

NUCLEAR REGULATORY COMMISSION

DOCKET NO. 040-06377

**NOTICE OF AVAILABILITY OF ENVIRONMENTAL ASSESSMENT AND FINDING OF NO
SIGNIFICANT IMPACT FOR LICENSE AMENDMENT TO SOURCE MATERIALS LICENSE
NO. SUB-348, FOR UNRESTRICTED RELEASE OF THE DEPARTMENT OF THE ARMY, U.S.
ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND, ARMAMENT
RESEARCH, DEVELOPMENT AND ENGINEERING CENTER, BUILDING 611B FACILITY IN
PICATINNY, NEW JERSEY**

AGENCY: Nuclear Regulatory Commission.

ACTION: Issuance of Environmental Assessment and Finding of No Significant Impact for License Amendment.

FOR FURTHER INFORMATION CONTACT: Betsy Ullrich, Senior Health Physicist, Commercial and R&D Branch, Division of Nuclear Materials Safety, Region I, 475 Allendale Road, King of Prussia, Pennsylvania; telephone (610) 337-5040; fax number (610) 337-5269; or by email: exu@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Introduction

The U.S. Nuclear Regulatory Commission (NRC) is considering the issuance of a license amendment to Source Materials License No. SUB-348. This license is held by the Department of the Army, U. S. Army Research, Development and Engineering Center (RDEC), Armament Research, Development and Engineering Center (ARDEC) (the Licensee), for its activities at the Picatinny Arsenal located in Picatinny, New Jersey. Issuance of the amendment would authorize

release of Building 611B for unrestricted use. The Licensee requested this action in a letter dated May 14, 2007. The NRC has prepared an Environmental Assessment (EA) in support of this proposed action in accordance with the requirements of Title 10, Code of Federal Regulations (CFR), Part 51 (10 CFR Part 51). Based on the EA, the NRC has concluded that a Finding of No Significant Impact (FONSI) is appropriate with respect to the proposed action. The amendment will be issued to the Licensee following the publication of this FONSI and EA in the Federal Register.

II. Environmental Assessment

Identification of Proposed Action

The proposed action would approve the Licensee's May 14, 2007 license amendment request, resulting in release of Building 611B for unrestricted use. License No. SUB-348 was issued on July 13, 1961, pursuant to 10 CFR Part 40, and has been amended periodically since that time. This license authorized the Licensee to use uranium and thorium in any form for purposes of conducting research and development activities.

The Picatinny Arsenal is situated on 6,500 acres of land and consists of office space, laboratories, and specialized facilities. The Picatinny Arsenal is located in a mixed residential and commercial area. Building 611B was one of several buildings where use of licensed material was performed under the authority of RDEC/ARDEC, one of the military tenants at Picatinny Arsenal. Building 611B is a single-story concrete structure of about 1,100 square feet, containing two test-firing ranges. One of the firing ranges was used for the testing of depleted uranium munitions. Building 611B is located in a cleared area on a rocky and wooded hillside,

within a fenced area of approximately 40,000 square feet. Other structures within the fenced area include an Outdoor Storage Area and two movable electrical storage shelters.

On November 19, 1998, the Licensee notified the NRC that they had ceased licensed activities and initiated a survey and decontamination of Building 611B. Based on the Licensee's historical knowledge of the site and the conditions of the Building 611B, the Licensee determined that only routine decontamination activities, in accordance with their NRC-approved, operating radiation safety procedures, were required. The Licensee submitted a decommissioning plan for Building 611B. The NRC's approval of the Licensee's decommissioning plan was published in the *Federal Register* on Friday, March 31, 2000 (65 FR 17322). The Licensee conducted surveys of the Building 611B and provided information to the NRC to demonstrate that it meets the criteria in Subpart E of 10 CFR Part 20 for unrestricted release.

Need for the Proposed Action

The Licensee has ceased conducting licensed activities at the Building 611B and seeks the unrestricted use of this facility.

Environmental Impacts of the Proposed Action

The historical review of licensed activities conducted at the Building 611B shows that such activities involved use of depleted uranium, a radionuclide with a half-life greater than 120 days. Prior to performing the final status survey, the Licensee conducted decontamination activities, as necessary, in the areas of the Building 611B affected by this radionuclide.

The Licensee conducted a final status survey during August and September, 2003. This survey covered areas inside Building 611B including the DU Tunnel, the Non-DU Tunnel, the Foyer, the Instrument Room, and the Indoor Storage Area; exterior surfaces of building 611B; an

Outdoor Storage Area; two movable electrical storage containers; and the open land area and bunker within the fence line for the Building 611B area. The final status survey report was attached to the Licensee's amendment request dated May 14, 2007. The Licensee elected to demonstrate compliance with the radiological criteria for unrestricted release as specified in 10 CFR 20.1402 by developing derived concentration guideline levels (DCGLs) for its Building 611B. The Licensee conducted site-specific dose modeling using input parameters specific to the Building 611B. For soil, the Licensee used the RESRAD code, version 5.82, with all default values except for a smaller thickness of contaminated soil (0.25 meters instead of 2 meters) and a smaller contaminated area (4000 square-meters instead of 10,000 square-meters), and did not use the pathways for milk or meat ingestion because of the small area. The soil DCGL was determined to be 186 picocuries per gram of soil. For contaminated building surfaces, the Licensee used the RESRAD-Build code, version 3.0 with all default values except for the removable fractions (10 percent instead of 50 percent), the fraction indoors (0.33 instead of 0.5) and the exposure duration (250 days instead of 365 days). The building surface DCGL was determined to be 5,550 disintegrations per minute (dpm) per 100 square-centimeters area. The NRC previously reviewed the Licensee's methodology and proposed DCGLs, and concluded that the proposed DCGLs are acceptable for use as release criteria at the Building 611B. The Licensee's final status survey results were below these DCGLs, and are thus acceptable.

