Wayne, New Jersey, Site

U.S. DEPARTMENT OF ENERGY | Legacy Management

SITE CERTIFICATION SUMMARY

This Site Certification Summary provides information about the **Wayne, New Jersey, Site**. The U.S. Department of Energy Office of Legacy Management is responsible for long-term stewardship of the site under the **Formerly Utilized Sites Remedial Action Program**.

Site Description and History

The Wayne, New Jersey, Site (previously called the Wayne Interim Storage Site) is a 6.5-acre property located at 868 Black Oak Ridge Road in Wayne Township in northern New Jersey. From 1948 through 1957, Rare Earths, Inc. processed monazite sand at the site to extract thorium and rare-earth metals. The Davison Chemical Division of W.R. Grace acquired the site in 1957, and processing activities continued until July 1971, when the facility was licensed by the U.S. Atomic Energy Commission for storage only. In 1975, the U.S. Nuclear Regulatory Commission (NRC) terminated the storage license for radioactive materials and released the site without radiological restrictions. NRC only stipulated that the property deed must state that the property had buried radioactive materials on-site.

There are several vicinity properties (VPs) located in commercial and residential areas also associated with this site. Transporting and storing radioactive materials contaminated these VPs.

Wayne, New Jersey, Site (August 2006).

Site Remediation Timeline

1981 — NRC surveyed the site and identified elevated radiation levels greater than the U.S. Department of Energy (DOE) guidelines.

1984 — The Wayne site was designated for remedial action under the DOE Formerly Utilized Sites Remedial Action Program (FUSRAP).

September 21, 1984 — The U.S. Environmental Protection Agency (EPA) added the site to the National Priorities List.

September 1985 — Ownership of the site transferred from W.R. Grace and Co. to the federal government.

1985 through 1987 — Bechtel National, Inc., contracted by DOE, removed radioactive contamination from the Wayne site and the following VPs: Wayne Township Park, the backyard of 112 Deerfield Road, the front yard of 34 Farmingdale Road, portions under Farmingdale Road, portions of Sheffield Brook, the mouth of Sheffield Brook, the front yard of the former W.R. Grace and Co. property, a small area on the right-of-way of Pompton Plains Cross Road, and the school bus maintenance facility.

June 6, 1990 — DOE certified that the Wayne site and VPs remediated from 1985 to 1987 were clean. DOE published the notice of certification in the Federal Register.

September to December 1993 — DOE remediated seven residential VPs in the townships of Pequannock and Wayne and at the Pompton Plains Railroad Spur VP.

September 26, 1995 — DOE certified that the VPs remediated in 1993 were clean. DOE published the notice of certification in the Federal Register.

1997 — When licensed disposal facilities started to open, DOE removed the 38,500-cubic-yard interim storage pile from the site.

1998 — The U.S. Army Corps of Engineers (USACE) removed another 41,500 cubic yards of buried contaminated materials.

April 27, 2000 — USACE issued the Wayne site Record of Decision (ROD), which specified the removal of the remaining 55,410 cubic yards of buried contaminated material.

2002 — USACE began a long-term groundwater monitoring program, which continued through 2006.

May and June 2003 — USACE reviewed the 1980s remediation and determined that two VPs (Wayne Township Park and the small right-of-way area adjacent to the Pompton Plains Cross Road) required additional remediation due to a change in radiological standards.

July and August 2003 — USACE excavated 2,300 cubic yards of soil from the two VPs.

2006 — The Wayne site transferred from the federal government to the township of Wayne for recreational use as a park.

2007 — USACE transferred long-term stewardship responsibility for the Wayne site to the DOE Office of Legacy Management (LM).

2009 and 2010 — Previously inaccessible portions of Pompton Plains Crossroad and Black Oak Ridge Road were made accessible for remediation; these areas underwent complete excavation.

2012 — EPA removed the Wayne site from the National Priorities List.

Remedial Action

Remediation of the Wayne site began in 1985 and completed in 2010. DOE remediated the site from 1985 to 1987 and also in late 1993. USACE continued the remediation in 2003 and 2009 through 2010. See the Fact Sheet or the Site Closeout Report for remediation details.

The ROD-specified remediation objectives addressed the Wayne site's contaminated soil and debris. The Wayne site ROD also considered the long-term goals of protecting human health and the environment while meeting the applicable requirements. A risk analysis showed the average contamination concentrations needed to meet federal requirements (i.e., the Comprehensive Environmental Response, Compensation, and Liability Act and 10 CFR 20, Subpart E). Those average concentrations were:

- 5 picocuries per gram (pCi/g) of thorium-232 (Th-232) and radium-226 (Ra-226) combined above naturally occurring background concentrations of 2.1 p/Ci/g for residential use.
- 15 pCi/g of Th-232 and Ra-226 combined above naturally occurring background concentrations for recreational use.

In addition to cleanup levels for radium and thorium, uranium cleanup levels were developed on a site-specific basis. The levels are an average concentration of 50 pCi/g above background for uranium-238 (U-238) and an average concentration of 100 pCi/g above the background of 4.2 pCi/g for total uranium (uranium-234 and U-238).

Post-Remediation Sampling

DOE Remediation, 1985-1987

After excavating, DOE surveyed the excavated area to confirm removal of radionuclide concentrations exceeding guidelines. This survey included surface gamma radiation scans, soil sampling, and dose rate measurements. Analytical results of soil samples, collected from the decontaminated areas, showed no areas of contamination remaining in excess of DOE remediation guidelines. Analytical results of soil samples collected following remediation indicated U-238 concentrations ranging from 1.1 to 3.8 pCi/g and averaging 1.8 pCi/g. Ra-226 concentrations ranged from 0.79 to 1.2 pCi/g and averaged 0.95 pCi/g. Th-232 concentrations ranged from 1.6 to 5.9 pCi/g and averaged 3.1 pCi/g.

DOE Remediation, 1993

As excavation proceeded in exterior areas, DOE conducted walkover surface scans and soil sampling to confirm removal of all radioactively contaminated soil. Using composited samples representing a 100-square-meter area, soil sample analysis indicated that the highest Th-232 concentration was 3.6 pCi/g.

USACE Remediation, 2003

The results of final status surveys demonstrated that ROD cleanup levels were achieved for radiological and chemical constituents of concern. USACE excavated 2,300 cubic yards of additional soil from the Wayne Township Park and the small right-of-way area adjacent to the Pompton Plains Cross Road.

USACE Remediation, 2009-2010

Using data collected from this remediation phase, USACE showed how the site complied with the ROD-specified cleanup criteria. No FUSRAP-related contamination remains in the previously inaccessible areas under the Black Oak Ridge Road, and the site was released for unrestricted use.

As of this writing, USACE did not provide any post-remediation documents for the Wayne site except for the final closeout report (dated April 2012) to LM staff.

For more detailed results of the post-remediation sampling, see the Site Certification Data Summary Worksheet on pages 4-10. For a detailed map of the site and sampling locations, see the Site Overview Map on page 11.

Current Site Conditions

The Wayne site meets all site-completion requirements as specified in the EPA Directive 9320.2-22, *Close Out Procedures for National Priorities List Sites*. All site remediation is complete, and the implemented remedy achieves the ROD-specified degree of cleanup for all exposure pathways. Therefore, EPA determined that no further response action is necessary at the site to protect human health and the environment. DOE has been responsible for long-term stewardship of the Wayne site since 2007. The stewardship requirements and protocols are captured in the Long-Term Stewardship Plan for Completed FUSRAP Sites, which is available on the DOE Office of Legacy Management website (www.energy.gov/lm/wayne-new-jersey-site).

ADDITIONAL INFORMATION

Documents related to FUSRAP activities at the Wayne, New Jersey, Site are available on the LM website at lmpublicsearch.lm.doe.gov/SitePages/default.aspx?sitename=Wayne.

For other information on site history or current long-term stewardship activities, please contact us at:

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Wayne, New Jersey, Site Certification Data Summary Worksheet

Twenty-four tables referenced in the New York Certification Docket provide the evidence used to certify the site as clean.

When the tables refer to the "PRAR1," that is the "Post-Remedial Action Report for 826 Black Oak Ridge Road, Wayne, New Jersey" (dated March 1987).

When the tables refer to the "PRAR2," that is the "Post-Remedial Action Report for the Wayne Site - 1986, Wayne, New Jersey" (dated April 1987). The copy of PRAR2 available to LM staff is missing some of the pages with tables; therefore, Tables 2 and 3 from PRAR2 are not reproduced here.

When the tables refer to the "PRAR3," that is the "Post-Remedial Action Report for the Wayne Site - 1985 and 1987, Wayne, New Jersey" (dated March 1989).

When the tables refer to the "PRAR4," that is the "Post-Remedial Action Report for the Wayne Site Vicinity Properties, Wayne, New Jersey" (dated August 1994).

NOTE: No post-remediation documents written by USACE, except for the Final Close-Out Report (dated April 2012), are currently available to LM staff for the Wayne Site. Therefore this data summary worksheet only contains data from documents written by DOE (dated 1994 and earlier).

Gamma Radiation Exposure Rate Measurements at 826 Black Oak Ridge Road - FY 1985

Table 2 in PRAR1

Coordinates		Exposure Rate mrem/yr*
North	East	
4962.5	10037.5	5
4962.5	10052.5	0
4962.5	10067.5	5
4962.5	10082.5	23
4977.5	10022.5	0
4977.5	10037.5	14
4977.5	10052.5	14
4977.5	10067.5	14
4977.5	10082.5	5
4985.0	10082.5	14
4992.5	10022.5	23
4992.5	10037.5	40
4992.5	10052.5	31
4992.5	10067.5	40
4992.5	10082.5	31

*Converted from µR/h measurements by assuming continuous occupancy and subtracting a background contribution of 100 mrem/yr. The DOE standard permits exposures up to 100 mrem/yr above background (average over a lifetime).

Post-Remedial Action Sampling Results for 826 Black Oak Ridge Road - FY 1987

Table 4 in PRAR1

Grid Coordinates		Concentration (pCi/g ± 1 sigma)*		
East	North	Uranium-238	Radium-226	Thorium-232
10051.5	5000.0	<2.0	0.6 ± 0.1	0.7 ± 0.4
10062.5	4997.5	<2.1	0.8 ± 0.1	1.3 ± 0.5
10075.5	4999.5	<2.4	0.6 ± 0.1	1.0 ± 0.2
10077.0	4999.0	<6.1	3.7 ± 0.7	22.3 ± 3.9**

*Samples taken from bottom of the excavation.
**When the four results are averaged over a 100-m^2 area, the concentration of thorium-232 is below the remedial action guideline of 15 pCi/g.

