
Formerly Utilized Sites Remedial Action Program (FUSRAP)

ADMINISTRATIVE RECORD

for Maywood, New Jersey



U.S. Department of Energy



Department of Energy

Oak Ridge Operations Office
P.O. Box 2001
Oak Ridge, Tennessee 37831-8723

July 1, 1996

Mr. Paul A. Giardina
Radiation Branch
Environmental Protection Agency
Region II
290 Broadway
New York, New York 10278

Dear Mr. Giardina:

STATUS OF RADON FLUX MONITORING (NESHAPs SUBPART Q) AT THREE DEPARTMENT OF ENERGY SITES IN EPA REGION II

This letter provides the status of the radon flux monitoring activities implemented by the Department of Energy (DOE) at three Region II sites that are subject to requirements in the National Emission Standards for Hazardous Air Pollutants (NESHAPs) Subpart Q. To evaluate compliance with Subpart Q, DOE has monitored its storage piles at these sites according to an EPA-approved method modified from NESHAPs Appendix B, Method 115. The monitored sites are:

- Maywood Interim Storage Site (MISS), Maywood, New Jersey
- Middlesex Sampling Plant (MSP), Middlesex, New Jersey
- Niagara Falls Storage Site (NFSS), Lewiston, New York

Since 1992, radon flux monitoring results from these sites have been significantly less than 20 pCi/m²-s (see attachments), successfully demonstrating compliance with the NESHAPs Subpart Q standard.

The final Memorandum of Understanding between EPA and DOE concerning the Clean Air Act Emission Standards for Radionuclides, 40 CFR Part 61 including subparts H, I, Q, and T (signed April 1995), makes the following statement:

“Where flux measurements demonstrate compliance with the 20 pCi/m²-s standard, no further measurements are required so long as the storage or disposal site remains in the condition for which compliance was demonstrated.”

Consistent with the language in the Memorandum of Understanding, based on successful demonstration of compliance with the standard, it is technically justifiable to discontinue monitoring at all FUSRAP sites until alterations of site conditions necessitate reassessment of radon flux at the particular site. Detailed below is the description of DOE's planned implementation of this agreement at its Region II FUSRAP sites.

Mr. Paul A. Giardina

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Niagara Falls Storage Site

Since 1992, radon flux results at NFSS have consistently been less than 3 percent of the Subpart Q standard. Nevertheless, DOE intends to continue conducting radon flux monitoring at NFSS on an annual basis as part of performance monitoring of the clay pile cover. The recent study by the National Academy of Sciences, and their voiced concerns over the presence of K-65 residues in the pile, further justify continued radon flux monitoring at this site. Formal reports will no longer be submitted to EPA, but data will be provided to you to the extent that you request.

Maywood Interim Storage Site

At MISS, pile removal will be completed by the end of the calendar year; therefore, the final pile radon flux monitoring activity will be conducted in the summer/early fall in 1996. No formal report will be submitted. Upon completion of pile removal, radon flux monitoring will be permanently discontinued.

Middlesex Sampling Plant

Given the consistently low radon flux results at MSP, the expense of conducting the monitoring activity, and the restrictive budget under which this site operates, the resources currently devoted to radon flux monitoring can more effectively be used for FUSRAP site remediation. Therefore, at MSP, monitoring will be discontinued until site alterations necessitate reassessment of radon flux. Specifically, such site alterations are those activities that significantly disrupt the storage pile, thereby affecting the source term:

- the addition, removal, or redistribution of waste material in the pile;
- major pile cover repair or replacement due to routine pile cover degradation or external factors (i.e., wind).

Reassessment of radon flux will be conducted either by performing calculations based on sampled or known conditions or by temporarily reinstating confirmatory radon flux monitoring. If reassessment of radon flux is deemed appropriate, the reassessment will be conducted after the activities that alter the site condition are completed for the working season. For example, if material is added to or removed from the pile throughout the construction season of a given year, confirmatory sampling or monitoring will be conducted one time after the pile is restored to a stable condition for the non-construction season, not intermittently during work. Unless results indicate that additional stabilization is necessary, no subsequent confirmatory monitoring, sampling, or calculations will be conducted.

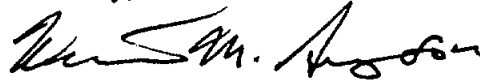
Mr. Paul A. Giardina

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If you have any questions regarding this strategy, please contact me at (423) 576-0730.

Sincerely,



Lester K. Price

Director, Former Sites Restoration Division

Attachments:

Middlesex Sampling Plant

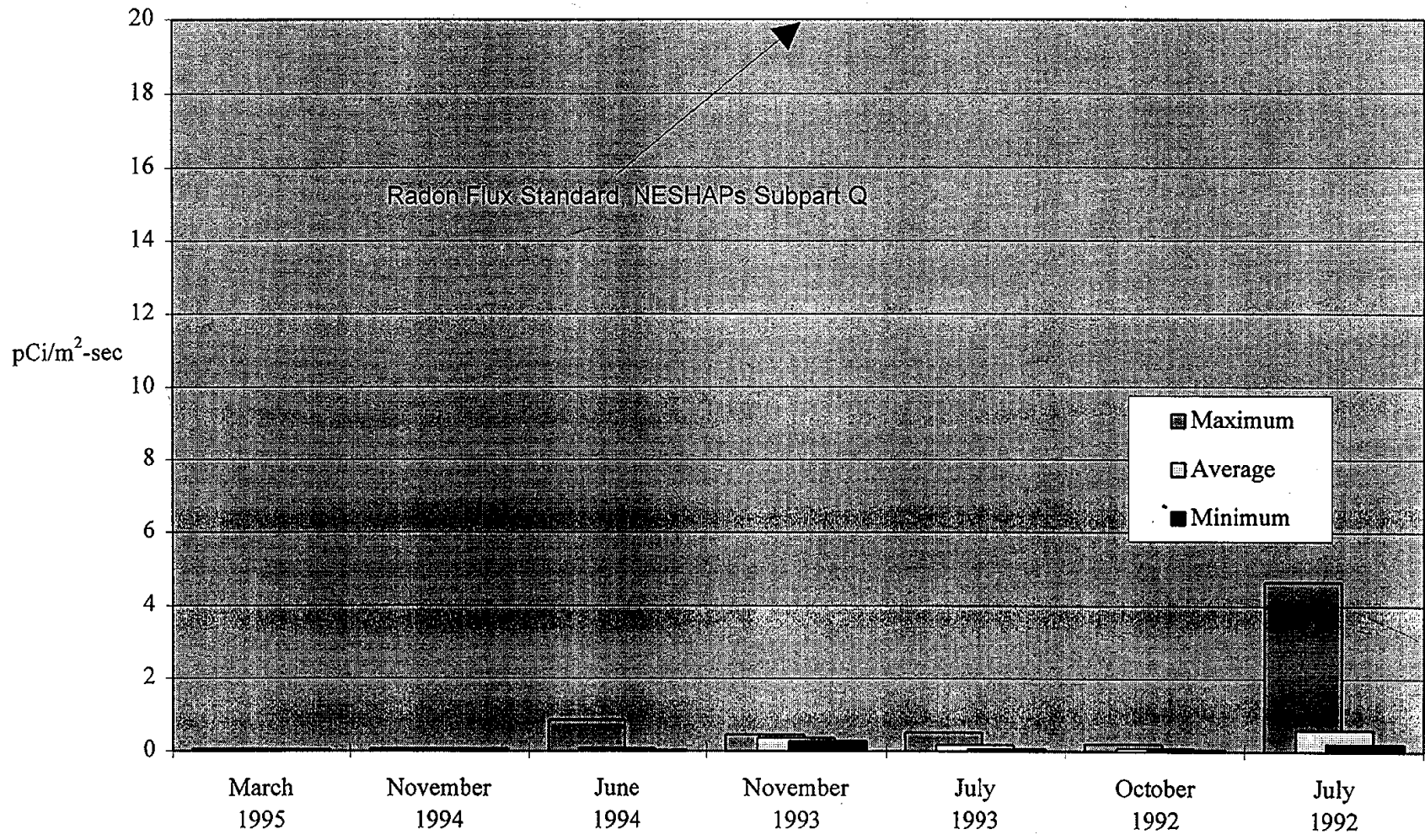
- Radon Flux Summary for the Middlesex Sampling Plant - Landfill (Figure)
- Radon Flux Summary for the Middlesex Sampling Plant - South Pile (Figure)
- Radon Flux Monitoring Locations (Figure)
- Radon Flux Monitoring Results (landfill)
- Radon Flux Monitoring Results (south pile)

