# Beverly, Massachusetts, Site

U.S. DEPARTMENT OF ENERGY | Legacy Management

## SITE CERTIFICATION SUMMARY

This Site Certification Summary provides information about the **Beverly, Massachusetts, 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 Beverly, Massachusetts, Site (formerly known as the Ventron Corporation Site) is located on Massachusetts Bay at the confluence of the Bass and Danvers rivers. From 1942 to 1948, the Metal Hydrides Corporation (predecessor of the Ventron Corporation) used the 3-acre site to process natural uranium under contract to the Manhattan Engineer District (MED). In 1977, Thiokol Corporation acquired the property. Prior to remedial action, the site was a fully operational chemical-manufacturing facility comprised of three groups of buildings: the A buildings (used for uranium storage and processing), the B buildings (constructed over the machine shop used during MED operations), and C buildings (next to subsurface waste pits). Other on-site buildings (Biocides Building and Buildings E, F, and J) were not used for MED activities; however, some private operations involving purification of thorium were conducted in Building J. Building F was built on the site of a former MED operations building.

## Site Remediation Timeline

**1977, 1980 through 1982** — Oak Ridge National Laboratory (ORNL) conducted radiological surveys of the land and buildings.

**1986** — The Beverly site was designated for inclusion in the Formerly Utilized Sites Remedial Action Program (FUSRAP).

**1987 through 1988** — ORNL performed additional radiological surveys.

**1990** — The Ventron Corporation was renamed Morton International.

**1991** — Radiological surveys of properties in the vicinity of the site were performed to determine if radiological contamination from plant operations had migrated off-site.

**1992** — Betchtel National Inc. performed further characterization of radiological and chemical conditions at the site.

**1994** — Morton International production activity at the site ceased.

**September 1995** — The first phase of remediation occurred at the site.

**1996** — U.S. Department of Energy (DOE) and Morton International finalized a Memorandum of Agreement regarding the allocation of cleanup responsibilities between the parties.

**May 1996 through March 1997** — The second phase of remediation occurred at the site.

**July 1997** — Supplemental sampling of the site occurred to verify the adequacy of radiological remediation.

**1997** — DOE radiological decontamination of the site concluded.

**October 21, 2003** — DOE published a notice of cleanup certification for the site in the Federal Register.

## Certification Docket Contents

The Certification Docket documents the successful decontamination of radioactively contaminated areas at the Ventron Corporation Site in Beverly, Massachusetts, by DOE. The docket includes information and documents supporting certification that conditions at the property are in compliance with radiological guidelines in effect at the conclusion of remedial action. In addition, the certification docket substantiates that the future use of the property will not produce any significant radiological hazard or dose to the general public as a result of residual radioactivity remaining on-site that originated during activities conducted by DOE or its predecessor agencies.

## Remedial Action

Remedial activities at the Beverly site were performed in two phases as part of the FUSRAP program. The first phase of remediation took place in September 1995; the second phase

took place from May 1996 through March 1997. During these two phases, all but two buildings (the Biocides Building and Building E) were demolished and much of the soil and rubble were excavated. See the Fact Sheet for details.

FUSRAP objectives for the site were to:

- Identify and evaluate areas formerly used to support MED/U.S. Atomic Energy Commission nuclear development activities.
- Remove or otherwise control radioactive contamination above current federal guidelines.
- Achieve and maintain compliance with applicable criteria for the protection of human health and the environment.
- Certify the site, to the extent possible, for use without radiological restrictions after remediation.

## Post-Remediation Sampling

DOE conducted walkover scans during remedial action to direct the excavation. As remediation was completed, DOE measured exposure rates to confirm that radiation levels were in compliance with applicable guidelines and collected and analyzed soil samples to establish that residual radioactive material exceeding applicable criteria had been removed. Neither of the two remaining on-site structures was involved in work with radiological materials. However, interior gamma radiation exposure rates were taken in these structures.

### Buildings

Before soil excavation began, Morton International demolished Buildings A, B, C, and F and shipped the debris from Buildings B, C, and F to a Class II industrial landfill for disposal. Debris from Building A was crushed, sampled, and stockpiled for use as backfill. Data for the crushed debris indicated that the concentrations of uranium-238 (U-238), thorium-232 (Th-232), and radium-226 (Ra-226) were below supplemental limit criteria. As soil remediation progressed, demolition of Building J became necessary in order to access and remove contaminated soil beneath the building.

### Excavations

DOE excavated and verified 11 discrete site areas for compliance with radiological cleanup criteria. See the Site Certification Data Summary Worksheet on pages 4-7 for detailed results.

### Other Areas of Remediation

The bank of ovens in Building A exhausted into a tunnel directly beneath the building. The tunnel contained radioactively contaminated material mixed with asbestos. Morton International removed, bagged, packaged, and shipped the asbestos-contaminated material from the tunnel for disposal as low-level radioactive waste.

The seawall at the site is approximately 100 years old, composed primarily of granite boulders stacked 12 feet high. Residual contamination within the seawall could not be remediated due to stability and safety concerns. Estimates indicated that the total uranium concentration in the rubble, 0.72 picocuries per gram (pCi/g), would be less than 1% of the volumetric soil guideline of 100 pCi/g established for the Beverly site. The seawall required no further action.

### Supplemental Sampling

Due to concerns about the final radiological status of the Beverly site, additional sampling was performed in July 1997. Seven on-site boreholes and three boreholes in the harbor were drilled and sampled. All sample results were below the cleanup criteria of 50 pCi/g for U-238, 5 pCi/g for Th-232, and 5 pCi/g for Ra-226. This supplemental post-remedial action data addressed concerns about the sufficient data needed to demonstrate site-wide compliance with the cleanup criteria.

For detailed results of the post-remediation sampling, see the Site Certification Data Summary Worksheet. For a detailed map of the site and sampling locations, see the Site Overview Map on page 8.

## Current Site Conditions

DOE post-remedial action survey data indicate that the radiological condition of the Beverly site is in compliance with applicable DOE standards and guidelines for cleanup of residual radioactive contamination. DOE certified that use of the property will result in no radiological exposure above current guidelines established to protect the public as well as site occupants. The site was released for unrestricted use.

DOE has been responsible for long-term stewardship of the Beverly site since 2004. 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/beverly-massachusetts-site).

## ADDITIONAL INFORMATION

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

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

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# Beverly, Massachusetts, Site Certification Data Summary Worksheet

Twelve tables referenced in the Beverly Certification Docket provide the evidence used to certify the site as clean.

When the tables refer to the "PRAR," that is the "Post-Remedial Action Report for the Remedial Action at the Ventron Site, Beverly, Massachusetts" (dated March 2003).

