



SITE CERTIFICATION SUMMARY

This Site Certification Summary provides information about the **Columbus East, 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 Columbus East, Ohio, Site (formerly the B&T Metals site) is located at 425 West Town Street in southwest Columbus, Ohio. The site consisted of a main building, a storage building, and an aluminum-extrusion building. The site covers most of a city block. From March through August 1943, B&T Metals extruded rods from uranium billets under contract to E.I. du Pont de Nemours and Company (DuPont) in support of the Manhattan Engineer District (MED). B&T Metals extruded more than 50 tons of uranium destined for use in the Hanford, Washington, nuclear reactor. The MED-related work occurred in the northwest corner of the main building, the largest of the three structures. Extrusion activities disposed process-cooling fluids and metal shavings in what is now a parking lot west of the main building, near an electrical substation.



Main manufacturing building at the former B&T Metals site (2006).

Site Remediation Timeline

August 22, 1988 — Members of the Oak Ridge National Laboratory (ORNL) Measurement Applications and Development Group conducted the initial screening for residual radioactivity at the site.

April 25, 1989 — ORNL visited the site a second time to collect air samples in the main building.

1992 — The Columbus East site was designated for remedial action under the Formerly Utilized Sites Remedial Action Program (FUSRAP).

November and December 1995 — Bechtel National Inc. (BNI) performed a supplemental characterization to delineate boundaries of radioactive contamination.

March to June 1996 — BNI remediated the Columbus East site.

June 26, 2001 — The U.S. Department of Energy (DOE) published a notice of cleanup certification for the site in the Federal Register.

Certification Docket Contents

The [Certification Docket](#) summarizes activities culminating in certification that radiological conditions at the B&T Metals site comply with applicable criteria and that reasonably foreseeable future use of the site will result in no radiological exposure above radiological guidelines, in effect at the conclusion of the remedial action, for protecting occupants of the site and members of the general public. Standards and criteria governing release of properties for radiologically unrestricted use are included in DOE Order 5400.5, "Radiation Protection of the Public and the Environment."

Remedial Action

BNI performed remedial activities at the Columbus East site from March to June 1996 as part of FUSRAP. See the [Fact Sheet](#) for more details of the remediation.

FUSRAP objectives for the Columbus East site were to:

- Identify and evaluate all sites used to support former MED and U.S. Atomic Energy Commission nuclear development activities.
- Remove or otherwise control contamination on sites identified as contaminated above current DOE guidelines.

- Achieve and maintain compliance with applicable criteria for the protection of human health and the environment.
- Certify the site, to the extent practicable, for use without radiological restrictions after remediation.
- Remove hazardous waste that is mixed with radioactively contaminated waste resulting from MED/AEC work in accordance with applicable federal or state laws and regulations.

Post-Remediation Sampling

Areas requiring radiological remediation included the interior of the northwest corner of the main building, the rain gutters above this area, three exterior maintenance holes (M-1, M-2, and M-6), and 4 square yards of exterior soil adjacent to an electrical substation.

After remedial action was complete, radiological surveys and sampling were conducted to ensure that residual uranium contamination had been removed to levels meeting applicable guidelines. Surveys included direct surface measurements on interior surfaces in the northwest corner of the main building as well as other measurements of direct and transferable surface contamination, walkover gamma scans, external gamma exposure rate measurements, and soil sampling.

Approximately 2% of the direct beta/gamma measurements for individual isolated areas in the overheads were above the average guideline of 5,000 disintegrations per minute (dpm)/100 square centimeters (cm²) but below DOE guidelines when averaged with other measurements over the surrounding 1-square-meter area. All direct beta/gamma results were below the maximum DOE guideline of 15,000 dpm/100 cm².

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 indicated that all areas of the B&T Metals site determined to be contaminated during characterization surveys were in compliance with applicable cleanup guidelines. Radiological conditions at the site were determined to comply with DOE decontamination criteria and standards to protect health, safety, and the environment. DOE certified the site as suitable for appropriate future use without radiological restrictions.