Maywood Interim Storage Site

- Radon Flux Summary for the Maywood Interim Storage Site (Figure)
- Approximate Radon Flux Monitoring Locations (Figure)
- Radon Flux Surveillance Results

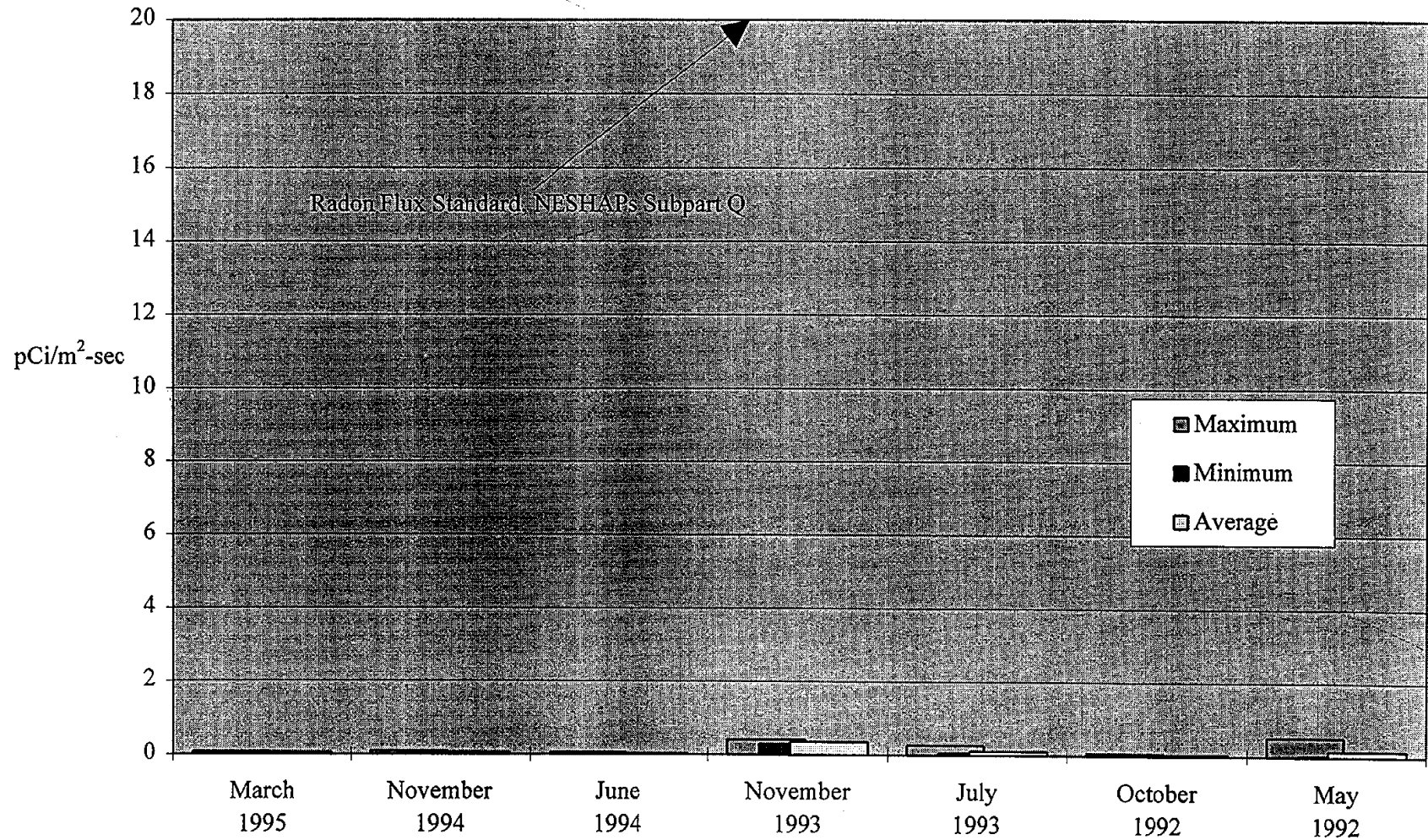
Niagara Falls Storage Site

- Radon Flux Summary for the Niagara Falls Storage Site (Figure)
- Approximate Radon Flux Locations for the NFSS Waste Containment Structure (Figure)
- Radon Flux Monitoring Results



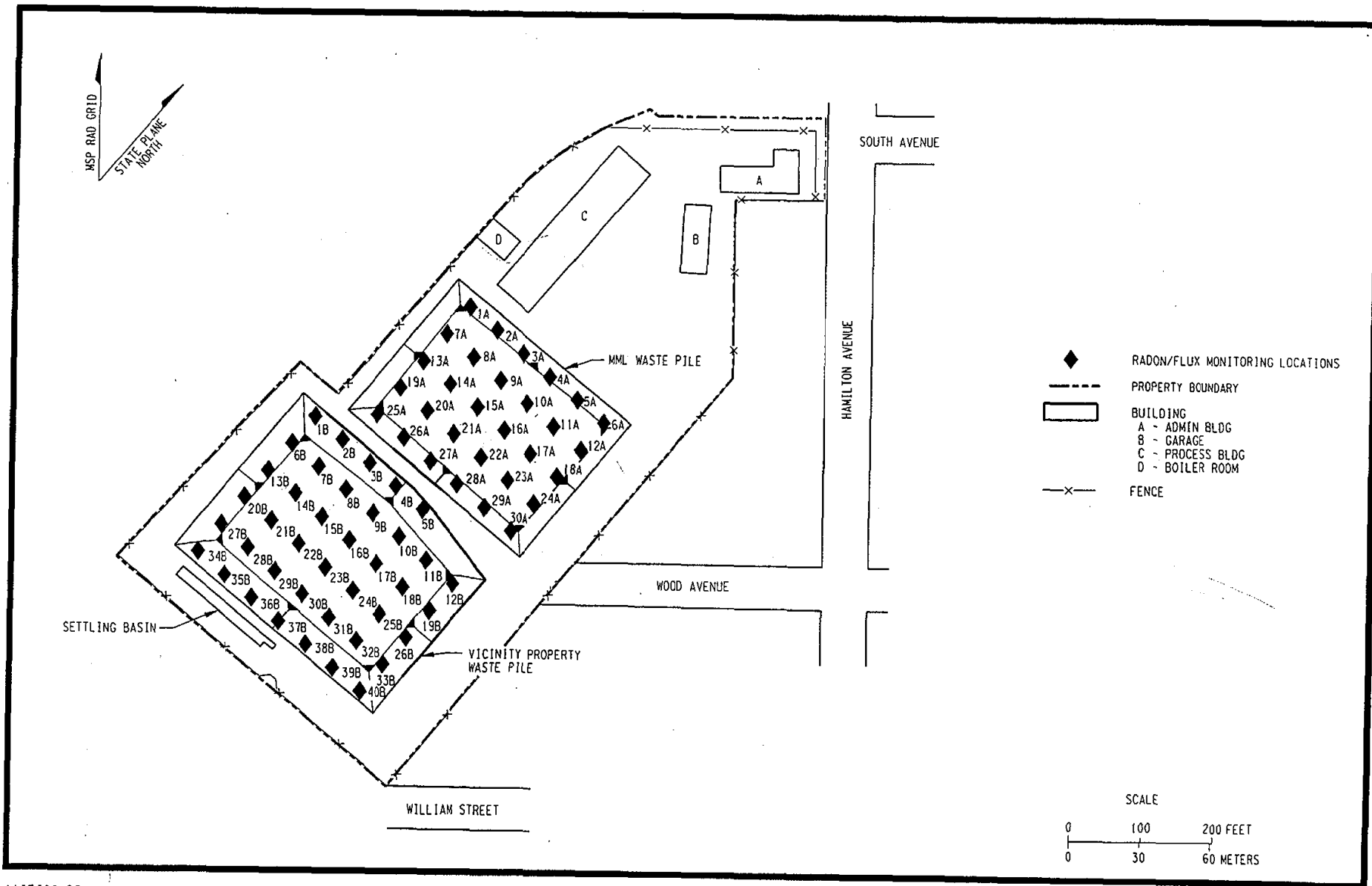
Radon Flux Summary for the Middlesex Sampling Plant - North Pile