**Post-Remedial Action Data, July 1997 Supplemental Sampling**

**Table 5-1 in the PRAR**

| Borehole | Sample ID | Depth (ft) | U-238 (pCi/g) | Th-232 (pCi/g) | Ra-226 (pCi/g) |
|---|---|---|---|---|---|
| Onsite | | | | | |
| 1 (Alfa Building) | 127-RS-0800 | 0 – 1 | <2.55 | 0.6 ± 0.06 | 0.55 ± 0.04 |
| 1 (Alfa Building) | 127-RS-0801 | 1 – 2 | 4.30 ± 1.36 | 0.78 ± 0.07 | 0.64 ± 0.05 |
| 1 (Alfa Building) | 127-RS-0802 | 2 – 3 | 6.61 ± 1.28 | 0.51 ± 0.06 | 0.65 ± 0.04 |
| 1 (Alfa Building) | 127-RS-0803 | 3 – 4 | 3.31 ± 1.00 | 0.65 ± 0.06 | 0.65 ± 0.04 |
| 1 (Alfa Building) | 127-RS-0804 | 4 – 5 | 1.98 ± 1.06 | 0.61 ± 0.07 | 0.65 ± 0.05 |
| 1 (Alfa Building) | 127-RS-0805 | 5 – 5.5 | 2.27 ± 1.13 | 0.61 ± 0.07 | 0.51 ± 0.05 |
| | | | | | |
| 2 (Alfa Building) | 127-RS-0806 | 0 – 1 | 4.15 ± 0.93 | 0.55 ± 0.06 | 0.52 ± 0.04 |
| 2 (Alfa Building) | 127-RS-0807 | 1 – 2 | 8.57 ± 1.18 | 0.72 ± 0.06 | 0.55 ± 0.04 |
| 2 (Alfa Building) | 127-RS-0808 | 2 – 3 | 16.29 ± 1.67 | 0.61 ± 0.06 | 0.61 ± 0.04 |
| 2 (Alfa Building) | 127-RS-0814 | 3 – 3.75 | 12.42 ± 1.49 | 0.74 ± 0.06 | 0.55 ± 0.04 |
| | | | | | |
| 3 (Alfa Building) | 127-RS-0809 | 0 – 1 | 11.70 ± 1.49 | 0.71 ± 0.07 | 0.66 ± 0.04 |
| 3 (Alfa Building) | 127-RS-0810 | 1 – 2 | 24.57 ± 1.24 | 0.67 ± 0.06 | 0.63 ± 0.04 |
| 3 (Alfa Building) | 127-RS-0811 | 2 – 3 | 13.11 ± 1.31 | 0.61 ± 0.06 | 0.60 ± 0.04 |
| 3 (Alfa Building) | 127-RS-0812 | 3 – 4 | 17.33 ± 1.73 | 0.73 ± 0.07 | 0.61 ± 0.04 |
| 3 (Alfa Building) | 127-RS-0813 | 4 – 5 | 14.35 ± 1.59 | 0.66 ± 0.07 | 0.61 ± 0.04 |
| | | | | | |
| 4 (Building A/C Area) | 127-RS-0815 | 0 – 1 | 2.24 ± 1.04 | 1.16 ± 0.07 | 1.39 ± 0.06 |
| 4 (Building A/C Area) | 127-RS-0816 | 1 – 2 | <4.08 | 1.77 ± 0.10 | 2.09 ± 0.08 |
| 4 (Building A/C Area) | 127-RS-0817 | 2 – 3 | 4.71 ± 1.22 | 0.97 ± 0.08 | 1.08 ± 0.05 |
| 4 (Building A/C Area) | 127-RS-0818 | 3 – 4 | 2.94 ± 1.39 | 1.59 ± 0.09 | 1.35 ± 0.06 |
| | | | | | |
| 5 (Building A/C Area) | 127-RS-0819 | 0 – 1 | <2.95 | 0.50 ± 0.05 | 0.55 ± 0.04 |
| 5 (Building A/C Area) | 127-RS-0820 | 1 – 2 | 2.98 ± 1.37 | 0.71 ± 0.06 | 0.74 ± 0.05 |
| 5 (Building A/C Area) | 127-RS-0821 | 2 – 3 | 4.28 ± 1.09 | 0.68 ± 0.06 | 0.73 ± 0.05 |
| 5 (Building A/C Area) | 127-RS-0822 | 3 – 4 | 5.10 ± 1.13 | 0.81 ± 0.07 | 0.78 ± 0.05 |
| | | | | | |
| 6 (Building A/C Area) | 127-RS-0823 | 0 – 1 | <3.17 | 0.56 ± 0.06 | 0.65 ± 0.04 |
| 6 (Building A/C Area) | 127-RS-0824 | 1 – 2 | 1.14 ± 0.96 | 0.57 ± 0.06 | 0.62 ± 0.04 |
| 6 (Building A/C Area) | 127-RS-0825 | 2 – 3 | 1.77 ± 0.94 | 0.78 ± 0.06 | 0.69 ± 0.04 |
| 6 (Building A/C Area) | 127-RS-0826 | 3 – 4 | 4.19 ± 1.24 | 0.90 ± 0.07 | 0.64 ± 0.04 |
| 6 (Building A/C Area) | 127-RS-0827 | 4 – 5 | 2.77 ± 1.19 | 0.74 ± 0.07 | 0.71 ± 0.04 |
| | | | | | |
| 7 (Building A/C Area) | 127-RS-0828 | 0 – 1 | 3.72 ± 1.01 | 0.69 ± 0.06 | 0.51 ± 0.04 |
| 7 (Building A/C Area) | 127-RS-0829 | 1 – 2 | 3.90 ± 1.25 | 0.67 ± 0.07 | 0.66 ± 0.04 |
| 7 (Building A/C Area) | 127-RS-0830 | 2 – 3 | <3.37 | 0.84 ± 0.07 | 0.56 ± 0.05 |
| 7 (Building A/C Area) | 127-RS-0831 | 3 – 4 | 2.79 ± 1.14 | 0.86 ± 0.07 | 0.72 ± 0.05 |
| | | | | | |
| Harbor | | | | | |
| 8 (Grid 31) | 127-RS-0832 | 2 – 3 | <2.55 | 0.60 ± 0.06 | 0.43 ± 0.04 |
| 8 (Grid 31) | 127-RS-0833 | 3 – 3.5 | <2.39 | 0.44 ± 0.05 | 0.37 ± 0.04 |
| | | | | | |
| 9 (Grid 33) | 127-RS-0834 | 2 – 2.5 | <2.72 | 0.53 ± 0.06 | 0.59 ± 0.04 |
| | | | | | |
| 10 (Grid 16) | 127-RS-0835 | 2 – 2.5 | 13.17 ± 1.26 | 0.52 ± 0.06 | 0.39 ± 0.04 |
| 10 (Grid 16) | 127-RS-0836 | 2.5 – 3 | 5.68 ± 0.96 | 0.38 ± 0.06 | 0.36 ± 0.03 |

**Alfa Building (Building J) Demolition Data**

**Table D-2 in the PRAR**

| Sample ID | Material | U-238 (pCi/g) | Th-232 (pCi/g) | Ra-226 (pCi/g) |
|---|---|---|---|---|
| | | | | |
| 127-RS-610 | Metal | 0.57 ± 0.74 | <0.53 | <0.37 |
| 127-RS-611 | Roofing | <3.00 | <1.10 | <0.62 |
| 127-RS-612 | Concrete | <2.10 | 0.64 ± 0.10 | 1.30 ± 0.08 |
| 127-RS-613 | Wood | <9.70 | <2.70 | <1.60 |

**Buildings A and A-1 Demolition Data**

**Table D-1 in the PRAR**

| Sample ID | Pile Location | U-238 (pCi/g) | Th-232 (pCi/g) | Ra-226 (pCi/g) |
|---|---|---|---|---|
| 127-RS-097 | Quadrant A | <2.00 | <0.57 | 0.45 ± 0.06 |
| 127-RS-098 | Quadrant A | <1.50 | 0.57 ± 0.08 | 0.43 ± 0.05 |
| 127-RS-099 | Quadrant A | <1.30 | 0.53 ± 0.08 | 0.43 ± 0.04 |
| 127-RS-100 | Quadrant A | <1.30 | 0.70 ± 0.10 | 0.36 ± 0.05 |
| 127-RS-101 | Quadrant A | <2.10 | 0.63 ± 0.13 | 0.59 ± 0.06 |
| 127-RS-102 | Quadrant A | 1.20 ± 0.53 | 0.75 ± 0.10 | 0.44 ± 0.05 |
| 127-RS-103 | Quadrant A | <2.00 | 0.59 ± 0.09 | 0.47 ± 0.06 |
| 127-RS-104 | Quadrant A | <2.50 | 0.63 ± 0.14 | 0.61 ± 0.08 |
| 127-RS-105 | Quadrant A | <2.30 | 0.49 ± 0.12 | 0.62 ± 0.06 |
| 127-RS-106 | Quadrant B | <2.30 | 0.65 ± 0.14 | 0.62 ± 0.07 |
| 127-RS-107 | Quadrant B | <3.20 | <0.89 | 0.61 ± 0.10 |
| 127-RS-108 | Quadrant B | 3.60 ± 1.30 | <0.98 | 0.95 ± 0.14 |
| 127-RS-109 | Quadrant B | 3.10 ± 1.60 | <1.30 | 1.20 ± 0.15 |
| 127-RS-110 | Quadrant B | <2.60 | 0.95 ± 0.14 | 0.90 ± 0.08 |
| 127-RS-111 | Quadrant B | <3.70 | 1.10 ± 0.16 | 0.78 ± 0.11 |
| 127-RS-112 | Quadrant B | 1.30 ± 1.00 | 1.10 ± 0.16 | 1.00 ± 0.10 |
| 127-RS-113 | Quadrant B | <3.40 | 0.88 ± 0.18 | 0.67 ± 0.09 |
| 127-RS-114 | Quadrant B | <3.20 | 0.71 ± 0.14 | 0.82 ± 0.09 |
| 127-RS-115 | Quadrant C | 0.40 ± 0.46 | <0.48 | 0.39 ± 0.05 |
| 127-RS-116 | Quadrant C | <3.70 | 0.78 ± 0.18 | 0.55 ± 0.10 |
| 127-RS-117 | Quadrant C | <3.20 | <0.79 | 0.59 ± 0.08 |
| 127-RS-118 | Quadrant C | <2.40 | 0.85 ± 0.15 | 0.62 ± 0.07 |
| 127-RS-119 | Quadrant C | <2.70 | 0.82 ± 0.15 | 0.57 ± 0.08 |
| 127-RS-120 | Quadrant C | <1.90 | 0.71 ± 0.12 | 0.55 ± 0.06 |
| 127-RS-121 | Quadrant C | 2.80 ± 1.30 | 0.89 ± 0.19 | 0.76 ± 0.13 |
| 127-RS-122 | Quadrant C | 1.70 ± 0.89 | <0.75 | 0.73 ± 0.09 |
| 127-RS-123 | Quadrant C | <3.60 | 0.94 ± 0.20 | 0.74 ± 0.10 |
| 127-RS-124 | Quadrant D | <3.50 | 0.91 ± 0.24 | 0.98 ± 0.13 |
| 127-RS-125 | Quadrant D | <4.20 | <1.10 | <0.76 |
| 127-RS-126 | Quadrant D | <2.20 | <0.58 | 0.45 ± 0.07 |
| 127-RS-127 | Quadrant D | <2.40 | <0.61 | 0.63 ± 0.08 |
| 127-RS-128 | Quadrant D | <3.00 | <0.76 | 0.42 ± 0.09 |
| 127-RS-129 | Quadrant D | <2.10 | <0.53 | 0.38 ± 0.07 |
| 127-RS-130 | Quadrant D | 1.20 ± 0.87 | <0.78 | <0.51 |
| 127-RS-131 | Quadrant D | <3.50 | <0.95 | <0.60 |
| 127-RS-132 | Quadrant D | <3.20 | 0.50 ± 0.16 | 0.54 ± 0.10 |
| 127-RS-133 | Quadrant D | <0.90 | <0.23 | <0.16 |
| 127-RS-134 | Quadrant D | <0.84 | <0.24 | <0.16 |
| 127-RS-135 | Pile Grab | <2.20 | 0.69 ± 0.12 | 1.20 ± 0.08 |
| 127-RS-142 | Quadrant E | <1.90 | 0.55 ± 0.10 | 0.58 ± 0.06 |
| 127-RS-143 | Quadrant E | <2.40 | 0.43 ± 0.11 | <0.37 |
| 127-RS-144 | Quadrant E | <2.70 | 0.90 ± 0.13 | 0.61 ± 0.07 |
| 127-RS-145 | Quadrant E | 1.60 ± 0.67 | 0.76 ± 0.10 | 0.60 ± 0.06 |
| 127-RS-146 | Quadrant E | 0.23 ± 0.69 | <0.76 | 0.52 ± 0.08 |
| 127-RS-147 | Quadrant E | 2.40 ± 0.77 | <0.46 | 0.30 ± 0.06 |
| 127-RS-148 | Quadrant E | <2.80 | 0.54 ± 0.12 | 0.46 ± 0.07 |
| 127-RS-149 | Quadrant E | 3.20 ± 0.97 | 0.61 ± 0.10 | 0.61 ± 0.06 |
| 127-RS-150 | Quadrant E | 1.70 ± 0.80 | <0.52 | 0.42 ± 0.06 |

