



Department of the Army

Buffalo District Army Corps of Engineers
1776 Niagara Street
Buffalo, NY 14207

23 Nov 93 11 42 NOV 23 1998

JOHN
14-3

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

Subject: Niagara Falls Storage Site (NFSS)
1998 Radon Flux Monitoring Results

Dear Mr. Giardina:

Enclosed are the 1998 results for radon-222 flux monitoring of the storage pile (Waste Containment Structure) at the Niagara Falls Storage Site (NFSS) in Lewiston, New York. The monitoring data is being provided for your information in the spirit of the Memorandum of Understanding (MOU) between the U.S. Environmental Protection Agency (EPA) and U.S. Department of Energy (DOE) concerning the Clean Air Act Emission Standards for Radionuclides, 40 CFR Part 61 including subparts H, I, Q, and T (signed April 1995). This submittal is also consistent with DOE's planned implementation of the MOU for its Region II Formerly Utilized Sites Remedial Action Program (FUSRAP) sites as outlined in correspondence to you from Lester K. Price, Director of DOE Former Sites Restoration Division, dated July 1, 1996. Management of FUSRAP has been subsequently transferred from DOE to the U.S. Army Corps of Engineers (USACE). The results demonstrate continued compliance with the requirements specified in Subpart Q of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) and is conducted as part of performance monitoring of the clay pile cover.

Radon-222 flux at the NFSS site was measured using 180 10-inch diameter activated carbon canisters placed at 15-meter intervals across the pile and sealed to the surface for a 24-hour exposure period (August 3-4, 1998). The radon-222 flux monitoring locations are shown in the attached figure and the monitoring results are summarized in the attached table. Individual and average measurements were well below the NESHAPs standard for radon flux, with results ranging from non-detect to 0.61 pCi/m²/s. These results are consistent with radon flux measured in previous years.

My point of contact for this action is Mathew Masset at 716-879-4448. If you have any questions or need assistance please do not hesitate to contact me at (716) 879-4146.

Sincerely,

Raymond L. Pilon
U.S. Army Corps of Engineers
Buffalo District

Bechtel

70 Pearce Avenue
Tonawanda, NY 14150
Telephone: (716) 447-9380
Facsimile: (716) 871-1192

Job No. 14501, FUSRAP Project
USACE Contract No. DACW45-98-D-0028
Code: 7430/WBS: 158

USACE
Buffalo District
1776 Niagara Street
Buffalo, NY 14207-3199

SEP 21 1998

Attention: Judith S. Leithner, Ph.D.
Project Engineer

Subject: Niagara Falls Storage Site (NFSS)
1998 Radon Flux Monitoring Results

Dear Dr. Leithner:

Enclosed are the 1998 results for radon-222 flux monitoring of the storage pile (Waste Containment Structure) at the Niagara Falls Storage Site (NFSS) for your review and subsequent transmittal to the U.S. Environmental Protection Agency (EPA). The radon flux data is collected and provided to the EPA in the spirit of the Memorandum of Understanding (MOU) between EPA and U.S. Department of Energy (DOE) concerning the Clean Air Act Emission Standards for Radionuclides, 40 CFR Part 61 including subparts H, I, Q, and T (signed April 1995)(Attachment 1). This submittal is also consistent with DOE's planned implementation of the MOU for its Region II Formerly Utilized Sites Remedial Action Program (FUSRAP) sites as outlined in correspondence to EPA from Lester K. Price, Director of DOE Former Sites Restoration Division, dated July 1, 1996 (Attachment 2). The results are intended to demonstrate continued compliance with the requirements specified in Subpart Q of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), and is conducted as part of performance monitoring of the clay pile cover.

This year's annual monitoring was conducted on August 3 and 4, 1998. Consistent with results from previous years, individual and average measurements were well below the NESHAPs standard for radon flux. Sample results presented in the summary table (Attachment 3) and sample locations are shown on the enclosed figure (Attachment 4). A copy of the laboratory data package is included (Attachment 5) for your permanent records. Last year, the radon flux results were transmitted directly to EPA by Bechtel National, Inc. (BNI). However, at the direction of Mr. Mathew Masset, the 1998 results are being provided to USACE for subsequent transmittal to EPA. For your consideration, a draft cover letter (Attachment 6) is enclosed for transmittal of the summary table and figure to the EPA. Electronic file versions of the summary table, figure, and draft cover letter are included in the enclosed diskette (Attachment 7). This submittal constitutes the last deliverable under Task 158L020 for BNI Scope of Work for FY 1998 and the USACE Delivery Order 0002.



Bechtel National, Inc.

Judith S. Leithner, Ph.D.

Page 2

If you have any questions, please do not hesitate to call me at (716) 447-9380, ext. 301, or Robert Gibbs at (716) 447-9380, ext. 332.

Sincerely,

George James

George James
Project Manager - FUSRAP

GMJ:lm:NY98L047.doc

7 Attachments, as identified above

Concurrence: R.J. Gibbs RJG

cc: T. Byrnes, USACE (w/o attachment)
R. Pilon, USACE (w/o attachment)

ATTACHMENT 1

**MEMORANDUM OF UNDERSTANDING
BETWEEN THE U.S. ENVIRONMENTAL PROTECTION AGENCY
AND THE U.S. DEPARTMENT OF ENERGY
CONCERNING
THE CLEAN AIR ACT
EMISSION STANDARDS FOR RADIONUCLIDES
40 CFR PART 61 INCLUDING SUBPARTS H, I, Q & T**

100010

**MEMORANDUM OF UNDERSTANDING BETWEEN
THE U.S. ENVIRONMENTAL PROTECTION AGENCY AND
THE U.S. DEPARTMENT OF ENERGY**

concerning

**THE CLEAN AIR ACT
EMISSION STANDARDS FOR RADIONUCLIDES
40 CFR PART 61 INCLUDING SUBPARTS H, I, Q & T**

The U. S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE) are engaged in a mutual effort to clarify provisions of 40 CFR Part 61, Subpart H, I, Q, and T, National Emission Standards for Hazardous Air Pollutants (NESHAP) promulgated under the Clean Air Act (CAA) for radionuclide emissions from DOE facilities. This effort has been undertaken to assure uniform and consistent interpretation of the NESHAP provisions for radionuclides at DOE facilities and EPA regional offices. DOE and EPA have reached an accord on certain issues and have signed this Memorandum of Understanding (MOU). The terms and language of this MOU are in accordance with the applicable definitions found in the CAA and Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the implementing regulations. The MOU is not intended to supersede or replace applicable statutes, regulations, compliance agreements or orders reached between DOE field offices and EPA regional offices. Nothing in this MOU is intended to restrict EPA's authority under applicable statute or regulation to take an enforcement action where appropriate.

1. Monitoring Requirements:

1a. DOE facilities with emission points that are subject to the continuous monitoring requirements of 40 CFR Section 61.93(b), but are not in compliance with these requirements, should reach agreement as soon as possible with the relevant EPA regional office on actions necessary to attain compliance.

The emission monitoring requirements set forth in Subpart H at 40 CFR Section 61.93(b) include the use of reference methods for continuous monitoring at major release points (those with the potential for emissions that exceed 1% of the standard, assuming normal operations but with no effluent controls in place); the establishment of a periodic confirmatory measurement program for all other release points, in accordance with Section 61.93(b)(4); and the implementation of a Quality Assurance (QA) program where appropriate that meets the requirements described in 40 CFR Part 61, Appendix B, Method 114. The continuous monitoring requirements present technical and procedural difficulties which in many instances will require significant effort and resources to resolve. Where DOE facilities are not in compliance with the continuous monitoring requirements, the DOE facility and the cognizant EPA regional office shall determine the most efficient DOE actions needed to bring the facilities into compliance including consideration of alternate monitoring methods under Section 61.93(b)(3). Commitments by DOE should include a plan and schedule that will result in compliance with the emission monitoring requirements including those for continuous monitoring, periodic confirmatory measurements, and QA program.

1b. Engineering calculations and/or representative measurements may be used to comply with periodic confirmatory measurement requirements.

The protocol for periodic confirmatory measurements which is required by 40 CFR Section 61.93(b)(4) is not specified in the regulations. EPA and DOE recognize that some DOE facilities have large numbers of minor release points that have similar emissions and controls. Therefore, confirmatory measurements of these types of releases would result in a large number of redundant measurements. Development of periodic confirmatory measurement programs is the responsibility of the facility. For each category of release points that the facility classifies as minor because uncontrolled emissions will not exceed 1% of the standard, periodic confirmatory measurements should be designed to confirm that individual release points remain properly categorized. The facility owner or operator should use best professional judgement, knowledge of the

radionuclides and quantities being used in plant operations, and the potential for their release to determine when representative measurements should be made and/or engineering calculations should be utilized. A protocol for periodic confirmatory measurements for each DOE facility must be provided by DOE to the appropriate EPA regional office.

- 1c. DOE facilities may implement continuous monitoring procedures that differ from the reference methods of Section 61.93(b) with prior FFA approval.

Section 61.93 provides for the use of alternate effluent flow rate measurement procedures or site selection and sample extraction procedures if all the criteria specified in Section 61.93(b)(3)(i) through (iv) are met. The criteria for establishing "impractical" pursuant to Section 61.93(b)(3)(i) are site-specific and include engineering, economic, health and safety considerations. Prior EPA approval must be granted for each emission point for which alternate monitoring procedures are to be used.

- 1d. Environmental measurements of radionuclide air concentrations at critical receptor locations may be used as an alternate to air dispersion calculations in demonstrating compliance with the standard, if the criteria of Section 61.93(b)(5) are met.

Prior EPA approval must be granted for use of environmental monitoring as a substitute for air dispersion calculations when all the requirements of Section 61.93(b)(5) are met. This approach to demonstrating compliance is particularly appropriate where air dispersion modeling is overly conservative, and for facilities with minor emission points (of the periodic confirmatory type) and/or diffuse sources as primary contributors to the dose. The location of the air samplers should be selected to give an accurate representation of the dose received by a critical receptor and should be based on modeling results.

2. Approval to Construct or Modify:

- 2a. Facilities meeting the requirements of 40 CFR Part 61, Section 61.96(b) are exempt from filing an application for approval to construct or modify.

A facility is eligible for exemption from submitting an application for any new construction or modification within the existing facility if the effective dose equivalent to be caused by all emissions from the completed construction or modification is less than 1% of the standard prescribed in Section 61.92 and the facility was shown to be in compliance with all provisions of the subpart in the last annual report. As stated in Section 61.96(b), the effective dose equivalent shall be calculated with the source term derived using

Appendix D or other EPA approved procedures as input to the air dispersion and other computer models. DOE facilities not subject to the continuous monitoring requirements of section 61.93(b) are eligible for this exemption once a program which meets the periodic confirmatory measurement requirement is implemented.

3. High Level Waste and Transuranic Waste Disposal and Monitored Retrievable Storage:

- 3a. EPA has determined that no NESHAP is needed for disposal activities at the High Level Waste Repository and the Waste Isolation Pilot Plant. DOE agrees, however, to implement the requirements of 40 CFR Part 61 as they apply to any test phase activity at either facility.

EPA's analysis under source category F, High-Level Nuclear Waste Disposal Facilities, included the proposed High-Level Waste Repository and the Waste Isolation Pilot Plant (WIPP) Waste Repository and the Waste Isolation Pilot Plant (WIPP) transuranic waste disposal site. EPA's finding, "since, expected emissions are so low, no NESHAP is needed" (54 FR 51672) applies to the operations and disposal activities at both facilities. Operations are included to the extent they are limited to activities analyzed by EPA and described in the Background Information Document (EPA 520/1-89-006-1). 40 CFR Part 61 would apply, however, during any test phase of activities at either facility. Notwithstanding this finding, the policy of the Department of Energy will be to implement the requirements of Subpart I for the High-Level Waste Repository and Subpart H for WIPP until such time as the facilities have completed closure.

- 3b. The Monitored Retrievable Storage (MRS) facility will be licensed and regulated by the Nuclear Regulatory Commission and therefore subject to the provisions of Subpart I of 40 CFR Part 61.

DOE and EPA agree that operations at the MRS facility are subject to Subpart I of 40 CFR Part 61.

4. Subpart Q Compliance:

- 4a. Subpart Q applies to radon-222 emitting sources at DOE storage and disposal facilities. Compliance of sources at DOE storage and disposal facilities with the 20 pCi/m³-s emission standard of Section 61.192 will be addressed as part of any FFA reached between the relevant EPA regional office and DOE. For sources subject to the standard of Section 61.192, DOE will demonstrate compliance through direct measurement of radon-222 flux in accordance with Appendix B, Method 115, or use alternative procedures (based on best available data) that do

not underestimate emissions.

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. If flux measurements indicate that a DOE storage and disposal facility is out of compliance and there is no FFA in place, the DOE facility and the relevant EPA regional office shall determine the appropriate actions necessary to return to compliance. If the site condition is significantly altered by adverse weather conditions, a natural catastrophe or other reason, the DOE facility will coordinate with the relevant EPA regional office to determine the appropriate actions necessary. DOE will monitor the storage and disposal sites in accordance with the requirements of DOE 5400.5 and the DOE Environmental Regulatory Guide (DOE/EH-0173T) and will report results in its annual site environmental reports.

5. Miscellaneous Sources:

- 5a. Emissions of radionuclides to the ambient air from DOE facilities include point and diffuse source releases. Subpart H provides procedures for evaluating only emissions from point sources. DOE and EPA agree to the collection, analysis and review of emissions data from diffuse sources.

EPA and DOE agree that the dose standard of 40 CFR Part 61, Subpart H applies to emissions from diffuse sources such as evaporation ponds, breathing of buildings and contaminated soils. EPA has provided DOE with a report on candidate methodologies for evaluating diffuse source emissions. EPA and DOE will continue to review methodologies to arrive at mutual guidance on procedures for evaluating these emissions. DOE will collect data on diffuse sources and provide this information to EPA. Data from environmental measurements and other appropriate methods may be used to evaluate diffuse emissions and to verify compliance with the Subpart H standard. DOE will provide its methodology for assessing diffuse sources to the appropriate EPA regional office. Data on diffuse sources and the results of analyses will be reported as part of DOE's Annual Air Emissions Report to EPA.

- 5b. Current NESHAPS for radionuclide air emissions do not address radon-220 emissions. EPA and DOE agree to collect data and review the potential for exposure from these emissions.

Current radionuclide emission standards do not address radon-220, which is exempt from Subpart H and not included in Subparts Q or T. DOE agrees to collect data at selected DOE sites and to provide the current or previously collected data to EPA for further analysis.

