

**MATERIALS LICENSE**

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

<p style="text-align: center;">Licensee</p> <p>1. Department of the Army U. S. Army Research, Development and Engineering Command Army Research Laboratory</p> <p>2. Aberdeen Proving Ground, Maryland 21005-5066</p>	<p>In accordance with the letter dated January 13, 2005,</p> <p>3. License number SMB-141 is amended in its entirety to read as follows:</p> <hr/> <p>4. Expiration date June 30, 2011</p> <hr/> <p>5. Docket No. 040-06394 Reference No.</p>	
<p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Natural Uranium</p> <p>B. Depleted Uranium</p> <p>C. Thorium</p> <p>D. Transuranics and technetium-99 contaminants in depleted uranium</p>	<p>7. Chemical and/or physical form</p> <p>A. Metal and metal oxide</p> <p>B. Metal and metal oxide</p> <p>C. Metal and metal oxide</p> <p>D. Contaminants contained in depleted uranium metal and metal oxide</p>	<p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. 100 kilograms</p> <p>B. 200,000 kilograms</p> <p>C. 100 kilograms</p> <p>D. Not to exceed 100 picocuries per gram (pCi/g) per transuranic radionuclide and 500 pCi/g total transuranics; not to exceed 500 pCi/g technetium-99</p>
<p>9. Authorized use:</p> <p>A. through D. (1) Research and development as defined in 10 CFR 30.4; (2) fabrication, modification, and testing of components, parts and/or devices; (3) laboratory analysis and measurement studies; (4) calibration of the licensee's instruments; (5) munitions testing; and (6) processing of waste of other Department of the Army tenants located at Aberdeen Proving Ground.</p>		

**CONDITIONS**

10. Licensed material may be used or stored at the licensee's facilities located at Aberdeen Proving Ground and at temporary job sites of the licensee anywhere in the United States.

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number

SMB-141

Docket or Reference Number

040-06394

Amendment No. 27

11. A. Licensed material shall only be used by, or under the supervision of, individuals designated, in writing, by the Radiation Safety Committee. The licensee shall maintain records of individuals designated as users for 3 years following the last use of licensed material by the individual.
- B. The Radiation Safety Officer for this license is Richard A. Markland.
12. The licensee shall not use licensed material in or on human beings except as provided otherwise by specific condition of this license.
13. The licensee shall not use licensed material in field applications where it is released except as provided otherwise by specific condition of this license.
14. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
15. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.
- A. Application dated April 13, 2001 [011140434]
- B. Letter dated July 30, 2001 [ML012200458]

For the U.S. Nuclear Regulatory Commission

Date December 19, 2005

By



Elizabeth Ulrich  
Commercial and R&D Branch  
Division of Nuclear Materials Safety  
Region I  
King of Prussia, Pennsylvania 19406

Monday, December 19, 2005 2:38:53 PM

NUCLEAR REGULATORY COMMISSION  
DOCKET NO. 040-06394  
December 7, 2005

Environmental Assessment Related to Issuance of a License Amendment  
of U.S. Nuclear Regulatory Commission Materials License No. SMB-141,  
Department of the Army in Aberdeen, Maryland

## **Introduction**

The U.S. Nuclear Regulatory Commission (NRC) has prepared this environmental assessment (EA) of the amendment of the Department of the Army's Materials License Number SMB-141, and the release of its Transonic Range, located at Aberdeen Proving Grounds, Aberdeen, Maryland, for unrestricted use. The Transonic Range is operated by the Department of the Army in Aberdeen Proving Grounds, Aberdeen, Maryland. The Department of the Army was authorized by NRC since April 12, 1961, to use radioactive materials for munitions testing and research and development purposes at the site. Actual use of licensed material at the Transonic Range began in 1973. In 2005, the Department of the Army ceased operations with licensed materials at the Transonic Range site and requested that NRC release the site for unrestricted use. The Department of the Army has conducted surveys of the Transonic Range and determined that the site meets the license termination criteria in Subpart E of 10 CFR Part 20. The NRC staff has evaluated the Department of the Army's request and the results of the surveys, and has developed an EA in accordance with the requirements of 10 CFR Part 51. Based on the staff evaluation, the conclusion of the EA is a Finding of No Significant Impact (FONSI) on human health and the environment for the proposed licensing action. The Department of the Army requested release for unrestricted use of the land mass and buildings located at Aberdeen Proving Grounds, Aberdeen, Maryland, as authorized by the NRC License No. SMB-141. The land mass contained within the Transonic Range is approximately 53,000 square meters and the two remaining structures have a total footprint of 80 square meters. This tract of land is located within an active U.S. Army testing and research facility.

License No. SMB-141 was issued in 1961 and amended periodically since that time. NRC-licensed activities performed at the Transonic Range site were limited to research and development and munitions testing using projectiles containing depleted uranium. Activities involving depleted uranium testing at the Transonic Range were conducted from 1973 to 1979. Outdoor areas were affected by the use of licensed materials.