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Radon Flux Summary for the Middlesex Sampling Plant - South Pile

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Middlesex Sampling Plant Environmental Surveillance
 Radon Flux Monitoring Locations

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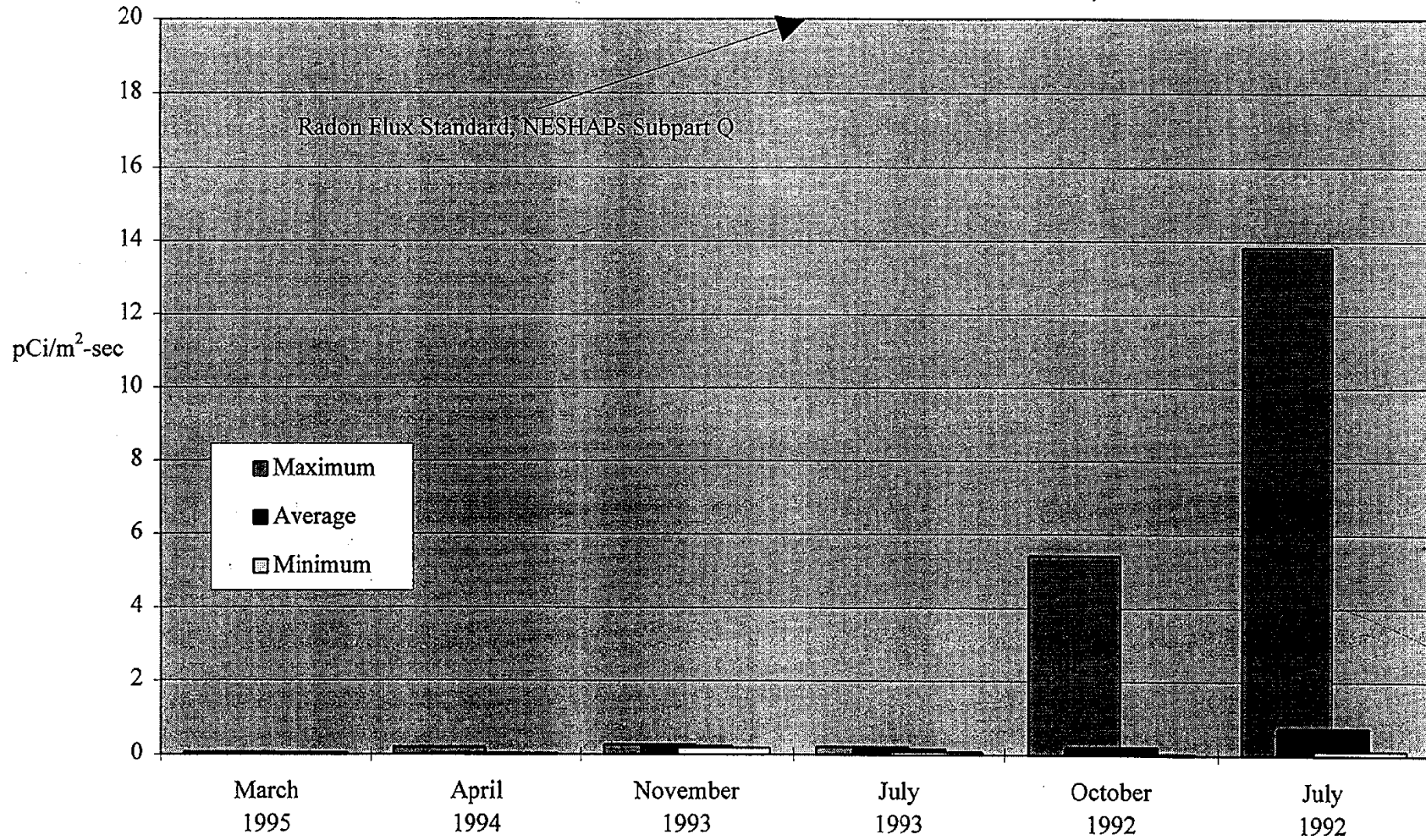
Radon Flux Monitoring Results at MSP (North Pile)

Sample ID	1995	1994		1993		1992	
	March pCi/m ² /s	November pCi/m ² /s	June pCi/m ² /s	November pCi/m ² /s	July pCi/m ² /s	October pCi/m ² /s	July pCi/m ² /s
North pile :							
(landfill)							
118-RF-01A	0.05	0.07	0.03	0.34	0.14	0.09	0.32
118-RF-02A	0.05	0.07	0.02	0.34	0.08	0.08	0.49
118-RF-03A	0.05	0.07	0.03	0.43	0.25	0.07	0.23
118-RF-04A	0.05	0.07	0.03	0.41	0.09	0.08	0.21
118-RF-05A	0.05	0.07	0.02	0.35	0.08	0.08	0.23
118-RF-06A	0.05	0.07	0.03	0.38	0.09	0.08	0.25
118-RF-07A	0.06	0.07	0.03	0.35	0.22	0.09	0.24
118-RF-08A	0.06	0.07	0.03	0.38	0.08	0.09	0.26
118-RF-09A	0.05	0.07	0.04	0.40	0.23	0.08	0.24
118-RF-10A	0.05	0.07	0.03	0.40	0.08	0.09	1.50
118-RF-11A	0.05	0.07	0.03	0.35	0.39	0.09	0.28
118-RF-12A	0.05	0.07	0.03	0.34	0.16	0.09	0.29
118-RF-13A	0.06	0.07	0.03	0.38	0.35	0.20	0.24
118-RF-14A	0.05	0.07	0.04	0.38	0.13	0.09	3.73
118-RF-15A	0.05	0.07	0.04	0.37	0.06	0.09	x
118-RF-16A	0.05	0.07	0.04	0.37	0.23	0.09	0.23
118-RF-17A	0.05	0.07	0.03	0.35	0.14	0.09	0.35
118-RF-18A	0.06	0.07	0.04	0.37	0.22	0.09	4.66
118-RF-19A	0.05	0.07	0.03	0.35	0.19	0.05	0.33
118-RF-20A	0.06	0.07	0.04	0.37	0.51	0.08	0.28
118-RF-21A	0.05	0.07	0.06	0.41	0.09	0.09	0.27
118-RF-22A	0.05	0.07	0.02	0.38	0.10	0.09	0.25
118-RF-23A	0.05	0.07	0.03	0.28	0.09	0.09	0.23
118-RF-24A	x	0.07	0.04	0.34	0.08	0.08	0.26
118-RF-25A	0.06	0.07	0.04	0.36	0.34	0.08	0.21
118-RF-26A	0.05	0.07	0.05	0.33	0.22	0.08	0.28
118-RF-27A	0.06	0.07	0.33	0.31	0.14	0.08	0.23
118-RF-28A	0.07	0.07	0.04	0.45	0.12	0.09	0.27
118-RF-29A	0.06	0.07	0.04	0.34	0.06	0.09	0.28
118-RF-30A	0.05	0.07	0.85	0.29	0.10	0.09	0.24
# of readings	29	30	30	30	30	30	29
Minimum	0.05	0.07	0.02	0.28	0.06	0.05	0.21
Maximum	0.07	0.07	0.85	0.45	0.51	0.20	4.66
Average	0.05	0.07	0.07	0.36	0.17	0.09	0.58