6. Reporting Requirements - Subpart H:

- 6a. EPA and DOE agree that Appendixes D and E of 40 CFR Part 61 are acceptable "other procedures" relative to Section 61.93(a) of Subpart H.

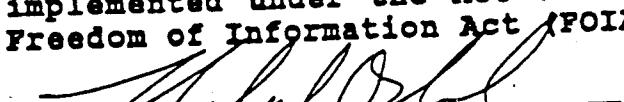
In fulfilling the requirements of Subpart H, DOE may use Appendixes D and E of 40 CFR Part 61.

- 6b. EPA and DOE agree that DOE's annual report will contain a list of all stacks, vents or other points where radioactive materials are released to the atmosphere.

While some release points may be considered minor because the potential discharge (assuming no effluent controls in place) of radionuclides into the air does not cause an effective dose equivalent in excess of 0.1 mrem/y, Section 61.94(b) requires that these release points be listed in the annual report. EPA and DOE recognize that many DOE facilities have large numbers of minor release points which have similar emissions and controls, and are similarly located. These sources may be grouped for reporting purposes unless there is a technical reason that would cause such grouping to be inappropriate. The number of emission points within the group should be indicated. Additional information, such as stack identification numbers, types and quantities of radionuclides emitted will be available to EPA inspectors.

7. MOU Status:

- 7a. Effective date, Revision and Termination of MOU. - This MOU will be effective immediately and will continue in effect until revised or amended by mutual written consent of DOE and EPA. This MOU may be terminated by either party upon 120 days written notice.
- 7b. Public Information Coordination. - Decisions on disclosure of information to the public regarding projects and programs implemented under the MOU will be made consistent with the Freedom of Information Act (FOIA), 5 U.S.C. 552.


Environmental Protection Agency
Mary D. Nichols
Assistant Administrator
for Air and Radiation

Dated 9/29/94


Department of Energy
Tara J. O'Toole
Assistant Secretary
for Environment, Safety and Health

Dated 4/5/95

ATTACHMENT 2

**LETTER FROM L. K. PRICE (DOE)
TO P. A. GIARDINA (EPA)
DATED JULY 1,1996**



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

2

July 1, 1996

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 reconstituting 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

3

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

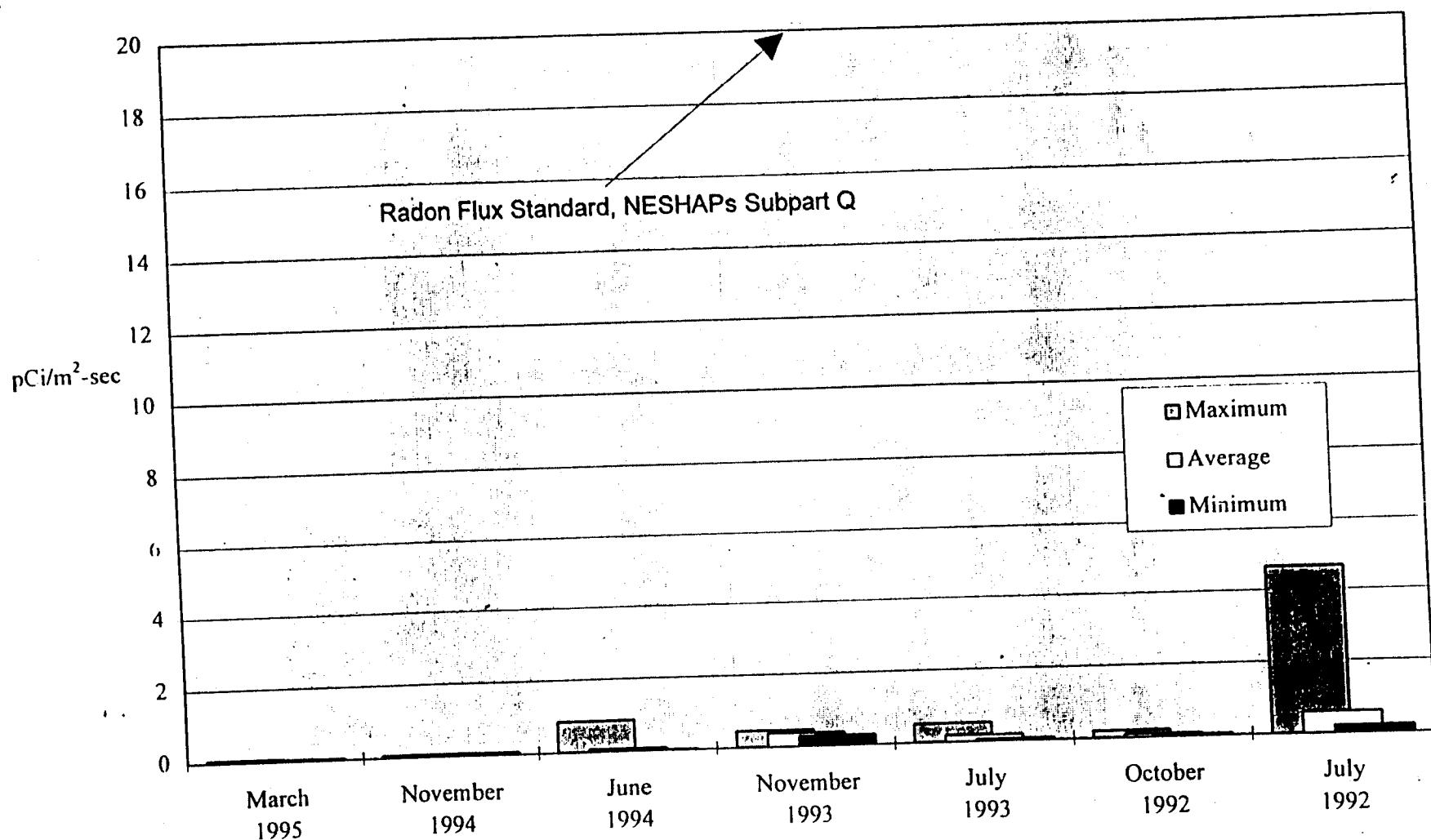
- Radon Flux Summary for the Middlesex Sampling Plant - Landfill (Figure)
- Radon Flux Summary for the Middlesex Sampling Plant - South Pile (Figure)
- Radon Flux Monitoring Locations (Figure)
- Radon Flux Monitoring Results (landfill)
- Radon Flux Monitoring Results (south pile)

