



Virginia Department of Environmental Quality  
Division of Land Protection and Revitalization  
Office of Financial Responsibility and Waste Programs  
1111 E. Main St., Suite 1400, P. O. Box 1105, Richmond, VA 23218

---

**FACT SHEET**  
**DRAFT HAZARDOUS WASTE MANAGEMENT POST-CLOSURE CARE PERMIT**

**July 16, 2025**

<b><u>Facility Name</u></b>	Radford Army Ammunition Plant
<b><u>EPA Facility I.D. Number</u></b>	VA1210020730
<b><u>Owner/Operator</u></b>	U.S. Army/ BAE Systems Ordnance Systems Inc.
<b><u>Address of Facility</u></b>	4050 Pepper's Ferry Road Radford, Virginia 24141
<b><u>Type of Permit</u></b>	Hazardous Waste Management Permit for post-closure care of two closed hazardous waste management units (HWMUs)

**Purpose of Fact Sheet**

This fact sheet is prepared in accordance with the requirements of the Virginia Hazardous Waste Management Regulations (VHWMR), 9 VAC 20-60-124, under which Title 40 of the Code of Federal Regulations (40 CFR) § 124.8 is incorporated by reference. This fact sheet provides information on the current status of the facility, the facility background, the facility's current hazardous waste management activities, and the public comment period associated with the Draft Hazardous Waste Management Post-Closure Care Permit (Permit) for renewal.

**Introduction - Facility Background - Draft Permit**

The Radford Army Ammunition Plant (RFAAP) facility's current Hazardous Waste Management Permit for Post-Closure Care was issued by the Virginia Department of Environmental Quality (DEQ) on July 17, 2014 with an effective date of August 16, 2014, for a 10-year period until August 16, 2024, under the Virginia Hazardous Waste Management Regulations (VHWMR).

A renewal Permit application was received on February 15, 2024, and the Permit application fee was received on February 22, 2024. Revisions were received on April 25, 2024, October 28, 2024, and February 5, 2025. DEQ has reviewed the Resource Conservation and Recovery Act (RCRA) permit application and revisions, and found it to be complete and technically adequate on April 14, 2025.

Therefore, pursuant to 9 VAC 20-60-124 and 40 CFR Part 124, the DEQ has prepared a draft permit for the hazardous waste management activities at the facility.

### **Description of Facility**

Radford Army Ammunition Plant (RFAAP) is an operating hazardous waste management facility. The RFAAP encompasses approximately 4,104 acres of land and is located in southwest Virginia in Pulaski and Montgomery Counties approximately 5 miles northeast of the city of Radford, 10 miles west of Blacksburg, and 47 miles southwest of Roanoke. The New River separates Pulaski and Montgomery Counties and also divides the RFAAP into two (2) portions commonly known as the Horseshoe Area and the Main Manufacturing Area (MMA).

RFAAP is an active manufacturer of explosives and propellants for the U.S. military and other commercial uses. RFAAP began manufacturing propellants in the 1940s and continues that work to this day. Manufacturing processes include the production of single-base and multi-base solvent propellants, cast propellant, solventless propellant (rolled powder), and trinitrotoluene (TNT) explosives.

The draft Permit is for post-closure care of two closed hazardous waste management units (HWMUs): HWMU-5 and HWMU-16. For both HWMUs, the Permittee will conduct semi-annual groundwater monitoring for targeted constituents and annual groundwater monitoring for a broader list of constituents not included in the targeted monitoring list. Additionally, the Permittee will conduct inspections and maintenance of soil/ vegetative covers, fencing and surrounding areas, and associated monitoring wells.

#### **HWMU-5:**

HWMU-5 was put into operation as an unlined surface impoundment in 1970 and was retrofitted with a liner in 1981. The Unit's dimensions were approximately 150 feet by 100 feet at the top of the berm, and the berm rose 10 feet above the base of the impoundment. Leakage from the unit may have occurred prior to the installation of the liner. During its operation, HWMU-5 received stormwater runoff, spilled liquids, and washdown waters from an acid tank farm, and held the acidic waste waters prior to discharge to an equalization basin. The wastes deposited in HWMU-5 were characteristically hazardous as corrosive. The waste waters in HWMU-5 were both nitric and sulfuric in composition. The impoundment was taken out of operation in 1986, and HWMU-5 was closed in 1989. As the waste remained in place at closure, the facility is required to conduct post-closure care for HWMU-5.

The concentration of trichloroethene (TCE) in groundwater had historically exceeded the groundwater protection standards in several monitoring wells, and so HWMU-5 transitioned from a Compliance Monitoring Program to a Corrective Action (CA) Program in November 2009. The groundwater CA and monitoring program utilized monitored natural attenuation of TCE and its daughter products in the subsurface at HWMU-5. During natural attenuation, multiple natural

processes such as dispersion, diffusion, dilution, sorption, volatilization, biological degradation and chemical decomposition result in an effective reduction of contaminant concentration, toxicity, mobility, or volume to levels that are protective of human health and the environment. This natural attenuation is monitored and evaluated over time using data collected from groundwater monitoring wells.

