53. Using the EML acceptance criteria, 18 of 19 radionuclide analyses (94.7%) were evaluated to be acceptable or acceptable with warning. One of 19 sample result was not acceptable (5.3%). Results for the EML cross Check Program can be viewed on-line at www.eml.doe.gov

A summary of the JAF Environmental Laboratory results is as follows:

<u>Matrix</u>	<u>Total Analyses</u>	<u>Acceptable</u>	<u>Not Acceptable</u>
Air	11	10	1
Water	8	8	0
<hr/>			
Total Evaluation	19	18	1
Percentage		94.7%	5.3%

9.4.3.1 EML Nonconformity

Nonconformity 2000-05, QAP-52, Ru-106 in Air Filter

A single air filter from EML was analyzed for gamma emitters. Using the standard single filter geometry, all results were in agreement with the exception of Ru-106. The apparent cause of the nonconformity was the low Ru-106 activity contained in the sample. Ru-106 was detected in only one of the three sample analyses. The second and third analysis reported Ru-106 results as less than detectable concentrations (LLD). The Ru-106 activity was reported using the single positive result. Because of the low activity level present in the sample the resulting count rate for Ru-106 for this sample was less than 0.7 counts per minute. The one sigma associated counting error was 30% for the 2 hour count time. By comparison, the associated one sigma counting error for Co-60 was less than 2.5% for the sample count time. There was no corrective action associated with this nonconformity. Future QA samples results will be evaluated when less than 3 positive results are obtained for a specific radionuclide. Based on the evaluation it will be determined if the results can be reported with the appropriate level of confidence.

9.5 REFERENCES

- 9.5.1 Semi-Annual Report of the Department of Energy, Office of Environmental Management, Quality Assessment Program, EML 608, March 2000.
- 9.5.2 Semi-Annual Report of the Department of Energy, Office of Environmental Management, Quality Assessment Program, EML 611, September 2000.
- 9.5.3 Radioactivity and Radiochemistry, The Counting Room: Special Edition, 1994
Caretaker Publications, Atlanta, Georgia

TABLE 9-1

INTERLABORATORY INTERCOMPARISON PROGRAM

Gross Beta Analysis of Air Particulate Filters
(pCi/filter)

DATE	JAF ENV ID NUMBER	MEDIUM	ANALYSIS	JAF RESULT (1)	REFERENCE LABORATORY* (1)	RATIO (2)
06/22/00	E-2235-05	AIR	Gross Beta	48.2±1.7 50.4±1.7 51.3±1.7 Mean = 50±1	57±1	0.88, A
12/07/00	E-2493-05	AIR	Gross Beta	71.2±2.0 67.4±1.2 69.0±2.0 Mean = 69.2±1.2	72±1	0.96, A

(1) Results reported as activity \pm 1 sigma.

(2) Ratio = Reported/Analytics (See Section 9.3).

(*) Samples provided by Analytics, Inc.

(A) Evaluation Results, Acceptable.

TABLE 9-1 (Continued)

INTERLABORATORY INTERCOMPARISON PROGRAM

Tritium Analysis of Water (pCi/liter)

DATE	JAF ENV ID NUMBER	MEDIUM	ANALYSIS	JAF RESULT (1)	REFERENCE LABORATORY* (1)	RATIO (2)
03/23/00	E-2092-05	WATER	H-3	4170±194	4170±70	1.0, A

- (1) Results reported as activity \pm 1 sigma. Sample Analyzed by Environmental Inc. Midwest Laboratory
- (2) Ratio = Reported/Analytics (See Section 9.3).
- (*) Samples provided by Analytics, Inc.
- (A) Evaluation Results, Acceptable.

TABLE 9-1 (Continued)

