

NUCLEAR REGULATORY COMMISSION

License Number SUB-00971
Docket Number 040-07982
December 13, 2004
ATK Ordnance and Ground Systems, LLC
Twin Cities Army Ammunition Plant (TCAAP)
Arden Hills, Minnesota

Safety Evaluation Report

1.0 BACKGROUND

On June 2, 2004 (Reference 1), ATK Ordnance and Grounds Systems, LLC (ATK) informed the Nuclear Regulatory Commission (NRC) of its desire to terminate its SUB-00971 license. The licensee informed the NRC regarding the status of its site as follows:

“The status of the decommissioning, as of the date of this letter is:

- All waste has been shipped from the site.
- Final status surveys will be completed on the areas where the waste was stored by June 4, 2004. The final status surveys of all of the areas except where waste was stored have been completed.
- The Final Report will be submitted to the NRC no later than June 18, 2004.”

By cover letter dated June 18, 2004, ATK provided the NRC the “Final Status Survey Report” (Reference 2), which was submitted to demonstrate that the property associated with the licensee’s former depleted uranium production facility (Building 502) met the unrestricted use criteria approved in its decommissioning plan (DP). Building 502 has been demolished, and underlying soils were remediated and backfilled with clean fill dirt. All depleted uranium contaminated waste has been shipped off-site to approved disposal sites. The NRC staff has reviewed and evaluated the final status survey (FSS) and technical basis documentation, and the staff’s review findings are summarized below:

2.0 Discussion

The ATK depleted uranium facilities located at the TCAAP site in Arden Hills, Minnesota, were operated from the early 1970s until 1987 under the NRC License SUB-00971 to produce projectiles containing depleted uranium for the U.S. Government. The depleted uranium operations were initially conducted by Honeywell, Inc.; more recently, ATK has been the operator. In 1987 production was discontinued, and in August 1996, ATK notified the NRC of its intent to permanently cease operations and decommission the facility. A decommissioning contractor for ATK, GTS Duratek, Inc., performed characterization of the facilities during 1997. In addition, in September 1997, GTS Duratek prepared the Decommissioning Plan for the TCAAP Depleted Uranium Facilities for submittal to the NRC. In August 2001, ATK awarded Safety and Ecology Corporation (SEC) a contract for dismantlement and decontamination of the affected portions of the TCAAP site, including a final status survey (FSS) to demonstrate that the remaining structures and land satisfied the established radiological guidelines for termination of its license. The final status surveys were performed from August 2002 through May 2004, following a survey plan approved by the NRC.

3.0 Site Description

The TCAAP site is located on Ramsey County Highway 96, approximately 10 miles northeast of Minneapolis Minnesota. The land and facilities are owned by the U.S. Army. A number of manufacturing facilities on the site were operated by ATK under separate Army contracts. Although the TCAAP contains many and varied buildings, only a small part of the site was involved in the licensed DU operations under the direction of ATK. Machining and fabrication operations were performed by ATK in Building 502. Building 576 was used by ATK as a warehouse facility for storage of DU material and wastes from the fabrication processes. Buildings 519C and 519D were munitions magazines used for storage of finished DU munitions products. Characterization surveys by GTS Duratek demonstrated that the 576 and 519C and D buildings were not impacted by the licensed operations and satisfied the requirements for unrestricted release in accordance with the guidance of NUREG/CR-5849, "Manual for Conducting Radiological Surveys in Support of License Termination." However, the 1997 site characterization identified residual radioactive material in portions of Building 502 requiring decontamination and follow-up surveys.

Building 502 is a large structure of more than 350,000 square feet (ft²), located near the southwest corner of the TCAAP. It was used for a wide variety of activities, including manufacturing, storage, and administration. The DU manufacturing activities were primarily conducted in a multiroom complex known as the "DU Room" located on the north side of the building and occupying approximately 25,000 ft². The DU Room, was comprised primarily of the Machining Room, Heat Treat Room, Equipment Room, Rod/Cut Off Room, Waste Water Evaporator Room, and Centrifugal Cast Room.