Semiannual monitoring for total cobalt as a CA Targeted Constituent began with the Fourth Quarter 2011 semi-annual CA groundwater monitoring event and was incorporated in the reissuance of the current Permit effective August 16, 2014.

#### HWMU-16:

HWMU-16 is a closed hazardous waste landfill located within the Horseshoe Area of the New River. HWMU-16 consisted of a trench measuring approximately 60 feet width, 400 feet length and 10 to 14 feet depth. The trench was constructed without a liner or leachate collection system. The trench had an estimated capacity of 6,000 cubic yards, and was filled to approximately 80% of its capacity. HWMU-16 was operated from 1980 to 1988 and was certified as closed in 1993 with all waste materials remaining in place and a final cover system has been provided. No waste has been managed in HWMU-16 since it was closed.

Hazardous wastes and other waste known to have been disposed of within HWMU-16 included 3,898 tons of ash from the burning of waste explosives and explosives-contaminated material, 545 tons of wastewater treatment sludges, 6 tons of asbestos, and various laboratory chemicals. Additionally, the following wastes were disposed of in HWMU-16 in unknown quantities: ash from waste propellant incinerator, residue from waste propellant burning, residue from explosive contaminated waste burning, Sulfur Acid Regeneration area fume burner ash, and various other sludges. HWMU-16 is currently under Groundwater Compliance Monitoring. The groundwater has been monitored since 1981 as part of the requirements of RCRA interim status. Current semi-annual sampling constituents include lead and other metals, explosive-related compounds, and volatile organic compounds.

#### **Purpose of the Permitting Process**

One of the purposes of the permitting process is to afford the DEQ, interested citizens, and other governmental agencies the opportunity to evaluate the proposed draft permit and the ability of the Permittee to comply with the applicable hazardous waste management requirements of the Permit and the VHWMR. The draft permit sets forth in one document all the requirements which the Permittee must comply with during the ten (10) year duration of the permit. These requirements include, but are not limited to, the regulations as set forth in the VHWMR.

#### **Draft Permit**

The DEQ has reviewed the permit application, and has found the Part A and B permit application

submittals to be technically adequate and complete to comply with the requirements of the VHWMR. Therefore, pursuant to the VHWMR, under 9 VAC 20-60-124, and as adopted by reference, 40 CFR § 124.6, the DEQ has prepared a draft permit for renewal.

The draft permit is divided into seven (7) main parts, Modules I, II, III, IV, V, VI, and VII, and a list of twenty (20) permit attachments. Attachments II.A through VI.C are incorporated into the permit. The seven (7) main parts of the permit are outlined below. The column entitled "Regulation," identifies the regulatory authority for the permit conditions in Parts I through VII of the Permit. The VHWMR, 9 VAC 20-60, has incorporated by reference the federal regulations under the Resource Conservation and Recovery Act (RCRA). Applicable citations of the RCRA regulations are provided below.

### **Permit Organization**

<b><u>Module</u></b>	<b><u>Topic</u></b>	<b><u>Regulation</u></b>	<b><u>Description</u></b>
Module I	Standard Conditions	40 CFR § 270.30 and 40 CFR § 270.32	Contains conditions which generally apply to all hazardous waste management facilities
Module II	General Facility Conditions	40 CFR § 264.13-16, 40 CFR § 264.31, 40 CFR § 264.73, 40 CFR § 264.75, and 40 CFR § 270.14	Outlines the general facility conditions
Module III	Post-Closure Care	40 CFR §264.117 – 120 and 40 CFR §270.28	Outlines the post-closure care requirements for HWMU-5 and HWMU-16
Module IV	Groundwater Detection Monitoring	40 CFR §264.98	Outlines the groundwater detection monitoring requirements
Module V	Groundwater Compliance Monitoring	40 CFR §264.99	Outlines the groundwater compliance monitoring requirements
Module VI	Groundwater Corrective Action and Monitoring Program for HWMU-5	40 CFR §264.100 and 40 CFR §264.101	Outlines the groundwater corrective action program requirements
Module VII	Site-Wide Corrective Action	40 CFR § 264.101 and 40 CFR § 270.14	Outlines the corrective action procedures required by 40 CFR § 264.101

### **List of Permit Attachments**

The following twenty (20) permit attachments are incorporated into the proposed draft permit by reference. Upon approval of the draft permit, the attachments will be considered enforceable conditions of this permit.

Some of the attachment documents contain excerpts from the Permittee's hazardous waste permit application. Specific language excerpted from the permit application has been modified, as deemed necessary, so to be acceptable to the DEQ.

