

**SECTION 106
RECORDATION, INTERPETATION, AND
DOCUMENTATION FOR THE DEMOLITION OF
BUILDINGS 3008, 3012, 3044, 3080, 3501, 3502, 3503, 3504, 3508, 3523, 3587,
and 3592 AT THE OAK RIDGE NATIONAL LABORATORY, OAK
RIDGE, TENNESSEE**

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review (no need to edit this document)**

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Building 3008
(Moderate Historic Significance)

Architectural Description

Building 3008 (formerly Building 103), the Source and Special Materials Vault, is a 563 square foot, one-story concrete brick building with a flat roof surface. The small structure, which contains no windows, has two metal vault doors (exterior covered by a second wood door) that are located on its south side.

History

Building 3008 was constructed adjacent (northeast) to the Graphite Reactor (Building 3001) in 1943. It served as a materials storage vault for the Graphite Reactor and supported the site's World War II missions and goals of plutonium production. It continued this function during the post-war era. This building was one of the original buildings constructed at ORNL as part of the Manhattan Project.

Significance

Building 3008 is significant for its role as a support facility during the Manhattan Project era and in subsequent missions involving plutonium production. It is eligible for inclusion in the National Register of Historic Places (NRHP) under Criterion A and is included in the NRHP-eligible ORNL Historic District. Under Criterion A, the building is eligible because of its historical association with the Manhattan Project, the evolution of ORNL as a national laboratory, the post-World War II government-sponsored scientific movement, and early nuclear development.

References

1. *Architectural/Historical Assessment of the Oak Ridge National Laboratory, Oak Ridge Reservation, Anderson and Roane Counties, Tennessee*, ORNL/M-3244, January 1994.
2. *National Historic Preservation Act Historic Preservation Plan*, ORNL/TM-2004/62, April 2004.

Building 3012 **(Moderate Historic Significance)**

Architectural Description

Building 3012 (formerly Building 101-B), the Rolling Mill, is a 10,160 square foot, two-story, steel-frame building with a gable roof. The building has ridgeline vents, original hopper windows, and large roll-up garage bay doors at the gable ends. Small shed roof additions are located on the north and east elevations. The interior of the building contains a large room that housed the milling equipment. A track in the concrete floor was for the rolling mill. A high bay area was added in 1951 as a shop at the north end of the building. The existing roll-up doors and hopper windows were relocated to the new end. Also, some existing equipment was relocated to the new section and other equipment was purchased.

History

Building 3012 was constructed in 1947 to house a rolling mill. Clinton Laboratories purchased the rolling mill secondhand and used it to roll, cast, and forge reactor fuel elements and metal parts. Various programs at ORNL used the facility to conduct research on metallic elements under high-temperature and radiation stress conditions produced in reactors.

Building 3012 served a supportive role in ORNL's historic missions but was not vital to the functions and activities of the Laboratory. However, the building does retain much of its original architectural character and is located in the heart of the National Register of Historic Places (NRHP)-eligible historic district.

Significance

Since its construction in 1947, Building 3012 has continuously served as a rolling mill. The building is associated with various research programs in ORNL's Metallurgical Division, which later became the Metals and Ceramics Division. Activities inside the building ceased in 2008, and the facility has been placed in a shutdown mode pending disposal.

Building 3012 is eligible for inclusion in the NRHP under Criterion A and is included in the NRHP-eligible ORNL Historic District. Under Criterion A, the building is eligible because of its historical association with the evolution of ORNL as a national laboratory and the post-World War II government-sponsored scientific movement.

References

1. *Architectural/Historical Assessment of the Oak Ridge National Laboratory, Oak Ridge Reservation, Anderson and Roane Counties, Tennessee*, ORNL/M-3244, January 1994.

2. *National Historic Preservation Act Historic Preservation Plan*, ORNL/TM-2004/62, April 2004.

Building 3044 **(Moderate Historic Significance)**

Architectural Description

Building 3044, the West Complex Field Shop (formerly the Special Materials Machine Shop), is a 5834 square foot, steel-frame building that has a gable roof with ridgeline vents, corrugated-metal siding, and original multi-pane hopper windows with aluminum awnings. On the west elevation is a roll-up door.

History

Building 3044 was constructed in 1955 as part of ORNL Plant and Equipment Division machine shop facilities. It was used in machining beryllium and other materials that were used in research being conducted at ORNL, especially during the late 1960s as part of the High Flux Isotope Reactor (HFIR) program. Beryllium was machined into various forms and temporarily stored at Building 3044 before being transferred back to the HFIR site.