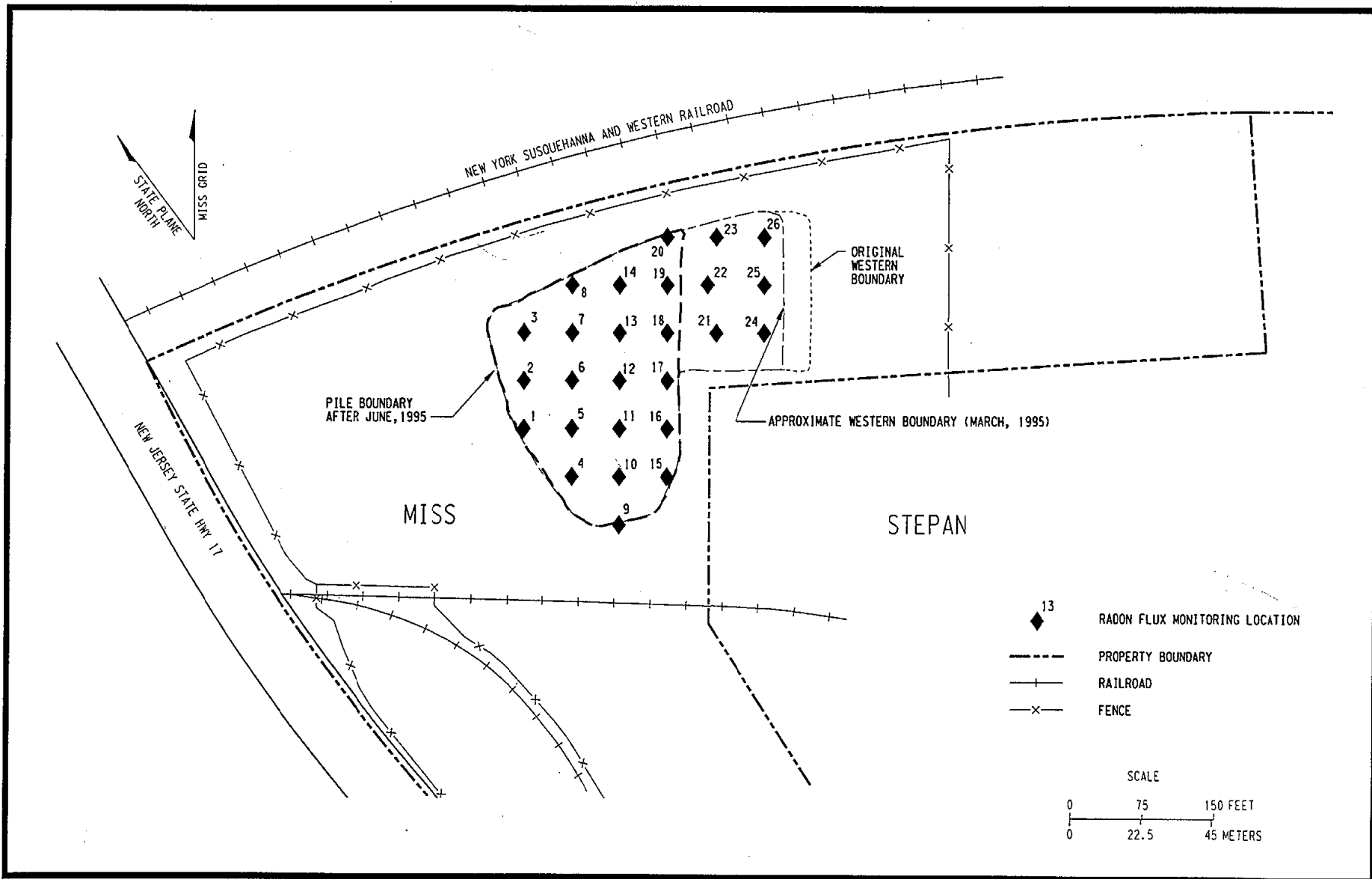
Radon Flux Monitoring Results at MSP (South Pile)

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Sample ID	1995	1994		1993		1992	
	March pCi/m ² /s	November pCi/m ² /s	June pCi/m ² /s	November pCi/m ² /s	July pCi/m ² /s	October pCi/m ² /s	May pCi/m ² /s
South pile :							
(Vicinity property)							
118-RF-01B	0.06	0.08	0.02	0.40	0.08	0.04	0.05
118-RF-02B	0.05	0.07	0.03	0.39	0.18	0.07	0.28
118-RF-03B	0.06	0.07	0.03	0.38	0.07	0.04	0.32
118-RF-04B	0.06	0.07	0.05	0.35	0.08	0.04	0.25
118-RF-05B	0.06	0.07	0.06	0.36	0.13	0.04	0.06
118-RF-06B	0.07	0.06	0.05	0.33	0.13	0.04	0.06
118-RF-07B	0.04	0.06	0.05	0.39	0.13	0.04	0.04
118-RF-08B	0.05	0.09	0.03	0.35	0.09	0.04	0.03
118-RF-09B	0.05	0.07	0.04	0.35	0.09	0.04	0.05
118-RF-10B	0.06	0.07	0.06	0.35	0.13	0.04	0.10
118-RF-11B	0.06	0.06	0.07	0.37	0.07	0.04	0.09
118-RF-12B	0.07	0.07	0.03	0.34	0.11	0.04	0.52
118-RF-13B	0.05	0.07	0.03	0.36	0.10	0.04	0.14
118-RF-14B	0.06	0.06	0.03	0.41	0.11	0.04	0.03
118-RF-15B	0.06	0.06	0.05	0.33	0.12	0.04	0.05
118-RF-16B	0.05	0.07	0.07	0.35	0.12	0.04	0.19
118-RF-17B	0.07	0.06	0.05	0.35	0.07	0.04	0.19
118-RF-18B	0.06	0.07	0.05	0.35	0.08	0.04	0.05
118-RF-19B	0.07	0.07	0.06	0.34	0.08	0.04	0.15
118-RF-20B	0.05	0.07	0.04	0.41	0.10	0.04	0.13
118-RF-21B	0.05	0.08	0.02	0.35	0.09	0.04	0.05
118-RF-22B	0.06	0.06	0.03	0.34	0.06	0.07	0.07
118-RF-23B	0.06	0.07	0.03	0.34	0.08	0.04	0.04
118-RF-24B	0.06	0.06	0.05	0.33	0.11	0.04	0.21
118-RF-25B	0.05	0.07	0.05	0.37	0.08	0.04	0.21
118-RF-26B	0.06	0.07	0.04	0.35	0.09	0.04	0.19
118-RF-27B	0.06	0.06	0.04	0.37	0.10	0.04	0.38
118-RF-28B	0.05	0.06	0.04	0.35	0.08	0.04	0.09
118-RF-29B	0.05	0.07	0.03	0.32	0.08	0.04	0.03
118-RF-30B	0.06	0.07	0.04	0.31	0.10	0.04	0.12
118-RF-31B	0.06	0.07	0.03	0.36	0.17	0.04	0.16
118-RF-32B	0.07	0.06	0.04	0.36	0.16	0.04	0.51
118-RF-33B	0.07	0.06	0.04	0.36	0.22	0.04	0.39
118-RF-34B	0.06	0.06	0.03	0.37	0.14	0.04	0.03
118-RF-35B	0.05	0.08	0.03	0.34	0.14	0.04	0.28
118-RF-36B	0.06	0.07	0.04	0.35	0.09	0.04	0.03
118-RF-37B	0.06	0.07	0.04	0.33	0.13	0.04	0.16
118-RF-38B	0.07	0.07	0.04	0.38	0.11	0.04	0.25
118-RF-39B	0.06	0.08	0.03	0.35	0.27	0.04	0.27
118-RF-40B	0.07	0.06	0.02	0.33	0.13	0.04	0.04
# of readings	40	40	40	40	40	40	40
Minimum	0.04	0.06	0.02	0.31	0.06	0.04	0.03
Maximum	0.07	0.09	0.07	0.41	0.27	0.07	0.52
Average	0.06	0.07	0.04	0.36	0.11	0.04	0.16