Maywood Interim Storage Site

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

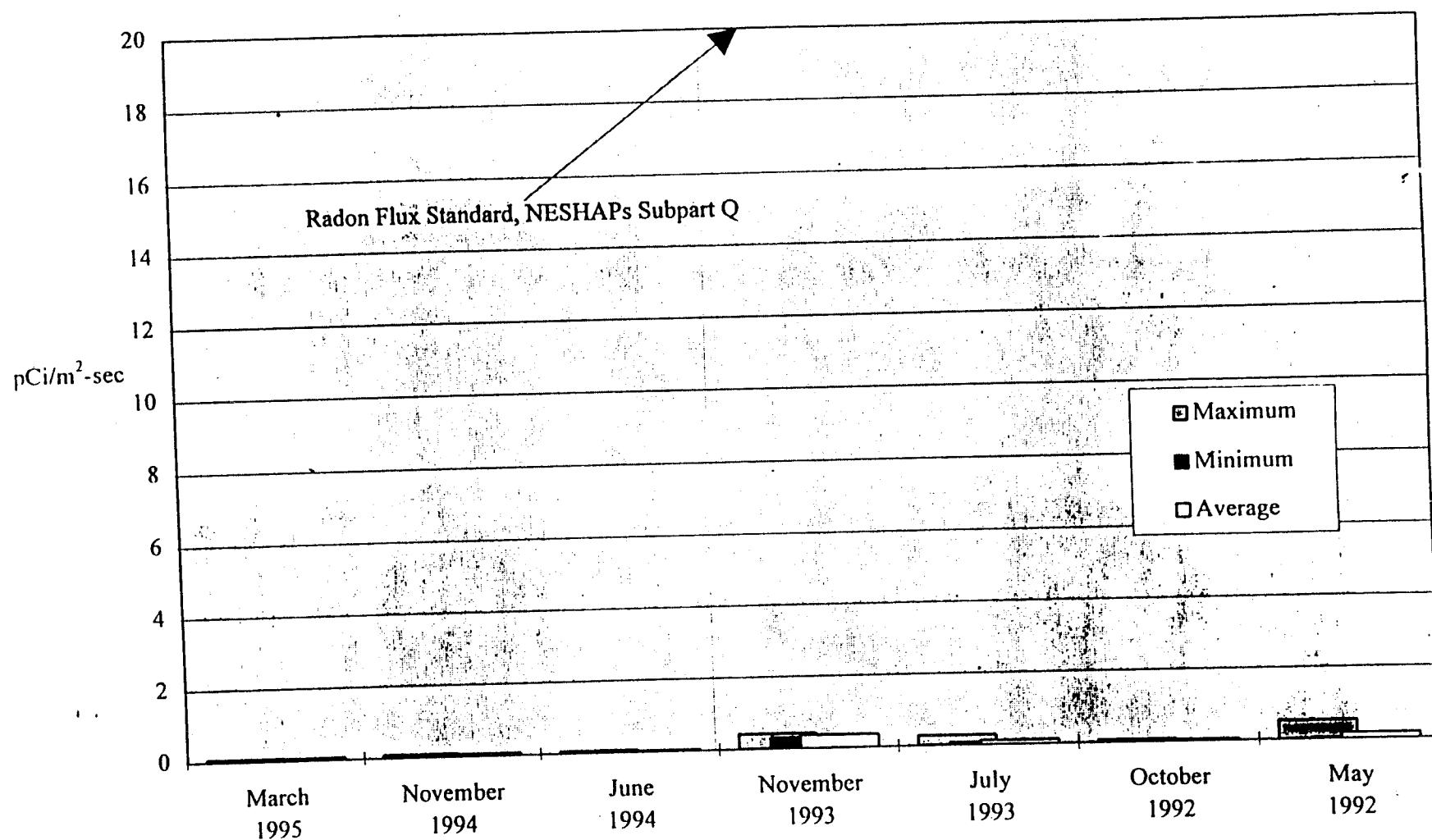
Niagara Falls Storage Site

- 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

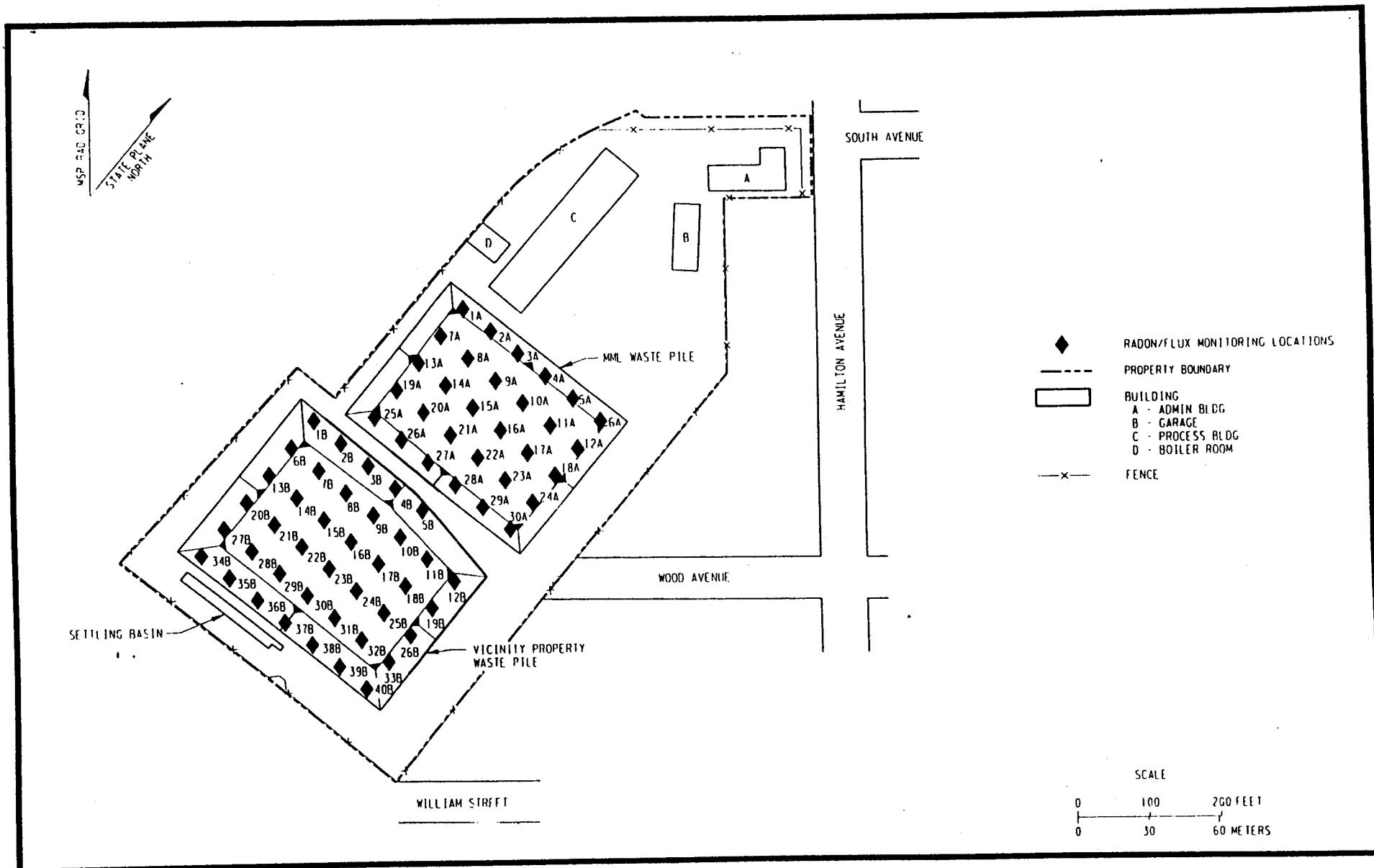


Radon Flux Summary for the Middlesex Sampling Plant - North Pile

143772



Radon Flux Summary for the Middlesex Sampling Plant - South Pile



1181092.DCN

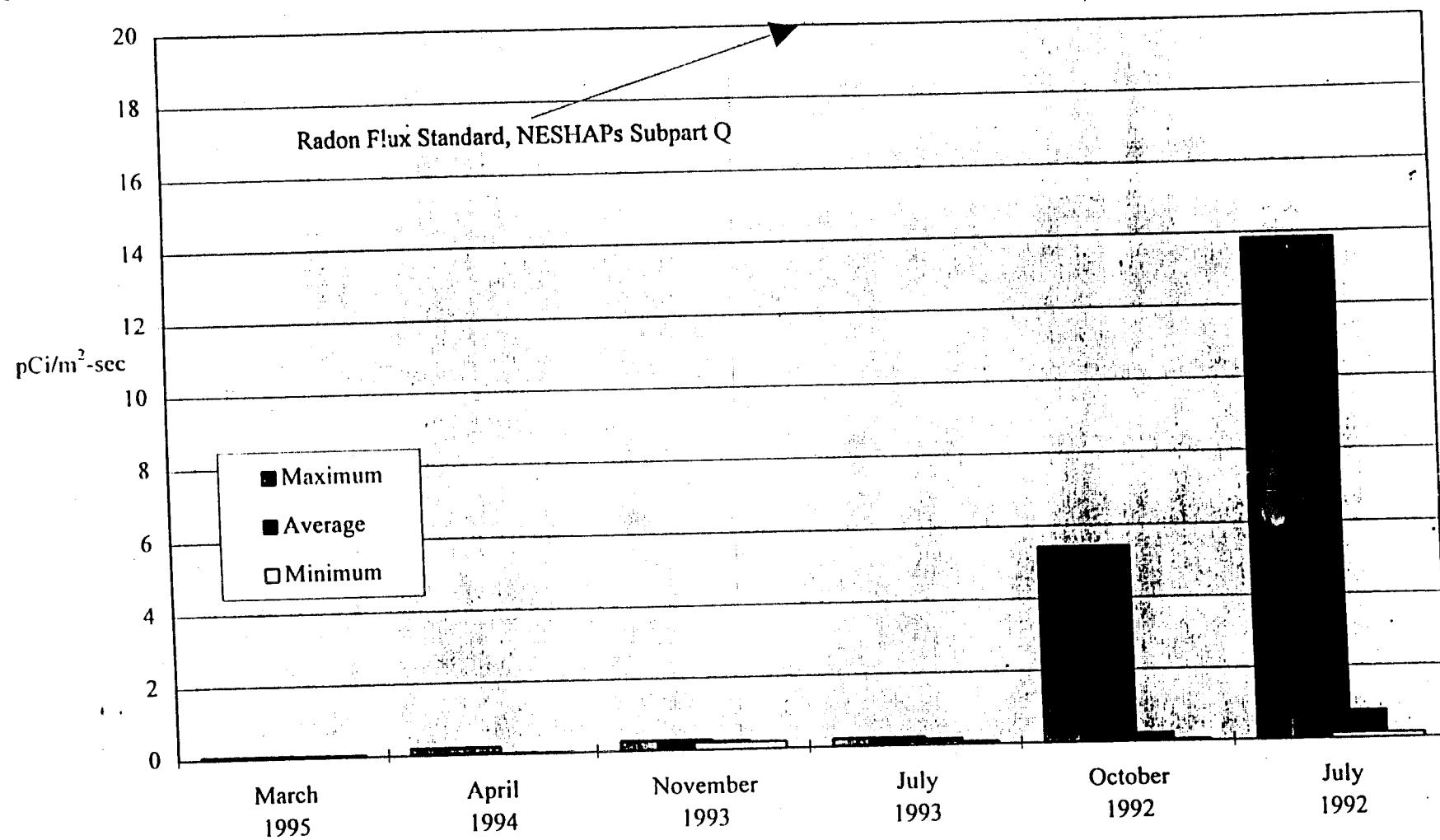
Middlesex Sampling Plant Environmental Surveillance
 Radon Flux Monitoring Locations

Radon Flux Monitoring Results at MSP (North Pile)

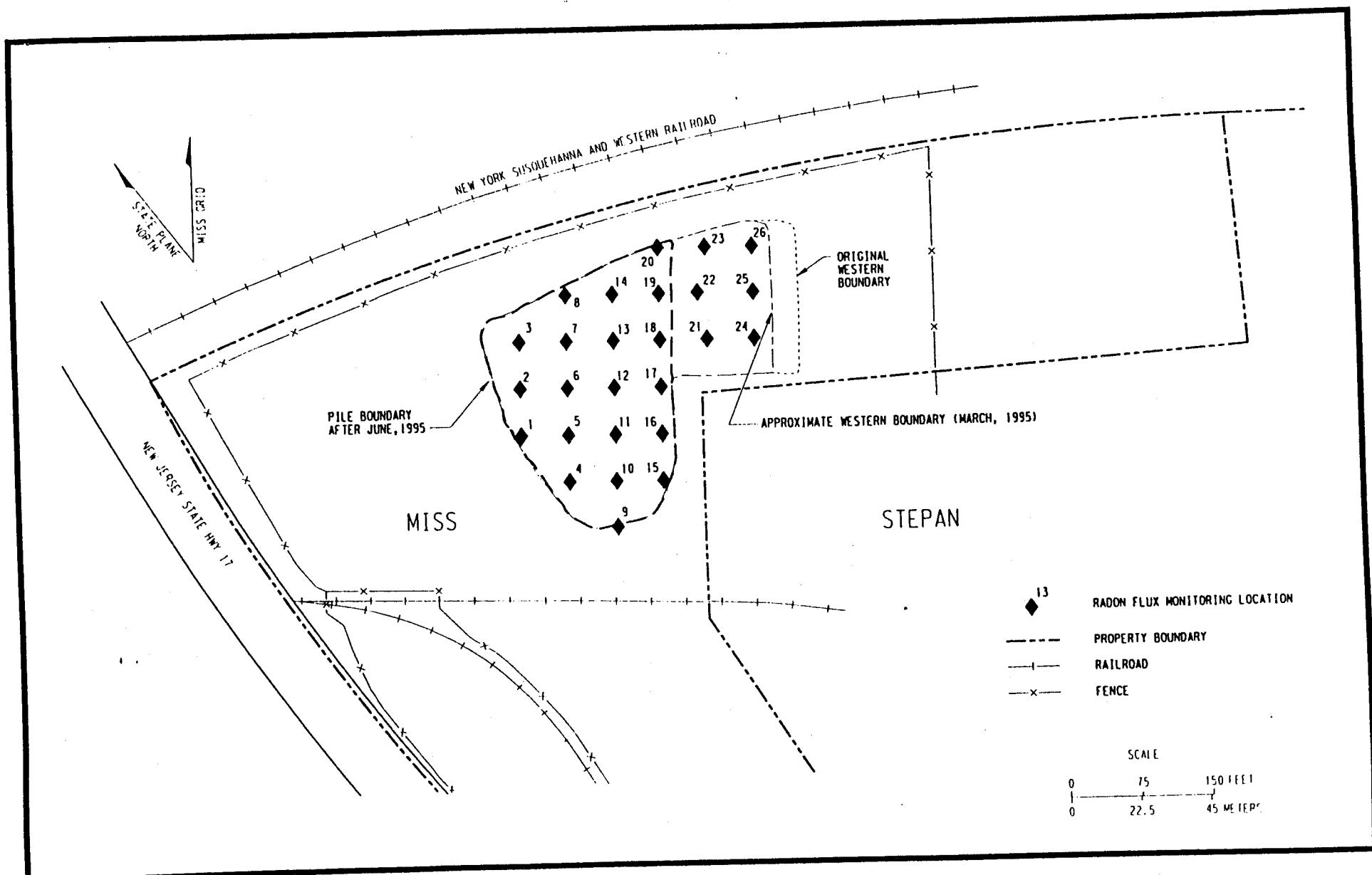
Sample ID	1995		1994		1993		1992	
	March pCi/m ² /s	November pCi/m ² /s	June pCi/m ² /s	November pCi/m ² /s	July pCi/m ² /s	October pCi/m ² /s	July pCi/m ² /s	
North pile :								
(landfill)								
118-RF-01A	0.05	0.07	0.03	0.34	0.14	0.09	0.32	
118-RF-02A	0.05	0.07	0.02	0.34	0.08	0.08	0.49	
118-RF-03A	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	0.09	3.73	
118-RF-14A	0.05	0.07	0.04	0.38	0.13	0.09	x	
118-RF-15A	0.05	0.07	0.04	0.37	0.06	0.09	0.23	
118-RF-16A	0.05	0.07	0.04	0.37	0.23	0.09	0.24	
118-RF-17A	0.05	0.07	0.03	0.35	0.14	0.09	4.66	
118-RF-18A	0.06	0.07	0.04	0.37	0.22	0.09	0.33	
118-RF-19A	0.05	0.07	0.03	0.35	0.19	0.05	0.28	
118-RF-20A	0.06	0.07	0.04	0.37	0.51	0.08	0.27	
118-RF-21A	0.05	0.07	0.06	0.41	0.09	0.09	0.25	
118-RF-22A	0.05	0.07	0.02	0.38	0.10	0.09	0.23	
118-RF-23A	0.05	0.07	0.03	0.28	0.09	0.09	0.26	
118-RF-24A	x	0.07	0.04	0.34	0.08	0.08	0.21	
118-RF-25A	0.06	0.07	0.04	0.36	0.34	0.08	0.28	
118-RF-26A	0.05	0.07	0.05	0.33	0.22	0.08	0.23	
118-RF-27A	0.06	0.07	0.33	0.31	0.14	0.08	0.27	
118-RF-28A	0.07	0.07	0.04	0.45	0.12	0.09	0.28	
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)

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	0.04
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	0.19
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



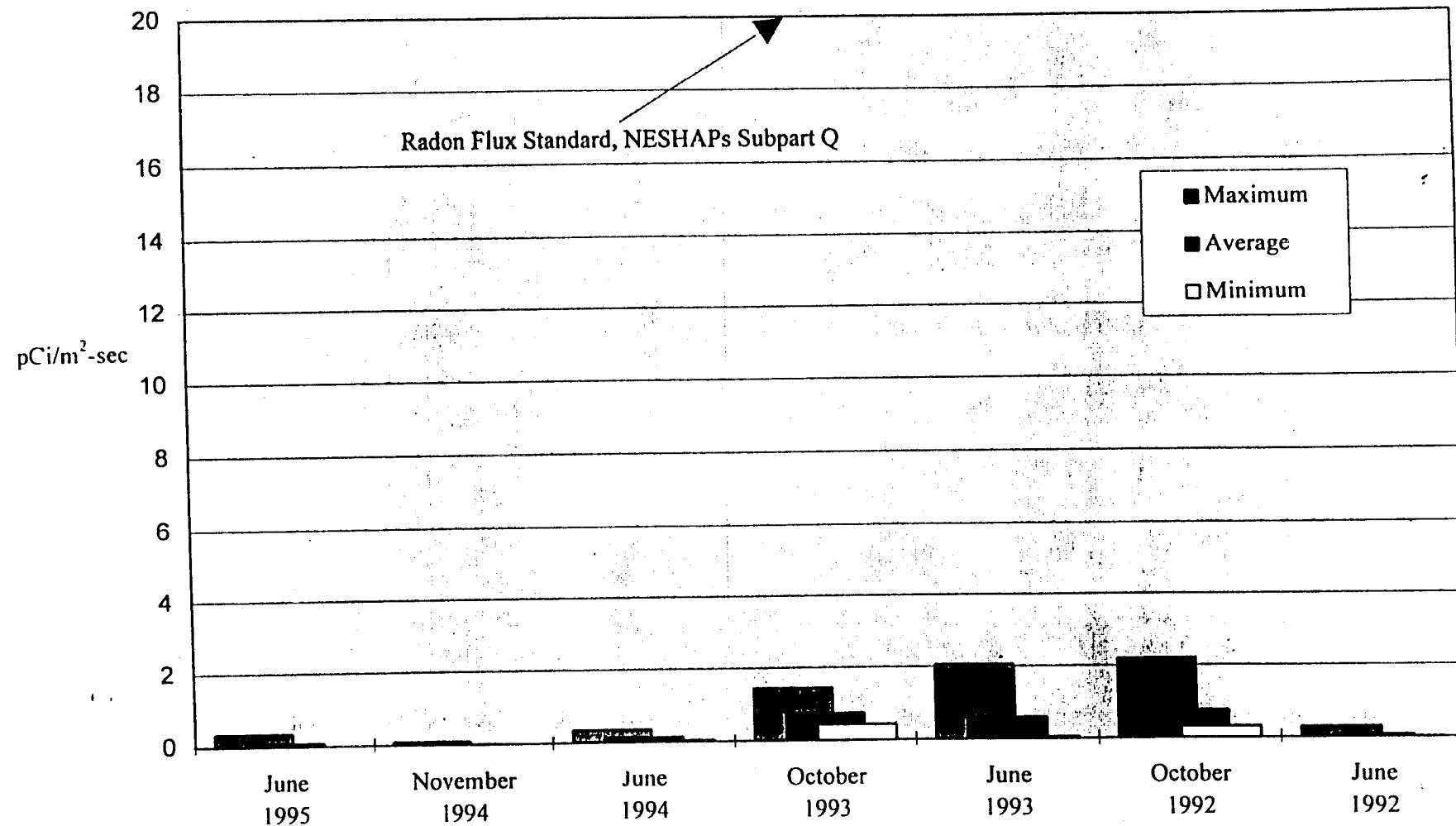
139 R64F011.DCN

Maywood Interim Storage Site Environmental Surveillance
 Approximate Radon Flux Monitoring Locations