–continued to page 5–

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# Beverly, Massachusetts, Site Certification Data Summary Worksheet

| Post-Remedial Action Data, Excavations 1, 2, and 3 | | | | | |
|---|---|---|---|---|---|
| Table D-3 in the PRAR | | | | | |
| **Grid Location** | **Sample ID** | **Sample Type** | **U-238 (pCi/g)** | **Th-232 (pCi/g)** | **Ra-226 (pCi/g)** |
| **Excavation 1 (NW Corner of Site)** | | | | | |
| S0 - E0 | 127-RS-088 | Composite | 8.8 ± 2.3 | 0.92 ± 0.12 | 1.0 ± 0.08 |
| S3 - E9 | 127-RS-136 | Highest Area | 6.6 ± 1.8 | 0.43 ± 0.10 | 0.44 ± 0.06 |
| S0 - E10 | 127-RS-091 | Composite | 6.8 ± 1.80 | 0.79 ± 0.10 | 0.64 ± 0.06 |
| S2 - E14 | 127-RS-137 | Highest Area | 12.7 ± 3.30 | 1.7 ± 0.16 | 1.3 ± 0.11 |
| **Excavation 2 (Near Buildings A and A- 1 Slabs)** | | | | | |
| S0 - E50 | 127-RS-092 | Composite | 9.9 ± 2.70 | 0.89 ± 0.16 | 0.88 ± 0.11 |
| S0 - E50 | 127-RS-093 | Highest Area | 14.1 ± 3.60 | 0.7 ± 0.12 | 0.65 ± 0.07 |
| S10 - E50 | 127-RS-094 | Composite | 15.8 ± 4.10 | 1.2 ± 0.21 | 0.6 ± 0.10 |
| S10 - E50 | 127-RS-095 | Highest Area | 34.1 ± 2.50 | 1.3 ± 0.15 | 1 ± 0.09 |
| **Excavation 3 (Near Building E)** | | | | | |
| S30 - E130 | 127-RS-096 | Composite | 2.9 ± 1.10 | <0.81 | 0.6 ± 0.09 |

| Building A Soil Beneath Slab Samples | | | | | |
|---|---|---|---|---|---|
| Table D-10 in the PRAR | | | | | |
| **Sample Number** | **Sample ID** | **Sample Type** | **U-238 (pCi/g)** | **Th-232 (pCi/g)** | **Ra-226 (pCi/g)** |
| 1 | 127-RS-257 | Discrete | <4.40 | 1.70 ± 0.25 | 2.20 ± 0.14 |
| 2 | 127-RS-258 | Discrete | <3.60 | 2.50 ± 0.20 | 2.60 ± 0.14 |
| 3 | 127-RS-259 | Discrete | <2.90 | 1.70 ± 0.15 | 1.70 ± 0.10 |
| 4 | 127-RS-260 | Discrete | 10.20 ± 2.80 | <1.40 | 2.50 ± 0.16 |
| 5 | 127-RS-261 | Discrete | <3.50 | 2.20 ± 0.21 | 2.20 ± 0.13 |
| 6 | 127-RS-262 | Discrete | <4.30 | <1.20 | 2.10 ± 0.14 |
| 7 | 127-RS-263 | Discrete | 2.9 | 2.20 ± 0.22 | 2.00 ± 0.12 |
| 8 | 127-RS-264 | Discrete | <4.10 | <1.20 | 2.20 ± 0.14 |
| 9 | 127-RS-265 | Discrete | 2.6 | 1.40 ± 0.15 | 1.70 ± 0.09 |
| 10 | 127-RS-266 | Discrete | <2.50 | 0.81 ± 0.15 | 0.93 ± 0.08 |
| 11 | 127-RS-267 | Discrete | 4.2 | 1.80 ± 0.16 | 1.80 ± 0.10 |
| 12 | 127-RS-268 | Discrete | <3.40 | 1.80 ± 0.20 | 2.70 ± 0.14 |
| 13 | 127-RS-269 | Discrete | <4.70 | 2.10 ± 0.25 | 2.40 ± 0.17 |
| 14 | 127-RS-270 | Discrete | <3.7 | 1.3 ± 0.22 | 1.8 ± 0.12 |
| 15 | 127-RS-271 | Discrete | <3.3 | 0.9 ± 0.17 | 1.3 ± 0.11 |
| 16 | 127-RS-272 | Discrete | <2.60 | 1.50 ± 0.16 | 1.40 ± 0.09 |
| 17 | 127-RS-273 | Discrete | <2.40 | <0.73 | 0.47 ± 0.08 |
| 18 | 127-RS-274 | Discrete | <2.50 | <0.79 | 1.60 ± 0.10 |
| 19 | 127-RS-422 | Discrete | <5.49 | 1.93 ± 0.16 | 2.33 ± 0.11 |
| 20 | 127-RS-423 | Discrete | <5.74 | 1.68 ± 0.17 | 2.09 ± 0.12 |
| 21 | 127-RS-426 | Discrete | <2.59 | 0.60 ± 0.07 | 0.48 ± 0.04 |