Radon Flux Summary for the Maywood Interim Storage Site



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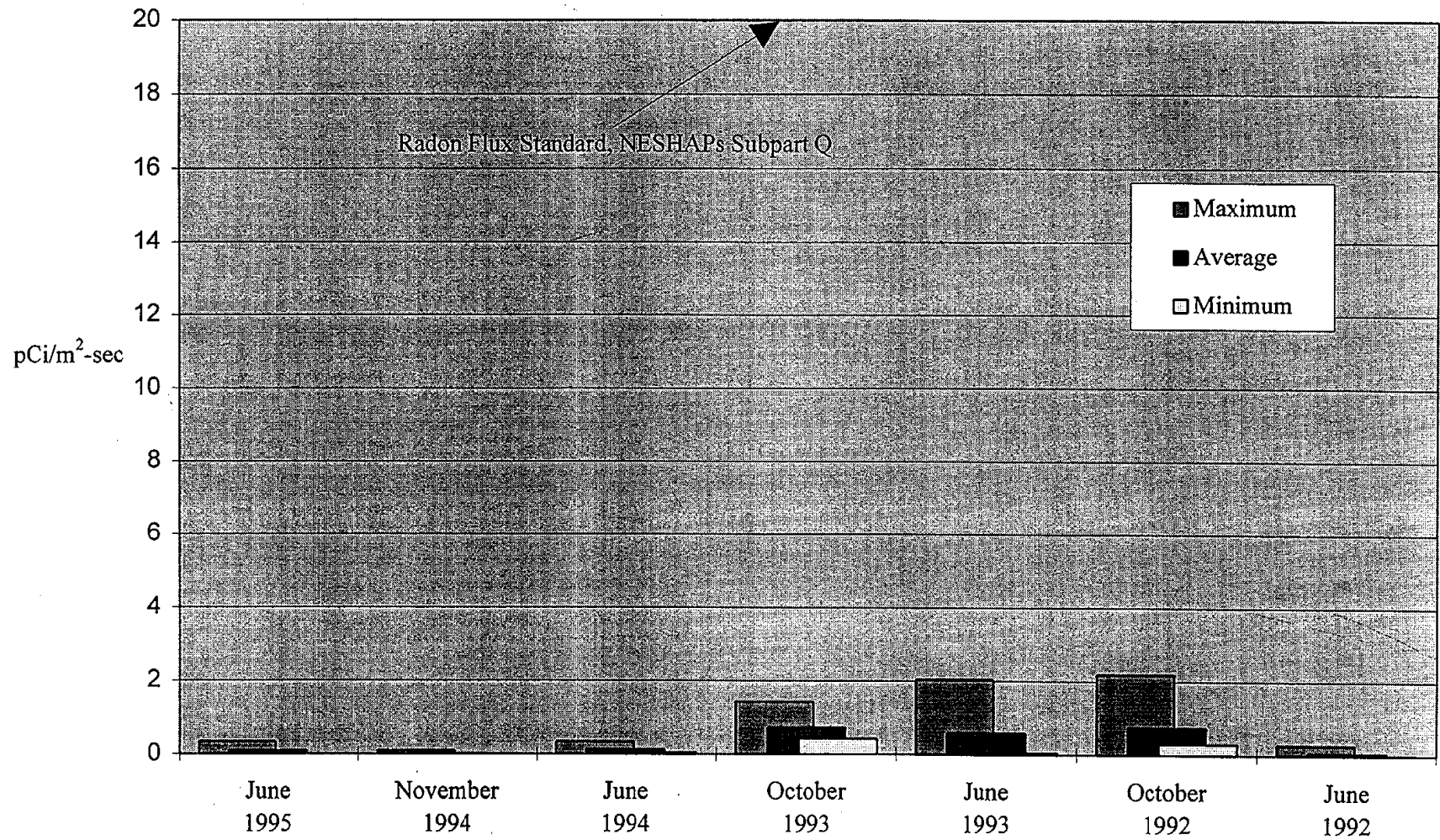
Maywood Interim Storage Site Environmental Surveillance
Approximate Radon Flux Monitoring Locations

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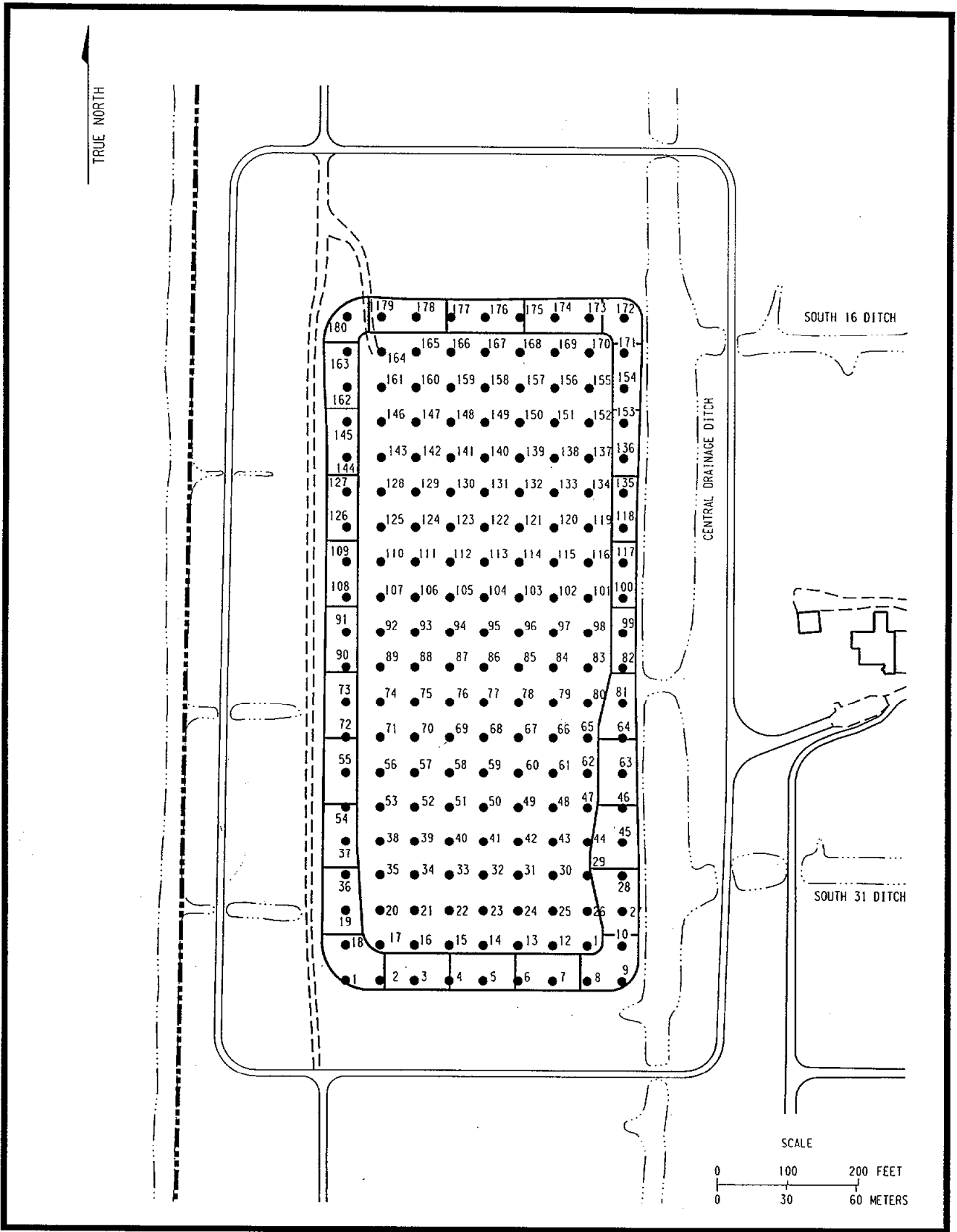
Radon Flux Monitoring Results for MISS

