

## ORNL SITES - SUMMARY

License No.: SNM-00065 ORNL Score: 69,115  
Docket No.: 070-00082  
Licensee: Nuclear Metals, Inc. (NMI) Review Status: Complete

Site Addresses: 155 Massachusetts Avenue 2229 Main Street  
Cambridge, Massachusetts Concord, Massachusetts

224 Albany Street 6 Huron Street  
Cambridge, Massachusetts Natick, Massachusetts

Site Contact: Frank Vumbaco  
Telephone No.: (508) 369-5410  
SDMP Site: yes  
Related License(s): SNM-00160; C-03429 (now SMB-179); SNM-00219; and SUB-1452  
NRC Reviewer: Duncan White and Marie Miller

Review Abstract: Massachusetts Institute of Technology (MIT) Metallurgical Project from 1942 to 1946, then NMI, operated at two locations in Cambridge, Massachusetts from approximately 1942 to 1958. Operations then moved to the current facility in Concord, Massachusetts. During the 1960's, a radiographic facility in Natick was listed as an authorized place of use.

The Concord location remains an active NMI licensee. The facility at 155 Massachusetts Avenue was demolished and replaced with another MIT building. The facility at 224 Albany Street was used for limited storage. As confirmed by a MIT, both a remediation and a termination report were completed for both Cambridge facilities. Because of the Natick facility had limited use as a radiographic testing facility, no further action was taken with regard to this license.

Recommendations: None

Summary: The 155 Massachusetts Avenue facility (also called the Hood Building) started in April 1942 as a metallurgical laboratory operated by Massachusetts Institute of Technology (MIT) for the Manhattan Engineering District. From 1946 to June 1954, the facility was apparently owned by the AEC and operated by NMI. From June 1954 until NMI moved its operations to Concord in the Fall of 1958, NMI continued operations at both Cambridge facilities. The facility located at 224 Albany Street was listed as the offices on the company letterhead, but according to an AEC inspection conducted in October 1958, the Albany Street site was also used to store licensed material. The Concord facility is currently occupied by NMI and licensed by the NRC under License Nos. SMB-179 and SUB-1452.

The Natick address was added to the license from 1964 to 1967. The company listed

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at this address was Arnold Greene Testing Laboratories, a licensee authorized to conduct radiography. Arnold Greene continued to operate as an NRC licensee until the early 1990's. No closeout survey was performed when the license was terminated apparently assuming that only sealed sources were used at the facility. Because of the limited NMI activities at the Natick facility, no further review was determined necessary under this docket.

SNM-65 was issued to NMI on February 13, 1957 and authorized 275 grams of 20% enriched U-235 for the preparation of uranium-molybdenum fuel rods. During the transfer of operations from Cambridge to Concord, the possession limits was increased to 450 grams. Subsequently, the quantity of U-235 authorized for the Concord facilities increased to 714 kilograms in a license issued on November 3, 1964 for the primary purpose of fuel fabrication containing 93% enriched U-235. In a license issued March 25, 1970, the possession limit was reduced to 200 kilograms. On March 6, 1974, the possession limit was reduced to 4,950 grams of U-235 and NMI requested termination of the license. In a report of a July 1974 AEC inspection, it was noted that NMI no longer possessed special nuclear material. On November 25, 1974, NMI submitted a summary of radiation measurements to support that the areas in the Concord facility where SNM had been used meet AEC guidelines for unrestricted use. On December 10, 1974, the licensee submitted a Certificate of Disposition indicating that all SNM had been removed from the facility and transferred to Argonne National Laboratory. The AEC did not perform a confirmatory survey because licensed activities continued at Concord under License No. SMB-179.

As indicated above, the Concord facility is currently licensed. The holding basin, used from 1958 to 1975 for the disposal of process waste (primarily DU), will be remediated under the SDMP program. Any contamination will be remediated when the holding basin and/or the site is decommissioned.

The reviewers could not locate closeout surveys by the licensee or an AEC confirmatory surveys for the Cambridge facilities, despite contacting NMI, MIT and the Department of Energy. The current RSO at MIT recalled that termination survey reports funded by AEC (now DOE) for both facilities were completed and records sent to Hudson Street, NY. He also stated that the Hood Building was demolished and the facility at 224 Albany Street was remediated to remove some surface contamination on the floor. Further, the record review identified the contractor (Controls for Radiation, Inc.) that requested a license amendment to decontaminate the Cambridge facilities, using remediation criteria that meets current criteria for release for unrestricted use. The reviewers toured the outside of the Cambridge facilities and compared historical photographs to current facilities. This confirmed that the Hood Bldg was demolished; while the other continues as a storage facility.

Reviewed by: Mauri Miller Date 8-13-96

Approved by: Ronald R. Bell Date Aug 13, 1996