INTERLABORATORY INTERCOMPARISON PROGRAM

Iodine Analysis of Water, Air and Milk

DATE	JAF ENV ID NUMBER	MEDIUM	ANALYSIS	JAF RESULT (1)	REFERENCE LABORATORY* (1)	RATIO (2)
03/23/00	E-2093-05	WATER pCi/liter	I-131**	74.3±0.97 76.2±1.07 75.0±1.19 Mean = 75.2±0.6	74±1.3	1.02, A
06/22/00	E-2238-05	AIR pCi/cc	I-131	61.1±6.0 68.8±6.1 63.4±5.8 Mean = 64.4±3.4	72.0±1.3	0.89, A
06/22/00	E-2236-05	MILK pCi/liter	I-131**	76.2±1.2 72.3±1.6 72.2±1.4 Mean = 73.6±0.8	81.0±1.3	0.91, A
09/21/00	E-2355-05	MILK pCi/liter	I-131**	53.0±1.0 50.0±1.3 57.1±1.5 Mean = 53.4±0.7	58.0±1.0	0.92, A
09/21/00	E-2356-05	AIR pCi/cc	I-131	89.7±6.4 84.8±5.2 81.3±5.2 Mean = 85.3±3.3	83.0±1.3	1.02, A
09/21/00	E-2353-05	WATER pCi/liter	I-131**	71.8±1.1 74.0±1.6 74.4±1.4 Mean = 73.4±0.6	75.0±1.3	0.97, A

(1) Results reported as activity ± 1 sigma.

(2) Ratio = Reported/Analytics (See Section 9.3).

(*) Samples provided by Analytics, Inc.

(**) Result determined by Resin Extraction/Gamma Spectral Analysis.

(A) Evaluation Results, Acceptable.

TABLE 9-1 (Continued)
INTERLABORATORY INTERCOMPARISON PROGRAM
Gamma Analysis Water (pCi/liter)

DATE	JAF ENV ID NUMBER	MEDIUM	ANALYSIS	JAF RESULT (1)	REFERENCE LABORATORY* (1)	RATIO (2)
03/23/00	E-2093-05	WATER	Ce-141	471±8.6 471±8.6 463±11.6 Mean = 459±6	427±7	1.07, A
			Cr-51	215±20.9 270±24.3 217±39.0 Mean = 234±17	238±4	0.98, A
			Cs-134	124±3.0 128±3.8 128±4.9 Mean = 127±2	139±2	0.91, A
			Cs-137	127±4.1 134±4.3 116±6.6 Mean = 126±3	128±2	0.98, A
			Mn-54	166±4.7 171±4.7 170±7.9 Mean = 169±3	159±3	1.06, A
			Fe-59	96.7±6.0 101±6.2 106±10.9 Mean = 101±5	92±2	1.10, A
			Zn-65	211±8.4 221±8.5 198±14.1 Mean = 210±6	196±3	1.07, A
			Co-60	123±3.2 114±3.1 115±5.2 Mean = 117±2	116±2	1.01, A
			Co-58	45.0±2.9 47.8±3.0 48.7±5.0 Mean = 47±2	44±0.7	1.07, A

- (1) Results reported as activity ± 1 sigma.
(2) Ratio = Reported/Analytics (See Section 9.3).
(*) Sample provided by Analytics, Inc.
(A) Evaluation Results, Acceptable.

TABLE 9-1 (Continued)
INTERLABORATORY INTERCOMPARISON PROGRAM
Gamma Analysis Water (pCi/liter)

DATE	JAF ENV ID NUMBER	MEDIUM	ANALYSIS	JAF RESULT (1)	REFERENCE LABORATORY* (1)	RATIO (2)
09/21/00	E-2353-05	WATER	Ce-141	222±11.6 214±7.5 196±7.3 Mean = 211±5	191±3.3	1.1, A
			Cr-51	197±46.0 258±33.1 255±36.7 Mean = 227±23	230±4.0	0.99, A
			Cs-134	116±6.9 116±3.8 111±8.9 Mean = 114±4	128±2.0	0.89, A
			Cs-137	223±9.2 226±5.3 203±6.8 Mean = 217±4	218±4.0	1.0, A
			Mn-54	82.3±6.7 112±4.2 87.4±5.3 Mean = 94±3	89±1.3	1.06, A
			Fe-59	48.7±11.4 65.5±6.8 46.6±8.1 Mean = 54±5	54±1.0	1.00, A
			Zn-65	122±13.3 140±8.3 120±10.0 Mean = 127±6	134±2.3	0.95, A
			Co-60	243.0±7.7 257±4.5 259±6.0 Mean = 253±4	246±4.0	1.03, A
			Co-58	48.4±6.1 56.9±3.4 65.9±4.8 Mean = 57±3	60±1.0	0.95, A

- (1) Results reported as activity ± 1 sigma.
 (2) Ratio = Reported/Analytics (See Section 9.3).
 (*) Sample provided by Analytics, Inc.
 (A) Evaluation Results, Acceptable.