Post-Remedial Action Sampling Results for 826 Black Oak Ridge Road - FY 1985

Table 3 in PRAR1

Grid Coordinates		Concentration (pCi/g ± 1 sigma)*		
East	North	Uranium-238	Radium-226	Thorium-232
10015.0	4970.0	<3.9	0.7 ± 0.2	2.6 ± 1.2
10015.0	4977.5	<3.1	0.4 ± 0.1	1.3 ± 0.1
10015.0	4985.0	<3.0	0.6 ± 0.2	1.9 ± 0.1
10015.0	4992.5	<4.0	0.5 ± 0.2	1.9 ± 0.1
10015.0	5000.0	<4.6	1.0 ± 0.2	2.9 ± 0.9
10022.5	4971.0	<3.6	0.8 ± 0.5	1.6 ± 0.1
10022.5	4977.5	<3.3	0.6 ± 0.1	1.7 ± 0.7
10022.5	4985.0	<3.9	0.7 ± 0.1	2.3 ± 0.8
10022.5	4992.5	<3.2	0.6 ± 0.1	1.7 ± 0.8
10022.5	5000.0	<3.4	0.7 ± 0.2	2.0 ± 0.9
10030.0	4977.5	<1.6	0.7 ± 0.1	1.3 ± 0.4
10030.0	4985.0	0.7 ± 1.1	0.6 ± 0.2	1.5 ± 0.4
10030.0	4992.5	<3.2	0.7 ± 0.1	1.9 ± 0.6
10030.0	5000.0	1.9 ± 1.7	2.5 ± 0.5	2.5 ± 1.0
10037.5	4955.0	<2.1	0.7 ± 0.1	2.3 ± 0.4
10037.5	4962.5	<1.1	0.7 ± 0.2	2.4 ± 0.7
10037.5	4970.0	1.5 ± 1.4	0.9 ± 0.3	3.5 ± 0.9
10037.5	4977.5	<0.9	0.5 ± 0.1	1.6 ± 0.1
10037.5	4985.0	<2.2	0.7 ± 0.1	2.4 ± 0.4
10037.5	4992.5	<1.6	0.7 ± 0.1	1.4 ± 2.7
10037.5	5000.0	<2.1	1.4 ± 0.3	4.8 ± 0.8
10045.0	4955.0	<2.6	0.5 ± 0.2	1.2 ± 0.2
10045.0	4962.5	<2.8	0.5 ± 0.2	1.3 ± 0.2
10045.0	4970.0	<2.0	0.6 ± 0.1	1.4 ± 0.2
10045.0	4977.5	<1.0	0.7 ± 0.2	1.5 ± 0.2
10045.0	4985.0	<1.2	0.8 ± 0.2	2.4 ± 0.2
10045.0	4992.5	<2.5	0.8 ± 0.1	2.1 ± 0.4
10045.0	5000.0	<2.3	1.1 ± 0.3	5.8 ± 0.6
10052.5	4955.0	<2.9	0.6 ± 0.3	1.4 ± 0.3
10052.5	4962.5	<1.9	0.6 ± 0.1	2.4 ± 0.7
10052.5	4970.0	<3.9	0.6 ± 0.3	3.5 ± 1.1
10052.5	4977.5	<3.7	0.6 ± 0.1	2.4 ± 0.5
10052.5	4985.0	<4.2	0.8 ± 0.1	3.7 ± 1.7
10052.5	4992.5	1.6 ± 1.1	0.6 ± 0.1	2.4 ± 0.5
10052.5	5000.0	<2.1	0.6 ± 0.1	1.2 ± 0.4
10060.0	4955.0	<2.2	0.5 ± 0.2	1.9 ± 0.4
10060.0	4962.5	<0.9	0.5 ± 0.1	2.1 ± 0.6
10060.0	4970.0	<2.8	0.7 ± 0.2	<0.7
10060.0	4977.5	<3.7	1.0 ± 0.3	2.5 ± 0.5
10060.0	4985.0	<3.2	0.4 ± 0.8	1.5 ± 0.3
10060.0	4992.5	<3.1	0.6 ± 0.1	2.0 ± 0.2
10060.0	5000.0	<4.1	0.6 ± 0.1	6.7 ± 4.1
10067.5	4985.0	<3.4	0.7 ± 0.1	2.0 ± 0.7
10067.5	4992.5	<4.9	1.5 ± 0.6	6.7 ± 1.3
10067.5	5000.0	<3.3	0.8 ± 0.5	1.4 ± 0.6
10075.0	5000.0	<3.8	0.9 ± 0.2	2.2 ± 1.6
10082.5	5000.0	<3.4	0.8 ± 0.2	2.0 ± 1.4
10087.0	4985.0	<2.6	0.6 ± 0.3	0.7 ± 0.3
10087.0	4992.5	<4.1	1.6 ± 0.6	2.4 ± 0.7
10087.0	5000.0	<2.7	0.5 ± 0.1	0.9 ± 0.8

*Samples taken from bottom of the excavation.

–continued to page 5–

–continued from page 4–

Wayne, New Jersey, Site Certification Data Summary Worksheet

Post-Remedial Action Soil Sampling Results for Sheffield Brook

Table 4 in PRAR2

Grid Coordinates		Concentration (pCi/g ± 2 sigma)		
E,W	N,S	Uranium-238	Radium-226	Thorium-232
W0533.0	S0147.0	1.8 ± 1.3	0.6 ± 0.1	0.9 ± 0.2
W0567.0	S0151.0	1.1 ± 0.9	0.8 ± 0.1	0.9 ± 0.1
W0572.5	S0174.5	<3.1	0.8 ± 0.2	1.2 ± 0.3
W0593.0	S0152.0	2.3 ± 1.4	0.9 ± 0.2	1.9 ± 0.5
W0600.0	S0183.0	3.2 ± 2.3	0.7 ± 0.1	2.2 ± 1.1
W0617.0	S0150.0	<2.0	0.8 ± 0.3	1.5 ± 0.9
W0617.0	S0183.0	<1.3	0.8 ± 0.4	1.1 ± 0.6
W0617.0	S0217.0	<1.4	0.8 ± 0.1	0.9 ± 0.2
W0650.0	S0150.0	<1.2	0.6 ± 0.1	1.4 ± 0.6
W0650.0	S0183.0	1.8 ± 1.1	0.8 ± 0.1	1.3 ± 0.3
W0650.0	S0217.0	<1.8	0.7 ± 0.2	1.0 ± 0.3
W0650.0	S0250.0	3.1 ± 1.5	0.8 ± 0.1	1.5 ± 0.5
W0666.0	S0166.0	1.9 ± 0.2	0.8 ± 0.2	1.1 ± 0.2
W0683.0	S0150.0	<1.9	0.5 ± 0.1	1.0 ± 0.3
W0683.0	S0183.0	2.0 ± 1.2	0.8 ± 0.1	3.4 ± 0.5
W0683.0	S0217.0	<2.3	0.8 ± 0.1	3.5 ± 0.7
W0683.0	S0250.0	<1.3	0.7 ± 0.2	1.1 ± 0.5
W0691.5	S0274.5	<2.2	0.8 ± 0.1	0.8 ± 0.1
W0708.5	S0191.5	<4.1	1.0 ± 0.4	5.1 ± 0.9
W0717.0	S0150.0	<2.0	0.6 ± 0.1	1.0 ± 0.3
W0717.0	S0183.0	<1.5	0.7 ± 0.1	1.1 ± 0.5
W0717.0	S0217.0	<1.7	0.9 ± 0.1	2.9 ± 0.2
W0717.0	S0250.0	<1.8	0.8 ± 0.3	1.1 ± 0.6
W0717.0	S0283.0	<1.5	0.6 ± 0.1	1.2 ± 0.2
W0734.0	S0300.0	<9.0	1.0 ± 0.3	2.0 ± 1.0
W0750.0	S0158.0	<2.2	0.6 ± 0.2	0.9 ± 0.8
W0750.0	S0183.0	<1.6	0.7 ± 0.1	0.9 ± 0.2
W0750.0	S0217.0	<2.6	1.0 ± 0.4	2.6 ± 0.7
W0750.0	S0250.0	<2.1	0.7 ± 0.2	2.4 ± 0.4
W0750.0	S0283.0	<1.6	0.6 ± 0.1	1.2 ± 0.6
W0750.0	S0317.0	<1.7	0.8 ± 0.2	2.0 ± 0.6
W0767.0	S0333.0	2.2 ± 1.6	0.9 ± 0.3	0.8 ± 0.4
W0783.0	S0183.0	<1.9	0.5 ± 0.2	1.2 ± 0.2
W0783.0	S0217.0	2.1 ± 1.0	0.9 ± 0.1	1.2 ± 0.4
W0783.0	S0250.0	<1.8	0.8 ± 0.1	2.5 ± 1.1
W0783.0	S0283.0	2.8 ± 1.3	1.3 ± 0.5	5.5 ± 1.6
W0783.0	S0317.0	<1.7	0.7 ± 0.3	1.3 ± 0.3
W0783.0	S0350.0	1.4 ± 0.9	0.6 ± 0.4	1.3 ± 0.7
W0791.5	S0174.5	<2.4	0.7 ± 0.2	2.7 ± 0.3
W0797.0	S0163.0	<5.4	1.3 ± 0.5	3.1 ± 1.3
W0803.0	S0163.0	2.9 ± 1.9	1.0 ± 0.8	3.7 ± 0.5
W0810.0	S0224.0	<2.7	0.8 ± 0.4	1.5 ± 0.3
W0817.0	S0183.0	<2.8	0.7 ± 0.1	2.7 ± 0.5
W0817.0	S0217.0	<1.9	1.1 ± 0.2	2.7 ± 0.9
W0817.0	S0250.0	<1.9	1.0 ± 0.4	1.3 ± 0.2
W0817.0	S0283.0	1.9 ± 0.4	7.2 ± 0.2	1.5 ± 0.4
W0817.0	S0317.0	<2.1	0.6 ± 0.1	3.0 ± 0.8
W0817.0	S0350.0	2.0 ± 0.9	0.6 ± 0.1	1.7 ± 0.3
W0817.0	S0383.0	<2.3	0.7 ± 0.1	1.1 ± 0.6
W0834.0	S0267.0	5.3 ± 3.1	1.5 ± 0.6	4.1 ± 2.3
W0850.0	S0217.0	<1.4	0.9 ± 0.2	2.8 ± 1.0
W0850.0	S0250.0	4.4 ± 2.4	1.1 ± 0.1	2.9 ± 0.3
W0850.0	S0283.0	1.7 ± 1.0	0.9 ± 0.1	1.7 ± 0.9
W0850.0	S0317.0	1.7 ± 1.1	1.1 ± 0.2	2.9 ± 0.5
W0850.0	S0350.0	2.2 ± 1.3	0.9 ± 0.1	3.5 ± 1.0
W0850.0	S0383.0	<1.8	0.8 ± 0.1	2.1 ± 0.6
W0850.0	S0417.0	2.3 ± 0.5	0.7 ± 0.2	0.9 ± 0.3
W0883.0	S0250.0	3.8 ± 1.3	0.7 ± 0.2	1.6 ± 0.3
W0883.0	S0283.0	<1.0	0.8 ± 0.1	1.4 ± 0.6
W0883.0	S0317.0	<1.8	0.8 ± 0.1	1.6 ± 0.4
W0883.0	S0350.0	2.9 ± 1.8	0.8 ± 0.2	2.7 ± 0.6
W0883.0	S0383.0	2.8 ± 0.4	0.7 ± 0.1	2.2 ± 0.5
W0883.0	S0417.0	<2.7	0.7 ± 0.1	2.6 ± 0.4
W0883.0	S0450.0	3.1 ± 1.5	0.9 ± 0.3	0.8 ± 0.3
W0883.0	S0483.0	4.0 ± 2.5	1.1 ± 0.8	2.0 ± 1.4
W891.5	S0274.5	<1.1	0.7 ± 0.4	1.1 ± 0.7
W0900.0	S0267.0	2.8 ± 1.7	1.4 ± 1.0	1.2 ± 0.7
W0917.0	S0274.0	<2.3	0.6 ± 0.3	1.4 ± 0.6
W0917.0	S0283.0	<1.8	1.0 ± 0.3	1.1 ± 0.5
W0917.0	S0317.0	<2.1	0.8 ± 0.2	1.3 ± 0.3
W0917.0	S0350.0	4.7 ± 3.0	0.7 ± 0.3	1.3 ± 0.8
W0917.0	S0383.0	5.2 ± 1.1	0.9 ± 0.4	2.8 ± 1.0
W0917.0	S0417.0	<2.0	0.7 ± 0.1	2.6 ± 0.5
W0917.0	S0450.0	<1.4	0.5 ± 0.1	0.8 ± 0.5
W0917.0	S0483.0	<1.7	0.7 ± 0.2	1.2 ± 0.4
W0917.0	S0517.0	1.9 ± 1.5	0.8 ± 0.1	1.2 ± 0.2
W0925.5	S0308.5	2.1 ± 1.4	0.8 ± 0.2	1.2 ± 0.2
W0933.0	S0300.0	2.3 ± 1.2	1.5 ± 0.8	1.3 ± 0.4
W0934.0	S0550.0	2.4 ± 1.0	1.0 ± 0.3	1.2 ± 0.1
W0940.0	S0330.0	<3.6	0.7 ± 0.2	3.9 ± 0.6
W0941.5	S0325.5	<1.8	0.6 ± 0.2	1.5 ± 0.5
W0950.0	S0350.0	2.6 ± 1.3	0.9 ± 0.2	3.8 ± 1.0
W0950.0	S0383.0	<1.9	0.7 ± 0.2	2.0 ± 0.9
W0950.0	S0391.5	5.2 ± 1.1	0.9 ± 0.2	3.0 ± 0.6
W0950.0	S0417.0	<1.6	1.0 ± 0.5	3.6 ± 0.7
W0950.0	S0450.0	<1.6	0.7 ± 0.2	0.9 ± 0.1
W0950.0	S0483.0	2.0 ± 1.0	0.6 ± 0.1	1.0 ± 0.3
W0950.0	S0517.0	<1.5	0.7 ± 0.1	1.0 ± 0.2
W0950.0	S0550.0	<1.5	0.6 ± 0.2	0.9 ± 0.2
W0958.5	S0574.5	<1.5	0.6 ± 0.3	0.8 ± 0.5