Based on its review, the staff has determined that the affected environment and any environmental impacts associated with the proposed action are bounded by the impacts evaluated by the "Generic Environmental Impact Statement in Support of Rulemaking on Radiological Criteria for License Termination of NRC-Licensed Nuclear Facilities" (NUREG-1496) Volumes 1-3 (ML042310492, ML042320379, and ML042330385). The staff finds there were no significant environmental impacts from the use of radioactive material at Building 611B. The NRC staff reviewed the docket file records and the final status survey report

to identify any non-radiological hazards that may have impacted the environment surrounding the Building 611B. No such hazards or impacts to the environment were identified, except the presence of unexploded ordnance identified by the Licensee. Department of the Army personnel surveyed the area for unexploded ordnance prior to, and during, all activities performed in the outdoor area surrounding Building 611B, and removed any unexploded ordnance found. The NRC has identified no other radiological or non-radiological activities in the area that could result in cumulative environmental impacts.

The NRC staff finds that the proposed release of the Building 611B for unrestricted use is in compliance with 10 CFR 20.1402. Although the Licensee will continue to perform licensed activities at other parts of the Picatinny Arsenal, the Licensee must ensure that this decommissioned area does not become recontaminated. Before the license can be terminated, the Licensee will be required to show that the entire Picatinny Arsenal, including previously-released areas, complies with the radiological criteria in 10 CFR 20.1402. Based on its review, the staff considered the impact of the residual radioactivity at the Building 611B and concluded that the proposed action will not have a significant effect on the quality of the human environment.

Environmental Impacts of the Alternatives to the Proposed Action

Due to the largely administrative nature of the proposed action, its environmental impacts are small. Therefore, the only alternative the staff considered is the no-action alternative, under which the staff would leave things as they are by simply denying the amendment request. This no-action alternative is not feasible because it conflicts with 10 CFR 40.42(d), requiring that decommissioning of source material facilities be completed and approved by the NRC after licensed activities cease. The NRC's analysis of the Licensee's final status survey data

confirmed that the Building 611B meets the requirements of 10 CFR 20.1402 for unrestricted release. Additionally, denying the amendment request would result in no change in current environmental impacts. The environmental impacts of the proposed action and the no-action alternative are therefore similar, and the no-action alternative is accordingly not further considered.

Conclusion

The NRC staff has concluded that the proposed action is consistent with the NRC's unrestricted release criteria specified in 10 CFR 20.1402. Because the proposed action will not significantly impact the quality of the human environment, the NRC staff concludes that the proposed action is the preferred alternative.

Agencies and Persons Consulted

NRC provided a draft of this Environmental Assessment to the State of New Jersey Department of Environmental Protection (NJDEP) for review on October 2, 2007. On November 8, 2007, NJDEP responded by letter. The State agreed with the conclusions of the EA, and otherwise had no comments.

The NRC staff has determined that the proposed action is of a procedural nature, and will not affect listed species or critical habitat. Therefore, no further consultation is required under Section 7 of the Endangered Species Act. The NRC staff has also determined that the proposed action is not the type of activity that has the potential to cause effects on historic properties. Therefore, no further consultation is required under Section 106 of the National Historic Preservation Act.

III. Finding of No Significant Impact

The NRC staff has prepared this EA in support of the proposed action. On the basis of this EA, the NRC finds that there are no significant environmental impacts from the proposed action, and that preparation of an environmental impact statement is not warranted.

Accordingly, the NRC has determined that a Finding of No Significant Impact is appropriate.

IV. Further Information

Documents related to this action, including the application for license amendment and supporting documentation, are available electronically at the NRC's Electronic Reading Room at <http://www.nrc.gov/reading-rm/adams.html>. From this site, you can access the NRC's Agencywide Document Access and Management System (ADAMS), which provides text and image files of NRC's public documents. The documents related to this action are listed below, along with their ADAMS accession numbers.

1. Letter dated November 29, 1999, with the "Picatinny Arsenal Decommissioning Plan for Building 611B" [ML003683836];
2. Letter dated November 24, 2000 [ML003772619] with Amendment No. 23 [ML003773181];
3. Letter dated May 9, 2002 with the "Final Survey Plan for the TACOM-ARDEC Picatinny Arsenal Building 611B, Revision 1, January 2002" [ML021400335];
4. Letter dated October 16, 2002 with Amendment No. 26 [ML022970431];
5. Inspection 040-06377/2003-001, September 4, 18 and 22, 2003 [ML032930404];
6. Letter dated May 14, 2007 with the "Final Survey Report for the TACOM-ARDEC Picatinny Arsenal Building 611B" [ML071620348];
7. NUREG-1757, "Consolidated NMSS Decommissioning Guidance;"

8. Title 10 Code of Federal Regulations, Part 20, Subpart E, "Radiological Criteria for License Termination;"

9. Title 10, Code of Federal Regulations, Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions;" and

10. NUREG-1496, "Generic Environmental Impact Statement in Support of Rulemaking on Radiological Criteria for License Termination of NRC-Licensed Nuclear Facilities."

If you do not have access to ADAMS, or if there are problems in accessing the documents located in ADAMS, contact the NRC Public Document Room (PDR) Reference staff at 1-800-397-4209, 301-415-4737, or by email to pdr@nrc.gov. These documents may also be viewed electronically on the public computers located at the NRC's PDR, O 1 F21, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852. The PDR reproduction contractor will copy documents for a fee.

Dated at King of Prussia, Pennsylvania this 27th day of November 2007.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

James Dwyer, Chief
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Region I