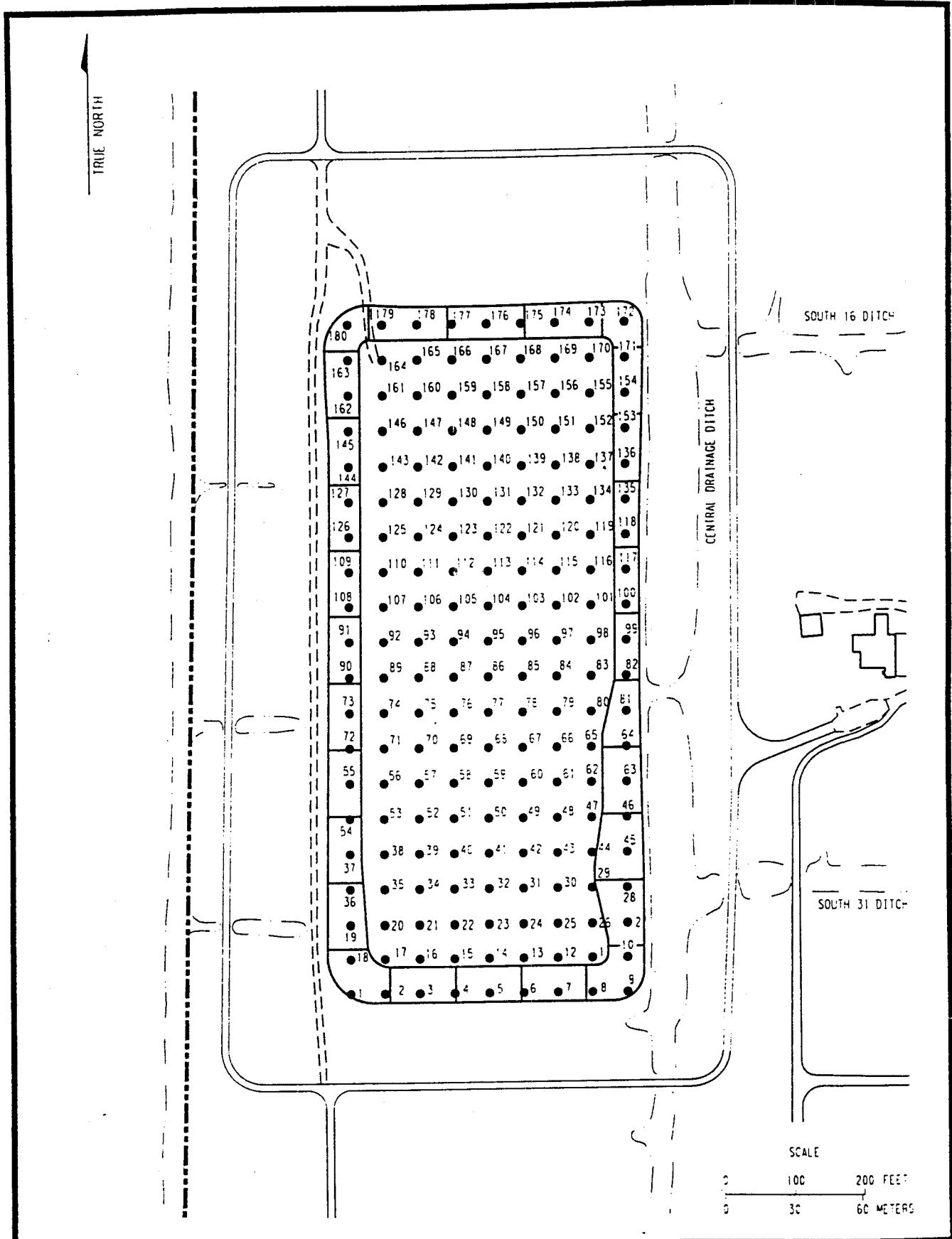
143772

Radon Flux Monitoring Results for MISS

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	0.25
138-RF-09	0.05	0.02	0.26	0.20	0.04	0.29
138-RF-10	0.05	0.02	0.22	0.15	0.04	0.27
138-RF-11	0.06	0.02	0.26	0.17	0.04	0.22
138-RF-12	0.06	0.02	0.25	0.17	5.42	1.83
138-RF-13	0.05	0.20	0.23	0.17	0.04	0.29
138-RF-14	0.06	0.02	0.19	0.22	0.04	0.26
138-RF-15	0.06	0.03	0.25	0.17	0.04	13.84
138-RF-16	0.06	0.02	0.24	0.14	0.04	0.20
138-RF-17	0.06	0.02	0.23	0.15	0.04	0.21
138-RF-18	0.06	0.02	0.23	0.11	0.04	0.22
138-RF-19	0.06	0.03	0.22	0.18	0.04	0.23
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	0.18
138-RF-24	0.06	0.03	0.23	0.16	0.05	0.13
138-RF-25	0.07	0.02	0.22	0.15	0.05	0.22
138-RF-26	0.06	0.03	0.25	0.17	0.05	0.28
138-RF-27	x	0.02	0.25	0.18	0.05	0.25
138-RF-28	x	0.03	0.23	0.13	0.05	0.28
138-RF-29	x	0.03	0.23	0.15	0.05	0.14
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



R85F009.DCN

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	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	0.70	0.08	
202-RF-009	0.09	0.00	0.07	0.50	0.26			
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	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	0.30	0.46	0.11	
202-RF-086	0.07	0.01	0.17	0.66	0.30	0.75	0.06	
202-RF-087	0.07	0.01	0.20	0.64	0.37	0.39	0.10	
202-RF-088	0.11	0.01	0.10	0.60	0.28	0.63	0.11	
202-RF-089	0.06	0.01	0.23	1.43	0.46	0.95	0.07	
202-RF-090	0.07	0.00	0.09	0.82	0.20	0.67	0.09	
202-RF-091	0.08	0.03	0.27	0.66	0.26	0.60	0.03	
202-RF-092	0.07	0.02	0.14	0.62	0.47	0.53	0.03	
202-RF-093	0.08	0.01	0.10	0.69	0.40	0.55	0.08	
202-RF-094	0.05	0.00	0.12	0.65	0.41	0.36	0.04	
202-RF-095	0.04	0.01	0.15	0.97	0.17	0.52	0.03	
202-RF-096	0.08	0.01	0.09	0.61	0.26	0.52	0.02	
202-RF-097	0.03	0.01	0.09	0.63	0.30	0.52	0.04	
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	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	0.80	0.03	
202-RF-125	0.10	0.00	0.29	0.98	0.92	0.80	0.14	
202-RF-126	0.05	0.01	0.12	0.98	0.57	0.91	0.09	
202-RF-127	0.09	0.01	0.14	0.70	1.37	1.28	0.04	
202-RF-128	0.04	0.01	0.07	0.85	0.80	0.45	0.16	
202-RF-129	0.09	0.01	0.10	0.65	0.80	0.56	0.03	
202-RF-130	0.09	0.00	0.08	0.67	0.52	0.45	0.02	
202-RF-131	0.04	0.01	0.14	0.74	1.00	0.46	0.03	
202-RF-132	0.04	0.00	0.11	0.62	0.76	0.53	0.04	
202-RF-133	0.00	0.00	0.07	0.66	0.49	0.45	0.04	
202-RF-134	0.06	0.01	0.08	0.91	0.92	0.85	0.17	
202-RF-135	0.08	0.02	0.11	0.73	1.07	0.67	0.03	
202-RF-136	0.09	0.01	0.14	0.72	0.72	1.00	0.04	
202-RF-137	0.07	0.01	0.12	0.76	1.06	0.86	0.04	
202-RF-138	0.07	0.01	0.09	0.71	1.40	0.55	0.01	
202-RF-139	0.07	-0.01	0.13	0.61	0.64	1.08	0.01	
202-RF-140	0.06	0.00	0.12	0.85	0.61	0.53	0.03	
202-RF-141	0.04	0.00	0.15	0.78	1.30	0.62	0.04	
202-RF-142	0.05	0.00	0.16	0.63	0.39	0.68	0.05	
202-RF-143	0.06	0.00	0.16	0.79	0.93	0.79	0.06	
202-RF-144	0.11	0.01	0.15	0.81	0.63	0.79	0.05	
202-RF-145	0.06	0.01	0.08	0.79	0.62	0.59	0.08	
202-RF-146	0.04	0.01	0.25	0.78	0.78	0.75	0.03	
202-RF-147	0.10	0.02	0.11	1.09	0.58			

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	June pCi/m ² /s
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	0.06	
202-RF-156	0.06	0.00	0.16	0.66	0.40	0.63	0.02	
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	0.60	0.13	
202-RF-166	0.09	0.01	0.16	0.72	0.82	0.52	0.06	
202-RF-167	0.04	0.00	0.19	0.65	1.05	0.74	0.07	
202-RF-168	0.10	0.02	0.21	0.80	0.52	0.36	0.04	
202-RF-169	0.06	0.01	0.12	0.66	0.44	0.50	0.04	
202-RF-170	0.13	0.01	0.15	0.79	0.82	0.53	0.04	
202-RF-171	0.11	0.01	0.07	0.77	0.66	1.07	0.05	
202-RF-172	0.08	0.07	0.12	0.75	0.58	0.85	0.02	
202-RF-173	0.07	0.02	0.12	0.73	0.70	0.83	0.02	
202-RF-174	0.09	0.04	0.12	0.82	0.58	0.72	0.09	
202-RF-175	0.09	0	0.23	0.66	0.73	0.65	0.05	
202-RF-176	0.04	0.02	0.07	0.62	0.39	0.68	0.07	
202-RF-177	0.11	0.02	0.12	0.62	0.48	1.52	0.11	
202-RF-178	0.11	0.02	0.11	0.71	0.68	0.88	0.25	
202-RF-179	0.33	0.02	0.17	0.80	0.96	NA	0.06	
202-RF-180	0.09	0.02	0.07	0.77	0.62			
# 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	

ATTACHMENT 3

1998 RADON FLUX RESULTS

SUMMARY TABLE

(FOR TRANSMITTAL TO EPA)

1998 Radon-222 Flux Monitoring Results^a
Niagara Falls Storage Site

Page 1 of 2

Sample ID	Radon-222 Flux (pCi/m ² /s) ^b	Sample ID	Radon-222 Flux (pCi/m ² /s) ^b	Sample ID	Radon-222 Flux (pCi/m ² /s) ^b
202-001	0.10 ± 0.04	202-031	-0.01 ± 0.02	202-061	-0.01 ± 0.02
202-002	0.06 ± 0.04	202-032	0.05 ± 0.03	202-062	0.01 ± 0.02
202-003	0.07 ± 0.04	202-033	0.02 ± 0.02	202-063	0.01 ± 0.02
202-004	0.02 ± 0.02	202-034	0.02 ± 0.03	202-064	0.00 ± 0.02
202-005	0.07 ± 0.04	202-035	0.08 ± 0.04	202-065	0.04 ± 0.03
202-006	0.02 ± 0.02	202-036	0.10 ± 0.04	202-066	-0.01 ± 0.03
202-007	0.01 ± 0.02	202-037	0.05 ± 0.03	202-067	0.00 ± 0.02
202-008	0.01 ± 0.02	202-038	0.01 ± 0.02	202-068	0.01 ± 0.03
202-009	0.00 ± 0.03	202-039	0.04 ± 0.03	202-069	0.05 ± 0.03
202-010	0.03 ± 0.02	202-040	0.00 ± 0.02	202-070	0.03 ± 0.03
Duplicate ^c	0.04 ± 0.02	Duplicate ^c	0.03 ± 0.03	Duplicate ^c	0.06 ± 0.04
202-011	0.01 ± 0.02	202-041	0.00 ± 0.02	202-071	0.04 ± 0.03
202-012	0.04 ± 0.03	202-042	0.03 ± 0.02	202-072	0.05 ± 0.04
202-013	0.01 ± 0.02	202-043	0.04 ± 0.04	202-073	0.04 ± 0.02
202-014	0.02 ± 0.03	202-044	0.01 ± 0.02	202-074	0.06 ± 0.04
202-015	0.01 ± 0.02	202-045	-0.02 ± 0.02	202-075	0.09 ± 0.04
202-016	0.04 ± 0.02	202-046	0.02 ± 0.03	202-076	0.03 ± 0.03
202-017	0.05 ± 0.03	202-047	0.04 ± 0.04	202-077	0.09 ± 0.04
202-018	0.06 ± 0.03	202-048	0.03 ± 0.02	202-078	0.00 ± 0.02
202-019	0.02 ± 0.02	202-049	-0.02 ± 0.03	202-079	0.01 ± 0.02
202-020	0.08 ± 0.02	202-050	0.01 ± 0.02	202-080	0.01 ± 0.02
Duplicate ^c	0.07 ± 0.02	Duplicate ^c	0.01 ± 0.02	Duplicate ^c	0.00 ± 0.03
202-021	0.08 ± 0.04	202-051	0.07 ± 0.04	202-081	0.01 ± 0.02
202-022	0.05 ± 0.03	202-052	0.04 ± 0.03	202-082	0.01 ± 0.02
202-023	0.04 ± 0.03	202-053	0.02 ± 0.03	202-083	0.04 ± 0.03
202-024	0.04 ± 0.03	202-054	0.04 ± 0.03	202-084	0.02 ± 0.02
202-025	0.01 ± 0.02	202-055	0.04 ± 0.03	202-085	0.01 ± 0.02
202-026	0.02 ± 0.02	202-056	0.03 ± 0.03	202-086	0.02 ± 0.03
202-027	0.02 ± 0.03	202-057	0.06 ± 0.03	202-087	0.03 ± 0.03
202-028	0.01 ± 0.02	202-058	0.01 ± 0.02	202-088	0.06 ± 0.04
202-029	0.01 ± 0.03	202-059	0.01 ± 0.02	202-089	0.05 ± 0.03
202-030	0.04 ± 0.03	202-060	0.02 ± 0.02	202-090	0.09 ± 0.06
Duplicate ^c	0.04 ± 0.02	Duplicate ^c	0.00 ± 0.02	Duplicate ^c	0.05 ± 0.03