Grid Coordinates		Concentration (pCi/g ± 2 sigma)		
E,W	N,S	Uranium-238	Radium-226	Thorium-232
W0963.0	S0336.0	2.2 ± 1.7	1.1 ± 0.3	1.4 ± 0.6
W0966.0	S0334.0	<25.0	2.5 ± 0.3	0.9 ± 0.4
W0975.0	S0360.0	<2.3	0.5 ± 0.1	1.2 ± 0.3
W0983.0	S0350.0	<1.6	0.8 ± 0.2	2.3 ± 0.9
W0983.0	S0385.0	<3.4	0.7 ± 0.1	2.1 ± 0.6
W0983.0	S0417.0	3.3 ± 1.9	0.8 ± 0.2	3.5 ± 0.4
W0983.0	S0450.0	<2.0	0.9 ± 0.2	3.0 ± 0.4
W0983.0	S0483.0	<2.1	0.6 ± 0.1	1.3 ± 0.6
W0983.0	S0517.0	<2.0	0.8 ± 0.5	3.3 ± 1.7
W0983.0	S0550.0	<1.9	0.7 ± 0.1	3.6 ± 0.7
W0991.5	S0517.0	2.3 ± 1.5	0.7 ± 0.1	1.9 ± 0.9
W1008.5	S0326.0	<1.7	0.9 ± 0.2	2.8 ± 1.0
W1017.0	S0350.0	<2.1	0.9 ± 0.2	2.0 ± 0.5
W1017.0	S0383.0	1.9 ± 0.9	1.1 ± 0.2	1.4 ± 0.5
W1017.0	S0417.0	<2.2	0.6 ± 0.2	2.9 ± 1.1
W1017.0	S0450.0	<2.1	0.5 ± 0.1	1.1 ± 0.3
W1017.0	S0483.0	<1.8	0.7 ± 0.2	2.2 ± 0.4
W1017.0	S0517.0	<1.9	0.6 ± 0.2	1.5 ± 0.8
W1017.0	S0550.0	9.9 ± 3.5	1.0 ± 0.5	9.4 ± 1.9
W1017.0	S0583.0	<2.0	0.7 ± 0.4	1.0 ± 0.5
W1025.5	S0441.5	<1.7	0.5 ± 0.3	1.2 ± 0.1
W1025.5	S0608.5	<2.2	0.7 ± 0.3	1.2 ± 0.5
W1035.0	S0365.0	2.7 ± 1.9	0.8 ± 0.1	0.8 ± 0.3
W1043.0	S0414.0	<1.7	0.5 ± 0.1	0.9 ± 0.1
W1050.0	S0383.0	1.2 ± 0.9	1.2 ± 0.1	1.4 ± 1.0
W1050.0	S0417.0	<2.2	0.8 ± 0.1	2.9 ± 0.8
W1050.0	S0450.0	<1.8	0.6 ± 0.2	1.1 ± 0.1
W1050.0	S0483.0	<1.9	0.7 ± 0.1	1.1 ± 0.3
W1050.0	S0517.0	<1.4	0.7 ± 0.1	2.2 ± 0.5
W1050.0	S0550.0	<1.6	0.6 ± 0.7	1.5 ± 0.4
W1050.0	S0583.0	<2.5	0.7 ± 0.2	2.9 ± 0.5
W1050.0	S0617.0	<2.3	0.4 ± 0.3	1.4 ± 0.6
W1050.0	S0650.0	2.5 ± 1.5	0.7 ± 0.2	1.6 ± 0.4
W1063.0	S0483.0	<2.3	1.0 ± 0.2	1.3 ± 0.9
W1067.0	S0350.0	<1.9	0.8 ± 0.1	1.4 ± 0.3
W1071.5	S0333.0	<1.5	0.5 ± 0.2	0.9 ± 0.4
W1074.5	S0491.5	<2.7	0.8 ± 0.3	1.5 ± 0.3
W1074.5	S0625.5	<2.0	0.6 ± 0.2	0.9 ± 0.4
W1083.0	S0383.0	<2.1	0.9 ± 0.2	1.0 ± 0.2
W1083.0	S0417.0	1.3 ± 0.9	1.1 ± 0.2	1.9 ± 0.5
W1083.0	S0450.0	3.1 ± 2.3	0.6 ± 0.1	1.0 ± 0.3
W1083.0	S0483.0	<1.9	0.8 ± 0.1	2.6 ± 1.0
W1083.0	S0517.0	<1.3	0.6 ± 0.1	2.0 ± 0.3
W1083.0	S0550.0	<1.6	0.7 ± 0.2	1.3 ± 0.1
W1083.0	S0583.0	2.9 ± 0.9	0.7 ± 0.1	2.0 ± 0.3
W1083.0	S0617.0	<1.8	0.6 ± 0.2	2.4 ± 0.7
W1083.0	S0650.0	2.4 ± 1.1	0.7 ± 0.3	3.0 ± 0.2
W1091.5	S0441.5	<1.9	0.8 ± 0.2	2.4 ± 0.5
W1091.5	S0691.5	<2.7	0.9 ± 0.2	1.5 ± 0.6
W1108.5	S0525.5	4.2 ± 2.7	0.7 ± 0.3	3.4 ± 1.4
W1117.0	S0350.0	<1.8	1.1 ± 0.1	1.3 ± 0.5
W1117.0	S0383.0	1.9 ± 1.6	0.7 ± 0.2	1.0 ± 0.3
W1117.0	S0417.0	<2.1	0.9 ± 0.2	3.4 ± 0.9
W1117.0	S0450.0	<1.5	0.8 ± 0.3	2.6 ± 0.4
W1117.0	S0483.0	<1.7	0.6 ± 0.4	1.5 ± 0.3
W1117.0	S0517.0	<3.7	0.4 ± 0.1	1.5 ± 0.5
W1117.0	S0550.0	<1.6	0.6 ± 0.1	1.4 ± 0.5
W1117.0	S0583.0	<1.9	0.7 ± 0.4	2.9 ± 0.5
W1117.0	S0617.0	<3.7	0.6 ± 0.2	1.9 ± 0.3
W1117.0	S0650.0	<2.1	0.4 ± 0.1	1.5 ± 0.6
W1117.0	S0683.0	<1.7	0.4 ± 0.2	1.0 ± 0.1
W1123.5	S0341.5	<1.2	0.7 ± 0.1	0.9 ± 0.4
W1133.0	S0358.0	<2.6	1.6 ± 0.3	1.6 ± 0.7
W1133.0	S0467.0	<2.9	1.5 ± 0.4	1.8 ± 0.3
W1133.0	S0550.0	<1.4	<0.6	1.3 ± 0.1
W1150.0	S0383.0	<1.7	1.0 ± 0.3	1.6 ± 0.8
W1150.0	S0417.0	<1.7	0.9 ± 0.2	1.5 ± 0.5
W1150.0	S0450.0	<1.8	0.9 ± 0.1	2.8 ± 0.9
W1150.0	S0483.0	2.1 ± 1.5	0.7 ± 0.1	2.1 ± 0.5
W1150.0	S0500.0	<2.0	0.4 ± 0.3	<0.2
W1150.0	S0517.0	<1.6	0.4 ± 0.3	1.0 ± 0.5
W1150.0	S0550.0	<2.4	0.6 ± 0.1	2.5 ± 1.0
W1150.0	S0583.0	2.3 ± 1.6	0.6 ± 0.2	1.1 ± 0.2
W1150.0	S0617.0	<3.6	0.6 ± 0.1	2.1 ± 0.8
W1150.0	S0650.0	6.7 ± 2.4	0.6 ± 0.2	3.5 ± 1.4
W1150.0	S0683.0	<3.7	0.5 ± 0.1	2.3 ± 1.2
W1183.0	S0417.0	1.3 ± 0.2	0.8 ± 0.3	1.2 ± 0.4
W1183.0	S0450.0	<1.9	0.9 ± 0.2	1.7 ± 0.5
W1183.0	S0483.0	2.0 ± 1.0	0.7 ± 0.2	1.9 ± 0.7
W1183.0	S0517.0	<1.7	0.9 ± 0.2	1.6 ± 0.4
W1183.0	S0533.0	<2.2	0.6 ± 0.1	0.9 ± 0.2
W1183.0	S0550.0	<2.0	0.5 ± 0.2	1.0 ± 0.3
W1183.0	S0583.0	<7.6	0.8 ± 0.3	2.8 ± 0.9
W1183.0	S0617.0	<4.0	0.7 ± 0.4	1.9 ± 1.0
W1183.0	S0650.0	<4.9	0.8 ± 0.3	1.7 ± 0.4
W1183.0	S0683.0	<2.0	1.3 ± 0.4	3.7 ± 1.3
W1208.5	S0450.0	<2.5	1.0 ± 0.3	2.3 ± 0.8
W1217.0	S0483.0	<3.3	0.6 ± 0.1	1.5 ± 0.3
W1217.0	S0517.0	<1.7	0.9 ± 0.1	1.5 ± 0.3
W1217.0	S0550.0	2.2 ± 1.5	0.5 ± 0.1	1.6 ± 0.2