Attachment II.A	Facility Maps
Attachment II.B	Contingency Plan
Attachment II.C	Facility Contact Representatives
Attachment II.D	Description of Wastes
Attachment II.E	Security Provisions and Maintenance
Attachment II.F	Inspection and Maintenance Plan
Attachment II.G	Personnel and Training
Attachment III.A	Closure Notices and Post-Closure Plans
Attachment V.A	Hydrological and Geological Information
Attachment V.B	Groundwater Compliance Monitoring Program
Attachment V.C	Annual Groundwater Sampling Constituent List (Appendix IX, 40 CFR Part 264)
Attachment V.D	Groundwater Compliance Monitoring (Semiannual) Constituent Lists
Attachment V.E	Groundwater Initial Background Data
Attachment V.F	Groundwater Protection Standards (GPS)
Attachment V.G	Boring Logs and Well Construction Diagrams
Attachment V.H	Methodology for Groundwater Well Abandonment

Attachment V.I	Statistical Procedures
Attachment VI.A	Corrective Action Plan- TCE Historical Data for HWMU-5
Attachment VI.B	Groundwater Corrective Action Targeted Contaminants GPS And Semiannual Monitoring List For HWMU- 5
Attachment VI.C	Groundwater Corrective Action Annual Monitoring List

### **Financial Assurance**

Financial assurance is not required as the facility is owned by the United States Army, a federal government agency, and is exempt from the financial assurance requirements under 40 CFR § 264.140(c).

### **Public Notice of Proposed Permit Action**

The purpose of public notice of a proposed permit action is to provide the DEQ, interested citizens, other governmental agencies, etc., the opportunity to evaluate and comment upon the draft permit action proposed for the subject facility. Permits are drafted to help assure facility compliance with the final RCRA Permit and the applicable requirements of the Hazardous Waste Management Regulations (VHWMR), 9 VAC 20-60.

<b><u>Comment Period:</u></b>	Begins:	July 16, 2025
	Ends:	September 15, 2025

The public and the Permittee have sixty-one (61) days to review and comment on the draft permit action proposed for the facility.

All persons who believe any condition of a draft permit or proposed permit action is inappropriate, shall raise all reasonably ascertainable issues and submit all reasonably available arguments and factual grounds supporting their position by September 15, 2025. Comments should include sufficient supporting material, including any pertinent technical or legal references and citations believed appropriate.

All comments and supporting rationale for such comments must be provided in writing to:

Sarah Dyer, Hazardous Waste Permit Writer/ Inspector  
Department of Environmental Quality  
Office of Financial Responsibility and Waste Programs  
P.O. Box 1105  
Richmond, VA 23218

---

Phone: (804) 659-2823  
E-mail: [sarah.dyer@deq.virginia.gov](mailto:sarah.dyer@deq.virginia.gov)

The DEQ will also accept comments from the public by e-mail. All comments received must provide your name, mailing address, phone number, and also must be received before the end of the comment period by September 15, 2025.

### **Public Hearing**

An informational briefing will be held on Wednesday, August 20, 2025 from 6:00 pm to 7:00 pm and a public hearing will be held immediately after at 7:00 pm at the Radford Public Library (30 West Main Street, Radford, VA 24141). Copies of the proposed draft permit associated with the proposed permit reissuance and the existing Permit will be available for review at the informational briefing and hearing.

### **Public Information**

The public may review the Draft Permit, the application, and this fact sheet at the following locations:

DEQ Blue Ridge Regional Office  
Contact: Nikki Herschler or Rebecca Wright  
901 Russell Drive  
Salem, VA 24153  
Phone: (540) 562-6700  
\* Every work day by appointment

DEQ Office of Financial Responsibility and Waste Programs  
Contact: Sarah Dyer  
1111 East Main Street, Suite 1400  
Richmond, VA 23219  
Phone: (804) 659-2823  
\* Every work day by appointment

Radford Public Library  
30 W. Main Street, Radford, VA 24141  
Phone: (540) 731-3621  
\* During normal hours of operation

### **Procedures for Reaching a Final Permit Decision:**

When making a final decision regarding this proposed permit action, the DEQ will consider all written comments received during the 61-day public comment period, and oral and written

comments received during the public hearing, along with the requirements of the Virginia Hazardous Waste Management Regulations.

When the DEQ makes a final decision to either issue or deny the permit, final notice will be given to the applicant and each person who has submitted comments or requested notice of the final decision. The final notice will include a written response from the DEQ to each comment submitted and will indicate any changes in the draft permit action which may have been made in response to the comments. The proposed permit action will become effective 30 days after the final permit decision notice unless a change to the draft permit is requested pursuant to the VHWMR, 9 VAC 20-60-80, and the Virginia Administrative Process Act, § 2.2-4000, et seq., of the Code of Virginia and the Virginia Waste Management Board Public Participation Guidelines, 9 VAC 20-11. If no comments request a change in the draft permit, the decision shall become effective immediately upon issuance.