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Sample ID	1995	1994	1993		1992	
	March pCi/m ² /s	April pCi/m ² /s	November pCi/m ² /s	July pCi/m ² /s	October pCi/m ² /s	July pCi/m ² /s
138-RF-01	0.06	0.02	0.24	0.20	0.04	0.23
138-RF-02	0.06	0.02	0.27	0.19	0.04	0.57
138-RF-03	0.06	0.02	0.22	0.22	0.04	0.22
138-RF-04	0.06	0.03	0.22	0.18	0.04	0.23
138-RF-05	0.06	0.02	0.23	0.17	0.04	0.30
138-RF-06	0.05	0.02	0.23	0.21	0.04	0.26
138-RF-07	0.06	0.02	0.24	0.19	0.04	0.28
138-RF-08	0.06	0.02	0.24	0.21	0.04	0.23
138-RF-09	0.05	0.02	0.26	0.20	0.04	0.25
138-RF-10	0.05	0.02	0.22	0.15	0.04	0.29
138-RF-11	0.06	0.02	0.26	0.08	0.04	0.27
138-RF-12	0.06	0.02	0.25	0.17	0.04	0.22
138-RF-13	0.05	0.20	0.23	0.17	5.42	1.83
138-RF-14	0.06	0.02	0.19	0.22	0.04	0.29
138-RF-15	0.06	0.03	0.25	0.17	0.04	0.26
138-RF-16	0.06	0.02	0.24	0.14	0.04	13.84
138-RF-17	0.06	0.02	0.23	0.15	0.04	0.20
138-RF-18	0.06	0.02	0.23	0.11	0.04	0.21
138-RF-19	0.06	0.03	0.22	0.18	0.04	0.22
138-RF-20	0.06	0.02	0.21	0.10	0.04	0.23
138-RF-21	0.06	0.02	0.23	0.15	0.05	0.21
138-RF-22	0.06	0.02	0.22	0.14	0.05	0.23
138-RF-23	0.06	0.03	0.23	0.16	0.05	0.23
138-RF-24	0.06	0.03	0.23	0.16	0.05	0.18
138-RF-25	0.07	0.02	0.22	0.15	0.05	0.13
138-RF-26	0.06	0.03	0.25	0.17	0.05	0.22
138-RF-27	x	0.02	0.25	0.18	0.05	0.28
138-RF-28	x	0.03	0.23	0.13	0.05	0.25
138-RF-29	x	0.03	0.23	0.15	0.05	0.28
138-RF-30	x	x	x	0.17	0.10	0.14
# of readings	26	29	29	30	30	30
Minimum	0.05	0.02	0.19	0.08	0.04	0.13
Maximum	0.07	0.20	0.27	0.22	5.42	13.84
Average	0.06	0.03	0.23	0.17	0.22	0.75



Radon Flux Summary for the Niagara Falls Storage Site



R85F 009.DGN

Approximate Radon Flux Monitoring Locations for the NFSS Waste Containment Structure

Radon Flux Monitoring Results at NFSS

Sample ID	1995	1994		1993		1992	
	June pCi/m ² /s	November pCi/m ² /s	June pCi/m ² /s	October pCi/m ² /s	June pCi/m ² /s	October pCi/m ² /s	June pCi/m ² /s
202-RF-001	0.18	0.00	0.07	0.92	0.44	0.31	0.09
202-RF-002	0.00	0.09	0.05	0.52	2.04	0.83	0.16
202-RF-003	0.34	-0.01	0.08	0.62	0.49	0.50	0.06
202-RF-004	0.06	0.00	0.06	0.52	0.71	0.62	0.20
202-RF-005	0.13	0.00	0.12	0.74	0.22	0.46	0.05
202-RF-006	0.13	0.00	0.16	0.63	0.29	0.52	0.04
202-RF-007	0.09	0.01	0.07	0.58	0.05	0.80	0.10
202-RF-008	0.17	0.00	0.06	0.43	0.26	0.43	0.06
202-RF-009	0.09	0.00	0.07	0.50	0.26	0.70	0.08
202-RF-010	0.10	0.03	0.15	0.65	0.52	1.46	0.04
202-RF-011	0.06	0.01	0.16	0.70	0.48	0.95	0.15
202-RF-012	0.07	0.00	0.13	0.71	0.55	1.12	0.09
202-RF-013	0.13	-0.01	0.25	0.79	0.53	1.31	0.14
202-RF-014	0.13	-0.02	0.17	0.81	0.29	1.26	0.10
202-RF-015	0.11	0.00	0.19	0.74	0.33	0.97	0.09
202-RF-016	0.15	-0.01	0.17	0.71	0.52	0.75	0.05
202-RF-017	0.14	0.00	0.11	0.55	0.45	0.74	0.09
202-RF-018	0.09	-0.01	0.05	0.69	0.44	0.47	0.13
202-RF-019	0.08	0.00	0.11	0.70	0.63	0.78	0.08
202-RF-020	0.20	0.01	0.12	0.78	0.32	0.92	0.10
202-RF-021	0.16	-0.02	0.08	0.81	0.53	0.38	0.05
202-RF-022	0.16	-0.01	0.21	0.86	0.57	1.34	0.10
202-RF-023	0.09	-0.01	0.18	0.69	0.26	0.77	0.07
202-RF-024	0.00	-0.01	0.10	0.71	0.31	1.16	0.08
202-RF-025	0.11	-0.01	0.19	0.89	0.67	0.97	0.11
202-RF-026	0.34	0.00	0.13	0.85	1.01	1.31	0.10
202-RF-027	0.09	0.02	0.09	0.68	0.45	1.02	0.07
202-RF-028	0.08	0.02	0.10	0.64	0.33	0.92	0.04
202-RF-029	0.10	0.00	0.28	0.88	0.24	0.48	0.08
202-RF-030	0.08	0.00	0.10	0.79	0.49	0.93	0.13
202-RF-031	0.12	-0.02	0.15	0.65	0.52	0.80	0.06
202-RF-032	0.30	-0.01	0.15	0.79	0.83	0.72	0.23
202-RF-033	0.12	0.01	0.11	0.56	0.51	0.82	0.10
202-RF-034	0.04	0.00	0.07	0.67	0.33	0.77	0.04
202-RF-035	0.10	-0.02	0.21	0.70	0.39	0.75	0.08
202-RF-036	0.11	0.00	0.12	0.68	0.23	0.69	0.11
202-RF-037	0.25	-0.01	0.20	0.68	0.63	0.67	0.06
202-RF-038	0.11	-0.01	0.09	0.73	0.33	0.68	0.06
202-RF-039	0.07	-0.01	0.07	0.53	0.40	0.80	0.05
202-RF-040	0.12	0.00	0.08	0.56	0.29	0.74	0.04
202-RF-041	0.17	-0.01	0.12	0.58	0.54	1.27	0.06
202-RF-042	0.18	0.02	0.10	0.75	0.80	0.89	0.03
202-RF-043	0.10	0.00	0.16	1.22	0.49	0.93	0.10
202-RF-044	0.09	0.01	0.21	0.73	0.33	0.80	0.09
202-RF-045	0.16	0.01	0.04	0.59	0.28	0.90	0.04
202-RF-046	0.06	0.00	0.12	0.63	0.23	0.96	0.04
202-RF-047	0.06	-0.02	0.09	0.77	0.32	0.87	0.07
202-RF-048	0.11	-0.01	0.08	0.69	0.61	0.93	0.06
202-RF-049	0.09	0.02	0.07	0.96	0.67	1.38	0.08