Grid Coordinates		Concentration (pCi/g ± 2 sigma)		
E,W	N,S	Uranium-238	Radium-226	Thorium-232
W1217.0	S0583.0	<1.5	0.6 ± 0.2	0.8 ± 0.5
W1217.0	S0617.0	<4.4	0.9 ± 0.3	2.3 ± 0.2
W1217.0	S0650.0	<3.9	0.6 ± 0.3	2.5 ± 0.7
W1217.0	S0683.0	<7.2	0.9 ± 0.1	4.7 ± 1.2
W1225.0	S0545.0	<6.6	1.7 ± 0.9	3.9 ± 1.6
W1250.0	S0485.0	<3.1	0.8 ± 0.4	0.8 ± 0.1
W1250.0	S0517.0	<1.5	0.6 ± 0.3	1.4 ± 0.2
W1250.0	S0550.0	<4.3	0.6 ± 0.2	1.2 ± 0.4
W1250.0	S0583.0	2.1 ± 1.5	0.5 ± 0.1	1.0 ± 0.4
W1250.0	S0617.0	<1.5	0.6 ± 0.1	2.0 ± 0.3
W1250.0	S0650.0	2.0 ± 1.0	1.5 ± 0.3	5.3 ± 0.4
W1250.0	S0683.0	<3.4	1.0 ± 0.1	4.2 ± 2.8
W1253.0	S0550.0	<3.0	0.4 ± 0.1	1.0 ± 0.2
W1274.5	S0674.5	4.3 ± 2.3	1.3 ± 0.5	3.8 ± 1.4
W1283.0	S0520.0	<2.0	0.6 ± 0.2	2.0 ± 1.3
W1283.0	S0550.0	<2.5	0.5 ± 0.1	0.9 ± 0.4
W1283.0	S0583.0	3.7 ± 2.5	0.8 ± 0.5	4.0 ± 2.1
W1283.0	S0617.0	<3.0	0.7 ± 0.1	1.5 ± 0.9
W1283.0	S0650.0	7.0 ± 1.0	1.4 ± 0.1	9.0 ± 1.0
W1317.0	S0550.0	<4.4	0.4 ± 0.3	0.9 ± 0.5
W1317.0	S0583.0	<4.3	0.6 ± 0.2	1.9 ± 0.7
W1317.0	S0617.0	<1.9	0.8 ± 0.3	2.2 ± 0.9
W1317.0	S0650.0	7.0 ± 2.0	1.5 ± 0.2	5.0 ± 1.0
W1317.0	S0683.0	<2.7	1.4 ± 0.4	2.6 ± 1.0
W1350.0	S0550.0	<3.1	0.6 ± 0.1	1.3 ± 0.3
W1350.0	S0583.0	<2.7	0.8 ± 0.3	2.3 ± 0.9
W1350.0	S0617.0	2.6 ± 1.9	1.2 ± 0.1	3.0 ± 0.9
W1350.0	S0650.0	1.4 ± 0.8	1.5 ± 0.1	2.5 ± 0.2
W1350.0	S0683.0	<4.6	0.8 ± 0.2	1.8 ± 0.5
W1383.0	S0550.0	<2.8	0.6 ± 0.1	0.9 ± 0.3
W1383.0	S0583.0	<1.4	0.5 ± 0.1	1.4 ± 0.4
W1383.0	S0617.0	1.9 ± 1.5	0.6 ± 0.2	1.0 ± 0.1
W1383.0	S0650.0	<5.1	1.0 ± 0.1	4.8 ± 2.0
W1383.0	S0683.0	<3.4	0.7 ± 0.2	1.5 ± 0.3
W1417.0	S0532.0	2.5 ± 0.2	1.5 ± 0.4	3.8 ± 2.0
W1417.0	S0550.0	<1.7	0.9 ± 0.1	1.8 ± 0.4
W1417.0	S0583.0	<2.7	5.4 ± 2.4	1.8 ± 0.4
W1417.0	S0617.0	<3.1	6.9 ± 0.2	1.6 ± 0.3
W1417.0	S0650.0	4.4 ± 2.4	1.2 ± 0.5	6.0 ± 3.3
W1417.0	S0667.0	<2.5	0.5 ± 0.2	0.9 ± 0.2
W1441.5	S0591.5	<5.5	0.9 ± 0.2	4.0 ± 1.0
W1450.0	S0532.0	<3.3	0.8 ± 0.3	2.3 ± 1.6
W1450.0	S0550.0	<2.1	1.3 ± 0.2	3.9 ± 1.4
W1450.0	S0583.0	<.4	0.6 ± 0.2	4.3 ± 1.7
W1450.0	S0617.0	2.7 ± 1.8	0.5 ± 0.2	1.6 ± 0.5
W1450.0	S0650.0	3.0 ± 0.7	0.9 ± 0.1	3.0 ± 0.2
W1450.0	S0667.0	<2.4	0.4 ± 0.1	1.3 ± 0.6
W1474.5	S0525.5	<2.0	0.5 ± 0.1	0.8 ± 0.3
W1483.0	S0550.0	<2.2	5.7 ± 0.1	2.6 ± 0.5
W1483.0	S0583.0	1.8 ± 0.9	0.9 ± 0.1	2.5 ± 1.5
W1483.0	S0617.0	<1.8	0.5 ± 0.2	1.5 ± 0.4
W1483.0	S0650.0	1.5 ± 0.5	0.7 ± 0.1	1.7 ± 0.2
W1491.5	S0674.5	<1.7	0.6 ± 0.4	1.2 ± 0.3
W1517.0	S0550.0	<1.9	0.7 ± 0.2	0.7 ± 0.5
W1517.0	S0583.0	<2.4	0.8 ± 0.2	2.3 ± 0.8
W1517.0	S0617.0	<2.8	0.5 ± 0.4	1.7 ± 0.4
W1517.0	S0650.0	<2.9	0.5 ± 0.2	1.5 ± 1.1
W1517.0	S0683.0	<1.8	0.8 ± 0.3	1.7 ± 0.8
W1550.0	S0583.0	<5.4	1.3 ± 0.2	3.0 ± 0.6
W1550.0	S0617.0	<1.8	1.0 ± 0.3	1.9 ± 0.3
W1550.0	S0650.0	<2.1	0.6 ± 0.1	1.6 ± 0.9
W1550.0	S0683.0	5.7 ± 4.0	1.3 ± 0.2	8.9 ± 2.6
W1583.0	S0583.0	<2.5	0.6 ± 0.2	1.4 ± 0.8
W1583.0	S0617.0	<2.1	1.0 ± 0.3	2.1 ± 0.6
W1583.0	S0650.0	<2.6	0.7 ± 0.2	1.5 ± 0.7
W1583.0	S0683.0	<1.3	1.1 ± 0.2	6.6 ± 2.8
W1583.0	S0701.0	<2.2	0.7 ± 0.4	3.1 ± 0.7
W1608.5	S0623.5	2.7 ± 1.5	0.6 ± 0.4	2.1 ± 0.7
W1617.0	S0650.0	<1.7	0.7 ± 0.3	1.5 ± 0.6
W1617.0	S0683.0	A	0.8 ± 0.1	2.4 ± 0.3
W1617.0	S0717.0	3.1 ± 2.0	0.6 ± 0.1	1.5 ± 0.4
W1650.0	S0650.0	<1.9	0.9 ± 0.3	1.8 ± 0.6
W1650.0	S0683.0	A	0.8 ± 0.1	2.9 ± 0.7
W1650.0	S0717.0	<2.1	0.9 ± 0.5	2.8 ± 0.8
W1683.0	S0650.0	<2.5	0.6 ± 0.2	1.7 ± 0.3
W1683.0	S0683.0	<1.9	0.8 ± 0.2	1.9 ± 1.0
W1683.0	S0717.0	<2.4	1.1 ± 0.2	4.9 ± 1.1
W1683.0	S0734.0	<3.0	0.5 ± 0.3	1.9 ± 0.2
W1717.0	S0650.0	<2.0	0.6 ± 0.1	2.1 ± 0.4
W1717.0	S0683.0	<1.9	1.1 ± 0.2	2.7 ± 0.8
W1717.0	S0717.0	6.1 ± 1.3	0.8 ± 0.1	2.9 ± 0.7
W1717.0	S0750.0	1.2 ± 0.9	0.9 ± 0.4	3.5 ± 0.4
W1750.0	S0650.0	<2.6	0.7 ± 0.1	1.3 ± 0.9
W1750.0	S0683.0	<1.8	0.8 ± 0.2	2.2 ± 0.3
W1750.0	S0717.0	<1.7	0.7 ± 0.1	2.0 ± 0.9
W1750.0	So750	5.3 ± 3.2	0.8 ± 0.1	2.9 ± 1.1
W1783.0	S0683.0	<1.6	0.6 ± 0.1	1.5 ± 0.1

"A" denotes analysis not performed.

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Post-Remedial Action Soil Sampling Results for the Front Yard of the WISS				
Table 5 in PRAR2				
Grid Coordinates		Concentration (pCi/g ± 2 sigma)		
E,W	N,S	Uranium-238	Radium-226	Thorium-232
E9050.0	N8417.0	<2.2	0.7 ± 0.2	1.9 ± 0.8
E9083.0	N8350.0	<1.7	0.7 ± 0.2	1.7 ± 0.7
E9083.0	N8383.0	<2.0	0.7 ± 0.2	2.7 ± 1.2
E9083.0	N8417.0	<2.5	0.5 ± 0.3	1.9 ± 0.4
E9117.0	N8317.0	<2.1	0.5 ± 0.2	1.2 ± 0.1
E9117.0	N8350.0	<1.5	4.0 ± 0.1	1.7 ± 0.3
E9117.0	N8383.0	<1.9	0.5 ± 0.2	<0.6
E9136.0	N8286.0	<1.8	0.9 ± 0.2	1.4 ± 0.3
E9145.0	N8340.0	<2.3	1.2 ± 0.3	5.7 ± 0.2
E9150.0	N8250.0	<1.6	0.5 ± 0.2	0.6 ± 0.3
E9150.0	N8283.0	<1.6	4.1 ± 0.1	2.0 ± 0.6
E9150.0	N8317.0	<2.0	0.5 ± 0.2	2.6 ± 0.4
E9150.0	N8350.0	<1.3	0.6 ± 0.3	1.1 ± 0.3
E9177.0	N8314.0	2.0 ± 1.5	1.0 ± 0.6	1.6 ± 0.6
E9183.0	N8217.0	2.1 ± 1.4	0.6 ± 0.2	1.5 ± 0.4
E9183.0	N8250.0	<1.5	0.6 ± 0.1	1.4 ± 0.6
E9183.0	N8283.0	<1.6	0.8 ± 0.3	2.0 ± 0.6
E9202.0	N8223.0	<2.9	0.5 ± 0.3	2.3 ± 0.8
E9217.0	N8217.0	<2.3	0.7 ± 0.2	0.9 ± 0.6
E9217.0	N8250.0	<3.1	0.6 ± 0.2	1.6 ± 0.4
E9217.0	N8283.0	<2.2	0.5 ± 0.2	1.7 ± 1.0

Gamma Radiation Dose Rate Measurements at Wayne Township Park - FY 1985		
Table 4-1 in PRAR3		
Coordinates		Dose Rate (mrem/yr)[a]
North	East	
7344	6958	5
7377	6950	40
7393	6811	5
7393	6950	23
7442	6811	27
7442	6917	31
7442	6958	31
7467	6893	14
7467	6934	49
7491	6909	31

[a]Converted from µR/h measurements by assuming continuous occupancy (365 days/yr) and subtracting a background contribution of 108 mrem/yr. The DOE standard permits exposures up to 100 mrem/yr above background (average over a lifetime).

