

**NUCLEAR REGULATORY COMMISSION**

**DOCKET NOS. 030-05215 AND 040-06377**

**NOTICE OF AVAILABILITY OF ENVIRONMENTAL ASSESSMENT AND FINDING OF NO  
SIGNIFICANT IMPACT FOR LICENSE AMENDMENTS TO BYPRODUCT MATERIALS  
LICENSE NO. 29-00047-02 AND SOURCE MATERIALS LICENSE NO. SUB-348, FOR  
AMENDMENT OF THE LICENSE AND UNRESTRICTED RELEASE OF THE DEPARTMENT  
OF THE ARMY FACILITIES IN PICATINNY ARSENAL, 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; telephone (610) 337-5040; fax number (610) 337-5269; or by email: [exu@nrc.gov](mailto:exu@nrc.gov).

**SUPPLEMENTARY INFORMATION:**

**I. Introduction**

The U.S. Nuclear Regulatory Commission (NRC) is considering the issuance of license amendments to Byproduct Materials License No. 29-00047-02 and Source Materials License No. SUB-348. These licenses are held by the Department of the Army, U. S. Army Research, Development and Engineering Command (RDEC), Armament Research, Development and Engineering Center (ARDEC) (the Licensee), for its facilities located at the Picatinny Arsenal in New Jersey. Issuance of the amendment would authorize release of Building 167, Magazine 3018, and Bunker 3030 for unrestricted use. The Licensee requested these actions

in a letter dated April 28, 2006. The NRC has prepared an Environmental Assessment (EA) in support of the proposed actions 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 actions. The amendments 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 April 28, 2006, license amendment requests, resulting in release of Building 167, Magazine 3018 and Bunker 3030 for unrestricted use. License No. 29-00047-02 was issued on August 22, 1956, pursuant to 10 CFR Part 30, and has been amended periodically since that time. This license authorized the Licensee to use unsealed and sealed byproduct materials for purposes of conducting research and development activities at its Picatinny Arsenal. 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 at its Picatinny Arsenal.

The Picatinny Arsenal is situated on 6,500 acres and consists of residential, industrial, office space, laboratories, and specialized facilities. The Picatinny Arsenal is located in a mixed residential and commercial area. Building 167, Magazine 3018, and Bunker 3030 are three of several facilities where use of licensed materials was performed under the authority of RDEC/ARDEC, one of the military tenants at Picatinny Arsenal. Building 167 was a one-story building containing approximately 1,800-square-feet of radioactive materials laboratories and

storage areas on the first floor. Radioactive materials were also stored in the basement. Areas outside Building 167 included in the decommissioning activities were a 2 meter by 3 meter area of localized contamination and an 800 square meter area across the street from Building 167 that was used for radioactive waste storage. Magazine 3018 was an explosives magazine in which radiolabelled explosives were stored. Bunker 3030 was a bunker that was once used to store radioactive munitions and was also used for radioactive waste storage.

In the late 1990's, the Licensee determined that Building 167, Magazine 3018, and Bunker 3030 were no longer required for licensed activities and initiated a survey and decontamination program. Based on the Licensee's historical knowledge of the site and the conditions of these facilities, the Licensee determined that only routine decontamination activities, in accordance with their NRC-approved, operating radiation safety procedures, were required. The Licensee was not required to submit a decommissioning plan to the NRC because worker cleanup activities and procedures are consistent with those approved for routine operations. The Licensee conducted surveys of Building 167, Magazine 3018, and Bunker 3030 and provided information to the NRC to demonstrate that they meet 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 in Building 167, Magazine 3018, and Bunker 3030 and seeks the unrestricted use of these buildings.

### **Environmental Impacts of the Proposed Action**

The historical review of licensed activities conducted in Building 167, Magazine 3018, and Bunker 3030 shows that such activities involved use of the following radionuclides with half-lives greater than 120 days: hydrogen-3, carbon-14, strontium-90, cesium-137, uranium,

thorium, radium, and other similar radionuclides. Prior to performing the final status survey, the Licensee conducted decontamination activities, as necessary, in the areas affected by these radionuclides.

The Licensee conducted final status surveys during October and November 2001 and June 2002. The surveys covered Building 167 and its associated outdoor areas, Magazine 3018, and Bunker 3030. The final status survey report was attached to the Licensee's amendment request dated April 28, 2006. 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 facilities. The Licensee conducted site-specific dose modeling using the default input parameters in RESRAD-BUILD 3.3 for a residential building scenario, and RESRAD 6.3 for soil used by a residential farmer, and performed sensitivity analyses which demonstrate that the proposed DCGLs are conservative estimations of the potential dose at the site and will not exceed the Department of the Army's self-imposed constraint of 15 millirem in a year. The Licensee thus determined the maximum amount of residual radioactivity on building surfaces, equipment, materials, and soils that will satisfy the NRC requirements in Subpart E of 10 CFR Part 20 for unrestricted release. The NRC reviewed the Licensee's methodology and the DCGLs, and has concluded that the proposed DCGLs are acceptable for use as release criteria for Building 167, Magazine 3018, and Bunker 3030. 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 167, Magazine 3018, and Bunker 3030. 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 these facilities. No such hazards or impacts to the environment were identified. 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 these facilities for unrestricted use and is in compliance with 10 CFR 20.1402 including the impact of residual radioactivity at previously-released site locations of use. Although the Licensee will continue to perform licensed activities at other parts of its Picatinny Arsenal, the Licensee must ensure that these decommissioned areas do not become recontaminated. Before the license can be terminated, the Licensee will be required to show that all previously-released areas comply with the radiological criteria in 10 CFR 20.1402. Based on its review, the staff considered the impact of the residual radioactivity in Building 167, Magazine 3018, and Bunker 3030 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 30.36(d) and 10 CFR 40.42(d), requiring that decommissioning of byproduct material and 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 167, Magazine 3018, and Bunker 3030 meet 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 January 2, 2008. On January 31, 2008, 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 April 28, 2006 [ML061290093];
2. New World Technology, Final Report, Picatinny Arsenal Radiological Remediation/Release Surveys and Sampling Project, Revision 3, January 30, 2006, Project No. USA 99-109 [ML061510185 and ML062840673];
3. Letter dated October 12, 2006 [ML062900446];
4. Letter dated September 26, 2007 [ML072770684];
5. NUREG-1757, "Consolidated NMSS Decommissioning Guidance;"
6. Title 10 Code of Federal Regulations, Part 20, Subpart E, "Radiological Criteria for License Termination;"
7. Title 10, Code of Federal Regulations, Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions;" and

8. 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](mailto: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 21<sup>st</sup> day of February 2008.

FOR THE NUCLEAR REGULATORY COMMISSION

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