



## SITE CERTIFICATION SUMMARY

This Site Certification Summary provides information about the **Hamilton, Ohio, 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 Hamilton, Ohio, Site (formerly known as the Herring-Hall-Marvin Safe Company [HHMS]) is located at 1550 Grand Boulevard in Hamilton, Ohio. The site consists of one multi-story, concrete building, about 28,000 square meters. Intermittently from the 1940s to the early 1950s, HHMS machined natural uranium metal slugs under subcontract to Manhattan Engineer District (MED) contractors. The uranium machining was minor and appears to have taken place over short periods of time. Records indicate that two work orders were performed at the site in 1943 in support of MED and one in 1951 for the U.S. Atomic Energy Commission (AEC).



*The former HHMS Company building (2006).*

### Site Remediation Timeline

**August 29 and 30, 1988 and April 24, 1989** — Radiological surveys were conducted at HHMS at the request of the U.S. Department of Energy (DOE) and with the consent of the property owner. These surveys resulted in the elimination of the site from consideration under the Formerly Utilized Sites Remedial Action Program (FUSRAP).

**August 5 and 6, 1993** — Oak Ridge National Laboratory conducted a survey of the third floor of the HHMS building, which had not been previously identified as an area of concern.

**March 1994** — The Hamilton Site was designated for remedial action under FUSRAP.

**December 1994 to March 1995** — Bechtel National Inc. (BNI) remediated the HHMS building.

**December 3, 1996** — 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 Hamilton site. Cleanup of the site was conducted to satisfy current DOE guidelines. This certification docket consists of documents supporting DOE certification that conditions at the subject property comply with the radiological criteria and standards determined to be applicable to the property. Furthermore, the certification docket provides the documents certifying that reasonably foreseeable future use of the property will not result in any significant radiological hazard to the general public as a result of the activities of DOE or its predecessor agencies.

### Remedial Action

From December 1994 to March 1995, DOE remediated the Hamilton site as part of FUSRAP. See the site [Fact Sheet](#) for details.

FUSRAP objectives for the site were to:

- Identify and assess sites formerly used in support of early MED/AEC nuclear work to determine whether further decontamination and/or control is needed.

- Decontaminate and/or apply controls to the site, where needed, to permit conformance to current and applicable guidelines.
- Stabilize and/or remove all generated residues in an environmentally acceptable manner.
- Accomplish all work in accordance with appropriate landowner agreements and local and state environmental and land use requirements to the extent permitted by federal law and applicable DOE orders, regulations, standards, policies, and procedures.
- Certify, at the completion of the remedial action, that the radiological conditions of the sites comply with applicable guidelines and that the site is appropriate for use without radiological restrictions.

In 2013, the entire HHMS building was demolished, and a service station was constructed in the southwest quarter of the property.



*Redevelopment at the former HHMS site, after demolition of the building (2015).*

## Post-Remediation Sampling

After the site was remediated, post-remedial action surveys were conducted to confirm that no residual radioactive material above DOE standards remains at the site. Survey techniques included measurements of direct and transferable surface contamination, walkover gamma scans, and exposure rate measurements. Measurements were taken on the floor and wall surfaces of the third floor, the floor and wall surfaces of the third-floor restroom, portions of the ceiling, the ceiling unistruts, the lead anchor bolt sleeves in the floor, the elevator and shaft, the stairwells leading from the third floor, and the elevator operations room.

All survey results of direct and transferable surface contamination were well below the applicable standards. Exposure rates ranged from 8.1 to 8.7 microrem per hour ( $\mu\text{R}/\text{h}$ ). These readings were indistinguishable from the 8.9  $\mu\text{R}/\text{h}$  average background exposure rate. The exposure rates inside the building were, therefore, well below the DOE guideline, which specifies that an exposure rate of 20  $\mu\text{R}/\text{h}$  above background is the maximum acceptable average exposure rate inside a building or habitable structure.

For more detailed results of the post-remediation sampling, see the [Site Certification Data Summary Worksheet](#) on page 3. For a detailed map of the site and sampling locations, see the [Site Overview Map](#) on page 4.