| Post-Remedial Action Data, Excavation 4 | | | | | |
|---|---|---|---|---|---|
| Alfa Building (Building J) | | | | | |
| Table D-4 in the PRAR | | | | | |
| **Grid Location** | **Sample ID** | **Sample Type** | **U-238 (pCi/g)** | **Th-232 (pCi/g)** | **Ra-226 (pCi/g)** |
| S60 - E150 | 127-RS-232 | Composite | 36.3 ± 4.9 | <0.66 | 0.66 ± 0.08 |
| S60 - E150 | 127-RS-231 | Highest Area | 32.6 ± 2.00 | 1.2 ± 0.15 | 0.62 ± 0.08 |
| S70 - E140 | 127-RS-228 | Composite | <2.9 | 1.4 ± 0.13 | 0.49 ± 0.07 |
| S70 - E140 | 127-RS-227 | Highest Area | 5.4 ± 1.6 | <0.56 | 0.67 ± 0.07 |
| S50 - E150 | 127-RS-230 | Composite | 11.4± 3.3 | 1.3 ± 0.19 | 0.76 ± 0.11 |
| S50 - E150 | 127-RS-229 | Highest Area | 20.6 ± 1.6 | 1.5 ± 0.17 | 1 ± 0.09 |
| S70 - E130 | 127-RS-222 | Composite | <3.2 | 1.6 ± 0.15 | 0.63 ± 0.08 |
| S70 - E130 | 127-RS-221 | Highest Area | <3.1 | 3 ± 0.2 | <0.45 |
| S60 - E140 | 127-RS-226 | Composite | 8.3 ± 2.3 | 1.5 ± 0.15 | 0.67 ± 0.09 |
| S60 - E140 | 127-RS-225 | Highest Area | <2.90 | 2.6 ± 0.15 | 0.41 ± 0.07 |
| S60 - E130 | 127-RS-220 | Composite | <3.90 | 2.1 ± 0.19 | 1.1 ± 0.11 |
| S60 - E130 | 127-RS-289 | Highest Area | <4.95 | 7.74 ± 0.36 | 1.15 ± 0.15 |
| S50 - E140 | 127-RS-224 | Composite | 7.2 ± 2.0 | 1.3 ± 0.13 | 0.63 ± 0.08 |
| S50 - E140 | 127-RS-223 | Highest Area | <1.9 | 0.8 ± 0.12 | <0.3 |
| S50 - E130 | 127-RS-287 | Composite | 7.7 ± 0.83 | 1.4 ± 0.12 | 0.74 ± 0.06 |
| S50 - E130 | 127-RS-288 | Highest Area | 23.1 ± 5.8 | 2.6 ± 0.19 | 0.77 ± 0.11 |
| S50/60 - E130/140 | 127-RS-290 | Composite | 4.84 ± 1.36 | 1.75 ± 0.13 | 0.83 ± 0.07 |
| **Phase II - Railroad Excavation (uses special grid)** | | | | | |
| 0E - 0S | 127-RS-527 | Discrete | 10.83 ± 2.65 | 1.11 ± 0.09 | 0.81 ± 0.06 |
| 0E - 2S | 127-RS-528 | Discrete | 16.82 ± 2.77 | 1.26 ± 0.11 | 1 ± 0.06 |
| 0E - 4S | 127-RS-529 | Discrete | 22.9 ± 2.75 | 0.83 ± 0.09 | 0.97 ± 0.06 |
| 0E - 6S | 127-RS-530 | Discrete | 25.0 ± 3.16 | 1.17 ± 0.10 | 0.89 ± 0.06 |
| 0E - 8S | 127-RS-531 | Discrete | 8.63 ± 2.21 | 0.64 ± 0.09 | 0.84 ± 0.06 |
| 0E - 10S | 127-RS-532 | Discrete | 39.49 ± 3.72 | 1.10 ± 0.11 | 0.95 ± 0.07 |
| 0E - 12S | 127-RS-533 | Discrete | 1.87 ± 2.26 | 0.76 ± 0.10 | 0.91 ± 0.07 |
| 2E - 0S | 127-RS-534 | Discrete | 25.57 ± 3.43 | 1.44 ± 0.12 | 1.46 ± 0.08 |
| 2E - 2S | 127-RS-535 | Discrete | 21.75 ± 3.06 | 2.00 ± 0.12 | 1.04 ± 0.06 |
| 2E - 4S | 127-RS-536 | Discrete | 15.11 ± 2.86 | 1.13 ± 0.11 | 0.82 ± 0.07 |
| 2E - 6S | 127-RS-537 | Discrete | 21.3 ± 3.04 | 1.12 ± 0.11 | 0.89 ± 0.07 |
| 2E - 8S | 127-RS-538 | Discrete | 7.52 ± 2.42 | 0.83 ± 0.09 | 0.79 ± 0.06 |
| 2E - 10S | 127-RS-539 | Discrete | 12.05 ± 1.96 | 0.77 ± 0.09 | 0.77 ± 0.06 |
| 2E - 12S | 127-RS-540 | Discrete | 9.96 ± 2.05 | 0.88 ± 0.09 | 0.77 ± 0.06 |
| 4E - 0S | 127-RS-541 | Discrete | 3.60 ± 1.64 | 0.48 ± 0.08 | 0.50 ± 0.05 |
| 4E - 2S | 127-RS-542 | Discrete | 34.92 ± 3.66 | 1.17 ± 0.10 | 0.91 ± 0.07 |
| 4E - 4S | 127-RS-543 | Discrete | 24.38 ± 3.47 | 1.38 ± 0.12 | 1.20 ± 0.08 |
| 4E - 6S | 127-RS-544 | Discrete | 6.69 ± 2.60 | 0.89 ± 0.11 | 0.78 ± 0.06 |
| 4E - 8S | 127-RS-545 | Discrete | 11.47 ± 2.39 | 0.88 ± 0.10 | 0.72 ± 0.06 |
| 4E - 10S | 127-RS-546 | Discrete | 7.66 ± 1.93 | 0.82 ± 0.08 | 0.65 ± 0.05 |
| 4E - 12S | 127-RS-547 | Discrete | 0.74 ± 1.90 | 0.55 ± 0.08 | 0.68 ± 0.05 |
| 4E - 14S | 127-RS-548 | Discrete | 3.47 ± 1.93 | 0.79 ± 0.09 | 0.71 ± 0.05 |
| 6E - 0S | 127-RS-549 | Discrete | 0.58 ± 2.06 | 0.81 ± 0.08 | 0.76 ± 0.05 |
| 6E - 2S | 127-RS-550 | Discrete | <3.03 | 0.66 ± 0.08 | 0.51 ± 0.04 |
| 6E - 4S | 127-RS-551 | Discrete | 0.65 ± 1.94 | 0.70 ± 0.07 | 0.49 ± 0.04 |
| 6E - 6S | 127-RS-552 | Discrete | <3.03 | 0.64 ± 0.07 | 0.45 ± 0.04 |
| 6E - 8S | 127-RS-553 | Discrete | 19.72 ± 2.83 | 0.80 ± 0.10 | 0.88 ± 0.06 |
| 6E - 10S | 127-RS-554 | Discrete | 2.70 ± 1.83 | 0.73 ± 0.09 | 0.60 ± 0.05 |
| 6E - 12S | 127-RS-555 | Discrete | 0.15 ± 2.35 | 1.13 ± 0.09 | 0.75 ± 0.05 |
| 6E - 14S | 127-RS-556 | Discrete | 3.56 ± 1.72 | 0.98 ± 0.09 | 0.75 ± 0.06 |
| Area Comp. | 127-RS-557 | Composite | 16.96 ± 2.67 | 0.92 ± 0.10 | 0.89 ± 0.07 |
| Highest Area | 127-RS-558 | Discrete | 38.15 ± 3.60 | 1.24 ± 0.10 | 0.73 ± 0.06 |
| Highest Area | 127-RS-559 | Discrete | 43.81 ± 3.95 | 1.15 ± 0.10 | 0.96 ± 0.07 |
| 3E - 4S | 127-RS-568 | Highest Area | 27.36 ± 3.06 | 1.27 ± 0.10 | 0.72 ± 0.06 |
| 3E - 4S | 127-RS-569 | Highest Area | 46.63 ± 3.43 | 0.98 ± 0.09 | 0.86 ± 0.06 |
| 1E - 5S | 127-RS-570 | Highest Area | 38.08 ± 3.48 | 1.4 ± 0.10 | 0.88 ± 0.06 |
| 1E - 5S | 127-RS-571 | Highest Area | 24.87 ± 2.99 | 1.04 ± 0.09 | 0.88 ± 0.06 |
| **Phase III - Under Alfa Building** | | | | | |
| 150/140E - 40/40S | 127-RS-633 | Composite | 26.67 ± 2.17 | 0.9 ± 0.06 | 0.81 ± 0.04 |
| 150E - 50S | 127-RS-632 | Composite | 21.1 ± 1.86 | 0.91 ± 0.06 | 0.68 ± 0.03 |
| 160E - 50S | 127-RS-630 | Composite | 13.51 ± 1.94 | 0.79 ± 0.07 | 0.7 ± 0.04 |
| 160E - 60S | 127-RS-631 | Composite | 7.42 ± 1.40 | 0.78 ± 0.06 | 0.71 ± 0.04 |
| Alfa Pit (150E - 50S) Bottom | 127-RS-646 | Composite | 35.08 ± 3.18 | 0.84 ± 0.08 | 0.61 ± 0.05 |

–continued to page 6–

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# Beverly, Massachusetts, Site Certification Data Summary Worksheet