In the late 1980s the building was converted to a sheet metal shop where metal components continued to be fabricated for various research and development activities until the facility was no longer considered viable. The building has been empty since 2001 when all machinery and equipment were removed and relocated to other facilities. It was designated excess to ORNL in 2007 and is currently in a shutdown mode pending disposal.

Significance

Building 3044 is eligible for inclusion in the National Register of Historic Places (NRHP) under Criterion A and is included in the NRHP-eligible ORNL Historic District. Under Criterion A, the building is eligible because of its historical association with the evolution of ORNL as a national laboratory and the post-World War II government-sponsored scientific movement.

References

1. *Architectural/Historical Assessment of the Oak Ridge National Laboratory, Oak Ridge Reservation, Anderson and Roane Counties, Tennessee*, ORNL/M-3244, January 1994.
2. *National Historic Preservation Act Historic Preservation Plan*, ORNL/TM-2004/62, April 2004.

Building 3080 **(Moderate Historic Significance)**

Architectural Description

Building 3080, the Reactor Experiment Control Room, is a 1915 square foot, one-story building of steel-frame construction with corrugated metal siding. It sits on a raised concrete foundation. Windows in the building are original multi-light hopper design, most of which have been painted. Some original awnings remain on the west elevation.

History

Building 3080 was constructed in 1953 as a storage facility for the Bulk Shielding Reactor (BSR, Building 3010) but has historically served as the control house for BSR experiments. The building is located in the main reactor area of the complex and contributes to the streetscape. It was designated excess to ORNL in 2007 and is currently in a shutdown mode pending disposal.

Significance

Building 3080 is significant for its association with the BSR, a major component of the Aircraft Nuclear Propulsion Program of the 1950s. As a control house and storage facility, the building supported the operations of the BSR.

Building 3080 is eligible for inclusion in the National Register of Historic Places (NRHP) under Criterion A and is included in the NRHP-eligible ORNL Historic District. Under Criterion A, the building is eligible because of its association with the post-World War II government-sponsored scientific movement, the evolution of ORNL as a national laboratory, and early nuclear development.

References

1. *Architectural/Historical Assessment of the Oak Ridge National Laboratory, Oak Ridge Reservation, Anderson and Roane Counties, Tennessee*, ORNL/M-3244, January 1994.
2. *National Historic Preservation Act Historic Preservation Plan*, ORNL/TM-2004/62, April 2004.

Building 3501 (Minor Historic Significance)

Architectural Description

Building 3501, the Sewage Pumping Station, is a 196 square foot, brick-faced, flat-roofed structure with hopper windows and a louvered-metal door. Adjacent to the building are various pumping apparatus housed in concrete, belowground, open-roofed structures.

History

Building 3501 was constructed in 1949 as a sewage pumping station as part of ORNL's storm and sanitary sewer system. It continues to operate and receives sewage from various locations, including the Central and East Campus regions, the 7000 Area, and the Spallation Neutron Source site. The waste flows by gravity to a lift station inside Building 3501 where it is pumped to ORNL's Sewage Treatment Plant.

Significance

Building 3501 is significant for its association with early treatment of sanitary waste at ORNL. The facility is eligible for inclusion in the National Register of Historic Places (NRHP) under Criterion A and is included in the NRHP-eligible ORNL Historic District. Under Criterion A, the building is eligible because its association with the post-World War II government-sponsored scientific movement, the evolution of ORNL as a national laboratory, and early nuclear development.

References

1. *Architectural/Historical Assessment of the Oak Ridge National Laboratory, Oak Ridge Reservation, Anderson and Roane Counties, Tennessee*, ORNL/M-3244, January 1994.
2. *National Historic Preservation Act Historic Preservation Plan*, ORNL/TM-2004/62, April 2004.

Building 3502 **(Moderate Historic Significance)**

Architectural Description

Building 3502 (formerly 706-HD), the East Research Service Center, is a 12,439 square foot structure that is comprised of several sections: a one-story, gable-roofed building with metal siding, original doors, and original hopper windows; a concrete block addition on the east end; a one-story, flat-roofed addition on the south side; and a shed-roofed addition.

History

Building 3502 was constructed in 1950 and is historically associated with the solvent operations program that was conducted in Building 3503. The development of reprocessing methods for nuclear power reactor fuels was a major effort in ORNL's Chemical Technology Division during the 1950s, and solvent extraction methods were the focus of this research. Today, the building is used as a general maintenance shop in the construction of wood products (boxes, frames, tables, etc.) and in fabricating rad contamination control devices, including rubber gloves for glove boxes and rubber boots for manipulators.