## **The Proposed Action**

The proposed action is to amend Materials License No. SMB-141 and release the Transonic Range, Aberdeen Proving Grounds, Aberdeen, Maryland, for unrestricted use. By letter dated January 13, 2005, the Department of the Army stated that no further actions are required to remediate the Transonic Range and requested release of the range for unrestricted use. The Department of the Army stated that licensed activities ceased completely in January 2005. Based on the licensee's historical knowledge of the site and the conditions of the facility, the licensee determined that only routine decontamination activities, in accordance with licensee radiation safety procedures, were required. A decommissioning plan was not required to be

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submitted to the NRC. The licensee surveyed the Transonic Range, decontaminated or remediated areas as needed, and provided documentation that the Range meets the license termination criteria specified in Subpart E of 10 CFR Part 20, and does not require additional decommissioning activities to be performed. The licensee demonstrated this using the screening criteria described in 65 FR 37186.

### **Need for the Proposed Action**

The purpose of the proposed action is to amend NRC Materials License No. SMB-141, to allow for the release of the Transonic Range for unrestricted use. The licensee needs this license change because it no longer plans to conduct licensed activities at the Transonic Range. NRC is fulfilling its responsibilities under the Atomic Energy Act to make a timely decision on a proposed license amendment for release of facilities for unrestricted use that ensures protection of public health and safety and the environment. The licensee has requested the action to reduce their regulatory burden since they no longer intend to conduct licensed activities at this location.

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

The affected environment was described in the Introduction. The licensee has completed all remediation at the site. The NRC staff has reviewed the surveys performed by the Department of the Army to demonstrate compliance with the 10 CFR 20.1402 license termination criteria. Based on its review, the staff has determined that the affected environment and environmental impacts associated with the release for unrestricted use of the Transonic Range 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). The staff also finds that the proposed release for unrestricted use of the Transonic Range is in compliance with Title 10, Code of Federal Regulations, Part 20.1402, "Radiological Criteria for Unrestricted Use." The NRC has found no other activities in the area that could result in cumulative impacts.

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

Since the Transonic Range has already been surveyed and found acceptable for release for unrestricted use, the only alternative to the proposed action of amendment of the license and release of the Transonic Range for unrestricted use is denial of the proposed action (i.e. no action). Denial of the application would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

### **Agencies and Persons Consulted**

The NRC staff has determined that the proposed action will not affect listed species or critical habitat. Therefore, no further consultation is required under Section 7 of the Endangered Species Act. Likewise, the NRC staff have 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.

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NRC provided a draft of its Environmental Assessment to the Maryland Department of the Environment for review. On September 29, 2005, the Maryland Department of the Environment responded by telephone and agreed with the conclusions of the EA.

### **Conclusions**

Based on its review, the NRC staff has concluded that the completed action complies with 10 CFR Part 20. The NRC staff have prepared this EA in support of the proposed action to amend License No. SMB-141. On the basis of the EA, NRC has concluded that there are no significant environmental impacts and the license amendment does not warrant the preparation of an Environmental Impact Statement. Accordingly, it has been determined that a Finding of No Significant Impact is appropriate.

### **List of Preparers**

James Schmidt, Health Physicist, Division of Nuclear Materials Safety, Region I  
Betsy Ullrich, Senior Health Physicist, Division of Nuclear Materials Safety, Region I

### **List of References**

1. NRC License No. SMB-141 inspection and licensing records.
2. "Remediation and Final Status Survey, Transonic Range Depleted Uranium Study Area - Structures", Cabrera Services, dated December 28, 2004 [ADAMS Accession Nos. ML050280349 and ML050280354].
3. "Radiological Final Status survey, Transonic Range - Land Areas, Depleted Uranium Study Area", Cabrera Services, dated November 2004 [ADAMS Accession No. ML050280341].
4. Federal Register Notice, Volume 65, No. 114, page 37186, dated Tuesday, June 13, 2000, "Use of Screening Values to Demonstrate Compliance With The Federal Rule on Radiological Criteria for License Termination."
5. Title 10 Code of Federal Regulations, Part 20, Subpart E, "Radiological Criteria for License Termination."
6. Title 10, Code of Federal Regulations, Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions."
7. NUREG-1496, "Generic Environmental Impact Statement in Support of Rulemaking on Radiological Criteria for License Termination of NRC-Licensed Nuclear Facilities."

The application for the license amendment and supporting documentation are available for inspection at NRC's Public Electronic Reading Room at <http://www.nrc.gov/reading-rm/adams.html>. Any questions with respect to this action should be

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referred to Betsy Ullrich, Commercial and R&D Branch, Division of Nuclear Materials Safety,  
Region I, 475 Allendale Road, King of Prussia, Pennsylvania 19406, telephone (610) 337-5040,  
fax (610) 337-5269.

Dated at King of Prussia, Pennsylvania this 7<sup>th</sup> day of December 2005

FOR THE NUCLEAR REGULATORY COMMISSION

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James P. Dwyer, Chief  
Commercial and R&D Branch  
Division of Nuclear Materials Safety  
Region I