**Post-Remedial Action Data, Excavation 5 (Harbor)**

**Table D-5 in the PRAR**

| Grid Location | Sample ID | Sample Type | U-238 (pCi/g) | Th-232 (pCi/g) | Ra-226 (pCi/g) |
|---|---|---|---|---|---|
| Grid 1 | 12795006 | Composite | 0.37 ± 0.46 | 0.46 ± 0.10 | 0.60 ± 0.09 |
| Grid 2 | 12795007 | Composite | <1.90 | <0.58 | 0.47 ± 0.07 |
| Grid 3 | 12795008 | Composite | <1.70 | 0.48 ± 0.11 | 0.44 ± 0.10 |
| Grid 4 | 12795009 | Composite | <1.80 | 0.36 ± 0.19 | 0.52 ± 0.12 |
| Grid 5 | 12795010 | Composite | <1.70 | <0.53 | 0.36 ± 0.09 |
| Grid 6 | 12795011 | Composite | <1.90 | 0.27 ± 0.10 | 0.45 ± 0.07 |
| Grid 7 | 12795012 | Composite | <1.50 | 0.41 ± 0.11 | 0.39 ± 0.08 |
| Grid 8 | 12795013 | Composite | 1.70 ± 0.67 | 0.26 ± 0.13 | 0.61 ± 0.11 |
| Grid 9 | 12795014 | Composite | 2.70 ± 0.87 | 0.47 ± 0.07 | 0.52 ± 0.10 |
| Grid 10 | 12795015 | Composite | 2.10 ± 0.81 | 0.33 ± 0.16 | 0.39 ± 0.08 |
| Grid 11 | 12795016 | Composite | 8.10 ± 2.20 | 0.58 ± 0.09 | 0.29 ± 0.09 |
| Grid 12 | 12795017 | Composite | <2.70 | 0.54 ± 0.11 | 0.45 ± 0.11 |
| Grid 13 | 12795018 | Composite | 1.30 ± 0.65 | 0.65 ± 0.13 | 0.51 ± 0.10 |
| Grid 14 | 12795036 | Composite | <3.10 | <0.86 | 0.40 ± 0.15 |
| Grid 15 | 12795019 | Composite | 5.60 ± 1.60 | 0.59 ± 0.11 | 0.50 ± 0.10 |
| Grid 16 | 12795020 | Composite | 13.30 ± 1.70 | 0.38 ± 0.11 | 0.43 ± 0.12 |
| Grid 17 | 12795031 | Composite | 9.50 ± 2.60 | 0.34 ± 0.11 | 0.56 ± 0.08 |
| Grid 18 | 12795021 | Composite | 21.50 ± 4.40 | 0.60 ± 0.08 | 0.57 ± 0.11 |
| Grid 19 | 12795022 | Composite | 3.00 ± 0.98 | 0.71 ± 0.16 | 0.43 ± 0.11 |
| Grid 21 | 12795024 | Composite | 6.10 ± 1.70 | 0.77 ± 0.12 | 0.70 ± 0.13 |
| Grid 22 | 12795025 | Composite | <2.20 | 0.61 ± 0.11 | 0.37 ± 0.07 |
| Grid 23 | 12795026 | Composite | 3.60 ± 1.10 | 0.39 ± 0.08 | 0.53 ± 0.10 |
| Grid 24 | 12795027 | Composite | <2.00 | 0.55 ± 0.13 | 0.39 ± 0.07 |
| Grid 25 | 12795028 | Composite | <2.10 | 0.78 ± 0.13 | 0.38 ± 0.08 |
| Grid 26 | 12795029 | Composite | <1.90 | 0.38 ± 0.08 | 0.56 ± 0.09 |
| Grid 27 | 12795030 | Composite | 1.80 ± 0.73 | 0.35 ± 0.08 | 0.45 ± 0.10 |
| Grid 31 | 12795032 | Composite | 9.80 ± 2.90 | 3.60 ± 0.67 | 0.47 ± 0.18 |
| Grid 33 | 12795033 | Composite | 4.20 ± 1.30 | <0.59 | 0.52 ± 0.10 |
| Grid 34 | 12795041 | Composite | <2.40 | 0.59 ± 0.15 | 0.44 ± 0.13 |
| Grid 35 | 12795042 | Composite | 0.74 ± 0.70 | 0.67 ± 0.11 | 0.43 ± 0.13 |
| Grid 36 | 12795043 | Composite | 1.10 ± 0.65 | <0.62 | 0.48 ± 0.12 |
| Grid 37 | 12795044 | Composite | 1.80 ± 0.79 | <0.64 | 0.46 ± 0.13 |
| Grid 38 | 12795037 | Composite | <4.10 | 0.36 ± 0.13 | 0.51 ± 0.13 |
| Grid 39 | 12795038 | Composite | <3.10 | 0.56 ± 0.20 | 0.51 ± 0.18 |
| Grid 40 | 12795039 | Composite | <4.00 | 0.84 ± 0.19 | 0.61 ± 0.13 |
| Grid 41 | 12795040 | Composite | <4.40 | 0.60 ± 0.37 | 1.00 ± 0.28 |
| Grid 42 | 12795034 | Composite | <4.40 | <1.50 | 0.52 ± 0.21 |
| Grid 43 | 12795035 | Composite | 1.30 ± 1.10 | 0.91 ± 0.19 | 0.83 ± 0.17 |
| **Phase II** | | | | | |
| Grid 20 | 127-RS-151 | Discrete | 13.0 ± 1.1 | 1 ± 0.12 | 0.47 ± 0.07 |
| Grid 20 | 127-RS-152 | Discrete | 8.6 ± 0.83 | 1 ± 0.09 | 0.57 ± 0.05 |
| Grid 20 | 127-RS-153 | Discrete | 2.1 ± 0.70 | 0.57 ± 0.09 | 0.47 ± 0.05 |
| Grid 20 | 127-RS-154 | Discrete | 2.4 ± 0.83 | 0.46 ± 0.10 | 0.33 ± 0.06 |
| Grid 20 | 127-RS-155 | Discrete | 4.3 ± 1.30 | 0.7 ± 0.11 | 0.88 ± 0.07 |
| Grid 20 | 127-RS-156 | Discrete | 6.6 ± 1.80 | 0.61 ± 0.11 | 0.69 ± 0.06 |
| Grid 20 | 127-RS-157 | Discrete | 12.9 ± 1.2 | 0.77 ± 0.13 | 0.51 ± 0.08 |
| Grid 20 | 127-RS-158 | Discrete | 6.7 ± 0.83 | 0.98 ± 0.13 | 0.47 ± 0.06 |
| Grid 20 | 127-RS-159 | Discrete | <3.3 | 0.64 ± 0.15 | 0.55 ± 0.10 |
| Grid 20 | 127-RS-160 | Discrete | 17.3 ± 4.3 | 0.75 ± 0.11 | 0.48 ± 0.08 |
| Grid 21 | 127-RS-639 | Composite | 37.6 ± 2.95 | 0.91 ± 0.08 | 0.59 ± 0.04 |
| Grid 21 | 127-RS-647 | Discrete | 11.0 ± 2.46 | 0.79 ± 0.11 | 0.62 ± 0.06 |
| Grid 21 | 127-RS-650 | Discrete | 18.1 ± 2.60 | 1.50 ± 0.11 | 0.64 ± 0.05 |
| Grid 21 | 127-RS-651 | Discrete | 12.3 ± 3.01 | 0.85 ± 0.12 | 0.74 ± 0.07 |
| Grid 28 | 127-RS-172 | Discrete | <2.4 | <0.6 | 0.84 ± 0.08 |
| Grid 28 | 127-RS-175 | Discrete | 1.1 ± 0.53 | 0.39 ± 0.08 | 0.37 ± 0.05 |
| Grid 28 | 127-RS-181 | Discrete | 3.3 ± 0.93 | 0.49 ± 0.08 | 0.27 ± 0.04 |
| Grid 28 | 127-RS-182 | Discrete | 5.6 ± 1.5 | 0.64 ± 0.10 | 0.43 ± 0.06 |
| Grid 28 | 127-RS-183 | Discrete | 2.9 ± 0.92 | <0.51 | 0.55 ± 0.06 |
| Grid 29 | 127-RS-171 | Discrete | 7.4 ± 2.0 | 0.83 ± 0.12 | 0.36 ± 0.07 |
| Grid 29 | 127-RS-173 | Discrete | 1.2 ± 0.57 | 0.5 ± 0.08 | 0.58 ± 0.05 |
| Grid 29 | 127-RS-174 | Discrete | 8.8 ± 1.0 | 0.75 ± 0.11 | 0.53 ± 0.07 |
| Grid 29 | 127-RS-176 | Discrete | 3.4 ± 0.10 | 0.59 ± 0.09 | <0.3 |
| Grid 29 | 127-RS-177 | Discrete | 7.8 ± 2.00 | 0.65 ± 0.09 | 0.56 ± 0.06 |
| Grid 29 | 127-RS-178 | Discrete | 6.7 ± 1.8 | 1.1 ± 0.14 | 0.7 ± 0.07 |
| Grid 29 | 127-RS-179 | Discrete | 8.5 ± 2.2 | <0.39 | 0.26 ± 0.04 |
| Grid 29 | 127-RS-180 | Discrete | 16.5 ± 1.2 | 0.37 ± 0.10 | <0.29 |
| Grid 30 | 127-RS-166 | Discrete | 1.3 ± 0.61 | 0.59 ± 0.10 | 0.88 ± 0.06 |
| Grid 30 | 127-RS-167 | Discrete | <2.3 | 0.63 ± 0.11 | 1.3 ± 0.07 |
| Grid 30 | 127-RS-168 | Discrete | 11.4 ± 2.9 | 0.93 ± 0.12 | 0.69 ± 0.07 |
| Grid 30 | 127-RS-169 | Discrete | 9.3 ± 0.94 | 0.44 ± 0.10 | 0.97 ± 0.07 |
| Grid 30 | 127-RS-170 | Discrete | 1.6 ± 0.65 | 0.61 ± 0.11 | 0.77 ± 0.06 |
| Grid 31 | 127-RS-161 | Discrete | <2.8 | <0.64 | 1.1 ± 0.08 |
| Grid 31 | 127-RS-162 | Discrete | 2.9 ± 0.89 | 0.58 ± 0.09 | 0.87 ± 0.06 |
| Grid 31 | 127-RS-163 | Discrete | 3 ± 1.0 | 0.84 ± 0.10 | 0.7 ± 0.07 |
| Grid 31 | 127-RS-164 | Discrete | 2.9 ± 0.90 | 0.76 ± 0.09 | 1.1 ± 0.07 |
| Grid 31 | 127-RS-165 | Discrete | <2.1 | 0.68 ± 0.11 | 0.92 ± 0.07 |
| Grid 32 | 127-RS-197 | Discrete | <1.81 | <0.42 | <0.33 |
| Grid 32 | 127-RS-198 | Discrete | <2.25 | 0.73 ± 0.13 | 1.1 ± 0.07 |
| Grid 32 | 127-RS-199 | Discrete | <2.17 | 0.57 ± 0.11 | 0.83 ± 0.07 |
| Grid 32 | 127-RS-200 | Discrete | 5.76 ± 1.64 | 0.89 ± 0.14 | 0.9 ± 0.08 |
| Grid 32 | 127-RS-201 | Discrete | <1.93 | 0.67 ± 0.12 | 0.81 ± 0.06 |
| Grid 44 | 127-RS-202 | Discrete | <2.43 | 0.51 ± 0.12 | 0.86 ± 0.08 |
| Grid 44 | 127-RS-203 | Discrete | <1.86 | 0.74 ± 0.11 | 1.14 ± 0.07 |
| Grid 44 | 127-RS-204 | Discrete | 2.72 ± 0.96 | 0.51 ± 0.16 | 0.53 ± 0.08 |
| Grid 44 | 127-RS-205 | Discrete | <1.54 | <0.43 | 0.85 ± 0.06 |
| Grid 44 | 127-RS-206 | Discrete | <3.19 | <0.55 | <0.35 |
| Grid 45 | 127-RS-212 | Discrete | <2.3 | 0.62 ± 0.10 | 0.58 ± 0.07 |
| Grid 45 | 127-RS-213 | Discrete | 2.9 ± 1.1 | 0.96 ± 0.19 | 0.75 ± 0.11 |
| Grid 45 | 127-RS-214 | Discrete | 2.3 ± 0.84 | 0.7 ± 0.11 | 0.48 ± 0.06 |
| Grid 45 | 127-RS-215 | Discrete | 2.9 ± 0.99 | <0.68 | 0.5 ± 0.07 |
| Grid 45 | 127-RS-216 | Discrete | 1.5 ± 0.66 | 0.62 ± 0.09 | 0.43 ± 0.05 |
| Grid 46 | 127-RS-207 | Discrete | <2.33 | 0.77 ± 0.13 | 0.5 ± 0.07 |
| Grid 46 | 127-RS-208 | Discrete | <2.5 | <0.63 | 0.38 ± 0.07 |
| Grid 46 | 127-RS-209 | Discrete | <2.9 | 2 ± 0.15 | 0.44 ± 0.08 |
| Grid 46 | 127-RS-210 | Discrete | <2.0 | 0.35 ± 0.10 | 0.55 ± 0.06 |
| Grid 46 | 127-RS-211 | Discrete | 1.8 ± 0.81 | 0.67 ± 0.15 | 0.41 ± 0.08 |
| Grid 29/30 HS Removal | 127-RS-253 | Discrete | 3.4 ± 0.10 | 0.64 ± 0.10 | 0.51 ± 0.05 |
| Grid 29/30 HS Removal | 127-RS-254 | Discrete | 2.7 ± 0.98 | 0.52 ± 0.08 | 0.38 ± 0.05 |
| Grid 29/30 HS Removal | 127-RS-255 | Discrete | <1.9 | 0.55 ± 0.08 | 0.3 ± 0.05 |
| Grid 29/30 HS Removal | 127-RS-256 | Discrete | <1.9 | 0.5 ± 0.09 | 0.4 ± 0.05 |