4.0 Environmental Review

In an internal NRC memorandum to ATK's license file dated October 24, 2001, the NRC's Division of Waste Management (DWM) and the Region III Decommissioning Branch Staff documented their review of an Environmental Assessment (EA) and Finding of No Significant Impact (FONSI), which had been prepared for the ATK decommissioning project by the U.S. Army. The EA, "Environmental Assessment for Demolition of the Building 502 DU Room, Twin Cities Army Ammunition Plant (TCAAP)," and FONSI were attached to a licensee letter dated October 22, 2001. The Army's FONSI findings were published in local news papers, and solicited responses from the public no later than August 17, 2001. The NRC staff found the EA and FONSI sufficient to satisfy NRC needs as outlined in NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Program," and incorporated the material into the ATK license.

5.0 Decommissioning Plan

The NRC published a Notice in the Federal Register (FRN) on May 21, 1998, Volume 63 (1998), page 28015, the Agency's proposed action, "Notice of Intent to Approve Decommissioning Plan License Amendment and Opportunity for Hearing Related to Source Materials License SUB-971 for Alliant Techsystems, Inc." The FRN informed the public that the NRC was considering the issuance of a license amendment to ATK to authorize decommissioning of the licensee's former depleted uranium facilities. The licensee requested the amendment in a letter dated October 6, 1997. The amendment incorporated the licensee's "Decommissioning Plan for the Twin Cities Army Ammunition Plant, Depleted Uranium Facilities, New Brighton, Minnesota." The licensee's decommissioning plan discussed the administrative and technical procedures necessary for performing the decommissioning project

as follows: (1) summary of the decommissioning plan (including background, description of facilities to be remediated, etc.); (2) choices of decommissioning alternatives and decommissioning activities (including decommissioning schedule, organization and program responsibilities); (3) Protection of Occupational and Public Health and Safety (including radiation protection, asbestos protection and waste management programs); (4) Final Radiation Safety Survey; (5) Decommissioning Cost Estimate and Funding Plan; (6) Decommissioning Quality Assurance Plan; and (7) References and Appendices. The licensee's DP was approved by the NRC in a letter dated June 10, 1998. The DP was incorporated into the licensee's license renewal dated October 25, 2001.

6.0 Decommissioning Inspections

The licensee initiated remediation and decommissioning activities on Building 502 during the month of October 2001, and concluded remediation activities during the month of May 2004. The NRC completed its first decommissioning inspection on November 23, 1999. This inspection evaluated the conditions of Building 502, familiarized the NRC staff with the facilities to be decommissioned, and included an onsite review of characterization results. Between November 1999 and the cessation of remediation activities, the NRC conducted 15 decommissioning surveys at the ATK site. The last inspection was conducted on July 22, 2004. The NRC staff's review of the ATK inspection history for the above period identified some minor procedural violations. Except for these minor procedural violations, the licensee's decommissioning program was conducted in a satisfactory and safe manner. The NRC also conducted confirmatory measurements during the decommissioning period. The results of the NRC surveys were comparable with the licensee's findings. The dates of the NRC inspections were: November 23, 1999; June 26, 2000; May 17, 2001; November 15, 2001; January 17, 2002; January 24, 2002; March 15, 2002; June 17 through 20, 2002; July 22 through 25, 2002; February 28, 2003; April 9, 2003; July 11, 2003; December 2, 2003; May 7, 2004; and July 22, 2004.

7.0 Certification Statement

The NRC staff has reviewed the information in the licensee's Final Status Survey Report and the licensee's Decommissioning Plan for the ATK Ordnance and Ground Systems, LLC., license number SUB-00971. The staff review was conducted in accordance with NUREG/CR- 5849, "Manual for Conducting Surveys in Support of License Termination."

Based on this review and the licensee's NRC inspection record, the NRC staff has determined that the licensee's final status survey is adequate to demonstrate compliance with radiological criteria for license termination, and that ATK has demonstrated that its former DU production site meets the radiological criteria for license termination. The NRC staff has reviewed the proposed amendment and has determined that the proposed termination will have no adverse effect on the public health and safety or the environment. Therefore, approval of the termination amendment is recommended.

CONTACT: George M. McCann, RIII
(630) 829-9856

License No. SUB-00971
Docket No. 040-09782

REFERENCES:

- 1) Alliant Ordnance and Ground Systems, LLC, June 18, 2004, letter, "Subject: Final Status Survey Report for Former Depleted Uranium Facilities of Alliant Techsystems, Inc. at the Twin Cities Army Ammunition Plant"
- 2) Safety and Ecology Corporation, "Final Status Survey Report, Depleted Uranium Facilities, Twin Cities Army Ammunition, Plant, New Brighton, Minnesota," Project 1350, Revision 2, June 2004

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