DOE has been responsible for long-term stewardship of the Columbus East site since 2001. 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/columbus-east-ohio-site).



ADDITIONAL INFORMATION

Documents related to FUSRAP activities at the Columbus East, Ohio, Site are available on the LM website at Impublicsearch.lm.doe.gov/SitePages/default.aspx?sitename=Columbus_East.

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

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Columbus East, Ohio, Site Certification Data Summary Worksheet

One table referenced in the Columbus East Certification Docket provides evidence used to certify the site as clean.

The "PRAR" is the "Post-Remedial Action Report for the B & T Metals Site, Columbus, Ohio" (dated October 1996).

Post-Remedial Action Radiological Survey Results								
Table 4-2 in the PRAR								
Area	Component	Number of Measurements	Direct Surface Measurements ^a		Transferable Surface Measurements ^a		External Gamma Exposure Rate (μR/h) ^b	Total Uranium Concentration (pCi/g) ^c
			Alpha (dpm/100 cm ²)	Beta/Gamma (dpm/100 cm ²)	Alpha (dpm/100 cm ²)	Beta/Gamma (dpm/100 cm ²)		
Main Building	Walls	279	<29 - 879	<522 - 4,990	--- ^e	<36 - 70	B - 2.5	--- ^d
	Floor trenches	1,334	<24 - 262	<299 - 4,731	--- ^e	<33 - 51		Trench 1: 5.0
	Overheads	1,240	<24 - 2,243	<316 - 11,812 ^f	<3 - 194	<35 - 663		Trench 2: 12.8
	Electrical equipment platform	230	<26 - 2,462	<324 - 3,968	<3 - 10	<36 - 166		Trench 3: 29.3
Exterior	Substation	--- ^g	--- ^g	--- ^g	--- ^g	--- ^g	0.3	25.9
	Maintenance holes/ sewer lines	82	<31 - 333	<377 - 4,347	--- ^e	<33 - 114	---	--- ^d
	Roof gutters	216	<35 - 202	<274 - 4,527	--- ^e	<33 - 38	---	--- ^d
DOE Guidelines			5,000/15,000 ^h	5,000/15,000 ^h	1,000	1,000	<20 ⁱ	35

^a< indicates that the measurement was less than the minimum detectable activity (MDA).
^bResults have background levels for the Columbus area subtracted (8.9 μR/h external gamma exposure rate); B indicates the value is indistinguishable from background.
^cResults have background concentrations for the Columbus area subtracted (5.5 pCi/g total uranium).
^dNo excavation performed or soil removed.
^eTransferable measurements required when the criterion for transferable surface contamination (1,000 dpm/100 cm²) is exceeded in direct measurements.
^fIndividual isolated areas in the overheads that were above the average guideline of 5,000 dpm/100 cm² were below DOE guidelines when averaged with other measurements over the surrounding 1-m² area.
^gSoil remediation only.
^hThe residual contamination guidelines for fixed radioactive contamination is 5,000 dpm/100 cm² average and 15,000 dpm/100 cm² maximum.
ⁱLess than 20 μR/h above background in habitable structures, or a maximum of 100 mrem/yr for all pathways, excluding radon.

Columbus East, 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

Columbus East, OH, Site

- Decontaminated Valve Box
- Decontaminated Drain Inlet
- Remediated Maintenance Hole
- Decontaminated Areas
- Floor Trenches
- Asbestos Tile Floor Area
- Area A
- Electrical Substation
- Original Site Boundary

DATE PREPARED:
October 12, 2018

FILE NAME:
COE_DELIVERABLE

DRAFT
Imagery: Google Earth 2018

425 West Town Street
Columbus, OH 43215

\\img\ProjectWork\Area\Sites\OH\ColumbusEast\ProjectWork\Area\spinel\COE_DELIVERABLE.mxd 10/12/2018 Source: Certification Docket for the Remedial Action Performed at the B&T Metals Site in Columbus, Ohio; Post-Remedial Action Report for the B&T Metals Site, Columbus, OH