**Post-Remedial Action Data, Excavation 6**

**Samples Near Vicinity of Seawall**

**Table D-6 in the PRAR**

| Seawall Proximity Location | Sample ID | Sample Type | U-238 (pCi/g) | Th-232 (pCi/g) | Ra-226 (pCi/g) |
|---|---|---|---|---|---|
| Location 1 | 127-RS-285 | Composite | 12.3 ± 3.10 | 0.79 ± 0.08 | 0.40 ± 0.05 |
| | 127-RS-286 | Highest Area | 15.1 ± 3.80 | 1.1 ± 0.14 | 0.47 ± 0.08 |
| Location 2 | 127-RS-296 | Composite | 25.89 ± 1.93 | 1.16 ± 0.15 | 0.86 ± 0.08 |
| | 127-RS-297 | Composite | 18.1 ± 4.51 | 0.77 ± 0.13 | 0.69 ± 0.07 |
| | 127-RS-298 | Highest Area | 5.3 ± 1.39 | 0.42 ± 0.07 | 0.42 ± 0.06 |
| Location 3 | 127-RS-295 | Composite | 21.16 ± 1.52 | 0.69 ± 0.69 | 0.34 ± 0.07 |
| | 127-RS-294 | Composite | 29.31 ± 2.07 | 0.59 ± 0.10 | 0.52 ± 0.06 |
| | 127-RS-293 | Highest Area | 16.73 ± 4.28 | <0.94 | 0.52 ± 0.11 |
| Location 4 | 127-RS-299 | Composite | 22.7 ± 1.90 | 1.6 ± 0.17 | 1.6 ± 0.11 |
| | 127-RS-300 | Composite | 24.9 ± 6.20 | <0.96 | 1.3 ± 0.11 |
| | 127-RS-301 | Highest Area | 26.1 ± 6.40 | 0.86 ± 0.17 | 1.3 ± 0.10 |
| Location 5 | 127-RS-302 | Composite | 8.4 ± 2.20 | 0.61 ± 0.11 | 0.6 ± 0.06 |
| | 127-RS-303 | Composite | 15.6 ± 4.00 | 0.84 ± 0.14 | 0.77 ± 0.10 |
| | 127-RS-304 | Highest Area | 11.3 ± 1.00 | 0.71 ± 0.11 | 0.61 ± 0.07 |
| Location 6 | 127-RS-305 | Composite | 8.3 ± 2.40 | 1.2 ± 0.19 | 0.97 ± 0.12 |
| | 127-RS-306 | Composite | 27.6 ± 6.90 | <1.1 | 1.9 ± 0.15 |
| | 127-RS-307 | Highest Area | 19.0 ± 1.7 | 1.7 ± 0.18 | 1.3 ± 0.11 |
| Location 7 | 127-RS-308 | Composite | 14.8 ± 1.2 | 0.72 ± 0.11 | 0.57 ± 0.06 |
| | 127-RS-309 | Composite | 38.1 ± 2.50 | <0.94 | 0.77 ± 0.10 |
| | 127-RS-310 | Highest Area | 7.2 ± 1.90 | <0.61 | <0.35 |
| Location 8 | 127-RS-311 | Composite | 16 ± 1.40 | 1 ± 0.14 | 1.2 ± 0.09 |
| | 127-RS-312 | Composite | 18.7 ± 4.80 | <1.2 | <0.77 |
| | 127-RS-313 | Highest Area | 8.8 ± 0.89 | 0.57 ± 0.12 | 0.86 ± 0.07 |
| Location 9 | 127-RS-314 | Composite | 20.7 ± 1.50 | 0.59 ± 0.08 | 0.50 ± 0.05 |
| | 127-RS-315 | Composite | 23.6 ± 1.60 | 0.55 ± 0.12 | 0.45 ± 0.07 |
| | 127-RS-316 | Highest Area | 29.6 ± 1.70 | 0.61 ± 0.12 | <0.35 |
| Location 10 | 127-RS-317 | Composite | 15 ± 1.20 | 0.61 ± 0.09 | 0.55 ± 0.05 |
| | 127-RS-318 | Composite | 11.5 ± 3.00 | <0.62 | 0.58 ± 0.07 |
| | 127-RS-319 | Highest Area | 8.1 ± 2.10 | 0.92 ± 0.09 | 0.61 ± 0.06 |
| Location 11 | 127-RS-320 | Composite | 12.8 ± 3.20 | 0.72 ± 0.12 | 0.45 ± 0.07 |
| | 127-RS-321 | Composite | 12.5 ± 3.10 | 1.1 ± 0.10 | 0.52 ± 0.05 |
| | 127-RS-322 | Highest Area | 3.7± 1.10 | 0.43 ± 0.09 | 0.34 ± 0.05 |
| Location 12 | 127-RS-323 | Composite | 16.5 ± 1.30 | 0.78 ± 0.09 | 0.56 ± 0.06 |
| | 127-RS-324 | Composite | 25.9 ± 6.4 | <0.64 | 0.5 ± 0.08 |
| | 127-RS-325 | Highest Area | 2.2 ± 0.83 | <0.75 | 0.81 ± 0.08 |
| Location 13 | 127-RS-326 | Composite | 11.6 ± 1.20 | <0.58 | 0.42 ± 0.07 |
| | 127-RS-327 | Composite | 24.2 ± 1.80 | 0.65 ± 0.10 | 0.42 ± 0.05 |
| | 127-RS-328 | Highest Area | 5.7 ± 1.50 | 0.54 ± 0.09 | 0.37 ± 0.06 |
| Location 14 | 127-RS-414 | Composite | 36.88 ± 3.42 | 0.75 ± 0.08 | 0.53 ± 0.05 |
| | 127-RS-415 | Highest Area | 21.79 ± 2.47 | 1.17 ± 0.10 | 0.75 ± 0.07 |
| Location 15 | 127-RS-336 | Composite | 28.9 ± 3.02 | 0.97 ± 0.09 | 0.64 ± 0.06 |
| | 127-RS-337 | Highest Area | <2.76 | 0.51 ± 0.07 | 0.45 ± 0.04 |
| Location 16 | 127-RS-334 | Composite | 22.5 ± 2.49 | 0.9 ± 0.10 | 0.89 ± 0.06 |
| | 127-RS-335 | Highest Area | 12.98 ± 2.32 | 2.59 ± 0.18 | 2.24 ± 0.12 |
| Location 17 | 127-RS-460 | Composite | 4.75 ± 1.68 | 0.52 ± 0.06 | 0.59 ± 0.04 |
| Location 18 | 127-RS-464 | Composite | 18.8 ± 2.46 | 0.76 ± 0.07 | 0.57 ± 0.04 |
| Location 19 | 127-RS-477 | Composite | 3.78 ± 1.63 | 0.73 ± 0.08 | 0.54 ± 0.05 |
| Location 20 | 127-RS-518 | Composite | 6.98 ± 1.59 | 0.88 ± 0.12 | 0.64 ± 0.07 |
| | 127-RS-522 | Highest Area | 15.13 ± 1.86 | 0.93 ± 0.14 | 0.7 ± 0.08 |

**Post-Remedial Action Data, Excavation 7**

**(Between Building A Slab and Building E)**

**Table D-8 in the PRAR**

| Grid Location | Sample ID | Sample Type | U-238 (pCi/g) | Th-232 (pCi/g) | Ra-226 (pCi/g) |
|---|---|---|---|---|---|
| S30-E100 | 127-RS-349 | Composite | <4.63 | 0.67 ± 0.10 | 0.56 ± 0.06 |
| S30-E100 | 127-RS-350 | Highest Area | <3.82 | 0.69 ± 0.11 | 0.7 ± 0.07 |
| S30-E110 | 127-RS-352 | Composite | <4.52 | 0.94 ± 0.94 | 0.68 ± 0.06 |
| S30-E110 | 127-RS-353 | Highest Area | 10.89 ± 1.77 | 0.84 ± 0.11 | 0.6 ± 0.08 |