Radon Flux Monitoring Results at NFSS

Sample ID	1995	1994		1993		1992	
	June pCi/m ² /s	November pCi/m ² /s	June pCi/m ² /s	October pCi/m ² /s	June pCi/m ² /s	October pCi/m ² /s	June pCi/m ² /s
202-RF-050	0.09	-0.02	0.11	0.55	0.19	0.57	0.08
202-RF-051	0.08	0.00	0.10	0.64	0.43	0.69	0.07
202-RF-052	0.11	-0.01	0.09	0.60	0.34	0.69	0.05
202-RF-053	0.12	-0.02	0.17	0.74	0.50	0.53	0.06
202-RF-054	0.14	-0.02	0.12	0.79	0.37	0.95	0.28
202-RF-055	0.11	-0.01	0.16	0.90	0.52	1.69	0.08
202-RF-056	0.22	0.01	0.17	0.65	0.42	0.69	0.06
202-RF-057	0.07	0.00	0.13	0.69	0.26	0.60	0.02
202-RF-058	0.10	0.01	0.06	0.63	0.23	0.66	0.02
202-RF-059	0.11	0.00	0.08	0.63	0.21	0.58	0.01
202-RF-060	0.07	0.01	0.07	0.69	0.38	0.51	0.03
202-RF-061	0.14	0.00	0.09	0.82	0.36	0.81	0.03
202-RF-062	1.89	0.01	0.11	0.97	0.26	0.70	0.04
202-RF-063	0.08	0.02	0.06	0.68	0.34	1.30	0.03
202-RF-064	0.08	0.01	0.07	0.81	0.25	1.10	0.04
202-RF-065	0.11	0.00	0.08	0.76	0.29	1.15	0.08
202-RF-066	0.11	0.00	0.16	0.67	0.25	0.44	0.04
202-RF-067	0.09	0.00	0.25	0.49	0.18	0.31	0.04
202-RF-068	0.09	0.01	0.25	0.53	0.25	0.51	0.02
202-RF-069	0.12	0.00	0.16	0.59	0.98	0.66	0.03
202-RF-070	0.07	0.02	0.11	0.77	0.41	0.49	0.06
202-RF-071	0.11	0.03	0.15	0.74	0.43	1.08	0.07
202-RF-072	0.12	0.00	0.11	1.02	0.65	1.96	0.18
202-RF-073	0.12	0.05	0.27	0.88	0.72	1.12	0.04
202-RF-074	0.08	0.01	0.15	0.72	0.26	x	0.05
202-RF-075	0.04	0.01	0.16	0.57	0.36	0.46	0.02
202-RF-076	0.16	0.01	0.18	0.60	0.29	0.50	0.04
202-RF-077	0.12	0.02	0.16	0.72	0.26	x	0.04
202-RF-078	0.10	0.01	0.17	0.53	0.44	0.44	0.05
202-RF-079	0.07	0.02	0.13	0.83	0.39	0.65	0.10
202-RF-080	0.04	0.01	0.19	0.66	0.44	0.57	0.04
202-RF-081	0.05	0.01	0.08	0.72	0.25	0.65	0.03
202-RF-082	0.06	0.01	0.30	0.70	0.17	0.65	0.08
202-RF-083	0.07	0.00	0.14	0.76	0.95	0.46	0.05
202-RF-084	0.06	0.01	0.12	0.63	0.37	0.35	0.04
202-RF-085	0.13	0.01	0.13	0.65	0.41	0.63	0.02
202-RF-086	0.07	0.01	0.17	0.66	0.30	0.46	0.11
202-RF-087	0.07	0.01	0.20	0.64	0.37	0.75	0.06
202-RF-088	0.11	0.01	0.10	0.60	0.28	0.39	0.10
202-RF-089	0.06	0.01	0.23	1.43	0.46	0.63	0.11
202-RF-090	0.07	0.00	0.09	0.82	0.20	0.95	0.07
202-RF-091	0.08	0.03	0.27	0.66	0.26	0.67	0.09
202-RF-092	0.07	0.02	0.14	0.62	0.47	0.60	0.03
202-RF-093	0.08	0.01	0.10	0.69	0.40	0.53	0.03
202-RF-094	0.05	0.00	0.12	0.65	0.41	0.55	0.08
202-RF-095	0.04	0.01	0.15	0.97	0.17	0.36	0.04
202-RF-096	0.08	0.01	0.09	0.61	0.26	0.52	0.03
202-RF-097	0.03	0.01	0.09	0.63	0.30	0.52	0.02
202-RF-098	0.04	0.00	0.15	0.61	0.26	0.58	0.04