Post-Remedial Action Soil Sampling Results for the Right-of-Way of Pompton Plains Cross Road				
Table 6 in PRAR2				
Grid Coordinates		Concentration (pCi/g ± 2 sigma)		
E,W	N,S	Uranium-238	Radium-226	Thorium-232
W126	S065	A	0.4 ± 0.3	1.4 ± 0.5
W133	S064	A	2.0 ± 0.5	5.7 ± 1.0
W133	S066	A	<2.2	9.1 ± 1.0
W133	S068	A	4.8 ± 0.7	15.1 ± 1.6
W139	S066	A	1.3 ± 0.4	11.8 ± 1.8

"A" denotes analysis not performed.
Note: Samples represent discrete sampling locations and not composites. The excavated area was approximately 75 square feet, thus averaged values for the area are 2.1 pCi/g for radium-226 and 8.6 pCi/g for thorium-232.

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Wayne, New Jersey, Site Certification Data Summary Worksheet

Gamma Radiation Dose Rate Measurements for Sheffield Brook - FY 1987

Table 4-2 in PRAR3

Coordinates		Dose Rate (mrem/yr)[a]
East	North	
6633	7050	0
6644	7028	0
6667	7017	0
6667	7050	10
6667	7083	8
6667	7094	0
6700	7050	0
6700	7072	0
6700	7083	0
6700	7117	0
6733	7050	7
6733	7083	0
6733	7117	0
6767	7050	0
6767	7083	3
6767	7117	0
6789	6983	6
6800	7017	0
6800	7050	0
6800	7083	10
6800	7117	0
6811	6983	0
6833	6950	8
6833	6983	0
6833	7017	11
6833	7050	0
6833	7083	0
6833	7117	0
6833	7150	0
6867	6883	0
6867	6917	2
6867	6950	0
6867	6983	0
6867	7017	0
6867	7050	0
6867	7083	7
6867	7117	9
6867	7150	0
6867	8183	0
6867	8206	0
6900	6894	8
6900	6917	3
6900	6950	0
6900	6983	22
6900	7017	20
6900	7050	5
6900	7083	14
6900	7117	0
6900	7139	2
6900	7783	0
6900	7817	2
6900	8094	0
6900	8117	0
6900	8150	0
6900	8183	0
6900	8217	0
6911	7750	0
6911	8011	0
6911	8061	0
6911	8072	0
6922	6917	3
6922	7050	0
6922	7083	4
6922	7817	0
6922	8083	0
6933	6950	6
6933	6983	3
6933	7017	30
6933	7050	0
6933	7083	0
6933	7117	0
6933	7217	0
6933	7250	0
6933	7283	0
6933	7317	0
6933	7350	0
6933	7617	0
6933	7650	0
6933	7683	0
6933	7717	0
6933	7750	0

Coordinates		Dose Rate (mrem/yr)[a]
East	North	
6933	7783	0
6933	7950	0
6933	7983	0
6933	8017	0
6933	8050	0
6944	7150	0
6944	7183	0
6944	7217	0
6944	7250	0
6944	7283	0
6944	7317	0
6944	7350	0
6944	7383	1
6944	7417	3
6944	7861	5
6944	7928	0
6956	7050	2
6956	7650	0
6956	7794	2
6967	7083	4
6967	7117	8
6967	7150	3
6967	7183	0
6967	7217	0
6967	7250	0
6967	7283	0
6967	7317	0
6967	7350	0
6967	7383	0
6967	7417	2
6967	7450	2
6967	7483	0
6967	7517	2
6967	7617	0
6967	7783	0
6967	7817	0
6967	7850	1
6967	7883	0
6978	7722	1
6978	7750	0
6989	7283	0
6989	7317	0
6989	7350	0
6989	7761	0
6989	7783	0
7000	7483	0
7000	7528	0
7000	7650	0
7000	7683	0
7000	7717	0
7006	7622	0
7033	7450	0
7033	7483	0
7033	7517	2
7033	7617	0
7033	7650	0
7033	7683	0
7033	7717	0
7067	7683	0
7067	7717	0
7078	7483	0
7078	7517	0
7100	7483	1
7100	7717	0
7111	7517	8
7133	7517	0
7133	7528	4
7133	7717	0
7156	7539	0
7156	7561	10
7156	7572	2
7167	7583	4
7178	7594	8
7189	7628	2
7200	7639	0
7211	7650	0
7222	7672	0

[a]Converted from µR/h measurements by assuming continuous occupancy (365 days/yr) and subtracting a background contribution of 108 mrem/yr. The DOE standard permits exposures up to 100 mrem/yr above background (average over a lifetime).

Post-Remedial Action Sampling Results Wayne Township Park - FY 1985

Table 5-1 in PRAR3

Grid Location		Concentration (pCi/g ± 1 sigma)[a]		
East	North	Uranium-238	Radium-226	Thorium-232
6786	7319	2.3 ± 1.8	0.6 ± 0.2	1.5 ± 0.8
6786	7336	<1.4	0.8 ± 0.1	1.3 ± 0.6
6786	7352	<1.5	0.6 ± 0.1	1.8 ± 0.5
6786	7368	1.3 ± 0.1	0.8 ± 0.2	1.9 ± 0.6
6786	7385	2.0 ± 1.2	0.7 ± 0.2	2.0 ± 0.5
6786	7401	1.2 ± 1.6	0.7 ± 0.2	1.7 ± 0.7
6786	7418	<3.8	0.8 ± 0.4	2.7 ± 0.6
6786	7434	2.8 ± 1.3	0.6 ± 0.1	1.6 ± 0.5
6786	7450	<1.5	0.6 ± 0.2	1.4 ± 0.2
6786	7467	1.6 ± 1.2	0.7 ± 0.1	1.1 ± 0.4
6786	7483	2.9 ± 1.8	0.7 ± 0.3	2.3 ± 0.4
6786	7500	<2.1	0.7 ± 0.2	2.4 ± 0.7
6802	7319	<2.9	0.7 ± 0.1	1.0 ± 0.7
6802	7336	<1.7	0.5 ± 0.1	1.1 ± 0.3
6802	7352	<1.7	0.6 ± 0.2	0.9 ± 0.3
6802	7385	1.6 ± 1.5	0.7 ± 0.2	2.1 ± 1.2
6802	7386	2.0 ± 1.7	0.7 ± 0.2	2.1 ± 0.4
6802	7401	1.3 ± 1.9	0.8 ± 0.1	2.9 ± 0.7
6802	7418	3.6 ± 1.7	0.7 ± 0.1	3.7 ± 0.7
6802	7434	<2.6	0.9 ± 0.5	3.7 ± 1.4
6802	7450	<2.1	0.8 ± 0.1	2.2 ± 0.4
6802	7467	2.0 ± 1.3	0.5 ± 0.1	1.1 ± 0.5
6802	7483	<3.0	0.8 ± 0.2	2.3 ± 0.7
6811	7442	4.1 ± 2.0	1.1 ± 0.2	5.8 ± 0.9
6819	7319	1.3 ± 1.7	0.9 ± 0.2	3.6 ± 1.1
6819	7336	3.1 ± 1.9	0.9 ± 0.2	2.9 ± 0.5
6819	7352	3.7 ± 2.3	1.2 ± 0.1	5.6 ± 0.7
6819	7368	6.3 ± 1.7	1.1 ± 0.2	6.2 ± 0.9
6819	7385	4.6 ± 2.1	1.1 ± 0.2	7.1 ± 0.9
6819	7401	7.3 ± 2.9	1.2 ± 0.2	10.0 ± 1.5
6819	7434	3.3 ± 1.2	0.8 ± 0.1	2.9 ± 0.2
6819	7450	2.6 ± 1.8	0.9 ± 0.1	4.3 ± 0.9
6819	7467	1.1 ± 0.9	0.7 ± 0.2	0.9 ± 0.2
6819	7483	<1.6	0.5 ± 0.1	1.1 ± 0.7
6835	7336	<1.4	0.7 ± 0.1	1.7 ± 0.8
6835	7352	2.7 ± 1.9	0.8 ± 0.1	2.1 ± 0.3
6835	7368	<2.3	0.9 ± 0.5	3.4 ± 0.5
6835	7385	<1.6	0.8 ± 0.2	2.8 ± 1.0
6835	7401	2.0 ± 0.8	0.8 ± 0.2	2.7 ± 1.1
6835	7418	<2.3	0.9 ± 0.3	2.6 ± 0.8
6835	7434	<3.5	0.8 ± 0.1	1.8 ± 0.4
6835	7450	4.2 ± 2.3	1.0 ± 0.3	3.7 ± 1.3
6835	7467	1.5 ± 0.1	0.8 ± 0.1	2.6 ± 0.6
6835	7483	3.0 ± 1.6	0.9 ± 0.2	3.8 ± 0.8
6835	7500	3.5 ± 1.7	0.9 ± 0.3	3.8 ± 0.7
6852	7368	<2.1	0.6 ± 0.4	2.0 ± 0.5
6852	7385	<2.4	0.7 ± 0.2	3.0 ± 0.7
6852	7401	<3.1	0.6 ± 0.2	1.1 ± 0.6
6852	7418	3.9 ± 2.3	0.6 ± 0.1	4.3 ± 1.3
6852	7450	4.3 ± 1.9	1.0 ± 0.2	4.1 ± 0.9
6852	7467	4.4 ± 2.1	0.8 ± 0.1	3.8 ± 0.4