**Post-Remedial Action Data, Excavations 8, 9, 10, and 11**

**Table D-9 in the PRAR**

| Grid Location | Sample ID | Sample Type | U-238 (pCi/g) | Th-232 (pCi/g) | Ra-226 (pCi/g) |
|---|---|---|---|---|---|
| **Excavation 8 (Building A Leach Tank Pit)** | | | | | |
| S30-E80 | 127-RS-438 | Composite | 8.38 ± 2.46 | 1.03 ± 0.09 | 0.71 ± 0.06 |
| **Excavation 9 (Building A Fan Pit)** | | | | | |
| S27-E66 | 127-RS-454 | Composite | 6.72 ± 1.92 | 0.51 ± 0.07 | 0.42 ± 0.04 |
| S27-E66 | 127-RS-455 | Highest Area | 13.75 ± 2.62 | 1.42 ± 0.12 | 1.16 ± 0.08 |
| **Excavation 10** | | | | | |
| S20-E50 | 127-RS-442 | Composite | 4.18 ± 1.92 | 1.08 ± 0.10 | 1.03 ± 0.07 |
| S20-E50 | 127-RS-441A | Highest Area | 1.52 ± 3.36 | 2.2 ± 0.17 | 2.62 ± 0.12 |
| **Excavation 11** | | | | | |
| S20-E40 | 127-RS-438A | Composite | 3.89 ± 3.00 | 2.46 ± 0.17 | 2.69 ± 0.12 |
| S20-E40 | 127-RS-439A | Highest Area | 22.51 ± 3.37 | 0.90 ± 0.10 | 1.01 ± 0.07 |

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# Beverly, Massachusetts, Site Certification Data Summary Worksheet

| Post-Remedial Action Data, Excavation 6 | | | | | |
|---|---|---|---|---|---|
| (From Building C Slab , Across Building B Slab, to Building F Slab) | | | | | |
| Table D-7 in the PRAR | | | | | |
| **Grid Location** | **Sample ID** | **Sample Type** | **U-238 (pCi/g)** | **Th-232 (pCi/g)** | **Ra-226 (pCi/g)** |
| S30-E0 | 127-RS-334 | Composite | 22.5 ± 2.49 | 0.9 ± 0.10 | 0.89 ± 0.06 |
| S30-E0 | 127-RS-335 | Highest Area | 12.98 ± 2.32 | 2.55 ± 0.18 | 2.24 ± 0.12 |
| S30-E10 | 127-RS-338 | Composite | 7.36 ±1.32 | 1.11 ± 0.11 | 0.94 ± 0.06 |
| S30-E10 | 127-RS-339 | Highest Area | 19.8 ± 2.44 | 1.39 ± 0.12 | 1.13 ± 0.08 |
| S30-E20 | 127-RS-340 | Composite | 5.31 ± 1.13 | 0.87 ± 0.09 | 0.86 ± 0.06 |
| S30-E20 | 127-RS-341 | Highest Area | <6.23 | 1.67 ± 0.14 | 1.96 ± 0.10 |
| S40-E0 | 127-RS-342 | Composite | 44.3 ± 3.87 | 1.18 ± 0.10 | 0.9 ± 0.06 |
| S40-E0 | 127-RS-343 | Highest Area | 37.5 ± 3.57 | 1.06 ± 0.10 | 1.13 ± 0.07 |
| S40-E10 | 127-RS-344 | Composite | 22.4 ± 2.37 | 0.81 ± 0.08 | 0.78 ± 0.05 |
| S40-E10 | 127-RS-345 | Highest Area | 29.5 ± 3.18 | 0.85 ± 0.09 | 0.6 ± 0.06 |
| S40-E20 | 127-RS-347 | Composite | 9.84 ± 1.39 | 0.69 ± 0.08 | 0.58 ± 0.05 |
| S40-E20 | 127-RS-348 | Highest Area | 7.63 ± 1.25 | 0.58 ± 0.08 | 0.58 ± 0.05 |
| S50-E0 | 127-RS-465 | Composite | 8.87 ± 2.17 | 0.83 ± 0.08 | 0.82 ± 0.06 |
| S50-E0 | 127-RS-356 | Highest Area | 45.03 ± 4.51 | 1.22 ± 0.11 | 0.78 ± 0.07 |
| S50-E10 | 127-RS-357 | Composite | 41.89 ± 3.61 | 1.13 ± 0.09 | 0.79 ± 0.06 |
| S50-E10 | 127-RS-358 | Highest Area | 35.26 ± 3.18 | 0.55 ± 0.08 | 0.38 ± 0.05 |
| S50-E20 | 127-RS-373 | Composite | 20.7 ± 2.29 | 0.63 ± 0.08 | 0.51 ± 0.05 |
| S50-E20 | 127-RS-374 | Highest Area | 17.94 ± 2.12 | 0.78 ± 0.10 | 0.56 ± 0.05 |
| S60-E0 | 127-RS-359 | Composite | 45.79 ± 3.66 | 0.85 ± 0.08 | 0.72 ± 0.05 |
| S60-E0 | 127-RS-360 | Highest Area | 30.34 ± 2.93 | 0.76 ± 0.08 | 0.58 ± 0.05 |
| S60-E10 | 127-RS-361 | Composite | 21.08 ± 2.23 | 0.59 ± 0.07 | 0.54 ± 0.05 |
| S60-E10 | 127-RS-362 | Highest Area | 7.51 ± 1.29 | 0.65 ± 0.09 | 0.45 ± 0.05 |
| S60-E20 | 127-RS-370 | Composite | 23.05 ± 2.35 | 0.45 ± 0.06 | 0.45 ± 0.04 |
| S60-E20 | 127-RS-371 | Highest Area | <4.03 | 0.67 ± 0.08 | 0.43 ± 0.05 |
| S50-E30 | 127-RS-380 | Composite | 44.7 ± 4.02 | 0.89 ± 0.09 | 0.85 ± 0.06 |
| S50-E30 | 127-RS-439 | Highest Area | 48.50 ± 4.79 | 0.93 ± 0.10 | 0.80 ± 0.06 |
| S60-E30 | 127-RS-364 | Composite | 32.87 ± 3.17 | 0.79 ± 0.10 | 0.61 ± 0.05 |
| S60-E30 | 127-RS-365 | Highest Area | 13.82 ± 1.83 | 0.73 ± 0.09 | 0.62 ± 0.05 |
| S50-E40 | 127-RS-382 | Composite | 26.92 ± 2.81 | 0.65 ± 0.08 | 0.76 ± 0.06 |
| S50-E40 | 127-RS-383 | Highest Area | 23.34 ± 2.60 | 0.77 ± 0.10 | 0.77 ± 0.06 |
| S60-E40 | 127-RS-366 | Composite | 40.38 ± 3.96 | 0.9 ± 0.10 | 1.08 ± 0.07 |
| S60-E40 | 127-RS-379 | Highest Area | <13.6 | <2.12 | <1.14 |
| S50-E50 | 127-RS-399 | Composite | 31.67 ± 2.97 | 0.68 ± 0.08 | 0.64 ± 0.05 |
| S50-E50 | 127-RS-431 | Highest Area | 18.15 ± 2.45 | 0.56 ± 0.07 | 0.48 ± 0.04 |
| S60-E50 | 127-RS-430 | Composite | 34.8 ± 4.23 | 0.91 ± 0.10 | 0.61 ± 0.06 |
| S40-E60 | 127-RS-412 | Composite | 42.05 ± 3.70 | 0.73 ± 0.08 | 0.6 ± 0.05 |
| S40-E60 | 127-RS-413 | Highest Area | 40.16 ± 3.47 | 0.58 ± 0.08 | 0.59 ± 0.05 |
| S50-E60 | 127-RS-441 | Composite | 38.3 ± 4.61 | 1.09 ± 0.10 | 1.04 ± 0.07 |
| S50-E60 | 127-RS-440 | Highest Area | 40.59 ± 4.05 | 0.77 ± 0.09 | 0.74 ± 0.06 |
| S60-E60 | 127-RS-458 | Composite | 12.8 ± 1.96 | 0.64 ± 0.07 | 0.78 ± 0.05 |
| S60-E60 | 127-RS-415 | Highest Area | 21.79 ± 2.47 | 1.17 ± 0.10 | 0.75 ± 0.07 |
| S40-E70 | 127-RS-463 | Composite | 8.0 ± 1.76 | 0.79 ± 0.07 | 0.69 ± 0.04 |
| S50-E70 | 127-RS-462 | Composite | 17.21 ± 2.29 | 0.96 ± 0.08 | 0.68 ± 0.05 |
| S60-E70 | 127-RS-461 | Composite | 16.43 ± 2.11 | 0.73 ± 0.07 | 0.49 ± 0.04 |
| S40-E80 | 127-RS-510 | Composite | 12.46 ± 1.88 | 0.74 ± 0.10 | 0.69 ± 0.07 |
| S40-E80 | 127-RS-511 | Highest Area | 11.31 ± 1.40 | 0.82 ± 0.13 | 0.69 ± 0.07 |
| S50-E80 | 127-RS-512 | Composite | 35.43 ± 4.25 | 0.78 ± 0.10 | 0.68 ± 0.07 |
| S50-E80 | 127-RS-513 | Highest Area | 31.47 ± 2.95 | 0.85 ± 0.14 | 0.64 ± 0.07 |
| S60-E80 | 127-RS-514 | Composite | 34.97 ± 3.99 | 0.66 ± 0.10 | 0.62 ± 0.06 |
| S60-E80 | 127-RS-515 | Highest Area | 32.15 ± 3.11 | 0.68 ± 0.12 | 0.65 ± 0.07 |
| S40-E90 | 127-RS-580 | Composite | 14.1 ± 2.58 | 0.70 ± 0.08 | 0.62 ± 0.05 |
| S40-E90 | 127-RS-581 | Highest Area | 16.22 ± 2.61 | 0.76 ± 0.08 | 0.60 ± 0.05 |
| S50-E90 | 127-RS-582 | Composite | 11.76 ± 1.91 | 0.62 ± 0.07 | 0.53 ± 0.04 |
| S50-E90 | 127-RS-583 | Highest Area | 10.27 ± 1.87 | 0.69 ± 0.07 | 0.50 ± 0.04 |
| S60-E90 | 127-RS-584 | Composite | 5.59 ± 1.97 | 0.68 ± 0.07 | 0.60 ± 0.04 |
| S60-E90 | 127-RS-585 | Highest Area | 8.55 ± 1.71 | 0.59 ± 0.07 | 0.49 ± 0.04 |
| S70-E90 | 127-RS-586 | Composite | 4.43 ± 1.86 | 0.81 ± 0.09 | 0.63 ± 0.05 |
| S40-E100 | 127-RS-587 | Composite | 14.64 ± 2.02 | 0.71 ± 0.07 | 0.59 ± 0.05 |
| S40-E100 | 127-RS-588 | Highest Area | 13.58 ± 2.15 | 0.74 ± 0.08 | 0.58 ± 0.05 |
| S50-E100 | 127-RS-589 | Composite | 22.8 ± 2.77 | 0.91 ± 0.09 | 0.62 ± 0.05 |
| S50-E100 | 127-RS-590 | Highest Area | 20.6 ± 2.57 | 0.91 ± 0.09 | 0.59 ± 0.05 |
| S60-E100 | 127-RS-591 | Composite | 18.44 ± 2.57 | 0.84 ± 0.09 | 0.64 ± 0.05 |
| S60-E100 | 127-RS-592 | Highest Area | 18.23 ± 2.65 | 0.80 ± 0.08 | 0.49 ± 0.05 |
| S60-E110 | 127-RS-595 | Composite | 4.17 ± 2.36 | 0.71 ± 0.09 | 0.59 ± 0.05 |
| S60-E110 | 127-RS-596 | Highest Area | 6.78 ± 2.54 | 0.76 ± 0.10 | 0.54 ± 0.06 |
| S50-E110 | 127-RS-593 | Composite | 8.92 ± 2.12 | 0.86 ± 0.09 | 0.61 ± 0.05 |
| S50-E110 | 127-RS-594 | Highest Area | 8.08 ± 2.24 | 0.79 ± 0.09 | 0.60 ± 0.05 |