Radon Flux Monitoring Results at NFSS

Sample ID	1995	1994		1993		1992	
	June pCi/m ² /s	November pCi/m ² /s	June pCi/m ² /s	October pCi/m ² /s	June pCi/m ² /s	October pCi/m ² /s	June pCi/m ² /s
202-RF-099	0.07	0.01	0.15	0.77	1.52	2.19	0.14
202-RF-100	0.05	0.01	0.19	0.75	0.77	1.38	0.07
202-RF-101	0.08	0.00	0.15	0.69	1.95	0.66	0.03
202-RF-102	0.02	0.01	0.09	0.63	0.59	0.50	0.04
202-RF-103	0.06	0.00	0.13	0.56	0.74	0.32	0.01
202-RF-104	0.07	0.00	0.13	0.77	0.56	0.47	0.06
202-RF-105	0.03	0.03	0.21	0.70	0.84	0.59	0.05
202-RF-106	0.17	0.00	0.11	0.62	0.59	0.61	0.04
202-RF-107	0.13	0.03	0.13	0.80	1.17	0.79	0.05
202-RF-108	0.08	0.03	0.13	1.13	0.92	1.34	0.10
202-RF-109	0.09	0.01	0.12	0.68	0.79	1.12	0.06
202-RF-110	0.10	0.01	0.15	0.67	1.20	1.03	0.03
202-RF-111	0.10	0.01	0.21	0.66	1.47	0.60	0.07
202-RF-112	0.11	0.01	0.16	0.58	0.86	0.57	0.08
202-RF-113	0.05	0.01	0.13	0.72	1.16	0.39	0.09
202-RF-114	0.03	0.02	0.10	0.61	0.66	0.57	0.02
202-RF-115	0.04	0.04	0.07	0.55	0.76	0.67	0.02
202-RF-116	0.05	0.00	0.09	0.55	1.54	0.48	0.01
202-RF-117	0.09	0.03	0.17	0.93	0.94	1.29	0.13
202-RF-118	0.11	0.05	0.08	0.55	1.31	0.99	0.02
202-RF-119	0.05	0.00	0.11	1.04	0.86	0.77	0.04
202-RF-120	0.05	0.00	0.07	0.55	0.63	0.32	0.03
202-RF-121	0.04	0.02	0.17	0.81	0.95	0.55	0.03
202-RF-122	0.08	0.01	0.14	0.85	1.27	0.50	0.05
202-RF-123	0.04	0.02	0.06	0.74	0.73	0.71	0.02
202-RF-124	0.06	0.01	0.30	0.80	1.04	0.48	0.03
202-RF-125	0.10	0.00	0.29	0.98	0.92	0.80	0.03
202-RF-126	0.05	0.01	0.12	0.98	0.57	0.91	0.14
202-RF-127	0.09	0.01	0.14	0.70	1.37	1.28	0.09
202-RF-128	0.04	0.01	0.07	0.85	0.80	0.90	0.04
202-RF-129	0.09	0.01	0.10	0.65	0.80	0.45	0.16
202-RF-130	0.09	0.00	0.08	0.67	0.52	0.56	0.03
202-RF-131	0.04	0.01	0.14	0.74	1.00	0.45	0.02
202-RF-132	0.04	0.00	0.11	0.62	0.76	0.46	0.03
202-RF-133	0.00	0.00	0.07	0.66	0.49	0.53	0.04
202-RF-134	0.06	0.01	0.08	0.91	0.92	0.45	0.04
202-RF-135	0.08	0.02	0.11	0.73	1.07	0.85	0.17
202-RF-136	0.09	0.01	0.14	0.72	0.72	0.67	0.03
202-RF-137	0.07	0.01	0.12	0.76	1.06	1.00	0.04
202-RF-138	0.07	0.01	0.09	0.71	1.40	0.86	0.04
202-RF-139	0.07	-0.01	0.13	0.61	0.64	0.55	0.01
202-RF-140	0.06	0.00	0.12	0.85	0.61	1.08	0.01
202-RF-141	0.04	0.00	0.15	0.78	1.30	0.53	0.03
202-RF-142	0.05	0.00	0.16	0.63	0.39	0.62	0.04
202-RF-143	0.06	0.00	0.16	0.79	0.93	0.68	0.05
202-RF-144	0.11	0.01	0.15	0.81	0.63	0.79	0.06
202-RF-145	0.06	0.01	0.08	0.79	0.62	0.79	0.05
202-RF-146	0.04	0.01	0.25	0.78	0.78	0.59	0.08
202-RF-147	0.10	0.02	0.11	1.09	0.58	0.75	0.03

Radon Flux Monitoring Results at NFSS

Sample ID	1995	1994		1993		1992	
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202-RF-148	0.08	0.00	0.34	0.92	0.67	0.36	0.05
202-RF-149	0.06	0.00	0.17	0.99	0.51	0.54	0.02
202-RF-150	0.08	0.01	0.22	1.26	0.54	0.69	0.10
202-RF-151	0.05	0.01	0.10	0.83	0.67	0.44	0.04
202-RF-152	0.03	0.00	0.16	1.01	0.78	0.52	0.04
202-RF-153	0.03	0.03	0.06	0.92	0.29	1.05	0.04
202-RF-154	0.06	0.01	0.07	0.74	0.55	0.91	0.03
202-RF-155	0.05	0.01	0.17	0.67	0.36	0.56	0.03
202-RF-156	0.06	0.00	0.16	0.66	0.40	0.63	0.06
202-RF-157	0.05	0.01	0.12	1.01	0.25	0.55	0.02
202-RF-158	0.05	0.01	0.13	0.86	0.69	0.76	0.04
202-RF-159	0.10	0.01	0.11	0.95	0.59	0.45	0.06
202-RF-160	0.05	0.00	0.12	0.80	0.56	0.75	0.07
202-RF-161	0.09	0.01	0.09	0.74	0.84	0.33	0.04
202-RF-162	0.13	0.00	0.13	0.85	0.52	0.69	0.08
202-RF-163	0.11	0.00	0.11	0.88	0.73	0.38	0.12
202-RF-164	0.06	0.00	0.16	0.56	0.45	0.30	0.04
202-RF-165	0.02	0.00	0.15	0.68	0.52	0.33	0.04
202-RF-166	0.09	0.01	0.16	0.72	0.82	0.60	0.13
202-RF-167	0.04	0.00	0.19	0.65	1.05	0.52	0.06
202-RF-168	0.10	0.02	0.21	0.80	0.52	0.74	0.07
202-RF-169	0.06	0.01	0.12	0.66	0.44	0.36	0.04
202-RF-170	0.13	0.01	0.15	0.79	0.82	0.50	0.04
202-RF-171	0.11	0.01	0.07	0.77	0.66	0.53	0.04
202-RF-172	0.08	0.07	0.12	0.75	0.58	1.07	0.05
202-RF-173	0.07	0.02	0.12	0.73	0.70	0.85	0.02
202-RF-174	0.09	0.04	0.12	0.82	0.58	0.83	0.02
202-RF-175	0.09	0	0.23	0.66	0.73	0.72	0.09
202-RF-176	0.04	0.02	0.07	0.62	0.39	0.65	0.05
202-RF-177	0.11	0.02	0.12	0.62	0.48	0.68	0.07
202-RF-178	0.11	0.02	0.11	0.71	0.68	1.52	0.11
202-RF-179	0.33	0.02	0.17	0.80	0.96	0.88	0.25
202-RF-180	0.09	0.02	0.07	0.77	0.62	NA	0.06
# of readings	180	180	180	180	180	178	180
Minimum	0.00	-0.02	0.04	0.43	0.05	0.30	0.01
Maximum	0.34	0.09	0.34	1.43	2.04	2.19	0.28
Average	0.09	0.01	0.14	0.73	0.59	0.74	0.06

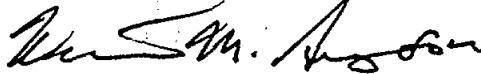
Mr. Paul A. Giardina

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July 1, 1996

If you have any questions regarding this strategy, please contact me at (423) 576-0730.

Sincerely,



Lester K. Price
Director, Former Sites Restoration Division

Attachments:

Middlesex Sampling Plant

- Radon Flux Summary for the Middlesex Sampling Plant - Landfill (Figure)
- Radon Flux Summary for the Middlesex Sampling Plant - South Pile (Figure)
- Radon Flux Monitoring Locations (Figure)
- Radon Flux Monitoring Results (landfill)
- Radon Flux Monitoring Results (south pile)

Maywood Interim Storage Site

- Radon Flux Summary for the Maywood Interim Storage Site (Figure)
- Approximate Radon Flux Monitoring Locations (Figure)
- Radon Flux Surveillance Results

Niagara Falls Storage Site

- Radon Flux Summary for the Niagara Falls Storage Site (Figure)
- Approximate Radon Flux Locations for the NFSS Waste Containment Structure (Figure)
- Radon Flux Monitoring Results

CONCURRENCES	
RTG SYMBOL EW-93	
INITIALS/SIG. Marz LM	
DATE 6/27/96	
RTG SYMBOL EW-93	
INITIALS/SIG. Cange AM	
DATE 6/25/96	
RTG SYMBOL EW-93	
INITIALS/SIG. Kirk [Signature]	
DATE 6/21/96	
RTG SYMBOL EW-93	
INITIALS/SIG. Seay [Signature]	
DATE 6/28/96	
RTG SYMBOL EW-93	
INITIALS/SIG. Price [Signature]	
DATE 6/28/96	
RTG SYMBOL	
INITIALS/SIG.	
DATE	
RTG SYMBOL	
INITIALS/SIG.	
DATE	
RTG SYMBOL	
INITIALS/SIG.	
DATE	