

# UNIVERSITY of MISSOURI

RESEARCH REACTOR CENTER

April 17, 2018

ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

REFERENCE: Docket No. 50-186  
University of Missouri-Columbia Research Reactor  
Renewed Facility Operating License No. R-103

SUBJECT: Written communication as specified by 10 CFR § 140.5 regarding a request to amend Indemnity Agreement No. E-45, per 10 CFR § 140.9, "Modifications of indemnity agreements"

The University of Missouri Research Reactor (MURR) is requesting to amend Indemnity Agreement No. E-45, as amended through Amendment No. 13 (dated July 1, 1989). This change would:

1. Remove Special Nuclear Material (SNM) License No. SNM-934 from the Indemnity Agreement (under Item 2 - License number or numbers) since this license expired when Construction Permit No. CPRR-68 was converted to reactor operating license No. R-103; and
2. Revise the definition of location in the Indemnity Agreement (under Item 3 - Location) so it is consistent with the definition of the MURR licensed area as described in MURR Technical Specification (TS) 5.1.a.

On page 9 of Indemnity Agreement No. E-45, licenses SNM-934, CPRR-60 and R-103 are listed under "Item 2 - License number or numbers."

On December 29, 1965, SNM License No. SNM-934 was issued to MURR. This license authorized the receipt, possession, and storage of nuclear reactor fuel assemblies and neutron detectors in accordance with MURR's application, dated August 31, 1965, and supplement, dated October 8, 1965, prior to receiving the reactor operating license.

By letter dated January 19, 1966, Amendment No. 1 was issued to SNM License No. SNM-934 to increase the possession limit of U-235 from 6,600 to 7,250 grams. The expiration date stipulated in the license was "October 31, 1968, or upon conversion of Construction Permit No. CPRR-68, dated November 21, 1961, to a reactor operating license, whichever is earlier." On October 11, 1966, Construction Permit No. CPRR-68 was converted to Facility License No. R-103.



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Therefore, we request that the licenses listed under "Item 2 - License number or numbers" be revised from:

"SNM-934, CPRR-68, and R-103"

To:

"CPRR-68 and R-103"

On January 4, 2017, MURR was relicensed and approved for another 20 years of operation. Relicensing provided an opportunity to better define the extent of the licensed area/boundary of MURR.

MURR TS 5.1.a, "Site Description," states:

"The MURR facility is situated on a 7.5-acre lot in the central portion of Research Commons, an 84-acre tract of land approximately one mile southwest of the University of Missouri (MU) at Columbia's main campus. This campus is located in the southern portion of Columbia, the county seat and largest city in Boone County, Missouri.

Approximate distances to the University property lines from the reactor facility are 2,400 feet (732 m) to the north, 4,800 feet (1,463 m) to the east, 2,400 feet (732 m) to the south, and 3,600 feet (1,097 m) to the west.

The restricted, or licensed, area is that area inside the fenced 7.5 acre lot surrounding the MURR facility itself. Within the restricted area the Reactor Facility Director has direct authority and control over all activities, normal and emergency. There are pre-established evacuation routes and procedures known to personnel frequenting this area.

For emergency planning purposes, the site boundaries consist of the following: Stadium Boulevard; Providence Road (Route K); the MU Recreational Trail; and the MKT Nature and Fitness Trail. The area within these boundaries is owned and controlled by MU and may be frequented by people unacquainted with the operation of the reactor. The Reactor Facility Director has authority to initiate emergency actions in this area, if required."

The bases of TS 5.1.a states:

"The MURR facility site location and description are strictly defined in Chapter 2 of the SAR. The location of the MURR facility and Research Commons is owned and operated by MU. Based on the information provided in Chapter 2, and throughout the SAR, the site is well suited for the location of the facility when considering the relatively benign operating characteristics of the reactor."

Therefore, we request that the location described under "Item 3 - Location" be revised from:

"The five level Research Reactor Facility and the Storage Room of the grade level off the south corridor of the Laboratory Facility. The location is further depicted on Figures 2.3 and 3.1 to 3.7, inclusive, of the licensee's Hazards Summary Report, dated July 1, 1965. The location is approximately one mile southwest of the main campus in Columbia, Missouri."

To:

"The University of Missouri-Columbia Research Reactor (MURR) facility is situated on a 7.5-acre lot in the central portion of Research Commons, an 84-acre tract of land approximately one mile southwest of the University of Missouri (MU) at Columbia's main campus. The restricted, or licensed, area is that area inside the fenced 7.5 acre lot surrounding the MURR facility itself. The MURR Site Description is provided in MURR Technical Specification 5.1."