TABLE 9-1 (Continued)
INTERLABORATORY INTERCOMPARISON PROGRAM
Gamma Analysis of Air Particulate Filters (pCi/filter)

DATE	JAF ENV ID NUMBER	MEDIUM	ANALYSIS	JAF RESULT (1)	REFERENCE LABORATORY* (1)	RATIO (2)
03/23/00	E-2094-05	FILTER	Ce-141	269±4.4 265±4.4 258±4.3 Mean = 264±2	293±5.0	0.9, A
			Cs-134	68.8±1.9 70.4±1.9 68.7±2.5 Mean = 69±1	95±1.7	0.73, N NC 2000-4
			Cs-137	77.9±2.7 82.2±2.8 76.9±2.7 Mean = 79±2	88±1.3	0.9, A
			Mn-54	110±3.5 105±3.4 108±3.6 Mean = 108±2	109±1.3	0.99, A
			Fe-59	56.9±5.1 62.6±4.9 63.4±5.2 Mean = 61±3	63±1.0	0.97, A
			Zn-65	134±6.4 138±6.6 125±6.5 Mean = 132±4	132±2.3	1.00, A
			Co-60	71.6±2.4 69.0±2.4 67.6±2.4 Mean = 69±1	80±1.3	0.87, A
			Cr-51	154±14.4 148±14.8 138±13.3 Mean = 147±8	163±2.7	0.9, A
			Co-58	26.4±2.1 25.6±2.2 28.7±2.3 Mean = 26.9±1	30±0.7	0.9, A

- (1) Results reported as activity ± 1 sigma.
(2) Ratio = Reported/Analytics (See Section 9.3).
(*) Sample provided by Analytics, Inc.
(N) Evaluation Results, Not Acceptable.
(A) Evaluation Results, Acceptable.
(NC) Nonconformity

TABLE 9-1 (Continued)
 INTERLABORATORY INTERCOMPARISON PROGRAM
 Gamma Analysis of Air Particulate Filters (pCi/filter)

DATE	JAF ENV ID NUMBER	MEDIUM	ANALYSIS	JAF RESULT (1)	REFERENCE LABORATORY* (1)	RATIO (2)
09/21/00	E-2354-05	FILTER	Ce-141	106±4.0 101±4.5 102±3.9 Mean = 103±2	102±1.7	1.01, A
			Cr-51	125±20.0 139±23.9 108±20.7 Mean = 124±13	123±2.0	1.01, A
			Cs-134	51.2±3.5 46.0±4.1 53.8±6.4 Mean = 50±3	68±1.0	0.74, N NC 2000-9
			Cs-137	119±4.8 108±5.8 121±5.0 Mean = 116±3	117±2.0	0.99, A
			Mn-54	65.4±4.0 54.7±5.0 48.6±3.8 Mean = 56±3	48±0.7	1.17, A
			Fe-59	41.3±6.7 34.1±8.5 30.8±6.9 Mean = 35±4	29±0.3	1.21, A
			Zn-65	79.3±7.7 81.3±9.6 81.2±8.4 Mean = 81±5	72±1.3	1.13, A
			Co-60	134±4.4 139±5.8 123±4.6 Mean = 132±3	132±2.7	1.0, A
			Co-58	34.1±3.1 30.9±4.0 27.8±3.4 Mean = 31±2	32±0.7	0.97, A

(1) Results reported as activity ± 1 sigma.

(2) Ratio = Reported/Analytics (See Section 9.3).

(*) Sample provided by Analytics, Inc.

(A) Evaluation Results, Acceptable.