Significance

Building 3502 is significant for its association with early reprocessing methods for nuclear power reactor fuels. The facility is eligible for inclusion in the National Register of Historic Places (NRHP) under Criterion A and is included in the NRHP-eligible ORNL Historic District. Under Criterion A, the building is eligible because its association with the post-World War II government-sponsored scientific movement, the evolution of ORNL as a national laboratory, and early nuclear development.

References

1. *Architectural/Historical Assessment of the Oak Ridge National Laboratory, Oak Ridge Reservation, Anderson and Roane Counties, Tennessee*, ORNL/M-3244, January 1994.
2. *National Historic Preservation Act Historic Preservation Plan*, ORNL/TM-2004/62, April 2004.

Building 3503 **(Moderate Historic Significance)**

Architectural Description

Building 3503 (formerly 706-HB), the High-Radiation-Level Chemical Engineering Laboratory, is a 12,798 square foot, four-story, steel-frame building with metal siding. Track doors serve as entrances, and the facility has no windows. There are vents in the rooftop and under the gable on the west elevation.

History

Building 3503 was constructed in 1948 as a solvent operations laboratory. Research activities involved developing solvent extraction methods for the reprocessing of spent nuclear fuel. The facility served as a research laboratory until it was closed in the 1980s. It was designated as excess to the mission of ORNL in 2007 and is currently in a shutdown mode pending disposal.

Significance

Building 3503 supported the mission of ORNL regarding spent nuclear fuel, which was a key area of research at ORNL throughout the Cold War era.

Building 3503 is eligible for inclusion in the National Register of Historic Places (NRHP) under Criterion A and is included in the NRHP-eligible ORNL Historic District. Under Criterion A, the building is eligible because of its historical association with ORNL's evolution as a national laboratory, the post-World War II government-sponsored scientific movement, and early nuclear research.

References

1. *Architectural/Historical Assessment of the Oak Ridge National Laboratory, Oak Ridge Reservation, Anderson and Roane Counties, Tennessee*, ORNL/M-3244, January 1994.
2. *National Historic Preservation Act Historic Preservation Plan*, ORNL/TM-2004/62, April 2004.

Building 3504 **(Moderate Historic Significance)**

Architectural Description

Building 3504, the Geosciences Laboratory, is a 7557 square foot, two-story, steel-frame building with a gable roof and metal siding. The building retains original paired multi-light hopper windows and single-light steel doors. On the west elevation is a roll-up door.

History

Building 3504 was constructed in 1946 and served as a research facility focusing on the biological effects of radioactive wastes, a major function of ORNL's Health Physics Division throughout the Cold War era. This activity was an important component of ORNL's role as a national laboratory.

Significance

Building 3504 retains much of its original design and is located at the southern edge of the National Register of Historic Places (NRHP)-eligible historic district. It is considered eligible for inclusion in the NRHP under Criterion A because of its historical association with ORNL's evolution as a national laboratory, the post-World War II government-sponsored scientific movement, and early nuclear research. Building 3504 is included in the NRHP-eligible ORNL Historic District.

References

1. *Architectural/Historical Assessment of the Oak Ridge National Laboratory, Oak Ridge Reservation, Anderson and Roane Counties, Tennessee*, ORNL/M-3244, January 1994.
2. *National Historic Preservation Act Historic Preservation Plan*, ORNL/TM-2004/62, April 2004.

Building 3508 **(Moderate Historic Significance)**

Architectural Description

Building 3508, the Electrical/Electronics Laboratory (formerly the High-Level Alpha Radiation Laboratory), is a 13,443 square foot, two-story, steel-frame building with a flat roof and corrugated metal siding. The building contains a series of solid metal doors and no windows. Administrative areas and five alpha laboratories designed for work with high-level alpha-emitting, low-level beta-emitting, and gamma-emitting materials are located on the first floor. Various supporting utility equipment for the air-conditioning, ventilating, off-gas, etc., systems are on the second floor.

History

Building 3508 was constructed in 1951 and served as a research facility focusing on a wide variety of methods for reprocessing spent nuclear fuel and waste and isotopes in ORNL's Chemical Technology Division. High-alpha-activity isotopes were the focus of this research. The facility was converted into an electrical/electronics laboratory in the 1980s and has been designated as excess to the mission of ORNL in 2007. It is currently in a shutdown mode pending decontamination and decommission.

Significance

Building 3508 retains much of its original design and is located at the southern edge of the National Register of Historic Places (NRHP)–eligible historic district. It is considered eligible for inclusion in the NRHP under Criterion A because of its historical association with ORNL's evolution as a national laboratory, the post-World War II government-sponsored scientific movement, and early nuclear research.