1998 Radon-222 Flux Monitoring Results^a

Niagara Falls Storage Site

Page 2 of 2

Radon-222 Flux		Radon-222 Flux		Radon-222 Flux	
Sample ID	(pCi/m ² /s) ^b	Sample ID	(pCi/m ² /s) ^b	Sample ID	(pCi/m ² /s) ^b
202-091	0.09 ± 0.04	202-121	0.03 ± 0.02	202-151	0.02 ± 0.02
202-092	0.00 ± 0.04	202-122	0.00 ± 0.03	202-152	0.01 ± 0.02
202-093	0.05 ± 0.04	202-123	0.05 ± 0.04	202-153	0.01 ± 0.02
202-094	0.05 ± 0.03	202-124	0.03 ± 0.03	202-154	0.02 ± 0.02
202-095	0.05 ± 0.03	202-125	0.04 ± 0.02	202-155	0.01 ± 0.01
202-096	0.04 ± 0.03	202-126	0.06 ± 0.05	202-156	-0.01 ± 0.03
202-097	0.03 ± 0.02	202-127	0.04 ± 0.03	202-157	0.00 ± 0.02
202-098	0.01 ± 0.02	202-128	0.06 ± 0.03	202-158	0.06 ± 0.04
202-099	0.03 ± 0.02	202-129	0.02 ± 0.03	202-159	0.04 ± 0.03
202-100	0.01 ± 0.03	202-130	-0.02 ± 0.04	202-160	0.02 ± 0.03
Duplicate ^c	0.01 ± 0.03	Duplicate ^c	0.04 ± 0.03	Duplicate ^c	0.61 ± 0.38
202-101	0.05 ± 0.03	202-131	0.04 ± 0.03	202-161	0.05 ± 0.04
202-102	0.02 ± 0.03	202-132	0.02 ± 0.02	202-162	0.06 ± 0.04
202-103	0.02 ± 0.02	202-133	0.03 ± 0.02	202-163	0.10 ± 0.04
202-104	0.06 ± 0.03	202-134	0.02 ± 0.02	202-164	0.02 ± 0.03
202-105	0.04 ± 0.03	202-135	0.02 ± 0.02	202-165	0.02 ± 0.02
202-106	0.09 ± 0.05	202-136	0.02 ± 0.03	202-166	0.09 ± 0.05
202-107	0.07 ± 0.03	202-137	0.05 ± 0.03	202-167	0.05 ± 0.03
202-108	0.06 ± 0.05	202-138	0.02 ± 0.04	202-168	0.02 ± 0.02
202-109	0.07 ± 0.04	202-139	0.04 ± 0.03	202-169	0.08 ± 0.04
202-110	0.05 ± 0.03	202-140	0.05 ± 0.04	202-170	0.04 ± 0.03
Duplicate ^c	0.06 ± 0.04	Duplicate ^c	-0.01 ± 0.03	Duplicate ^c	0.01 ± 0.03
202-111	0.08 ± 0.05	202-141	0.08 ± 0.02	202-171	0.01 ± 0.02
202-112	0.07 ± 0.04	202-142	0.10 ± 0.05	202-172	0.02 ± 0.04
202-113	0.05 ± 0.04	202-143	0.10 ± 0.02	202-173	0.05 ± 0.03
202-114	0.03 ± 0.03	202-144	0.09 ± 0.05	202-174	0.02 ± 0.02
202-115	0.02 ± 0.02	202-145	0.08 ± 0.05	202-175	0.02 ± 0.03
202-116	0.04 ± 0.03	202-146	0.06 ± 0.05	202-176	0.02 ± 0.04
202-117	0.05 ± 0.03	202-147	0.02 ± 0.03	202-177	0.05 ± 0.04
202-118	0.01 ± 0.02	202-148	0.03 ± 0.03	202-178	0.05 ± 0.04
202-119	0.01 ± 0.02	202-149	0.06 ± 0.04	202-179	0.09 ± 0.04
202-120	0.01 ± 0.03	202-150	0.05 ± 0.03	202-180	0.10 ± 0.05
Duplicate ^c	0.02 ± 0.03	Duplicate ^c	0.02 ± 0.03	Duplicate ^c	0.14 ± 0.07

Note: The EPA standard for radon-222 flux is 20 pCi/m²/s.

a. Radon-222 flux monitoring was performed from August 3 to 4, 1998.

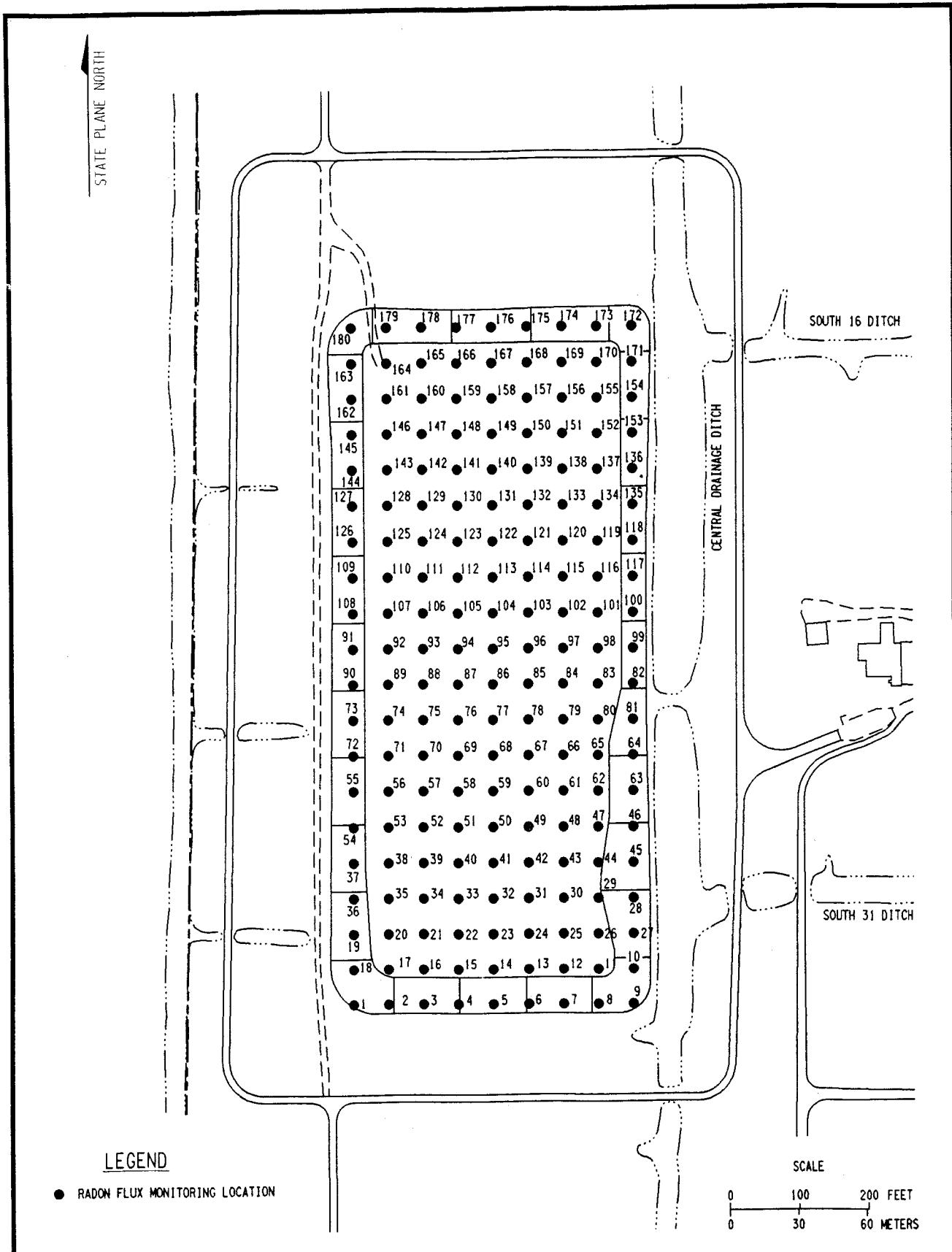
b. pCi/m²/s - picocuries per square meter per second.

c. Every tenth canister is counted twice in the laboratory as a quality control (QC) duplicate to evaluate analytical precision.

ATTACHMENT 4

RADON FLUX SAMPLE LOCATION MAP

(FOR TRANSMITTAL TO EPA)



R93E006.DGN

Niagara Falls Storage Site
Approximate Radon Flux Monitoring Locations
for the Waste Containment Structure

ATTACHMENT 5

LABORATORY DATA PACKAGE

FUSRAP DATA TRANSMITTAL

TO:
BECHTEL NATIONAL, INC.
FUSRAP PROJECT ENGINEERING MANAGER
ATTN: LABORATORY LIAISON
C/O FUSRAP PDCC
1511 LAFAYETTE DRIVE
OAK RIDGE, TN 37830

FROM:
THERMO NUTECH
601 SCARBORO ROAD
OAK RIDGE, TN 37830

LAB NO. 70-01-011
ORDER # 407
DATE 9-14-98
TE/WBS # 158
AREA NFSS
DATA CODE EM-SPEC

MAIL ADDRESS
P.O. BOX 350
OAK RIDGE, TN 37831-0350

14501-191-SC-537

14501 802 158 L020

ITEM NO.	DESCRIPTION
1.	Bandon Data - 180
2.	Disk

SUPPLIER DOCUMENT STATUS STAMP				REVIEW COMMENTS:
BECHTEL NATIONAL, INC.		FUSRAP OR-SC-008		Data - Not Beidms Loaded.
1 <input checked="" type="checkbox"/> DATA PACKAGE IS ACCEPTABLE. 2 <input type="checkbox"/> REVISE AND RESUBMIT: <input type="checkbox"/> ENTIRE PACKAGE <input type="checkbox"/> APPLICABLE SECTIONS: _____ <input type="checkbox"/> EDD 3 <input type="checkbox"/> REVIEW NOT REQUIRED.				
REVIEWED BY:				
SA	DMVS		DM	ET TEAM
Rmc	NA	—	Rmc	NA
SSRS ITEM #	<input type="checkbox"/> 5.20-C <input checked="" type="checkbox"/> 5.21-R		<input type="checkbox"/> COMPLETE SUBMITTAL <input checked="" type="checkbox"/> COMPLETE SUBMITTAL <input type="checkbox"/> PARTIAL SUBMITTAL	
REVIEWED BY	<u>Robin Crabtree</u>		DATE <u>9/16/98</u>	

Thermo NUtech

601 Scarboro Road

Oak Ridge, TN 37830

(423) 481-0683

FAX (423) 483-4621

FAX (423) 481-0121

TNU-OR-8625

September 14, 1998

Ms. Robin Crabtree
Bechtel National, Inc.
151 Lafayette Drive
Oak Ridge, TN 37830

CASE NARRATIVE
Work Order #98-07277-OR
State of Utah Certificate #E-235

SAMPLE RECEIPT

This work order contains 180 Radon cannisters received 8/5/98. These samples were analyzed for Radon-222.

The file name for these samples is 9807277.EDD.

ANALYTICAL METHODS

Radon-222 was analyzed using Method LANL ER-130 modified.

PROBLEMS OR UNUSUAL CIRCUMSTANCES

No problems or unusual circumstances were noted during the analytical process.

CERTIFICATION OF ACCURACY

I certify that this data report is in compliance with the terms and conditions of the Purchase Order, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package and electronic data deliverable has been authorized by the cognizant project manager or his/her designee to be accurate as verified by the following signature.


M. R. McDougall
Laboratory Manager

Date: 9/14/98

RADON FLUX DATA SHEET

(1)

SAMPLE ID	COORDINATES	CANISTER #	DATE OUT	TIME OUT	DATE IN	TIME IN
202-RF-001	S1700/E0025		8/3/98	0945	8/4/98	1042
202-RF-002	S1700/E0075			1020		1124
202-RF-003	S1700/E0125			1021		1125
202-RF-004	S1700/E0175			1047		1207
202-RF-005	S1700/E0225			1048		1208
202-RF-006	S1700/E0275			1132		1404
202-RF-007	S1700/E0325			1133		1434
202-RF-008	S1700/E0375			1206		1447
202-RF-009	S1700/E0425			1207		1448
202-RF-010	S1650/E0425			1208		1448
202-RF-011	S1650/E0375			1205		1446
202-RF-011(QC)	S1650/E0375					
202-RF-012	S1650/E0325			1134		1434
202-RF-013	S1650/E0275			1131		1405
202-RF-014	S1650/E0225			1048		1210
202-RF-015	S1650/E0175			1047		1205
202-RF-016	S1650/E0125			1021		1126
202-RF-017	S1650/E0075			1019		1123
202-RF-018	S1650/E0025			0947		1044
202-RF-019	S1600/E0025			0949		1045
202-RF-020	S1600/E0075			1018		1122
202-RF-021	S1600/E0125			1022		1127
202-RF-022	S1600/E0175			1046		1204
202-RF-023	S1600/E0225			1049		1211
202-RF-024	S1600/E0275			1130		1406
202-RF-025	S1600/E0325			1134		1433
202-RF-026	S1600/E0375			1204		1446
202-RF-026(QC)	S1600/E0375					
202-RF-027	S1600/E0425			1208		1448
202-RF-027(QC)	S1600/E0425					
202-RF-028	S1550/E0425			1209		1449
202-RF-029	S1550/E0375			1204		1445
202-RF-030	S1550/E0325			1135		1432
202-RF-031	S1550/E0275			1125		1407
202-RF-032	S1550/E0225			1050		1213
202-RF-033	S1550/E0175			1044		1203
202-RF-034	S1550/E0125			1023		1128
202-RF-035	S1550/E0075			1017		1121
202-RF-036	S1550/E0025			0950		1046
202-RF-037	S1500/E0025			0951		1047
202-RF-038	S1500/E0075			1016		1120
202-RF-039	S1500/E0125			1024		1139
202-RF-040	S1500/E0175			1044		1202
202-RF-041	S1500/E0225			1050		1214
202-RF-042	S1500/E0275			1015		1408
202-RF-043	S1500/E0325			1136		1431
202-RF-044	S1500/E0375			1202		1445
202-RF-044(QC)	S1500/E0375					
202-RF-045	S1500/E0425			1210		1449
202-RF-046	S1450/E0425			1210		1450
202-RF-047	S1450/E0375			1201		1444

RADON FLUX DATA SHEET

2

SAMPLE ID	COORDINATES	CANISTER #	DATE OUT	TIME OUT	DATE IN	TIME IN
202-RF-048	S1450/E0325		8/3/98	1137	8/4/98	1430
202-RF-049	S1450/E0275			1113		1409
202-RF-050	S1450/E0225			1052		1215
202-RF-050(QC)	S1450/E0225					
202-RF-051	S1450/E0175			1043		1201
202-RF-052	S1450/E0125			1024		1130
202-RF-053	S1450/E0075			1015		1118
202-RF-054	S1450/E0025			0952		1048
202-RF-055	S1400/E0025			0953		1049
202-RF-056	S1400/E0075			1014		1117
202-RF-057	S1400/E0125			1024		1131
202-RF-058	S1400/E0175			1042		1200
202-RF-059	S1400/E0225			1053		1216
202-RF-060	S1400/E0275			1113		1416
202-RF-061	S1400/E0325			1138		1429
202-RF-062	S1400/E0375			1200		1444
202-RF-063	S1400/E0425			1211		1450
202-RF-064	S1350/E0425			1212		1451
202-RF-065	S1350/E0375			1200		1443
202-RF-066	S1350/E0325			1138		1428
202-RF-066(QC)	S1350/E0325					
202-RF-067	S1350/E0275			1112		1411
202-RF-068	S1350/E0225			1055		1218
202-RF-069	S1350/E0175			1041		1159
202-RF-069(QC)	S1350/E0175					
202-RF-070	S1350/E0125			1025		1132
202-RF-071	S1350/E0075			1012		1116
202-RF-072	S1350/E0025			0954		1050
202-RF-073	S1300/E0025			0955		1051
202-RF-074	S1300/E0075			1012		1115
202-RF-075	S1300/E0125			1025		1133
202-RF-076	S1300/E0175			1040		1158
202-RF-077	S1300/E0225			1055		1220
202-RF-078	S1300/E0275			1111		1412
202-RF-078(QC)	S1300/E0275					
202-RF-079	S1300/E0325			1139		1428
202-RF-080	S1300/E0375			1159		1442
202-RF-081	S1300/E0425			1213		1451
202-RF-082	S1250/E0425			1214		1452
202-RF-083	S1250/E0375			1159		1441
202-RF-083(QC)	S1250/E0375					
202-RF-084	S1250/E0325			1140		1427
202-RF-085	S1250/E0275			1110		1413
202-RF-086	S1250/E0225			1056		1221
202-RF-087	S1250/E0175			1039		1158
202-RF-088	S1250/E0125			1026		1134
202-RF-088(QC)	S1250/E0125					
202-RF-089	S1250/E0075			1011		1115
202-RF-090	S1250/E0025			0956		1052
202-RF-091	S1200/E0025			0957		1053
202-RF-092	S1200/E0075			1010		1114