Enclosure 1 provides a map of the MURR Buildings within the licensed area, whereas Enclosure 2 provides a map of the MURR licensed area as described in MURR TS 5.1. This amendment would provide a consistent definition of the licensed area for all conditions of MURR operations and permit the movement and storage of licensed materials within this boundary as allowed by MURR-approved procedures. This amendment does not require a change to Renewed Facility Operating License No. R-103 or the Technical Specifications. Renewed Facility Operating License No. R-103, Condition 2.A states: "This license applies to the University of Missouri – Columbia Research Reactor (herein "the reactor") owned by The Curators of the University of Missouri, (herein "the licensee"), located in the University Research Park, adjacent to the main campus of the University of Missouri – Columbia, in Columbia, Missouri, and described in the licensee's application for license renewal, dated August 31, 2006, as supplemented." Note: the terms "University Research Park" and "Research Commons" are used interchangeably.

Thank you for consideration of this request to amend Indemnity Agreement No. E-45. This change will remove a license that is no longer active at MURR and provide a uniform definition of the MURR licensed area in all of MURR's licensing basis documentation.

If there are any questions regarding this amendment request, please contact me at (573) 882-5118 or MeffertB@missouri.edu. I declare under penalty of perjury that the foregoing is true and correct.

Sincerely,

Bruce A. Meffert  
Reactor Manager

ENDORSEMENT:  
Reviewed and Approved

Matthew R. Sanford  
Interim Reactor Facility Director

State of Missouri  
County of Boone

Subscribed and sworn to before me this

17 day of April, 2018

JACQUELINE L. MATYAS, Notary Public  
My Commission Expires: March 26, 2019



JACQUELINE L. MATYAS  
My Commission Expires  
March 26, 2019  
Howard County  
Commission #15634308

cc: Reactor Advisory Committee  
Reactor Safety Subcommittee  
Dr. Mark McIntosh, Vice Chancellor for Research, Graduate Studies and Economic  
Development  
Mr. Geoffrey Wertz, U.S. Nuclear Regulatory Commission  
Mr. William Schuster, U.S. Nuclear Regulatory Commission

Enclosures:

1. Figure 1 – Map of MURR Buildings
2. Figure 2 – Map of MURR Licensed Area

Enclosure 1

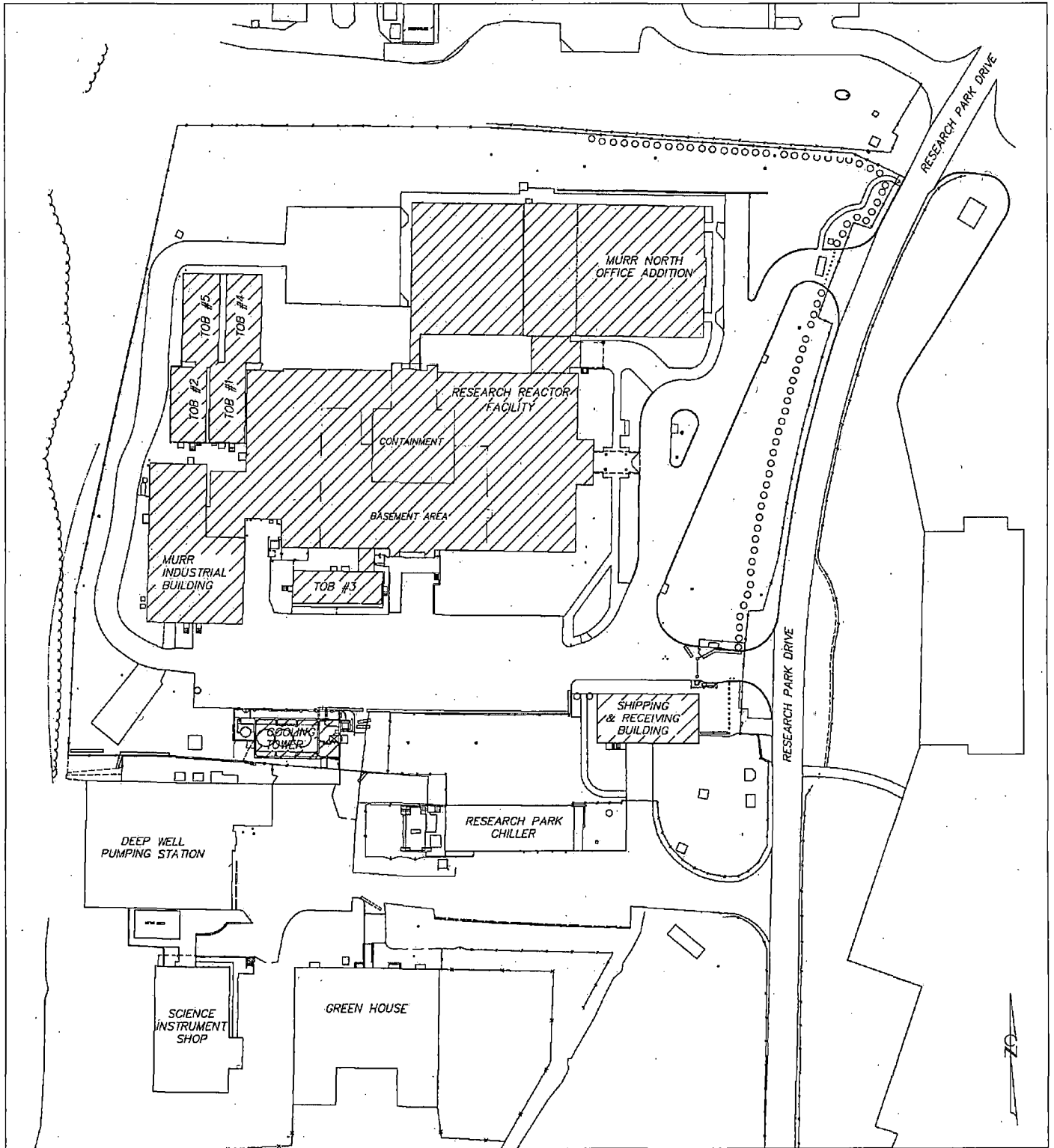


Figure 1  
Map of MURR Buildings

Enclosure 2

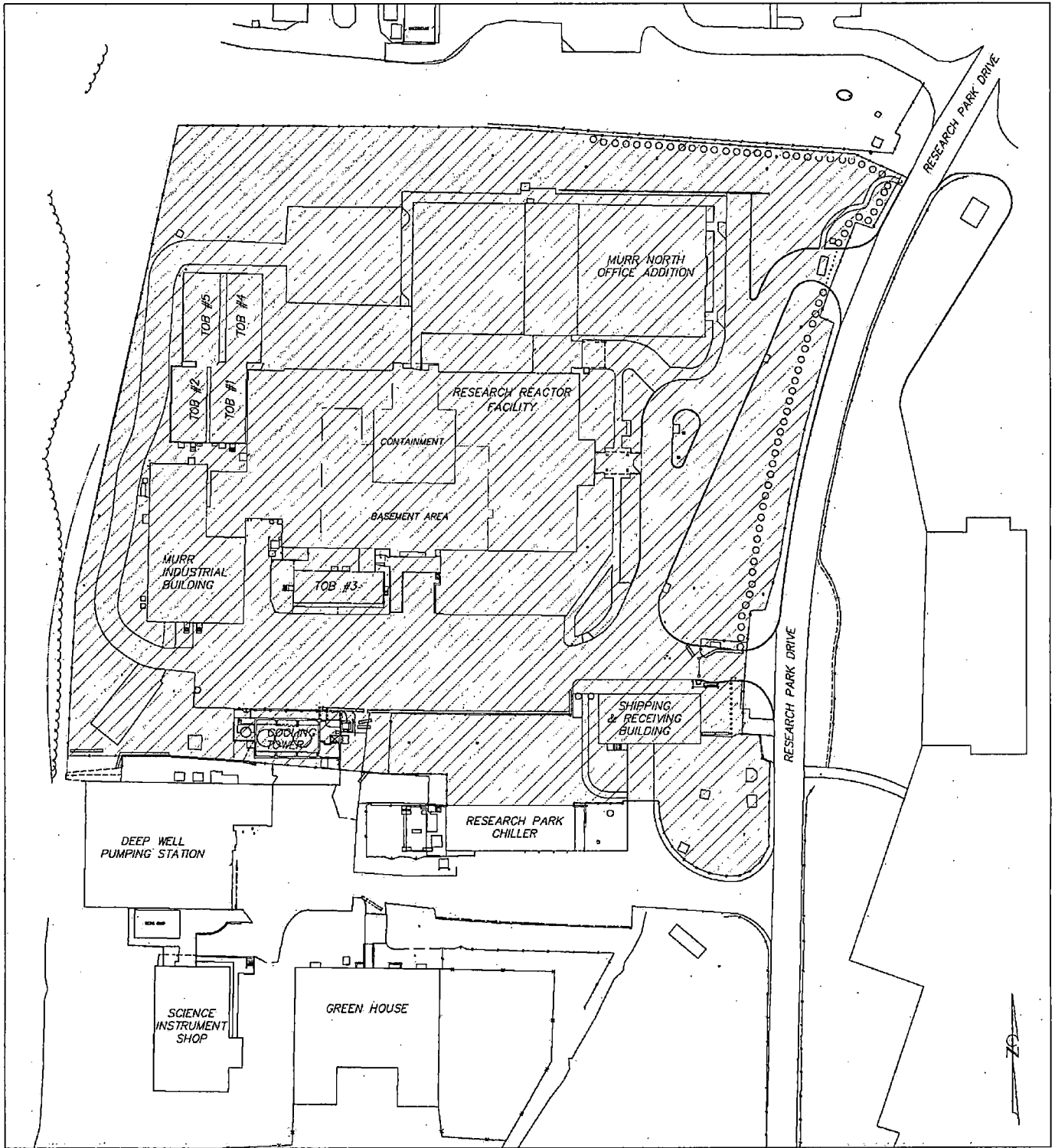


Figure 2  
Map of MURR Licensed Area