(N) Evaluation Results, Not Acceptable. (NC) Nonconformity

TABLE 9-1 (Continued)
INTERLABORATORY INTERCOMPARISON PROGRAM
Gamma Analysis of Milk (pCi/liter)

DATE	JAF ENV ID NUMBER	MEDIUM	ANALYSIS	JAF RESULT (1)	REFERENCE LABORATORY* (1)	RATIO (2)
06/22/00	E-2236-05	MILK	Ce-141	65.7±5.3 68.6±5.2 61.5±5.2 Mean = 65±3	69±1	0.94, A
			Cr-51	194±28.5 188±27.6 218±24.4 Mean = 200±16	211±3.7	0.95, A
			Cs-134	80.4±3.2 81.7±3.0 81.8±3.2 Mean = 81±2	91±1.7	0.89, A
			Cs-137	193±6.1 206±5.8 196±4.8 Mean = 198±3	190±3.3	1.04, A
			Mn-54	126±5.3 120±4.8 122±4.1 Mean = 123±3	118±2	1.04, A
			Fe-59	40.9±6.5 49.0±6.4 55.1±5.9 Mean = 48±4	50±1.0	0.97, A
			Zn-65	144±9.5 148±8.8 141±7.3 Mean = 144±5	148±2.3	0.97, A
			Co-60	150±4.6 142±4.1 148±3.5 Mean = 147±2	142±2.3	1.04, A
			Co-58	98±5.1 108±4.8 105±4.0 Mean = 104±3	104±1.7	1.0, A

- (1) Results reported as activity ± 1 sigma.
(2) Ratio = Reported/Analytics (See Section 9.3).
(*) Sample provided by Analytics, Inc.
(A) Evaluation Results, Acceptable.

TABLE 9-1 (Continued)
INTERLABORATORY INTERCOMPARISON PROGRAM
Gamma Analysis of Milk (pCi/liter)

DATE	JAF ENV ID NUMBER	MEDIUM	ANALYSIS	JAF RESULT (1)	REFERENCE LABORATORY* (1)	RATIO (2)
09/21/00	E-2355-05	MILK	Ce-141	160±7.0 163±8.3 181±10.7 Mean = 168±5	164±2.7	1.02, A
			Cr-51	208±30.3 138±36.6 209±46.2 Mean = 185±22	198±3.3	0.93, A
			Cs-134	96.4±3.5 95.0±4.4 90.8±6.4 Mean = 94±3	110±2	0.85, A
			Cs-137	194±5.1 178±6.5 196±8.0 Mean = 189±47	188±3	1.01, A
			Mn-54	88.9±3.9 84.5±5.0 73.4±6.2 Mean = 82±3	77±1.3	1.06, A
			Fe-59	46.3±6.1 25.8±7.6 77.4±11.8 Mean = 50±5	47±0.7	1.06, A
			Zn-65	117±7.6 102±10.5 124±13.4 Mean = 114±6	115±2	0.99, A
			Co-60	221±4.3 212±5.6 215±7.1 Mean = 216±3	212±3.7	1.02, A
			Co-58	52.7±3.1 52.7±4.6 46.6±5.5 Mean = 51±3	51±1	1.00, A

- (1) Results reported as activity ± 1 sigma.
 (2) Ratio = Reported/Analytics (See Section 9.3).
 (*) Sample provided by Analytics, Inc.
 (A) Evaluation Results, Acceptable.

TABLE 9-1 (Continued)
INTERLABORATORY INTERCOMPARISON PROGRAM
Gamma Analysis of Soil (pCi/g)

DATE	JAF ENV ID NUMBER	MEDIUM	ANALYSIS	JAF RESULT (1)	REFERENCE LABORATORY* (1)	RATIO (2)
06/22/00	E-2237-05	SOIL	Ce-141	0.178±0.02 0.160±0.02 0.196±0.02 Mean=0.178±0.01	0.175±0.003	1.02, A
			Cs-134	0.220±0.01 0.241±0.02 0.218±0.01 Mean=0.217±0.01	0.232±0.004	0.94, A
			Cs-137	0.644±0.03 0.544±0.03 0.583±0.03 Mean=0.590±0.02	0.610±0.010	0.97, A
			Mn-54	0.278±0.02 0.306±0.02 0.299±0.02 Mean=0.294±0.01	0.300±0.005	0.98, A
			Co-60	0.275±0.02 0.336±0.02 0.369±0.02 Mean=0.360±0.01	0.359±0.006	1.00, A
			Zn-65	0.333±0.04 0.275±0.04 0.418±0.04 Mean=0.342±0.02	0.375±0.006	0.91, A
			Co-58	0.266±0.02 0.267±0.02 0.283±0.02 Mean=0.272±0.01	0.263±0.004	1.03, A
			Fe-59	0.124±0.03 0.155±0.03 0.127±0.03 Mean=0.135±0.02	0.128±0.002	1.05, A
			Cr-51	0.480±0.11 0.472±0.11 0.517±0.12 Mean=0.49±0.07	0.536±0.009	0.91, A

- (1) Results reported as activity ± 1 sigma.
(2) Ratio = Reported/Analytics (See Section 9.3).
(*) Sample provided by Analytics, Inc.
(A) Evaluation Results, Acceptable.

