

ORNL SITES - SUMMARY

License No.: STB-00187 ORNL Score: 17
Docket No.: 040-03296
Licensee: The Martin Company Review Status: Complete
Martin-Marietta
Site Address(es): Middle River, Maryland
Site Contact: none
Telephone No.: no
SDMP Site: no
Related License(s): 19-01398-20; 19-01398-32, SNM-00011, SNM-00053, SNM-00849,
SNM-00907, SNM-01150, SNM-01192; [C-04283: NOT ON LIST]
NRC Reviewer: David F. Limroth, Stephen W. Holmes
Review Abstract: License No. STB-00187 authorized the possession and use of large
amounts of thorium alloy in Building D at Middle River, Maryland from
1961 to 1964. 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Summary: License No. STB-00187, which superseded C-04283 on January 1, 1961,
authorized possession of up to 100,000 pounds of thorium-magnesium alloy (4
percent thorium) for fabrication of missile components. The license was
terminated on March 20, 1964 at the request of the licensee. Region I Inspection
Report No. 40-3296/82-01 documents that all work under License No. STB-00187
was conducted in Building D at the Middle River facility.

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 μ Ci of U-235 remained in five drains which were to
be sealed with concrete; one small area of fixed Sr-90 contamination
(0.5 mrad/hr) also remained. The building was demolished after the survey,

January 23, 1995

B/4

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: *Dr Holmes* Date *01/23/95*

Approved by: *Joe D. Keim* Date *1/23/95*