Grid Location		Concentration (pCi/g ± 1 sigma)[a]		
East	North	Uranium-238	Radium-226	Thorium-232
6852	7483	2.2 ± 1.8	0.8 ± 0.3	3.0 ± 0.8
6852	7500	2.4 ± 1.4	0.9 ± 0.1	3.3 ± 1.5
6868	7352	2.4 ± 1.3	0.7 ± 0.1	1.9 ± 0.3
6868	7368	2.1 ± 1.7	0.8 ± 0.1	2.5 ± 0.5
6868	7385	<2.6	0.7 ± 0.1	2.6 ± 0.3
6868	7401	3.7 ± 0.7	0.8 ± 0.2	2.8 ± 0.3
6868	7418	3.5 ± 0.3	0.8 ± 0.2	2.8 ± 0.5
6868	7434	<1.6	0.8 ± 0.1	3.0 ± 0.7
6868	7450	3.5 ± 0.1	0.8 ± 0.2	5.0 ± 0.8
6868	7467	4.3 ± 3.2	1.0 ± 0.1	5.8 ± 1.7
6868	7483	<3.7	0.8 ± 0.7	4.7 ± 1.6
6868	7500	3.8 ± 2.4	1.1 ± 0.2	4.7 ± 0.7
6884	7368	<3.6	0.9 ± 0.4	2.3 ± 0.9
6884	7385	2.7 ± 1.5	0.7 ± 0.1	1.5 ± 0.3
6884	7401	<2.4	0.8 ± 0.3	3.2 ± 1.0
6884	7418	<5.8	0.9 ± 0.4	3.7 ± 1.3
6884	7434	4.0 ± 1.9	0.9 ± 0.2	5.0 ± 1.2
6884	7450	3.5 ± 2.0	1.0 ± 0.3	5.6 ± 1.9
6884	7467	1.9 ± 1.4	0.9 ± 0.3	3.0 ± 0.5
6884	7483	3.1 ± 0.5	1.0 ± 0.4	5.2 ± 1.2
6884	7500	<3.8	1.1 ± 0.1	2.1 ± 0.6
6901	7385	0.9 ± 1.6	0.9 ± 0.1	2.8 ± 0.9
6901	7401	3.0 ± 1.8	0.8 ± 0.3	2.6 ± 1.1
6901	7418	1.0 ± 0.2	0.6 ± 0.1	1.2 ± 0.3
6901	7434	1.5 ± 0.2	0.8 ± 0.1	3.7 ± 1.0
6901	7450	3.3 ± 2.1	0.8 ± 0.2	3.2 ± 0.3
6901	7467	3.5 ± 0.4	0.8 ± 0.2	3.5 ± 0.5
6901	7483	3.2 ± 1.8	0.9 ± 0.1	5.5 ± 2.5
6901	7500	3.0 ± 1.7	0.9 ± 0.1	5.0 ± 1.5
6917	7434	3.3 ± 1.8	0.9 ± 0.2	5.7 ± 0.9
6917	7450	8.1 ± 2.4	1.0 ± 0.1	8.6 ± 2.2
6917	7467	3.3 ± 1.7	0.7 ± 0.1	4.8 ± 0.7
6917	7483	<4.4	0.9 ± 0.6	4.2 ± 0.5
6917	7500	1.5 ± 0.1	0.8 ± 0.1	2.0 ± 0.7
6934	7418	<3.2	0.9 ± 0.7	1.7 ± 0.7
6934	7434	<3.7	0.9 ± 0.1	1.4 ± 0.9
6934	7450	3.8 ± 3.1	1.0 ± 0.5	3.4 ± 2.0
6934	7467	<2.3	0.8 ± 0.2	1.3 ± 0.2
6934	7483	<2.0	0.8 ± 0.6	2.2 ± 0.4
6934	7500	<1.0	0.7 ± 0.2	1.5 ± 0.9
6950	7336	3.2 ± 1.8	0.8 ± 0.1	4.6 ± 0.8
6950	7352	<2.2	0.9 ± 0.2	4.5 ± 1.5
6950	7368	<3.8	1.0 ± 0.2	6.9 ± 2.0
6950	7385	<3.3	1.1 ± 0.4	4.4 ± 1.4
6950	7418	<3.8	1.0 ± 0.2	7.7 ± 1.1
6950	7434	3.9 ± 3.5	1.3 ± 0.2	4.9 ± 0.9
6950	7450	<4.6	0.7 ± 0.1	3.7 ± 1.1
6950	7467	4.9 ± 4.9	1.6 ± 0.6	7.3 ± 0.9
6950	7483	3.5 ± 2.2	1.0 ± 0.3	6.0 ± 3.0
6950	7500	2.8 ± 2.1	0.8 ± 0.2	3.6 ± 0.6

[a]Samples taken from bottom of excavation.

Post-Remedial Action Sampling Results Wayne Township Park - FY 1987

Table 5-2 in PRAR3

Grid Location		Concentration (pCi/g ± 1 sigma)[a]		
East	North	Uranium-238	Radium-226	Thorium-232
6783	7380	<2.1	0.6 ± 0.1	1.2 ± 0.3
6783	7418	<2.8	0.6 ± 0.2	1.5 ± 0.3
6783	7450	<2.8	0.5 ± 0.3	2.0 ± 0.7
6783	7483	<3.3	0.8 ± 0.3	2.1 ± 0.4
6804	7450	2.2 ± 1.4	0.8 ± 0.2	1.3 ± 0.4
6811	7383	<1.5	0.7 ± 0.3	2.7 ± 0.4
6811	7418	<3.2	0.9 ± 0.2	1.8 ± 1.7

[a]Samples taken from bottom of excavation.

–continued to page 8–

–continued from page 7–

Wayne, New Jersey, Site Certification Data Summary Worksheet

Post-Remedial Action Soil Sampling Results for Sheffield Brook

Table 5-3 in PRAR3

Coordinates		Concentration (pCi/g ± 2 sigma)[a]		
East	North	Uranium-238	Radium-226	Thorium-232
6633	7050	1.4 ± 0.4	0.5 ± 0.1	1.0 ± 0.1
6646	7030	0.8 ± 0.3	0.5 ± 0.1	0.8 ± 0.1
6666	7017	1.7 ± 0.6	0.7 ± 0.1	2.7 ± 0.1
6666	7050	1.5 ± 0.5	0.6 ± 0.1	1.7 ± 0.1
6666	7083	<0.7	0.4 ± 0.1	1.2 ± 0.1
6666	7096	2.7 ± 0.5	0.8 ± 0.1	2.5 ± 0.1
6700	7050	0.9 ± 0.3	0.6 ± 0.1	2.0 ± 0.2
6700	7070	1.2 ± 0.3	0.5 ± 0.1	1.7 ± 0.1
6700	7083	0.4 ± 0.3	0.6 ± 0.1	1.1 ± 0.1
6700	7117	1.6 ± 0.5	0.6 ± 0.1	1.0 ± 0.1
6733	7050	3.5 ± 0.6	0.6 ± 0.1	2.9 ± 0.1
6733	7083	1.0 ± 0.5	0.6 ± 0.1	1.9 ± 0.5
6733	7117	0.8 ± 0.3	1.2 ± 0.1	1.2 ± 0.1
6766	7050	1.1 ± 0.4	0.5 ± 0.1	1.4 ± 0.4
6766	7083	1.7 ± 0.5	0.7 ± 0.1	3.4 ± 1.2
6766	7117	1.0 ± 0.4	0.6 ± 0.1	1.1 ± 0.1
6800	7017	2.2 ± 0.7	0.7 ± 0.1	2.5 ± 0.1
6800	7050	1.9 ± 0.5	0.6 ± 0.1	2.5 ± 0.1
6800	7083	2.5 ± 0.4	0.8 ± 0.1	3.9 ± 0.1
6800	7117	2.3 ± 0.5	0.6 ± 0.1	1.0 ± 0.1
6813	6983	1.3 ± 0.5	0.6 ± 0.1	2.3 ± 0.2
6833	6950	1.8 ± 0.5	0.6 ± 0.1	2.0 ± 0.1
6833	6983	2.0 ± 0.5	0.6 ± 0.1	1.9 ± 0.1
6833	7017	3.0 ± 0.6	0.7 ± 0.1	4.3 ± 0.3
6833	7050	1.0 ± 0.3	0.5 ± 0.1	1.7 ± 0.2
6833	7083	0.7 ± 0.4	0.7 ± 0.1	2.0 ± 0.2
6833	7117	3.2 ± 0.4	0.7 ± 0.1	1.5 ± 0.1
6833	7150	1.3 ± 0.4	0.6 ± 0.1	1.2 ± 0.1
6866	6883	1.7 ± 0.4	0.4 ± 0.1	1.4 ± 0.1
6866	6917	2.5 ± 0.5	0.6 ± 0.1	3.1 ± 0.1
6866	6950	1.3 ± 0.4	0.7 ± 0.1	2.2 ± 0.2
6866	6983	2.5 ± 0.6	0.8 ± 0.1	2.2 ± 0.1
6866	7017	1.4 ± 0.5	0.6 ± 0.1	2.4 ± 0.1
6866	7050	2.3 ± 0.5	0.5 ± 0.1	2.0 ± 0.1
6866	7083	3.0 ± 0.4	0.6 ± 0.1	2.2 ± 0.1
6866	7117	1.2 ± 0.3	0.7 ± 0.1	1.5 ± 0.1
6866	7150	0.7 ± 0.4	0.6 ± 0.1	1.1 ± 0.1
6866	8183	< 1.5	0.7 ± 0.1	1.7 ± 0.2
6866	8210	< 1.0	0.6 ± 0.1	1.3 ± 0.2
6893	8217	0.6 ± 0.4	0.6 ± 0.1	0.9 ± 0.1
6896	8094	4.5 ± 0.9	0.5 ± 0.1	1.6 ± 0.2
6900	6890	3.5 ± 0.6	0.7 ± 0.1	3.0 ± 0.1
6900	6917	2.7 ± 0.4	0.7 ± 0.1	2.5 ± 0.1
6900	6950	1.3 ± 0.4	0.9 ± 0.1	2.8 ± 0.2
6900	6983	1.0 ± 0.5	0.9 ± 0.1	2.9 ± 0.1
6900	7017	1.1 ± 0.4	0.9 ± 0.1	1.5 ± 0.1
6900	7050	1.7 ± 0.5	0.6 ± 0.1	2.2 ± 0.1
6900	7083	3.0 ± 0.8	0.8 ± 0.1	5.1 ± 0.2
6900	7117	<0.9	0.8 ± 0.1	2.9 ± 0.1
6900	7137	1.7 ± 0.4	0.6 ± 0.1	2.3 ± 0.1
6900	7783	0.9 ± 0.3	0.6 ± 0.1	1.0 ± 0.1
6900	7817	1.3 ± 0.4	0.7 ± 0.1	1.5 ± 0.1
6900	8117	0.9 ± 0.5	0.5 ± 0.1	1.0 ± 0.1
6900	8150	<1.1	0.7 ± 0.1	1.4 ± 0.1
6900	8183	1.8 ± 0.7	0.7 ± 0.1	1.4 ± 0.1
6913	7750	0.7 ± 0.1	0.7 ± 0.1	1.0 ± 0.1
6913	8063	1.1 ± 0.5	0.5 ± 0.1	0.9 ± 0.3
6913	8083	<0.9	0.4 ± 0.1	1.0 ± 0.1
6917	6920	1.5 ± 0.5	0.7 ± 0.1	2.3 ± 0.2
6918	8011	<1.8	0.7 ± 0.1	1.9 ± 0.1
6920	7050	0.7 ± 0.3	0.5 ± 0.1	1.4 ± 0.1
6920	7083	1.1 ± 0.4	0.6 ± 0.1	2.4 ± 0.1
6920	7150	<1.3	0.4 ± 0.1	0.8 ± 0.1
6920	7183	3.0 ± 1.0	0.7 ± 0.1	2.4 ± 0.1
6920	7217	3.9 ± 2.8	0.5 ± 0.1	2.1 ± 0.6
6920	7250	<1.4	0.5 ± 0.1	1.4 ± 0.1
6920	7283	<1.5	0.6 ± 0.1	1.3 ± 0.1
6920	7317	2.3 ± 0.8	0.8 ± 0.1	1.7 ± 0.2
6920	7350	<1.8	0.5 ± 0.1	2.4 ± 0.2
6920	7817	1.1 ± 0.3	0.7 ± 0.1	1.5 ± 0.1
6920	8083	<0.9	0.5 ± 0.1	0.9 ± 0.1
6933	6950	3.9 ± 0.5	0.9 ± 0.1	3.9 ± 0.5
6933	6983	1.5 ± 0.5	2.0 ± 0.1	2.1 ± 0.1
6933	7017	1.1 ± 0.4	0.6 ± 0.1	1.4 ± 0.1
6933	7050	1.4 ± 0.3	0.6 ± 0.1	1.2 ± 0.2
6933	7083	0.6 ± 0.3	0.4 ± 0.1	0.6 ± 0.1
6933	7117	<0.7	0.5 ± 0.1	1.9 ± 0.1
6933	7217	4.5 ± 0.9	0.5 ± 0.1	1.6 ± 0.2
6933	7250	<2.1	0.9 ± 0.1	3.3 ± 0.3
6933	7283	1.2 ± 0.6	0.6 ± 0.1	2.2 ± 0.2

