

## ORNL SITES - SUMMARY

License No.: SNM-00011 ORNL Score: 1,811  
Docket No.: 070-00014  
Licensee: The Martin Company Review Status: **Complete**  
Site Address(es): Middle River, Maryland  
Site Contact: none  
Telephone No.: none  
SDMP Site: no  
Related License(s): 19-01398-20, 19-01398-32, SNM-000053, SNM-00849, SNM-00907, SNM-01150, SNM-01192, STB-00187  
NRC Reviewer: David F. Limroth, Stephen W. Holmes  
Review Abstract: License No. SNM-00011 authorized research and development work with U-235 in Building D at Middle River, Maryland. The report of a final survey of Building D in 1970 indicates that some contamination remained in drains and on surfaces. The building was demolished following that survey. In 1982 Region I staff concluded that the site met the current criteria for release for unrestricted use. The results of a NRC site visit and survey on November 3, 1994 indicate that the site is suitable for unrestricted use.

Recommendations: None.

Summary: License No. SNM-00011 authorized the possession and use of 2 kilograms of U-235 in enriched uranium for fuel element research and development to be used in the licensee's Nuclear Materials Laboratory in Building D, Plant I. The licensee's letter dated September 19, 1957 requested that certain special operations in the fabrication of fuel bundles be permitted in the pilot manufacturing facility and in other buildings at Plant I. The licensee specified that only fully clad uranium fuel tubes or plates would be used in these other buildings. The license expired on May 31, 1961 and was not renewed. On April 7, 1961, the licensee certified that all material possessed under the license had been disposed of prior to expiration of the license.

Information from various docket files indicates that a variety of activities with large amounts of byproduct, source, and special nuclear material were authorized at Building D at the Middle River facility. Activities with licensed material at Building D ceased prior to 1970. License No. SNM-1192 was issued to Martin-Marietta on May 22, 1970 and authorized the decontamination of the Martin-Marietta, Middle River, Maryland facility. License No. SNM-1192 has the same Docket No. (70-58) as License No. SNM-53 and all records for License No. SNM-1192 are contained in the docket file for License No. SNM-53. Apparently only Building D was decontaminated under License No. SNM-1192. Building D was decontaminated from June to September 1970 and a final survey report provided to the AEC with a letter dated September 22, 1970. The final survey report states that a total of 29  $\mu$ Ci of U-235 remained in five drains which were to be sealed with concrete; one small

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area of fixed Sr-90 contamination (0.5 mrad/hr) also remained. The building was demolished after the survey, leaving only the concrete pad. Region I staff reviewed the available documentation in 1982 and concluded in Combined Inspection Report Nos. 40-3296/82-01 and 40-2308/82-01 that the site met NRC criteria for unrestricted use.

An NRC site visit and survey was performed on November 3, 1994 to assure that the site meets current NRC guidelines for release for unrestricted use. Buildings C and D at the Middle River facility and Buildings KJ and KC at the Martin State Airport were surveyed. The results of the surveys indicate no radiation or contamination levels above background in any of the buildings surveyed, including the concrete pad remaining from Building D. The contaminated drains discussed in the final survey report regarding Building D were not located, although a number of openings in the pad which had been filled with concrete were identified. Therefore, it seems apparent that the drains identified as contaminated during the final survey were plugged with concrete, as proposed by the licensee. Based on the fact that no radiation or contamination levels above background were detected, it seems unlikely that U-235 contamination in the drains, if present, is a significant hazard. Therefore, the site is suitable for unrestricted use.

Reviewed by:           *sw Holmes*           Date           *01/23/95*            
Approved by:           *J.D. Kenner*           Date           *1/23/95*