TABLE 9-1 (Continued)
INTERLABORATORY INTERCOMPARISON PROGRAM
Gamma Analysis of Vegetation

DATE	JAF ENV ID NUMBER	MEDIUM	ANALYSIS	JAF RESULT (1)	REFERENCE LABORATORY* (1)	RATIO (2)
06/22/00	E-2239A-05	VEGETATION	Ce-141	0.085±0.006 0.088±0.006 0.082±0.007 Mean=0.085±0.004	0.089±0.001	0.96, A
			Cs-134	0.098±0.003 0.101±0.005 0.104±0.004 Mean=0.101±0.002	0.118±0.002	0.86, A
			Cs-137	0.259±0.006 0.257±0.007 0.259±0.007 Mean=0.258±0.004	0.245±0.004	1.05, A
			Mn-54	0.160±0.005 0.158±0.006 0.146±0.006 Mean=0.155±0.003	0.152±0.003	1.02, A
			Zn-65	0.214±0.010 0.160±0.011 0.179±0.014 Mean=0.185±0.007	0.190±0.003	0.97, A
			Co-60	0.189±0.004 0.198±0.005 0.187±0.006 Mean=0.191±0.003	0.183±0.003	1.04, A
			Co-58	0.136±0.005 0.132±0.006 0.118±0.006 Mean=0.129±0.003	0.134±0.002	0.96, A
			Fe-59	0.060±0.008 0.055±0.010 0.069±0.012 Mean=0.061±0.006	0.065±0.001	0.94, A
			Cr-51	0.281±0.031 0.218±0.380 0.282±0.037 Mean=0.260±0.020	0.272±0.005	0.96, A

- (1) Results reported as activity ± 1 sigma.
(2) Ratio = Reported/Analytics (See Section 9.3).
(*) Sample provided by Analytics, Inc.
(A) Evaluation Results, Acceptable.
(N) Evaluation Results, Not Acceptable.

TABLE 9-1 (Continued)
INTERLABORATORY INTERCOMPARISON PROGRAM
Gamma Analysis of Water

DATE	JAF ENV ID NUMBER	MEDIUM	ANALYSIS	JAF RESULT (1)	REFERENCE LABORATORY* (1)	RATIO (2)
03/01/00	QAP-52	WATER Bq/liter	Cs-137	104±2.2 110±1.7 111±1.9 Mean = 108±1.12	103.0±4.0	1.05, A
			Co-60	55.5±1.4 54.0±1.0 53.3±1.1 Mean = 54.3±0.7	48.9±1.8	1.11, A
09/01/00	QAP-53	WATER Bq/liter	Cs-137	64.8±2.2 67.3±1.4 61.1±1.7 Mean = 64.4±1.0	67.0±3.5	0.96, A
			Co-60	70.3±2.0 76.6±1.3 71.8±1.6 Mean = 72.9±0.9	73.7±2.9	0.99, A

- (1) Results reported as activity \pm 1 sigma.
(2) Ratio = Reported/EML.
(*) Sample provided by Environmental Measurements Lab, Dept. of Energy.
(A) Evaluation Results, Acceptable.

TABLE 9-1 (Continued)
INTERLABORATORY INTERCOMPARISON PROGRAM
 Gamma Analysis Air Particulate Filters (Bq/filter)