Coordinates		Concentration (pCi/g ± 2 sigma)[a]		
East	North	Uranium-238	Radium-226	Thorium-232
6933	7317	1.6 ± 0.6	0.7 ± 0.1	1.6 ± 0.2
6933	7350	1.7 ± 0.7	0.9 ± 0.1	2.7 ± 0.2
6933	7383	<2.0	1.3 ± 0.4	1.9 ± 0.6
6933	7417	<1.0	0.9 ± 0.3	1.8 ± 0.5
6933	7617	0.8 ± 0.3	0.7 ± 0.1	1.5 ± 0.6
6933	7650	0.9 ± 0.2	0.7 ± 0.1	1.0 ± 0.1
6933	7683	2.1 ± 0.6	1.3 ± 0.1	2.1 ± 0.1
6933	7717	1.6 ± 0.3	0.6 ± 0.1	<0.2
6933	7750	1.4 ± 0.4	0.7 ± 0.1	<0.3
6933	7783	<0.6	0.7 ± 0.1	1.0 ± 0.1
6933	7950	0.7 ± 0.5	0.6 ± 0.1	1.1 ± 0.1
6933	7983	<1.1	0.6 ± 0.1	1.1 ± 0.1
6933	8017	<0.8	0.4 ± 0.1	0.6 ± 0.1
6933	8050	<0.8	0.3 ± 0.1	0.7 ± 0.3
6945	7931	<1.4	0.6 ± 0.1	0.9 ± 0.1
6953	7050	1.5 ± 0.5	0.7 ± 0.1	1.5 ± 0.1
6953	7650	0.9 ± 0.3	0.7 ± 0.1	1.4 ± 0.1
6960	7797	2.2 ± 0.7	0.8 ± 0.1	1.8 ± 0.3
6966	7083	1.6 ± 0.5	0.8 ± 0.1	1.6 ± 0.5
6966	7117	2.4 ± 0.5	0.8 ± 0.1	2.8 ± 0.7
6966	7150	1.2 ± 0.4	0.6 ± 0.1	2.2 ± 0.1
6966	7183	1.0 ± 0.4	0.6 ± 0.1	2.0 ± 0.1
6966	7217	1.1 ± 0.4	0.5 ± 0.1	1.5 ± 0.1
6966	7250	1.8 ± 0.4	0.6 ± 0.1	2.1 ± 0.1
6966	7283	0.6 ± 0.3	0.4 ± 0.1	1.3 ± 0.1
6966	7317	1.4 ± 0.5	0.7 ± 0.1	2.1 ± 0.1
6966	7350	<0.7	0.6 ± 0.1	1.3 ± 0.1
6966	7383	1.0 ± 0.4	0.6 ± 0.1	1.4 ± 0.1
6966	7417	1.8 ± 0.5	0.8 ± 0.1	3.1 ± 0.8
6966	7450	<2.0	0.7 ± 0.2	1.3 ± 0.5
6966	7483	1.3 ± 0.3	0.8 ± 0.1	1.5 ± 0.1
6966	7517	<1.8	0.8 ± 0.1	1.8 ± 0.2
6966	7617	2.1 ± 0.5	0.8 ± 0.1	1.8 ± 0.1
6966	7783	1.6 ± 0.5	0.5 ± 0.1	0.9 ± 0.1
6966	7817	1.9 ± 0.6	0.7 ± 0.1	1.0 ± 0.2
6966	7850	1.4 ± 0.5	0.7 ± 0.1	1.3 ± 0.3
6966	7883	2.1 ± 0.8	1.0 ± 0.1	3.2 ± 0.1
6976	7726	1.4 ± 0.4	0.8 ± 0.1	1.4 ± 0.1
6979	7750	<1.8	0.7 ± 0.1	1.2 ± 0.4
6986	7783	<0.8	0.6 ± 0.1	0.8 ± 0.1
6990	7283	1.6 ± 0.3	0.7 ± 0.1	1.1 ± 0.1
6990	7317	1.4 ± 0.5	0.7 ± 0.1	1.0 ± 0.1
6990	7350	1.8 ± 0.4	0.8 ± 0.1	1.1 ± 0.1
6993	7753	<1.8	0.7 ± 0.1	1.0 ± 0.3
6994	7250	-b-	<0.5c	6.5 ± 0.1c
7000	7483	0.5 ± 0.3	0.6 ± 0.1	0.8 ± 0.1
7000	7517	<1.6	0.7 ± 0.1	1.0 ± 0.4
7000	7623	2.2 ± 0.8	1.3 ± 0.2	1.2 ± 0.2
7000	7650	<1.7	0.7 ± 0.1	0.9 ± 0.3
7000	7683	<1.9	0.9 ± 0.2	0.7 ± 0.1
7007	7623	1.1 ± 0.6	0.7 ± 0.1	0.9 ± 0.1
7033	7450	<1.5	0.7 ± 0.1	0.8 ± 0.1
7033	7483	<1.4	0.5 ± 0.1	0.8 ± 0.1
7033	7517	3.1 ± 0.7	0.7 ± 0.1	0.7 ± 0.1
7033	7617	<1.9	0.7 ± 0.1	1.5 ± 0.6
7033	7650	2.3 ± 0.8	0.8 ± 0.1	1.0 ± 0.2
7033	7683	<0.8	0.7 ± 0.1	1.1 ± 0.5
7033	7717	<1.7	0.8 ± 0.1	1.2 ± 0.3
7066	7483	2.6 ± 0.7	0.5 ± 0.1	1.0 ± 0.1
7066	7517	1.7 ± 0.8	0.7 ± 0.1	1.0 ± 0.1
7066	7683	1.3 ± 0.5	0.7 ± 0.1	1.3 ± 0.5
7066	7717	2.3 ± 0.7	0.7 ± 0.1	0.9 ± 0.2
7100	7483	1.7 ± 0.5	0.6 ± 0.1	1.1 ± 0.2
7100	7717	<0.6	0.5 ± 0.1	0.9 ± 0.1
7100	7717	<1.1	0.7 ± 0.1	1.1 ± 0.3
7113	7517	<1.4	0.6 ± 0.1	0.9 ± 0.1
7133	7517	<1.6	0.5 ± 0.1	1.2 ± 0.1
7133	7717	<1.0	0.6 ± 0.1	1.0 ± 0.2
7134	7532	<2.0	0.8 ± 0.3	1.4 ± 0.5
7148	7539	<2.0	1.0 ± 0.3	1.3 ± 0.5
7153	7555	<2.0	1.2 ± 0.4	0.9 ± 0.6
7159	7574	<3.0	1.3 ± 0.6	1.9 ± 0.9
7166	7586	<2.0	1.2 ± 0.3	0.9 ± 0.4
7180	7603	<2.0	0.7 ± 0.3	2.0 ± 0.6
7192	7628	<2.0	1.0 ± 0.3	2.2 ± 0.6
7202	7640	<0.9	0.6 ± 0.1	0.8 ± 0.1
7211	7656	2.4 ± 0.7	0.7 ± 0.3	1.1 ± 0.1
7219	7669	3.1 ± 0.8	0.6 ± 0.1	0.8 ± 0.1

[a]Samples taken from bottom of excavation.
[b]Analysis not performed.
[c]Counted wet. A conversion factor was applied to compensate for emanation and moisture.

Post-Remedial Action Radionuclide Concentrations at PPRS

Table 4-1 in PRAR4

Location Number	Coordinates		Concentration (pCi/g ± 2 sigma)[a]		
	East	North	Uranium-238	Radium-226	Thorium-232
1	8538	6371	<3.00	0.72 ± 0.10	1.50 ± 0.72
2	8535	6365	<5.10	<0.73	2.30 ± 0.36
3	8542	6371	<5.10	<0.72	2.30 ± 0.26
4	8545	6365	<4.20	0.74 ± 0.37	1.50 ± 0.72
5	8535	6345	<2.50	0.45 ± 0.11	1.60 ± 0.73
6	8525	6345	<4.80	0.71 ± 0.44	2.60 ± 0.85
7	8516	6341	<5.40	1.10 ± 0.22	<1.30
8	8535	6355	<2.70	0.70 ± 0.24	1.30 ± 0.07
9	8527	6354	2.80 ± 2.10	0.56 ± 0.21	2.10 ± 0.68
10	8542	6357	<3.80	0.57 ± 0.24	1.20 ± 0.86
11	8532	6335	<4.30	0.72 ± 0.41	1.90 ± 1.00
12	8515	6325	2.80 ± 2.10	0.91 ± 0.14	1.20 ± 0.17
13	8515	6335	<3.10	0.55 ± 0.36	1.10 ± 0.39
14	8505	6335	<2.30	0.43 ± 0.20	1.20 ± 0.31
15	8508	6328	<3.80	<0.48	1.80 ± 0.61
16	8525	6335	<2.60	0.82 ± 0.42	1.20 ± 0.39
17	8525	6325	<4.10	<0.65	1.60 ± 1.00

[a]Results include background (0.7 pCi/g for Th-232; 0.5 pCi/g for Ra-226).

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Wayne, New Jersey, Site Certification Data Summary Worksheet

Post-Remedial Action Gamma Radiation Exposure Rates at PPRS		
Table 4-2 in PRAR4		
Coordinates		Exposure Rate (µR/h)a
East	North	
8537	6372	10.1
8542	6372	9.6
8537	6367	9.7
8542	6367	9.4
8547	6367	9.3
8537	6362	11.2
8542	6362	10.4
8547	6362	9.8
8532	6367	8.4
8532	6362	10.6
8527	6357	9.4
8532	6357	10.7
8537	6357	9.8
8542	6357	10.2
8527	6352	9.5
8532	6352	10.3
8537	6352	11.3
8517	6342	8.7
8522	6347	9.9
8527	6347	9.6
8522	6342	8.6
8527	6342	10.3
8532	6347	10.5
8537	6347	10.2
8532	6342	11.1
8502	6337	8.1
8507	6337	8.6
8502	6332	9.2
8507	6332	9.4
8512	6337	9.3
8517	6337	10.0
8512	6332	8.4
8517	6332	9.5
8522	6337	7.9
8527	6337	8.0
8522	6332	9.2
8527	6332	9.8
8532	6337	8.2
8507	6327	8.2
8512	6327	7.6
8517	6327	7.9
8512	6322	8.1
8517	6322	7.9
8522	6327	8.7
8527	6327	8.4
8522	6322	8.4
aResults include background (9.0 µR/h).		