RADON FLUX DATA SHEET

(3)

SAMPLE ID	COORDINATES	CANISTER #	DATE OUT	TIME OUT	DATE IN	TIME IN
202-RF-093	S1200/E0125		8/3/98	1027	8/4/98	1135
202-RF-094	S1200/E0175			1039		1157
202-RF-095	S1200/E0225			1056		1222
202-RF-096	S1200/E0275			1110		1413
202-RF-097	S1200/E0325			1141		1427
202-RF-098	S1200/E0375			1158		1440
202-RF-099	S1200/E0425			1215		1452
202-RF-100	S1150/E0425			1216		1452
202-RF-101	S1150/E0375			1158		1440
202-RF-102	S1150/E0325			1142		1426
202-RF-103	S1150/E0275			1104		1414
202-RF-104	S1150/E0225			1056		1224
202-RF-105	S1150/E0175			1038		1155
202-RF-106	S1150/E0125			1027		1136
202-RF-107	S1150/E0075			1009		1112
202-RF-108	S1150/E0025			0957		1034
202-RF-109	S1100/E0025			0958		1055
202-RF-110	S1100/E0075			1009		1111
202-RF-111	S1100/E0125			1028		1137
202-RF-112	S1100/E0175			1037		1154
202-RF-113	S1100/E0225			1057		1225
202-RF-114	S1100/E0275			1108		1414
202-RF-115	S1100/E0325			1143		1425
202-RF-116	S1100/E0375			1157		1438
202-RF-117	S1100/E0425			1216		1453
202-RF-118	S1050/E0425			1217		1454
202-RF-119	S1050/E0375			1156		1438
202-RF-120	S1050/E0325			1144		1425
202-RF-121	S1050/E0275			1107		1415
202-RF-122	S1050/E0225			1057		1230
202-RF-123	S1050/E0175			1036		1152
202-RF-124	S1050/E0125			1029		1138
202-RF-125	S1050/E0075			1008		1110
202-RF-126	S1050/E0025			0959		1056
202-RF-126(QC)	S1050/E0025			1000		
202-RF-127	S1000/E0025			1000		1058
202-RF-128	S1000/E0075			1007		1109
202-RF-128(QC)	S1000/E0075					
202-RF-129	S1000/E0125			1029		1139
202-RF-130	S1000/E0175			1036		1150
202-RF-131	S1000/E0225			1058		1230
202-RF-132	S1000/E0275			1106		1416
202-RF-133	S1000/E0325			1144		1424
202-RF-134	S1000/E0375			1155		1437
202-RF-135	S1000/E0425			1217		1454
202-RF-136	S0950/E0425			1218		1455
202-RF-137	S0950/E0375			1154		1437
202-RF-138	S0950/E0325			1145		1424
202-RF-139	S0950/E0275			1105		1416
202-RF-140	S0950/E0225			1058		1231
202-RF-141	S0950/E0175			1035		1150

RADON FLUX DATA SHEET

(4)

SAMPLE ID	COORDINATES	CANISTER #	DATE OUT	TIME OUT	DATE IN	TIME IN
202-RF-142	S0950/E0125		8/3/98	1030	8/4/98	1140
202-RF-143	S0950/E0075			1007		1108
202-RF-144	S0950/E0025			1001		1059
202-RF-144(QC)	S0950/E0025					
202-RF-145	S0900/E0025			1002		1100
202-RF-146	S0900/E0075			1006		1107
202-RF-147	S0900/E0125			1030		1141
202-RF-148	S0900/E0175			1035		1148
202-RF-148(QC)	S0900/E0175					
202-RF-149	S0900/E0225			1059		1232
202-RF-150	S0900/E0275			1104		1417
202-RF-151	S0900/E0325			1146		1423
202-RF-152	S0900/E0375			1153		1436
202-RF-153	S0900/E0425			1224		1455
202-RF-154	S0850/E0425			1220		1456
202-RF-155	S0850/E0375			1154		1436
202-RF-156	S0850/E0325			1147		1422
202-RF-157	S0850/E0275			1103		1418
202-RF-158	S0850/E0225			1100		1234
202-RF-159	S0850/E0175			1034		1147
202-RF-160	S0850/E0125			1031		1142
202-RF-160(QC)	S0850/E0125					
202-RF-161	S0850/E0075			1005		1106
202-RF-162	S0850/E0025			1003		1101
202-RF-163	S0800/E0025			1003		1102
202-RF-164	S0800/E0075			1004		1105
202-RF-164(QC)	S0800/E0075					
202-RF-165	S0800/E0125			1031		1143
202-RF-165(QC)	S0800/E0125					
202-RF-166	S0800/E0175			1033		1146
202-RF-167	S0800/E0225			1100		1235
202-RF-168	S0800/E0275			103		1419
202-RF-169	S0800/E0325			1148		1422
202-RF-170	S0800/E0375			1152		1435
202-RF-171	S0800/E0425			1225		1457
202-RF-171(QC)	S0800/E0425					
202-RF-172	S0750/E0425			1221		1457
202-RF-173	S0750/E0375			1226		1435
202-RF-174	S0750/E0325			1149		1421
202-RF-175	S0750/E0275			1102		1420
202-RF-176	S0750/E0225			1101		1236
202-RF-177	S0750/E0175			1032		1145
202-RF-178	S0750/E0125			1032		1145
202-RF-179	S0750/E0075			1005		1104
202-RF-180	S0750/E0025			1004		1103
202-RF-180(QC)	S0750/E0025					

REASON	RElinquished BY	RECEIVED BY	DATE	TIME
Shipping	McGill Fed Ex	FED EX Kathy Shaulis	8/4/98 8/5/98	17:30 0930

LabID	Posting Time	Aliquot	Client ID	Rpt Units	Energy Calib Date	EII Calib Date	Detector	Count Date	Duration (sec)	Analyte	Identified?	ACT	Error	MDA	
07277-1A	08/05/98 12:58	1	SPIKE	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 12:53	300	RN-222	YES	13090	474.9	465.5
07277-01B	08/05/98 13:05:	4410	BLANK	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 13:00	300	RN-222	NO	0.0353	0.0204	0.0589
07277-01	08/05/98 13:11:	4410	202RF001	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 13:06	300	RN-222	NO	0.1027	0.043	0.1025
07277-02	08/05/98 13:17	4431	202RF002	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 13:12	300	RN-222	NO	0.0638	0.0375	0.0845
07277-03	08/05/98 13:18	4431	202RF003	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/05/98 13:13	300	RN-222	NO	0.0674	0.039	0.1019
07277-04	08/05/98 13:23	4478	202RF004	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 13:17	300	RN-222	NO	0.0176	0.0208	0.0545
07277-05	08/05/98 13:24	4478	202RF005	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/05/98 13:19	300	RN-222	NO	0.0715	0.0371	0.0996
07277-06	08/05/98 13:30	4690	202RF006	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 13:25	300	RN-222	NO	0.0168	0.0165	0.0478
07277-07	08/05/98 13:31	4775	202RF007	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/05/98 13:26	300	RN-222	NO	0.0119	0.0235	0.0539
07277-08	08/05/98 13:36	4717	202RF008	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 13:31	300	RN-222	NO	-0.0018	0.0272	0.0557
07277-09	08/05/98 13:39	4717	202RF009	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/05/98 13:34	300	RN-222	NO	0.0292	0.0215	0.0531
07277-10	08/05/98 13:43	4714	202RF010	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 13:38	300	RN-222	NO	-0.0007	0.0229	0.05
07277-10B	08/05/98 12:13	4717	BLANK	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/05/98 13:44	300	RN-222	NO	0.0411	0.0245	0.0666
07277-10D	08/05/98 13:50	4714	202RF010	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 13:46	300	RN-222	NO	0.0108	0.0162	0.05
07277-11	08/06/98 12:26	4717	202RF011	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 13:50	300	RN-222	NO	0.0437	0.0306	0.0727
07277-12	08/06/98 12:14	4773	202RF012	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/05/98 13:52	300	RN-222	NO	0.0145	0.024	0.0615
07277-13	08/06/98 12:26	4696	202RF013	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 13:56	300	RN-222	NO	0.0248	0.0261	0.0641
07277-14	08/06/98 12:36	4484	202RF014	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/05/98 13:58	300	RN-222	NO	0.0072	0.019	0.0482
07277-15	08/06/98 12:37	4472	202RF015	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 14:03	300	RN-222	NO	0.0383	0.0218	0.061
07277-16	08/06/98 12:38	4434	202RF016	pCi	m2sec	08/03/98 6:38	09/26/97 14:38	GE4	08/05/98 14:04	300	RN-222	NO	0.0468	0.034	0.0826
07277-17	08/06/98 12:39	4316	202RF017	pCi	m2sec	06/24/98 9:38	08/05/98 10:42	GE2	08/05/98 14:24	300	RN-222	NO	0.0641	0.0312	0.083
07277-18	08/05/98 14:30	4413	202RF018	pCi	m2sec	08/03/98 6:38	09/26/97 14:38	GE4	08/05/98 14:25	300	RN-222	NO	0.0216	0.0224	0.0654
07277-19	08/05/98 14:31	4516	202RF019	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 14:30	300	RN-222	YES	0.084	0.023	0.0507
07277-20	08/05/98 14:36	4431	202RF020	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/05/98 14:32	300	RN-222	NO	0.0031	0.0117	0.0405
07277-20B	08/05/98 14:37	4434	BLANK	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 14:37	300	RN-222	YES	0.0683	0.0184	0.0381
07277-20D	08/05/98 14:42	5038	202RF020	pCi	m2sec	08/03/98 6:38	09/26/97 14:38	GE4	08/05/98 14:39	300	RN-222	NO	0.0829	0.0407	0.1082
07277-21	08/05/98 14:44	4434	202RF021	pCi	m2sec	06/24/98 9:38	08/05/98 10:42	GE2	08/05/98 14:45	300	RN-222	NO	0.0497	0.0262	0.0682
07277-22	08/05/98 14:50	4472	202RF022	pCi	m2sec	08/03/98 6:38	09/26/97 14:38	GE4	08/05/98 14:46	300	RN-222	NO	0.0407	0.031	0.0793
07277-23	08/05/98 14:51	4484	202RF023	pCi	m2sec	06/24/98 9:38	08/05/98 10:42	GE2	08/05/98 14:52	300	RN-222	NO	0.0385	0.0307	0.0652
07277-24	08/05/98 14:58	4702	202RF024	pCi	m2sec	08/03/98 6:38	09/26/97 14:38	GE4	08/05/98 14:54	300	RN-222	NO	0.0138	0.0178	0.0539
07277-25	08/05/98 14:59	4770	202RF025	pCi	m2sec	08/03/98 6:38	08/03/98 6:41	GE2	08/05/98 15:11	300	RN-222	NO	0.0181	0.0228	0.0595
07277-26	08/05/98 15:17	4719	202RF026	pCi	m2sec	08/03/98 6:38	09/26/97 14:38	GE4	08/05/98 15:13	300	RN-222	NO	0.0195	0.0303	0.0718
07277-27	08/05/98 15:18	4714	202RF027	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 15:23	300	RN-222	NO	0.0053	0.0187	0.0443
07277-28	08/05/98 15:28	4714	202RF028	pCi	m2sec	08/03/98 6:38	09/26/97 14:38	GE4	08/05/98 15:24	300	RN-222	NO	0.0071	0.0262	0.0599
07277-29	08/05/98 15:29	4717	202RF029	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 15:29	300	RN-222	NO	0.0415	0.0257	0.0693
07277-30	08/05/98 15:34	4764	202RF030	pCi	m2sec	08/03/98 6:38	09/26/97 14:38	GE4	08/05/98 15:30	300	RN-222	NO	0.0063	0.0135	0.0439
07277-30B	08/05/98 15:36	4719	BLANK	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 15:35	300	RN-222	NO	0.0407	0.0226	0.062
07277-30D	08/05/98 15:40	4764	202RF030	pCi	m2sec	08/03/98 6:38	09/26/97 14:38	GE4	08/05/98 15:37	300	RN-222	NO	-0.0146	0.023	0.0379
07277-31	08/05/98 15:42	4719	202RF031	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 15:42	300	RN-222	NO	0.0546	0.0297	0.0777
07277-32	08/05/98 15:48	4487	202RF032	pCi	m2sec	08/03/98 6:38	06/24/98 9:38	GE4	08/05/98 15:44	300	RN-222	NO	0.0219	0.0227	0.0662
07277-33	08/05/98 15:49	4475	202RF033	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 15:49	300	RN-222	NO	0.0236	0.0289	0.0678
07277-34	08/05/98 15:54	4434	202RF034	pCi	m2sec	08/03/98 6:38	09/26/97 14:38	GE4	08/05/98 15:50	300	RN-222	NO	0.0608	0.0426	0.1062
07277-35	08/05/98 15:55	4431	202RF035	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 15:55	300	RN-222	NO	0.0973	0.0432	0.1066
07277-36	08/05/98 16:00	4407	202RF036	pCi	m2sec	08/03/98 6:38	06/24/98 9:38	GE4	08/05/98 15:56	300	RN-222	NO	0.0465	0.0348	0.0791
07277-37	08/05/98 16:02	4407	202RF037	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 16:04	300	RN-222	NO	0.0051	0.0161	0.0421
07277-38	08/05/98 16:09	4431	202RF038	pCi	m2sec	08/03/98 6:38	09/26/97 14:38	GE4	08/05/98 16:05	300	RN-222	NO	0.0377	0.0272	0.077
07277-39	08/05/98 16:10	4434	202RF039	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 16:19	300	RN-222	NO	0.0041	0.0228	0.0506
07277-40	08/05/98 16:25	4472	202RF040	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 16:20	300	RN-222	NO	0.0064	0.0142	0.0464
07277-40B	08/05/98 16:25	4490	BLANK	pCi	m2sec	08/03/98 6:38	09/26/97 14:38	GE4	08/05/98 16:20	300	RN-222	NO	0.0324	0.031	0.0736
07277-40D	08/05/98 16:32	4472	202RF040	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 16:27	300	RN-222	NO	0.0019	0.0198	0.0493
07277-41	08/05/98 16:35	4490	202RF041	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/05/98 16:29	300	RN-222	NO	0.032	0.0242	0.0609
07277-42	08/05/98 16:38	4752	202RF042	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 16:33	300	RN-222	NO	0.0433	0.0398	0.0832
07277-43	08/05/98 16:41	4758	202RF043	pCi	m2sec	08/03/98 6:38	09/26/97 14:38	GE4	08/05/98 16:35	300	RN-222	NO	0.0083	0.0166	0.0434
07277-44	08/05/98 16:46	4722	202RF044	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 16:40	300	RN-222	NO	-0.0161	0.0225	0.035
07277-45	08/05/98 16:47	4711	202RF045	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/05/98 16:41	300	RN-222	NO	0.0168	0.0277	0.0622
07277-46	08/05/98 16:58	4714	202RF046	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 16:53	300	RN-2				