## Current Site Conditions

The post-remedial action survey data indicate that all areas of the former Herring-Hall-Marvin Safe Company facility that had been determined to be contaminated during characterization surveys are now in compliance with applicable DOE standards and cleanup criteria for residual radioactive contamination. The Hamilton site was released for unrestricted use. DOE has been responsible for long-term stewardship of the Hamilton site since 1997. The stewardship requirements and protocols are captured in the FUSRAP Long-Term Surveillance and Maintenance Plan, which is available on the DOE Office of Legacy Management website ([www.energy.gov/lm/hamilton-ohio-site](http://www.energy.gov/lm/hamilton-ohio-site)).



## ADDITIONAL INFORMATION

Documents related to FUSRAP activities at the Hamilton, Ohio, Site are available on the LM website at [lmpublicsearch.lm.doe.gov/SitePages/default.aspx?sitename=Hamilton](http://lmpublicsearch.lm.doe.gov/SitePages/default.aspx?sitename=Hamilton).

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

**U.S. Department of Energy**  
**Office of Legacy Management**  
 2597 Legacy Way  
 Grand Junction, CO 81503

Email:  
[FUSRAPinfo@lm.doe.gov](mailto:FUSRAPinfo@lm.doe.gov)  
[public.affairs@lm.doe.gov](mailto:public.affairs@lm.doe.gov)

DOE Office of Legacy Management  
 (970) 248-6070



[www.energy.gov/lm](http://www.energy.gov/lm)



[www.facebook.com/OfficeofLegacyManagement](https://www.facebook.com/OfficeofLegacyManagement)



[www.linkedin.com/showcase/office-of-legacy-management](https://www.linkedin.com/showcase/office-of-legacy-management)

# Hamilton, Ohio, Site Certification Data Summary Worksheet

Two tables referenced in the Hamilton Certification Docket provide the evidence used to certify the site as clean.

When the tables refer to the "PRAR," that is the BNI report "Post-Remedial Action Report for the Remedial Action at the Former Herring-Hall-Marvin Safe Company Site, Hamilton, Ohio" (dated February 1996).

## Summary of Post-Remedial Action Radiological Survey Results

**Table 4-1 in the PRAR**

Location	Direct Activity			Transferable Activity		
	Alpha (dpm/100 cm <sup>2</sup> )	Beta/Gamma (dpm/100 cm <sup>2</sup> )	No. Points Surveyed	Alpha (dpm/100 cm <sup>2</sup> )	Beta/Gamma (dpm/100 cm <sup>2</sup> )	No. Points Surveyed
Open Floor	0 - 199	< 415 - 1170	1728	3	113	1
Eastern Wall	< 26 - 81	< 400 - 1139	199	< 4	61	1
Western Wall	< 27 - 106	< 490 - 1302	181	< 4	< 32 - 79	4
Northern Wall	< 22 - 105	< 509 - 1932	234	< 3	< 34	10
Southern Wall	< 33 - 183	< 415 - 1487	166	< 4	< 35 - 93	21
Floor Drains	< 33 - 56	< 405 - 945	17	N/A	N/A	N/A
Third Floor Ceiling Hanger Holes	< 40 - 134	< 514 - 873	520	N/A	N/A	
Ceilings (80%)	N/A	< 5000	N/A	N/A	N/A	
Restroom Floor	< 40	< 434 - 769	68	N/A	N/A	N/A
Walls	< 30 - 119	< 546 - 773	184	N/A	N/A	N/A
Operations Room Floor	< 28 - 61	< 460	63	N/A	N/A	N/A
Operations Room Walls	< 28 - 119	< 620	119	N/A	N/A	N/A
DOE Guide	5,000a	5,000a	N/A		1,000a	N/A

<sup>a</sup>The guidelines presented are excerpted from DOE Order 5400.5, "Radiation Protection of the Public and the Environment," and represent the average allowable surface residual contamination (over an area of 1 m<sup>2</sup>).

NOTE: Use of the "less than" (<) notation in reporting survey results indicates that radioactivity was not present at levels that were quantifiable with the instruments and techniques used.