DATE	JAF ENV ID NUMBER	MEDIUM	ANALYSIS	JAF RESULT (1)	REFERENCE LABORATORY* (1)	RATIO (2)
03/01/00	QAP-52	FILTER	Co-57	4.92±0.07 4.81±0.08 4.96±0.08 Mean = 4.90±0.04	5.31±0.22	0.92, A
			Co-60	4.88±0.12 5.11±0.14 4.92±0.12 Mean = 4.97±0.07	5.32±0.26	0.93, A
			Mn-54	26.97±0.33 26.71±0.39 28.19±0.33 Mean = 27.3±0.2	27.2±0.8	1.0, A
			Cs-137	5.59±0.15 5.66±0.17 5.92±0.15 Mean = 5.72±0.09	6.1±0.3	0.94, A
			Ru-106	2.81±0.83 Mean = 2.81±0.8	2.01±1.94	1.40, N NC 2000-5
09/01/00	QAP-53	FILTER	Mn-54	44.03±0.24 46.62±0.62 46.99±0.62 Mean = 44.7±0.4	43.2±1.3	1.04, A
			Co-60	8.40±0.09 8.33±0.22 8.07±0.22 Mean = 8.3±0.1	8.43±0.48	0.98, A
			Co-57	14.2±0.20 14.8±0.18 14.5±0.19 Mean = 14.1±0.1	14.5±0.46	0.97, A
			Cs-137	7.14±0.30 7.29±0.26 7.55±0.26 Mean = 7.1±0.2	7.41±0.36	0.96, A

(1) Results reported as activity ± 1 sigma.

(2) Ratio = Reported/EML.

(A) Evaluation Results, Acceptable.

(N) Evaluation Results, Not Acceptable. (NC) Nonconformity

(*) Sample provided by Environmental Measurements Lab, Dept. of Energy.

TABLE 9-1 (Continued)

INTERLABORATORY INTERCOMPARISON PROGRAM

Gross Beta Analysis of Water (Bq/liter)

DATE	JAF ENV ID NUMBER	MEDIUM	ANALYSIS	JAF RESULT (1)	REFERENCE LABORATORY* (1)	RATIO (2)
03/01/00	QAP-52	WATER	GROSS BETA LBC A**	811±16 824±16 805±16 Mean = 814±9.1	690±70	1.18,A
09/01/00	QAP-53	WATER	GROSS BETA LBC A**	960±13 993±13 1005±13 Mean = 986±7	950±90	1.04,A
			GROSS BETA LBC C**	980±15 1077±15 988±15 Mean = 1015±8	950±90	1.07,A

(1) Results reported as activity \pm 1 sigma.

(2) Ratio = Reported/EML.

(*) Sample provided by Environmental Measurements Lab. Dept. of Energy.

(A) Evaluation Results, Acceptable.

(**) There are two Beta, low background counting instruments in the JAF Environmental Laboratory LBC-A, LBC-C.

TABLE 9-1 (Continued)

INTERLABORATORY INTERCOMPARISON PROGRAM

Tritium Analysis of Water (Bq/liter)

DATE	JAF ENV ID NUMBER	MEDIUM	ANALYSIS [†]	JAF RESULT (1)	REFERENCE LABORATORY* (1)	RATIO (2)
03/01/00	QAP-52	WATER	H-3	95±6	79.4±2.5	1.20, A
09/01/00	QAP-53	WATER	H-3	113±6	91.3±0.3	1.24, A

(1) Results reported as activity \pm 1 sigma.

(2) Ratio = Reported/EML.

(*) Sample provided by Environmental Measurements Lab, Dept. of Energy.

(†) Analysis performed by Environmental Inc. Midwest Laboratory.

(A) Evaluation Results, Acceptable.

(N) Evaluation Results, Not Acceptable.

TABLE 9-1 (Continued)

INTERLABORATORY INTERCOMPARISON PROGRAM

Gross Beta Analysis of Air (Bq/filter)

DATE	JAF ENV ID NUMBER	MEDIUM	ANALYSIS	JAF RESULT (1)	REFERENCE LABORATORY* (1)	RATIO (2)
03/01/00	QAP-52	AIR	GROSS BETA LBC A**	2.71±0.04 2.71±0.04 2.77±0.04 Mean = 2.73±0.02	2.42±0.2	1.13, A
09/01/00	QAP-53	AIR	GROSS BETA LBC A**	1.49±0.06 1.49±0.06 1.43±0.06 Mean = 1.46±0.03	1.52±0.15	0.96, A
			LBC C**	1.55±0.07 1.61±0.07 1.43±0.06 Mean = 1.53±0.04	1.52±0.15	1.01, A

(1) Results reported as activity \pm 1 sigma.

(2) Ratio = Reported/EML.

(*) Sample provided by Environmental Measurements Lab, Dept. of Energy.

(A) Evaluation Results, Acceptable.

(**) There are two Beta, low background counting instruments in the JAF Environmental Laboratory.
LBC-A and LBC-C