07277-1 Merged Gamma

LabID	Posting Time	Aliquot	Client ID	Rpt Units	Energy Calib Date	Eff Calib Date	Detector	Count Date	Duration (sec)	Analyte	Identified?	ACT	Error	MDA	
07277-53	08/05/98 17:25	4428	202RF053	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/05/98 17:19	300	RN-222	NO	0.0228	0.0291	0.0746
07277-54	08/05/98 17:30	4584	202RF054	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 17:24	300	RN-222	NO	0.0438	0.0286	0.0728
07277-55	08/05/98 17:31	4407	202RF055	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/05/98 17:26	300	RN-222	NO	0.0408	0.0297	0.0831
07277-56	08/05/98 17:36	4428	202RF056	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 17:30	300	RN-222	NO	0.0347	0.0328	0.069
07277-57	08/05/98 17:37	4440	202RF057	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/05/98 17:31	300	RN-222	NO	0.057	0.0344	0.0939
07277-58	08/05/98 17:44	4472	202RF058	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 17:38	300	RN-222	NO	0.009	0.0179	0.0469
07277-59	08/05/98 17:49	4487	202RF059	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/05/98 17:43	300	RN-222	NO	0.0107	0.0241	0.0613
07277-60	08/05/98 17:50	4764	202RF060	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 17:45	300	RN-222	NO	0.021	0.0184	0.0525
07277-60B	08/05/98 17:58	4746	BLANK	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/05/98 17:53	300	RN-222	NO	0.01	0.0225	0.0574
07277-60D	08/05/98 17:57	4764	202RF060	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 17:52	300	RN-222	NO	0.0016	0.0207	0.0452
07277-61	08/05/98 18:23	4746	202RF061	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 18:18	300	RN-222	NO	-0.0075	0.0206	0.0393
07277-62	08/05/98 18:24	4725	202RF062	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/05/98 18:19	300	RN-222	NO	0.0067	0.0212	0.0536
07277-63	08/05/98 18:30	4711	202RF063	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 18:24	300	RN-222	NO	0.0121	0.0184	0.0481
07277-64	08/05/98 18:31	4711	202RF064	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/05/98 18:25	300	RN-222	NO	0.0004	0.0182	0.0447
07277-65	08/05/98 18:39	4722	202RF065	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 18:33	300	RN-222	NO	0.0388	0.0254	0.069
07277-66	08/05/98 18:42	4743	202RF066	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/05/98 18:37	300	RN-222	NO	-0.0066	0.0265	0.0518
07277-67	08/05/98 18:52	4770	202RF067	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 18:46	300	RN-222	NO	0.002	0.0177	0.0411
07277-68	08/05/98 18:54	4487	202RF068	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/05/98 18:49	300	RN-222	NO	0.0096	0.0293	0.0675
07277-1SA	08/05/98 18:59	1	SPIKE 2	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/05/98 18:54	300	RN-222	YES	13260	474.9	397.2
07277-69	08/06/98 7:19	4472	202RF069	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 7:12	300	RN-222	NO	0.0543	0.0287	0.0784
07277-70	08/06/98 7:20	4440	202RF070	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 7:15	300	RN-222	NO	0.0286	0.0274	0.079
07277-70B	08/06/98 7:25	4357	BLANK	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 7:20	300	RN-222	NO	-0.0136	0.0236	0.0415
07277-70D	08/06/98 7:27	4440	202RF070	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 7:22	300	RN-222	NO	0.0597	0.0364	0.0971
07277-71	08/06/98 7:32	4357	202RF071	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 7:26	300	RN-222	NO	0.0431	0.0324	0.0779
07277-72	08/06/98 7:34	4407	202RF072	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 7:28	300	RN-222	NO	0.0516	0.0428	0.097
07277-73	08/06/98 7:38	4584	202RF073	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 7:32	300	RN-222	NO	0.035	0.0241	0.0673
07277-74	08/06/98 7:40	4428	202RF074	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 7:34	300	RN-222	NO	0.0631	0.0384	0.1034
07277-75	08/06/98 7:44	4443	202RF075	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 7:39	300	RN-222	NO	0.0891	0.0421	0.1082
07277-76	08/06/98 7:46	4472	202RF076	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 7:41	300	RN-222	NO	0.027	0.0327	0.0838
07277-77	08/06/98 7:51	4493	202RF077	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 7:45	300	RN-222	NO	0.0903	0.0376	0.0992
07277-78	08/06/98 7:52	4775	202RF078	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 7:47	300	RN-222	NO	-0.0033	0.0179	0.0423
07277-79	08/06/98 7:57	4740	202RF079	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 7:52	300	RN-222	NO	0.0138	0.0162	0.0486
07277-80	08/06/98 7:58	4722	202RF080	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 7:53	300	RN-222	NO	0.0074	0.0235	0.0594
07277-80B	08/06/98 8:04	4708	BLANK	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 7:59	300	RN-222	NO	0.0175	0.0219	0.0573
07277-80D	08/06/98 8:05	4722	202RF080	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 8:00	300	RN-222	NO	0.0046	0.0284	0.0641
07277-81	08/06/98 8:10	4708	202RF081	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 8:05	300	RN-222	NO	0.0139	0.0163	0.0489
07277-82	08/06/98 8:12	4708	202RF082	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 8:06	300	RN-222	NO	0.0106	0.0175	0.0549
07277-83	08/06/98 8:16	4719	202RF083	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 8:10	300	RN-222	NO	0.0406	0.0258	0.0708
07277-84	08/06/98 8:17	4734	202RF084	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 8:12	300	RN-222	NO	0.0178	0.0214	0.0641
07277-85	08/06/98 8:21	4781	202RF085	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 8:16	300	RN-222	NO	0.0144	0.0241	0.0583
07277-86	08/06/98 8:23	4493	202RF086	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 8:18	300	RN-222	NO	0.0233	0.0313	0.0802
07277-87	08/06/98 8:27	4475	202RF087	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 8:22	300	RN-222	NO	0.0348	0.028	0.0727
07277-88	08/06/98 8:29	4443	202RF088	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 8:23	300	RN-222	NO	0.0596	0.0406	0.0974
07277-89	08/06/98 8:34	4431	202RF089	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 8:29	300	RN-222	NO	0.0544	0.0332	0.0891
07277-90	08/06/98 8:36	4407	202RF090	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 8:31	300	RN-222	NO	0.0905	0.0621	0.1337
07277-90B	08/06/98 8:44	4407	BLANK	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 8:39	300	RN-222	NO	0.0138	0.0172	0.0519
07277-91	08/06/98 8:46	4407	202RF090	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 8:41	300	RN-222	NO	0.0448	0.0312	0.0882
07277-92	08/06/98 8:52	4407	202RF091	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 8:46	300	RN-222	NO	0.089	0.04	0.1051
07277-93	08/06/98 8:54	4431	202RF092	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 8:49	300	RN-222	NO	0.0036	0.0362	0.0765
07277-93	08/06/98 8:57	4443	202RF093	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 8:52	300	RN-222	NO	0.0529	0.0387	0.0861
07277-94	08/06/98 9:00	4472	202RF094	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 8:54	300	RN-222	NO	0.0535	0.0346	0.0959
07277-95	08/06/98 9:05	4496	202RF095	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 8:59	300	RN-222	NO	0.0458	0.0327	0.0737
07277-96	08/06/98 9:06	4781	202RF096	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 9:01	300	RN-222	NO	0.0407	0.0262	0.0752
07277-97	08/06/98 9:11	4731	202RF097	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 9:06	300	RN-222	NO	0.026	0.025	0.0651
07277-98	08/06/98 9:13	4719	202RF098	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 9:07	300	RN-222	NO	0.0071	0.0153	0.05
07277-99	08/06/98 9:17	4705	202RF099	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 9:12	300	RN-222	NO	0.0278	0.0223	0.0629
07277-100	08/06/98 9														

Thermo Nuclear Services
 Oak Ridge, TN 37830

07277-1 Merged Gamma

LabID	Posting Time	Aliquot	Client ID	Rpt Units	Energy Calib Date	Eff Calib Date	Detector	Count Date	Duration (sec)	Analyte	Identified?	ACT	Error	MDA	
07277-106	08/06/98 9:42	4446	202RF106	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 9:37	300	RN-222	NO	0.0897	0.049	0.1265
07277-107	08/06/98 9:46	4428	202RF107	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 9:40	300	RN-222	NO	0.0656	0.0335	0.0908
07277-108	08/06/98 9:48	4351	202RF108	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 9:42	300	RN-222	NO	0.0616	0.0496	0.1058
07277-109	08/06/98 9:54	4410	202RF109	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 9:49	300	RN-222	NO	0.0722	0.0372	0.0943
07277-110	08/06/98 9:56	4425	202RF110	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 9:50	300	RN-222	NO	0.0485	0.0334	0.0934
07277-110B	08/06/98 10:00	4446	BLANK	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 9:54	300	RN-222	NO	0.018	0.0286	0.0617
07277-110D	08/06/98 10:02	4425	202RF110	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 9:56	300	RN-222	NO	0.0571	0.0354	0.0982
07277-111	08/06/98 10:05	4446	202RF111	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 10:00	300	RN-222	NO	0.0832	0.0543	0.1032
07277-111	08/06/98 10:07	4469	202RF112	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 10:02	300	RN-222	NO	0.0702	0.0436	0.1092
07277-112	08/06/98 10:25	4501	202RF113	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 10:20	300	RN-222	NO	0.0491	0.0373	0.0874
07277-113	08/06/98 10:26	4790	202RF114	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 10:21	300	RN-222	NO	0.0268	0.0256	0.074
07277-114	08/06/98 10:31	4719	202RF115	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 10:25	300	RN-222	NO	0.022	0.0238	0.0622
07277-115	08/06/98 10:33	4717	202RF116	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 10:27	300	RN-222	NO	0.0437	0.0327	0.0907
07277-116	08/06/98 10:33	4705	202RF117	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 10:31	300	RN-222	NO	0.0496	0.0263	0.0722
07277-117	08/06/98 10:37	4705	202RF118	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 10:33	300	RN-222	NO	0.006	0.0233	0.0586
07277-118	08/06/98 10:38	4705	202RF118	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 10:37	300	RN-222	NO	0.0111	0.0197	0.0515
07277-119	08/06/98 10:42	4719	202RF119	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 10:39	300	RN-222	NO	0.0101	0.031	0.0715
07277-120	08/06/98 10:44	4717	202RF120	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 10:43	300	RN-222	NO	-0.0034	0.0174	0.0381
07277-120B	08/06/98 10:48	4796	BLANK	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 10:44	300	RN-222	NO	0.0224	0.03	0.077
07277-120D	08/06/98 10:50	4717	202RF120	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 10:50	300	RN-222	NO	0.0304	0.0233	0.0651
07277-121	08/06/98 10:55	4796	202RF121	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 10:52	300	RN-222	NO	0.0049	0.0307	0.0693
07277-122	08/06/98 10:57	4516	202RF122	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 10:56	300	RN-222	NO	0.051	0.04	0.087
07277-123	08/06/98 11:01	4466	202RF123	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 10:57	300	RN-222	NO	0.0259	0.033	0.0847
07277-124	08/06/98 11:03	4446	202RF124	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 11:02	300	RN-222	NO	0.0404	0.0227	0.0598
07277-125	08/06/98 11:07	4425	202RF125	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 11:43	300	RN-222	NO	0.0586	0.0476	0.1141
07277-126	08/06/98 11:48	4410	202RF126	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 11:48	300	RN-222	NO	0.0412	0.0325	0.0691
07277-127	08/06/98 11:54	4413	202RF127	pCi	m2sec	08/03/98 6:38	09/26/97 14:38	GE4	08/06/98 11:50	300	RN-222	NO	0.0575	0.0339	0.0949
07277-128	08/06/98 11:56	4425	202RF128	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 11:56	300	RN-222	NO	0.0234	0.0293	0.0716
07277-129	08/06/98 12:01	4448	202RF129	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 11:58	300	RN-222	NO	-0.0228	0.0386	0.0636
07277-130	08/06/98 12:03	4460	202RF130	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 12:02	300	RN-222	NO	0.0013	0.016	0.0412
07277-130B	08/06/98 12:08	4513	BLANK	pCi	m2sec	08/03/98 6:38	09/26/97 14:38	GE4	08/06/98 12:04	300	RN-222	NO	0.0392	0.032	0.0903
07277-130D	08/06/98 12:09	4460	202RF130	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 12:08	300	RN-222	NO	0.0423	0.027	0.0654
07277-131	08/06/98 12:24	4513	202RF131	pCi	m2sec	08/03/98 6:38	09/26/97 14:38	GE4	08/06/98 12:10	300	RN-222	NO	0.0162	0.0209	0.063
07277-132	08/06/98 12:25	4802	202RF132	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 12:15	300	RN-222	NO	0.0285	0.0229	0.0645
07277-133	08/06/98 12:43	4714	202RF133	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 12:16	300	RN-222	NO	0.0219	0.0239	0.0702
07277-134	08/06/98 12:21	4719	202RF134	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 12:21	300	RN-222	NO	0.0151	0.0215	0.0564
07277-135	08/06/98 12:26	4705	202RF135	pCi	m2sec	08/03/98 6:38	09/26/97 14:38	GE4	08/06/98 12:22	300	RN-222	NO	0.0226	0.0304	0.0779
07277-136	08/06/98 12:27	4705	202RF136	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 12:27	300	RN-222	NO	0.0464	0.0252	0.07
07277-137	08/06/98 12:32	4722	202RF137	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 12:28	300	RN-222	NO	0.0214	0.0352	0.0832
07277-138	08/06/98 12:33	4711	202RF138	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 12:33	300	RN-222	NO	0.0441	0.0323	0.0763
07277-139	08/06/98 12:39	4805	202RF139	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 12:34	300	RN-222	NO	0.0503	0.0407	0.0941
07277-140	08/06/98 12:40	4516	202RF140	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 12:40	300	RN-222	NO	0.0053	0.0231	0.0543
07277-140B	08/06/98 12:45	4463	BLANK	pCi	m2sec	08/03/98 6:38	09/26/97 14:38	GE4	08/06/98 12:41	300	RN-222	NO	-0.0067	0.0264	0.0543
07277-140D	08/06/98 12:51	4463	202RF141	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 12:46	300	RN-222	YES	0.0835	0.024	0.0394
07277-141	08/06/98 12:52	4448	202RF142	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 12:47	300	RN-222	NO	0.1035	0.0507	0.1293
07277-142	08/06/98 12:57	4422	202RF143	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 12:52	300	RN-222	YES	0.1006	0.0247	0.0514
07277-143	08/06/98 12:59	4413	202RF144	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 12:53	300	RN-222	NO	0.0856	0.0469	0.1254
07277-144	08/06/98 13:03	4413	202RF145	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 12:58	300	RN-222	NO	0.0806	0.0452	0.1059
07277-145	08/06/98 13:04	4422	202RF146	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 12:59	300	RN-222	NO	0.0617	0.0515	0.1064
07277-146	08/06/98 13:09	4451	202RF147	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 13:04	300	RN-222	NO	0.0207	0.0286	0.0698
07277-147	08/06/98 13:11	4457	202RF148	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 13:05	300	RN-222	NO	0.0276	0.0275	0.08
07277-148	08/06/98 13:15	4516	202RF149	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 13:10	300	RN-222	NO	0.0578	0.039	0.0852
07277-149	08/06/98 13:16	4811	202RF150	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 13:11	300	RN-222	NO	0.0451	0.031	0.0868
07277-150	08/06/98 13:21	4705	BLANK	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 13:16	300	RN-222	NO	-0.0066	0.021	0.0419
07277-150D	08/06/98 13:22	4811	202RF150	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 13:17	300	RN-222	NO	0.0173	0.0335	0.0787
07277-151	08/06/98 13:27	4705	202RF151	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE							