## Summary of Post-Remedial Action External Gamma Radiation Exposure Rates

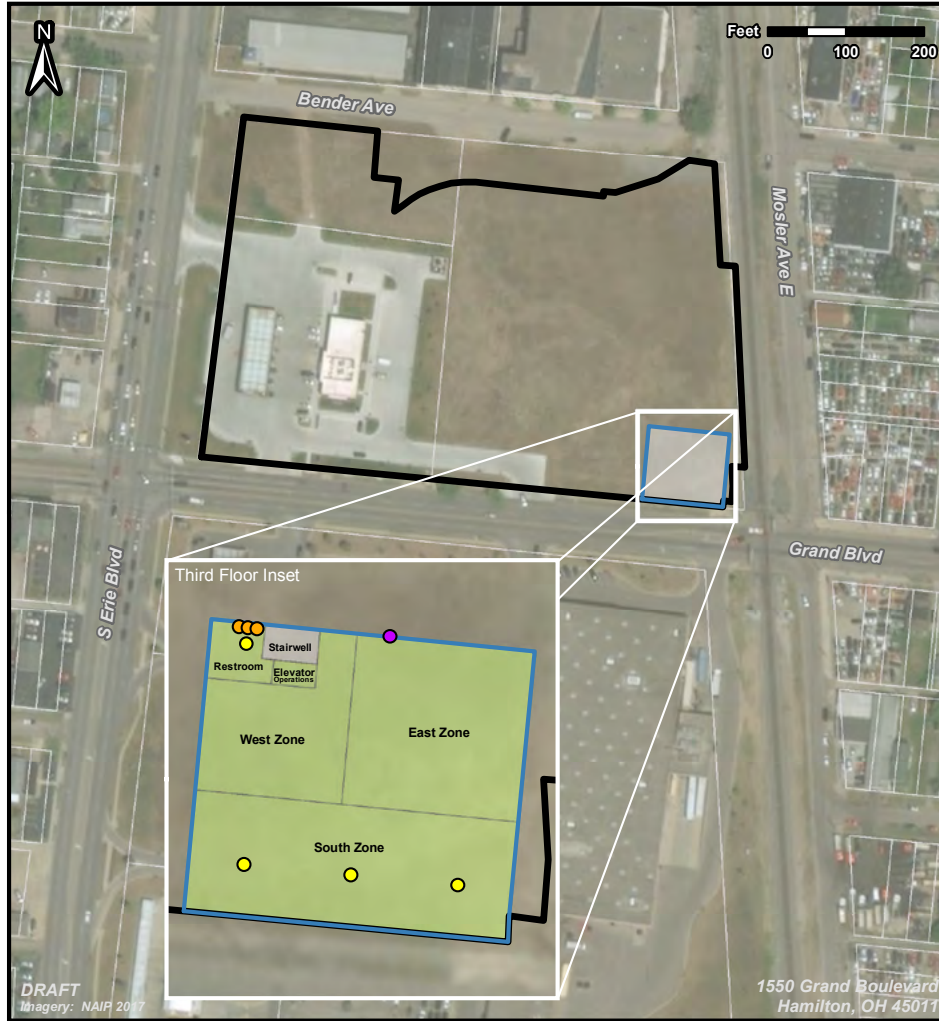
**Table 4-2 in the PRAR**

Room or Area	Exposure Rate <sup>a</sup> (μR/h)	Number of Measurements
East/West Zone	8.1 - 8.7	8
South Zone	8.2 - 8.4	4
Elevator Operations Room	8.7	1
DOE Guideline <sup>b</sup>	28.9	

<sup>a</sup>Reported external gamma radiation exposure rates include average background for HHMS, which is 8.9 μR/h.

<sup>b</sup>The guideline is from DOE Order 5400.5, "Radiation Protection of the Public and the Environment," which states that the average level of gamma radiation inside a building on a site that has no radiological restrictions on its use must not exceed the background level by more than 20 μR/h.

# Hamilton, Ohio, Site Map



U.S. DEPARTMENT OF ENERGY  
OFFICE OF LEGACY MANAGEMENT

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

## Hamilton, OH, Site

- Floor Drain
- Sanitary Drain
- Wall Drain
- Remediated
- Not Remediated
- FUSRAP Site Boundary
- Original Site Boundary

DRAFT  
Imagery: NAIP 2017

DATE PREPARED:  
August 31, 2018

FILE NAME:  
HAO\_DELIVERABLE

\\imgis\ProjectWorkArea\Sites\OH\Hamilton\ProjectWorkArea\apinelm\HAO\_DELIVERABLE.mxd 8/31/2018 Source: Certification Summary and Docket