References

1. *Architectural/Historical Assessment of the Oak Ridge National Laboratory, Oak Ridge Reservation, Anderson and Roane Counties, Tennessee*, ORNL/M-3244, January 1994.
2. *National Historic Preservation Act Historic Preservation Plan*, ORNL/TM-2004/62, April 2004.
3. *Environmental and Safety Report for the Oak Ridge National Laboratory*, Chapter 4, Description of ORNL Facilities, NUS 3892, September 30, 1981.

Building 3523 (Minor Historic Significance)

Architectural Description

Building 3523, Storage, is a one-story, 1200 square foot, metal-frame building with corrugated metal siding, a gable roof with ridgeline vents, and multi-light hopper windows.

History

This building was constructed in 1957 as the Controls Research Laboratory and is currently used as an expensed bench stock building. As a research laboratory, Building 3523 furthered ORNL's missions and goals as a national laboratory.

Significance

Building 3523 retains much of its original architectural character and contributes to the historic district's sense of time and place. It is eligible for inclusion in the National Register of Historic Places (NRHP) under Criterion A and is included in the NRHP-eligible ORNL Historic District. Under Criterion A, it is eligible because of its historical association with ORNL's evolution as a national laboratory, the post-World War II government-sponsored scientific movement, and early nuclear research.

References

1. *Architectural/Historical Assessment of the Oak Ridge National Laboratory, Oak Ridge Reservation, Anderson and Roane Counties, Tennessee*, ORNL/M-3244, January 1994.
2. *National Historic Preservation Act Historic Preservation Plan*, ORNL/TM-2004/62, April 2004.

Building 3587 **(Minor Historic Significance)**

Architectural Description

Building 3587, the Mail Services Building, is a 3421 square foot, one-story, L-plan building of steel-frame construction with corrugated metal siding. The building has a gable roof, multi-light hopper windows, and a gable roof wing on the south elevation. Most of the windows have been painted, and the doors are metal with a single-light window.

History

Building 3587 was constructed around 1950 as a field service shop and currently serves as a mail service facility. The building retains much of its original character and design and is located near the southern border of the historic district.

Significance

As a field service shop, Building 3587 supported ORNL's missions and goals as a national laboratory during the Cold War era. Ancillary facilities such as service shops, guard posts, utility buildings, etc., were important components of the overall complex.

Building 3587 is eligible for inclusion in the National Register of Historic Places (NRHP) under Criterion A and is included in the NRHP-eligible ORNL Historic District. Under Criterion A, the building is eligible because of its historical association with ORNL's evolution as a national laboratory and the post-World War II government-sponsored scientific movement.

References

1. *Architectural/Historical Assessment of the Oak Ridge National Laboratory, Oak Ridge Reservation, Anderson and Roane Counties, Tennessee*, ORNL/M-3244, January 1994.
2. *National Historic Preservation Act Historic Preservation Plan*, ORNL/TM-2004/62, April 2004.

Building 3592 **(Moderate Historic Significance)**

Architectural Description

Building 3592, the Coal Conversion Facility (formerly the Unit Operations Volatility Laboratory), is a two-story, 1307 square foot, metal-frame building with a gable roof, multi-light hopper windows, and corrugated metal siding. The building contains a walk-in hood on the second floor.

History

This building was constructed in 1952 as a Unit Operations Volatility Laboratory and played a major role in the Fluoride Volatility Processing Program being studied in the 1950s at various locations throughout the United States. The purpose of the program was the development of alternative methods for recovering uranium from spent nuclear fuel. Building 3592 is currently in a shutdown mode pending decontamination and decommission.

Significance

Building 3592 retains much of its original architectural character and contributes to ORNL's Historic District in its visual appearance and historical integrity. It is eligible for inclusion in the National Register of Historic Places (NRHP) under Criterion A and is included in the NRHP-eligible ORNL Historic District. Under Criterion A, it is eligible because of its historical association with ORNL's evolution as a national laboratory, the post-World War II government-sponsored scientific movement, and early nuclear research.

References

1. *Architectural/Historical Assessment of the Oak Ridge National Laboratory, Oak Ridge Reservation, Anderson and Roane Counties, Tennessee*, ORNL/M-3244, January 1994.
2. *National Historic Preservation Act Historic Preservation Plan*, ORNL/TM-2004/62, April 2004.
3. *Environmental and Safety Report for the Oak Ridge National Laboratory*, Chapter 4, Description of ORNL Facilities, NUS 3892, September 30, 1981.