07277-1 Merged Gamma

LabID	Posting Time	Aliquot	Client ID	Rpt Units	Energy Calib Date	Eff Calib Date	Detector	Count Date	Duration (sec)	Analyte	Identified?	ACT	Error	MDA	
07277-160	08/06/98 13:51	4451	202RF160	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 13:46	300	RN-222	NO	0.0186	0.0308	0.0788
07277-160B	08/06/98 13:57	4422	BLANK	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 13:52	300	RN-222	NO	0.0065	0.0132	0.043
07277-160D	08/06/98 13:58	451	202RF160	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 13:53	300	RN-222	NO	0.6086	0.3762	1.034
07277-161	08/06/98 14:22	4422	202RF161	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 14:16	300	RN-222	NO	0.0486	0.0366	0.0863
07277-162	08/06/98 14:23	4413	202RF162	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 14:17	300	RN-222	NO	0.0636	0.0406	0.1109
07277-163	08/06/98 14:28	4416	202RF163	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 14:22	300	RN-222	NO	0.1037	0.0447	0.1164
07277-164	08/06/98 14:29	4422	202RF164	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 14:23	300	RN-222	NO	0.0246	0.0334	0.0857
07277-165	08/06/98 14:34	4454	202RF165	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 14:28	300	RN-222	NO	0.0234	0.0219	0.0634
07277-166	08/06/98 14:35	4457	202RF166	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 14:29	300	RN-222	NO	0.0852	0.0468	0.1237
07277-167	08/06/98 14:39	4522	202RF167	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 14:34	300	RN-222	NO	0.0512	0.0271	0.0751
07277-167	08/06/98 14:41	4820	202RF168	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 14:35	300	RN-222	NO	0.0239	0.0248	0.0723
07277-168	08/06/98 14:45	4696	202RF169	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 14:39	300	RN-222	NO	0.0816	0.0375	0.0988
07277-169	08/06/98 14:45	4722	202RF170	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 14:41	300	RN-222	NO	0.0388	0.0276	0.0792
07277-170	08/06/98 14:46	4690	BLANK	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 14:45	300	RN-222	NO	-0.011	0.0194	0.035
07277-170B	08/06/98 14:50	4722	202RF170	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 14:46	300	RN-222	NO	0.0134	0.0272	0.0694
07277-170D	08/06/98 14:52	4722	202RF170	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 14:54	300	RN-222	NO	0.0118	0.0223	0.0498
07277-171	08/06/98 14:59	4690	202RF171	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 14:55	300	RN-222	NO	0.0166	0.0393	0.087
07277-172	08/06/98 15:00	4702	202RF172	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 14:59	300	RN-222	NO	0.0466	0.0315	0.0822
07277-173	08/06/98 15:05	4622	202RF173	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 15:01	300	RN-222	NO	0.0169	0.0218	0.0657
07277-174	08/06/98 15:06	4690	202RF174	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 15:09	300	RN-222	NO	0.0192	0.0265	0.0646
07277-175	08/06/98 15:14	4826	202RF175	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 15:10	300	RN-222	NO	0.0205	0.037	0.0871
07277-176	08/06/98 15:16	4522	202RF176	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 15:17	300	RN-222	NO	0.0462	0.0372	0.0815
07277-177	08/06/98 15:22	4457	202RF177	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 15:18	300	RN-222	NO	0.0538	0.0385	0.1025
07277-178	08/06/98 15:23	4457	202RF178	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 15:25	300	RN-222	NO	0.0913	0.043	0.1102
07277-179	08/06/98 15:31	4416	202RF179	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 15:26	300	RN-222	NO	0.1015	0.0505	0.1338
07277-180	08/06/98 15:31	4416	202RF180	pCi	m2sec	08/03/98 6:38	08/05/98 10:42	GE2	08/06/98 15:33	300	RN-222	NO	-0.0048	0.0131	0.0306
07277-180B	08/06/98 15:38	4416	BLANK	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 15:35	300	RN-222	NO	0.1421	0.0679	0.1685
07277-180D	08/06/98 15:40	4416	202RF180	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4	08/06/98 15:41	300	RN-222	YES	12350	552.2	378.7
07277-1SB	08/06/98 15:47		1 FINAL SPIKE	pCi	m2sec	06/24/98 9:38	09/26/97 14:38	GE4							

AG
8/10/98



Utah
Department
of Health

DIVISION OF EPIDEMIOLOGY
AND LABORATORY SERVICES

State of Utah

Michael O. Leavitt

Governor

Rod L. Betit

Executive Director

Charles D. Brokopp, Dr. P.H.

Director

Bureau of Laboratory Improvement

46 North Medical Drive

Salt Lake City, Utah 84113-1105

Telephone: (801) 584-8469

Fax: (801) 584-8501

SEP 02 1998

WILLIAM L McDOWELL PHD
THERMO NUTECH - TN
601 SCARBORO RD
OAK RIDGE TN 37830

QA/QC RECEIVED

DATE 9/8/98 INITIALS WT

Customer ID: TMA2
Account No: 6154810683

On the basis of your most recent audit results and compliance with the ELCP requirements, the laboratory listed is certified for environmental monitoring under the Clean Water Act and authorized to perform the following analytes, or groups of analytes by method:

RADIOLOGICS
GROSS ALPHA 900.0
GROSS BETA 900.0

RADIUM 226 903.1
TOTAL RADIUM 903.0

This laboratory's certification is effective AUGUST 31, 1998

The analytes or groups of analytes by method which a laboratory is authorized to perform at any given time will be those indicated in the most recent certificate letter. The most recent certification letter supersedes all previous certification or authorization letters. Any discrepancies must be documented and notice received by this Bureau within 15 days of receipt. The certification will be recalled in the event your Laboratory's certification is revoked.

Respectfully,

Charles Brokopp, Dr. P.H.
Director

cc. Utah Department of Environmental Quality
Kevin W. Brown - Division of Drinking Water
Dennis Downs - Division of Solid and Hazardous Waste
Don A. Ostler - Division of Water Quality
U.S. EPA Region VIII QAO

The expiration date for this laboratory's certification is SEP 30 2000. The Utah Environmental Laboratory Certification Program (ELCP) encourages clients and data users to verify the most current certificate letter for the authorized method. Please call 801-584-8469.



State of Utah

DIVISION OF EPIDEMIOLOGY
AND LABORATORY SERVICES

Michael O. Leavitt
Governor

Rod L. Betit
Executive Director

Charles D. Brokopp, Dr. P.H.
Director

Bureau of Laboratory Improvement
46 North Medical Drive
Salt Lake City, Utah 84113-1105
Telephone:(801)584-8469
Fax:(801) 584-8501

SEP 02 1998

WILLIAM L McDOWELL PHD
THERMO NUTECH - TN
601 SCARBORO RD
OAK RIDGE TN 37830

QA/QC APPROVED
DATE 9/8/98 INITIALS MT

Customer ID: TMA2
Account No: 6154810683

On the basis of your most recent audit results and compliance with the ELCP requirements, the laboratory listed is certified for environmental monitoring under the Safe Drinking Water Act and authorized to perform the following analytes, or groups of analytes by method:

RADIOLOGICS
CESIUM-134 901.1
GAMMA EM 901.1
GROSS ALPHA&BETA 900.0

RADIUM 226 903.1
RADIUM 228 904.0
TOTAL RADIUM
TRITIUM 906.0

This laboratory's certification is effective AUGUST 31, 1998

The analytes or groups of analytes by method which a laboratory is authorized to perform at any given time will be those indicated in the most recent certificate letter. The most recent certification letter supersedes all previous certification or authorization letters. Any discrepancies must be documented and notice received by this Bureau within 15 days of receipt. The certification will be recalled in the event that your Laboratory's certification is revoked.

Respectfully,

Charles Brokopp, Dr. P.H.
Director

cc. Utah Department of Environmental Quality
Kevin W. Brown - Division of Drinking Water
Dennis Downs - Division of Solid and Hazardous Waste
Don A. Ostler - Division of Water Quality
U.S. EPA Region VIII QAO

The expiration date for this laboratory's certification is SEP 30 2000. The Utah Environmental Laboratory Certification Program (ELCP) encourages clients and data users to verify the most current certificate letter for the authorized method. Please call 801-584-8469.



State of Utah

Michael O. Leavitt

Governor

Rod L. Betit

Executive Director

Charles D. Brokopp, Dr. P.H.

Director

DIVISION OF EPIDEMIOLOGY
AND LABORATORY SERVICES

Bureau of Laboratory Improvement

46 North Medical Drive

Salt Lake City, Utah 84113-1105

Telephone: (801) 584-8469

Fax: (801) 584-8501

SEP 02 1998

WILLIAM L McDOWELL PHD
THERMO NUTECH - TN
601 SCARBORO RD
OAK RIDGE TN 37830

QA/QC RECEIPT

DATE 9/8/98 INITIALS WT

Customer ID: TMA2
Account No: 6154810683

On the basis of your most recent audit results and compliance with the ELCP requirements, the laboratory listed is certified for environmental monitoring under the Resource Conservation and Recovery Act and authorized to perform the following analytes, or groups of analytes by method:

RADIOLOGICS

RADIUM 228-9320

ALPHA-EMIT RADIUM 9315

This laboratory's certification is effective AUGUST 31, 1998

The analytes or groups of analytes by method which a laboratory is authorized to perform at any given time will be those indicated in the most recent certificate letter. The most recent certification letter supersedes all previous certification or authorization letters. Any discrepancies must be documented and notice received by this Bureau within 15 days of receipt. The certification will be recalled in the event that your Laboratory's certification is revoked.

Respectfully,

Charles Brokopp, Dr. P.H.
Director

cc. Utah Department of Environmental Quality
Kevin W. Brown - Division of Drinking Water
Dennis Downs - Division of Solid and Hazardous Waste
Don A. Ostler - Division of Water Quality
U.S. EPA Region VIII QAO

The expiration date for this laboratory's certification is SEP 30 2000. The Utah Environmental Laboratory Certification Program (ELCP) encourages clients and data users to verify the most current certificate letter for the authorized method. Please call 801-584-8469.

ATTACHMENT 6

DRAFT COVER LETTER TO EPA

DRAFT LETTER

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

Subject: Niagara Falls Storage Site (NFSS)
1998 Radon Flux Monitoring Results

Dear Mr. Giardina:

Enclosed are the 1998 results for radon-222 flux monitoring of the storage pile (Waste Containment Structure) at the Niagara Falls Storage Site (NFSS) in Lewiston, New York. The monitoring data is being provided for your information in the spirit of the Memorandum of Understanding (MOU) between the U.S. Environmental Protection Agency (EPA) and U.S. Department of Energy (DOE) concerning the Clean Air Act Emission Standards for Radionuclides, 40 CFR Part 61 including subparts H, I, Q, and T (signed April 1995). This submittal is also consistent with DOE's planned implementation of the MOU for its Region II Formerly Utilized Sites Remedial Action Program (FUSRAP) sites as outlined in correspondence to you from Lester K. Price, Director of DOE Former Sites Restoration Division, dated July 1, 1996. As you may know, management of FUSRAP has been subsequently transferred from DOE to the U.S. Army Corps of Engineers (USACE). The results demonstrate continued compliance with the requirements specified in Subpart Q of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) and is conducted as part of performance monitoring of the clay pile cover.

Radon-222 flux at the NFSS site was measured using 180 10-inch diameter activated carbon canisters placed at 15-meter intervals across the pile and sealed to the surface for a 24-hour exposure period (August 3-4, 1998). The radon-222 flux monitoring locations are shown in the attached figure and the monitoring results are summarized in the attached table. Individual and average measurements were well below the NESHAPs standard for radon flux, with results ranging from non-detect to 0.61 pCi/m²/s. These results are consistent with radon flux measured in previous years.

If you have any questions, please do not hesitate to contact me at (____) _____.

Sincerely,

DRAFT