| Gamma Exposure Rate Survey Data | | |
|---|---|---|
| Table D-11 in the PRAR | | |
| **Excavation** | **Grid Location** | **µR/h** |
| Excavation 1 | S0-E0 | 11.5 |
| Excavation 1 | S0-E10 | 10.7 |
| Excavation 2 | S0-E50 | 10.7 |
| Excavation 2 | S10-E50 | 11.5 |
| Excavation 3 | S30-E130 | 9.0 |
| Excavation 4 | S50-E130 | 10.5 |
| Excavation 4 | S50-E140 | 10.6 |
| Excavation 4 | S50-E150 | 13.1 |
| Excavation 4 | S60-E140 | 10.6 |
| Excavation 4 | S60-E150 | 14.6 |
| Excavation 4 | S70-E130 | 10.8 |
| Excavation 4 | S70-E140 | 10.3 |
| Excavation 4 | S50-E140 | 13.0 |
| Excavation 4 | S50-E150 | 14.0 |
| Excavation 4 | S50-E160 | 12.0 |
| Excavation 5 | Harbor Grid 1 | 12.0 |
| Excavation 5 | Harbor Grid 2 | 12.0 |
| Excavation 5 | Harbor Grid 3 | 11.0 |
| Excavation 5 | Harbor Grid 4 | 11.0 |
| Excavation 5 | Harbor Grid 5 | 11.0 |
| Excavation 5 | Harbor Grid 6 | 12.0 |
| Excavation 5 | Harbor Grid 7 | 12.0 |
| Excavation 5 | Harbor Grid 8 | 10.0 |
| Excavation 5 | Harbor Grid 9 | 8.0 |
| Excavation 5 | Harbor Grid 10 | 9.0 |
| Excavation 5 | Harbor Grid 11 | 8.0 |
| Excavation 5 | Harbor Grid 12 | 8.0 |
| Excavation 5 | Harbor Grid 13 | 10.0 |
| Excavation 5 | Harbor Grid 14 | 10.0 |
| Excavation 5 | Harbor Grid 15 | 10.0 |
| Excavation 5 | Harbor Grid 16 | 9.0 |
| Excavation 5 | Harbor Grid 17 | 10.0 |
| Excavation 5 | Harbor Grid 18 | 9.0 |
| Excavation 5 | Harbor Grid 19 | 9.0 |
| Excavation 5 | Harbor Grid 20 | 8.0 |
| Excavation 5 | Harbor Grid 21 | 9.0 |
| Excavation 5 | Harbor Grid 22 | 9.0 |
| Excavation 5 | Harbor Grid 23 | 9.0 |
| Excavation 5 | Harbor Grid 24 | 9.0 |
| Excavation 5 | Harbor Grid 25 | 8.0 |
| Excavation 5 | Harbor Grid 26 | 10.0 |
| Excavation 5 | Harbor Grid 27 | 10.0 |
| Excavation 5 | Harbor Grid 28 | 10.0 |
| Excavation 5 | Harbor Grid 29 | 8.0 |
| Excavation 5 | Harbor Grid 30 | 10.0 |
| Excavation 5 | Harbor Grid 31 | 10.0 |
| Excavation 5 | Harbor Grid 32 | 10.0 |
| Excavation 5 | Harbor Grid 33 | 9.0 |
| Excavation 5 | Harbor Grid 34 | 9.0 |
| Excavation 5 | Harbor Grid 35 | 9.0 |
| Excavation 5 | Harbor Grid 36 | 8.0 |
| Excavation 5 | Harbor Grid 37 | 8.0 |
| Excavation 5 | Harbor Grid 38 | 8.0 |
| Excavation 5 | Harbor Grid 39 | 9.0 |
| Excavation 5 | Harbor Grid 40 | 8.0 |
| Excavation 5 | Harbor Grid 41 | 8.0 |
| Excavation 5 | Harbor Grid 42 | 10.0 |
| Excavation 5 | Harbor Grid 43 | 9.0 |
| Excavation 5 | Harbor Grid 44 | 10.0 |
| Excavation 5 | Harbor Grid 45 | 10.0 |
| Excavation 5 | Harbor Grid 46 | 8.0 |
| Excavation 6 | S30-E0 | 9.0 |
| Excavation 6 | S40-E0 | 9.0 |
| Excavation 6 | S50-E0 | 10.0 |
| Excavation 6 | S60-E0 | 10.0 |
| Excavation 6 | S30-E10 | 9.0 |
| Excavation 6 | S40-E10 | 10.0 |
| Excavation 6 | S50-E10 | 9.0 |
| Excavation 6 | S60-E10 | 9.0 |
| Excavation 6 | S30-E10 | 10.0 |
| Excavation 6 | S40-E20 | 11.0 |
| Excavation 6 | S50-E20 | 11.0 |
| Excavation 6 | S60-E20 | 10.0 |
| Excavation 6 | S50-E30 | 9.0 |
| Excavation 6 | S60-E30 | 9.0 |
| Excavation 6 | S50-E40 | 9.0 |
| Excavation 6 | S60-E40 | 9.0 |
| Excavation 6 | S50-E50 | 10.0 |
| Excavation 6 | S50-E70 | 10.0 |
| Excavation 6 | S50-E80 | 9.0 |
| Excavation 6 | S50-E90 | 10.0 |
| Excavation 6 | S50-E100 | 10.0 |
| Excavation 6 | S50-E110 | 10.0 |
| Excavation 6 | S60-E50 | 11.0 |
| Excavation 6 | S60-E60 | 10.0 |
| Excavation 6 | S60-E70 | 10.0 |
| Excavation 6 | S60-E80 | 10.0 |
| Excavation 6 | S60-E90 | 10.0 |
| Excavation 6 | S60-E100 | 10.0 |
| Excavation 6 | S60-E110 | 12.0 |
| Excavation 7 | S30-E100 | 11.0 |

# Beverly, Massachusetts, Site Map



U.S. DEPARTMENT OF ENERGY
OFFICE OF LEGACY MANAGEMENT

Work Performed by
**Navarro Research & Engineering, Inc.**
Under DOE Contract Number DE-LM0000421

## Beverly, MA, Site

- Boreholes
- Composite Post-RA Sample
- Discrete Post-RA Sample
- Sample of Elevated Grid Area (Biased to Evaluate Hot Spots)
- Seawall Sample Location
- Excavated Areas
- Buildings
- Verification Grid
- Parcels
- Original Site Boundary

DATE PREPARED: October 17, 2018

FILE NAME: BEV_DELIVERABLE

\\lm\gis\ProjectWorkArea\Sites\MA\Beverly\ProjectWorkArea\spinellm\BEV_DELIVERABLE.mxd 10/17/2018 Source: Certification Docket for the Remedial Action Performed at the Ventron Site Beverly, Massachusetts (March 2003)

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