Post-Remedial Action Radionuclide Concentrations at 898 Black Oak Ridge Road					
Table 4-3 in PRAR4					
Location Number	Coordinates		Concentration (pCi/g ± 2 sigma)a		
	East	North	Uranium-238	Radium-226	Thorium-232
18	10047	5179	1.1 ± 1.40	0.56 ± 0.08	1.70 ± 0.19
19	10038	5190	1.60 ± 1.60	0.67 ± 0.09	2.00 ± 0.22
20	10030	5180	<4.90	<0.69	1.60 ± 0.70
21	10040	5189	<4.20	0.77 ± 0.45	1.90 ± 0.75
22	10063.5	5179.5	<4.50	<0.59	1.60 ± 0.29
23	10070.5	5177.5	<4.70	0.90 ± 0.33	<1.20
24	10099	5145	<3.00	1.00 ± 0.28	1.70 ± 0.68
aResults include background (0.7 pCi/g for Th-232; 0.5 pCi/g for Ra-226).					

Post-Remedial Action Gamma Radiation Exposure Rates at 898 Black Oak Ridge Road		
Table 4-4 in PRAR4		
Coordinates		Exposure Rate (µR/h)a
East	North	
10038	5189	10.0
10048	5180	8.2
10027	5188	10.6
10030	5194	9.8
10033	5194	9.3
10041	5190	9.7
10064	5180	9.2
10071	5177	9.3
10035	5191	10.8
10041	5188	11.2
10101	5145	11.2
10106	5143	11.5
10111	5144	10.7
aResults include background (9.0 µR/h).		

Post-Remedial Action Radionuclide Concentrations and Gamma Radiation Exposure Rate at 3 Peck Avenue						
Table 4-5 in PRAR4						
Location Number	Coordinates		Concentration (pCi/g ± 2 sigma)a			Exposure ratea (µR/h)
	East	North	Uranium-238	Radium-226	Thorium-232	
25	8452	6422	<3.50	0.83 ± 0.17	2.00 ± 0.26	-
-	8454	6422	-	-	-	10.9
aResults include background (9.0 µR/h; 0.7 pCi/g for Th-232; 0.5 pCi/g for Ra-226).						

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Post-Remedial Action Radionuclide Concentrations at 7 Peck Avenue

Table 4-6 in PRAR4

Location Number	Coordinates		Concentration (pCi/g ± 2 sigma)[a]		
	East	North	Uranium-238	Radium-226	Thorium-232
26	8452	6420	<3.20	0.67 ± 0.21	2.00 ± 0.25
27	8460	6420	<1.90	0.67 ± 0.14	2.30 ± 0.10

[a]Results include background (0.7 pCi/g for Th-232, 0.5 pCi/g for Ra-226).

Post-Remedial Action Radionuclide Concentrations at 13 Peck Avenue

Table 4-8 in PRAR4

Location Number	Coordinates		Concentration (pCi/g ± 2 sigma)[a]		
	East	North	Uranium-238	Radium-226	Thorium-232
28	8482	6392	<2.20	0.98 ± 0.27	3.60 ± 0.53
29	8460	6383	<3.50	0.83 ± 0.22	2.20 ± 1.10
30	8474	6386	<4.30	<0.64	1.60 ± 0.75
31	8457	6372	<4.30	<0.57	2.40 ± 0.80
32	8460	6370	<3.20	0.53 ± 0.44	<0.83
33	8462	6368	<4.20	0.75 ± 0.17	2.10 ± 0.74

[a]Results include background (0.7 pCi/g for Th-232, 0.5 pCi/g for Ra-226).

Post-Remedial Action Radionuclide Concentrations and Gamma Radiation Exposure Rate at 14 Peck Avenue

Table 4-10 in PRAR4

Location Number	Coordinates		Concentration (pCi/g ± 2 sigma)[a]			Exposure ratea (µR/h)
	East	North	Uranium-238	Radium-226	Thorium-232	
34	8471	6344	<3.20	0.88 ± 0.14	2.00 ± 0.66	-
-	8471	6345	-	-	-	9.8

[a]Results include background (9.0 µR/h; 0.7 pCi/g for Th-232; 0.5 pCi/g for Ra-226).

Post-Remedial Action Radionuclide Concentrations and Gamma Radiation Exposure Rate at 15 Peck Avenue

Table 4-11 in PRAR4

Location Number	Coordinates		Concentration (pCi/g ± 2 sigma)a			Exposure ratea (µR/h)
	East	North	Uranium-238	Radium-226	Thorium-232	
35	8492	6365	<4.30	<0.68	<0.97	11.8

[a]Results include background (9.0 µR/h; 0.7 pCi/g for Th-232, 0.5 pCi/g for Ra-226.

Post-Remedial Action Radionuclide Concentrations at 17 Peck Avenue

Table 4-12 in PRAR4

Location Number	Coordinates		Concentration (pCi/g ± 2 sigma)[a]		
	East	North	Uranium-238	Radium-226	Thorium-232
7	8516	6341	<5.40	1.10 ± 0.22	<1.30
36	8518	6364	<4.10	0.73 ± 0.11	2.50 ± 0.29
37	8521	6373	<5.20	1.50 ± 0.29	1.00 ± 0.77
38	8503	6349	<1.90	0.77 ± 0.13	1.70 ± 0.04
39	8493	6360	<3.40	0.66 ± 0.07	1.60 ± 0.60
40	8507	6358	<1.50	0.62 ± 0.11	1.10 ± 0.44

[a]Results include background (0.7 pCi/g for Th-232, 0.5 pCi/g for Ra-226).

Post-Remedial Action Gamma Radiation Exposure Rates at 7 Peck Avenue

Table 4-7 in PRAR4

Coordinates		Exposure Rate (µR/h)[a]
East	North	
8456	6422	11.7
8460	6420	12.6

[a]Results include background (9.0 µR/h).

Post-Remedial Action Gamma Radiation Exposure Rates at 13 Peck Avenue

Table 4-9 in PRAR4

Coordinates		Exposure Rate (µR/h)[a]
East	North	
8463	6368	10.1
8466	6369	11.0
8471	6384	12.1
8470	6380	12.3
8475	6395	10.6
8481	6392	10.8
8458	6377	10.8

[a]Results include background (9.0 µR/h).

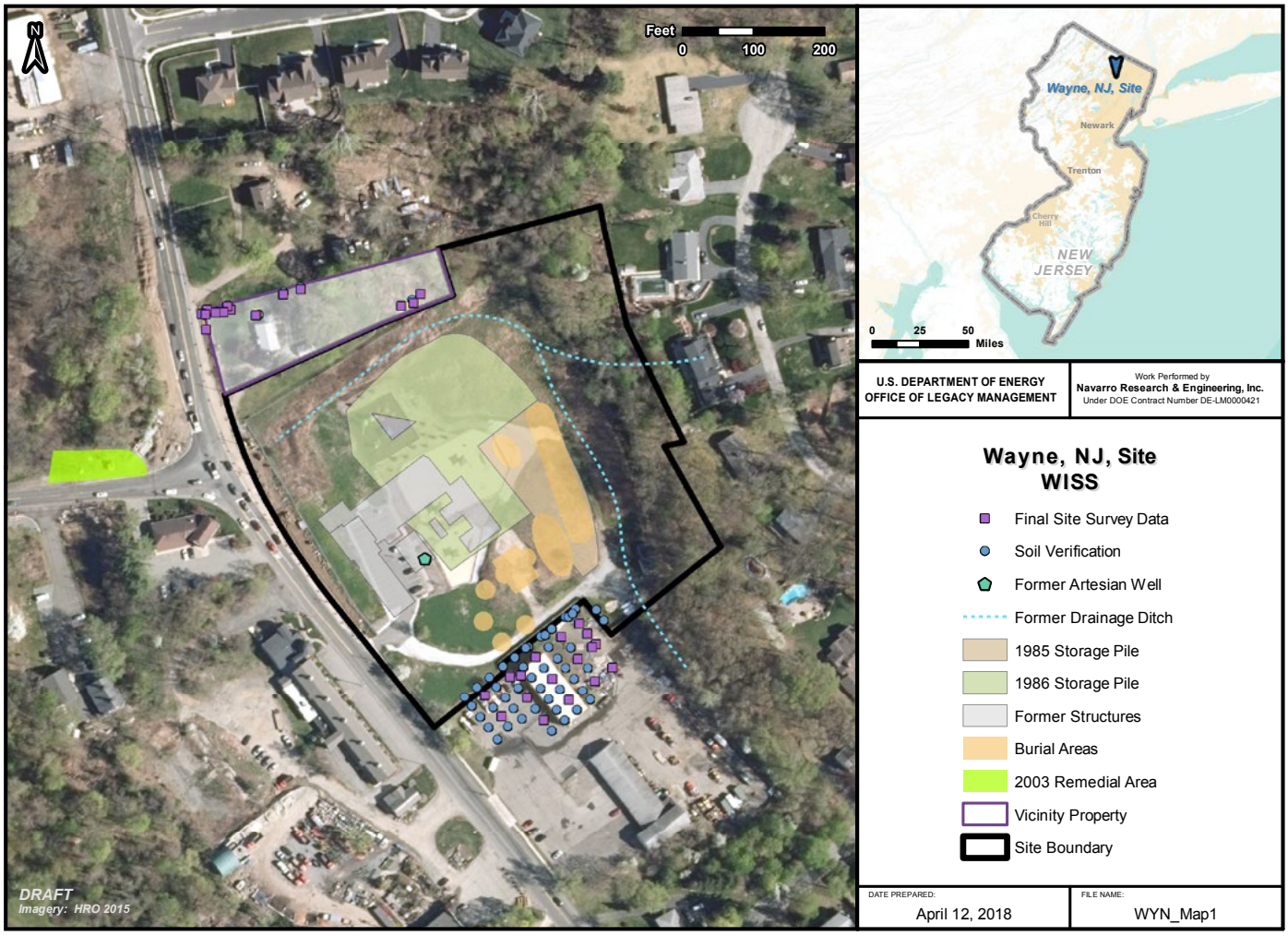
Post-Remedial Action Gamma Radiation Exposure Rates at 17 Peck Avenue

Table 4-13 in PRAR4

Coordinates		Exposure Rate (µR/h)[a]
East	North	
8518	6364	8.6
8523	6374	10.1
8504	6349	9.6
8506	6359	12.1
8494	6362	11.0

[a]Results include background (9.0 µR/h).

Wayne, New Jersey, Site Map



\\lm\gis\ProjectWorkArea\Sites\NJ\Wayne\ProjectWorkArea\spinellm\WYN_Map1.mxd 4/12/2018 Sources available upon request.

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