



U.S. ARMY

RADFORD ARMY AMMUNITION PLANT

**Commander's
Community Meeting
February 26, 2025
Facebook Live
Lt. Col. Adrien G. Humphreys
Commander, U.S. Army**





RADFORD ARMY AMMUNITION PLANT

Introductions

U.S. Army

Lt. Col. Adrien G. Humphreys

Commander

Radford Army Ammunition Plant

Robert Davie

Deputy to the Commander

Radford Army Ammunition Plant Army Staff

Barron Feit

Chief, Risk Management

Radford Army Ammunition Plant

Laura Dickerson

Environmental Protection Specialist

Radford Army Ammunition Plant Army Staff

Justine Barati/ Mark Kane/ Mike Chambers

Public Affairs

Joint Munitions Command

U.S. Army Corps of Engineers

Andrea Henry

Project Manager, USACE – Norfolk District

BAE Systems, Inc.

Laura Clifford

Senior Communications Manager

Nelson Hernandez

Environmental Manager

Guest Speakers:

Elizabeth Lohman, Office of Pollution Response & Emergency Preparedness, Virginia DEQ

Ashby Scott, Office of Financial Responsibility and Waste Programs, Virginia DEQ





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Agenda

- **Welcome, Introductions, Opening Comments**
- **Community Activities Update**
- **Energetic Waste Incinerator (EWI) progress**
- **Tote update, agency coordination**
- **VDEQ Reporting Process**
- **Recycling Progress**
- **Environmental Update**
- **BAE Systems workforce engagement**
- **Wrap Up, Questions**





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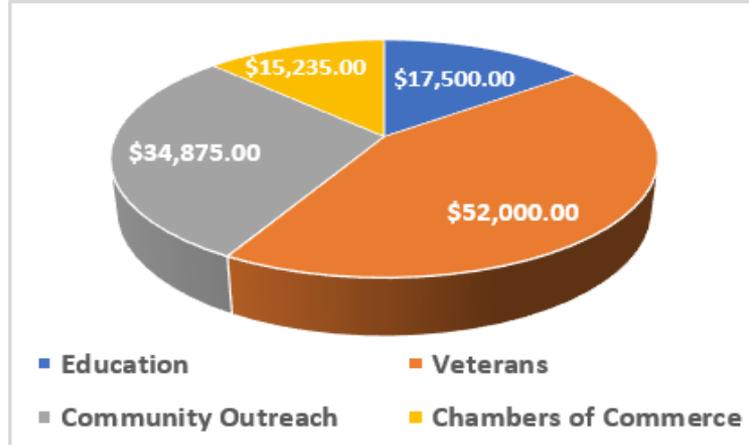
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Community Activities Recap

- **Mountain Valor Fest**
Primary Sponsor
- Roanoke Annual **Veteran's Day Parade**
- Engaging Radford **University & Virginia Tech ROTC**
- **Association of U.S. Army Blue Ridge Chapter Engagement**
- **Montgomery County Animal Shelter**
 - Employee voluntary donation drive & engagement
- **Feeding Southwest Virginia** food bank



2024 Community Investment





Radford Army Ammunition Plant

Energetic Waste Incinerator/Contaminated Waste Processor Complex

What is the EWI?

- The EWI/CWP will thermally treat energetic waste in an emission-controlled environment.

Why it's important:

- The EWI/CWP facility is an alternative technology to the open burning ground and provides a modern solution for safer waste removal with air pollution control devices.
- Construction of the new EWI/CWP facility will nearly eliminate the use of the open burning ground at RFAAP.
- Radford is ahead of DOD requirements and the community's involvement is a strong part of the project's success.





Radford Army Ammunition Plant

Energetic Waste Incinerator/Contaminated Waste Processor Complex



OVERVIEW

- This effort provides support under the facilities upgrade and modernization program and will ensure RFAAP continued compliance and ability to treat current waste streams.
- Contract Awarded by USACE Norfolk District to Parsons Government Services: \$145M





Tropical Storm Helene & Chemical Release Notifications

Elizabeth Lohman

Office of Spill Response & Emergency Preparedness

Virginia Department of Environmental Quality

Elizabeth.A.Lohman@deq.virginia.gov

Notification System



LEPC

VDEM and DEQ

The initial notification goes to VDEM's Situational Awareness Unit. The SAU sends a notification to the VDEM Regional Hazmat Officer (RHMO), DEQ Pollution Response (PREP) Coordinator, and VDH Office of Drinking Water

NRC

The initial notification goes to 17 federal agencies and VDEM's SAU.

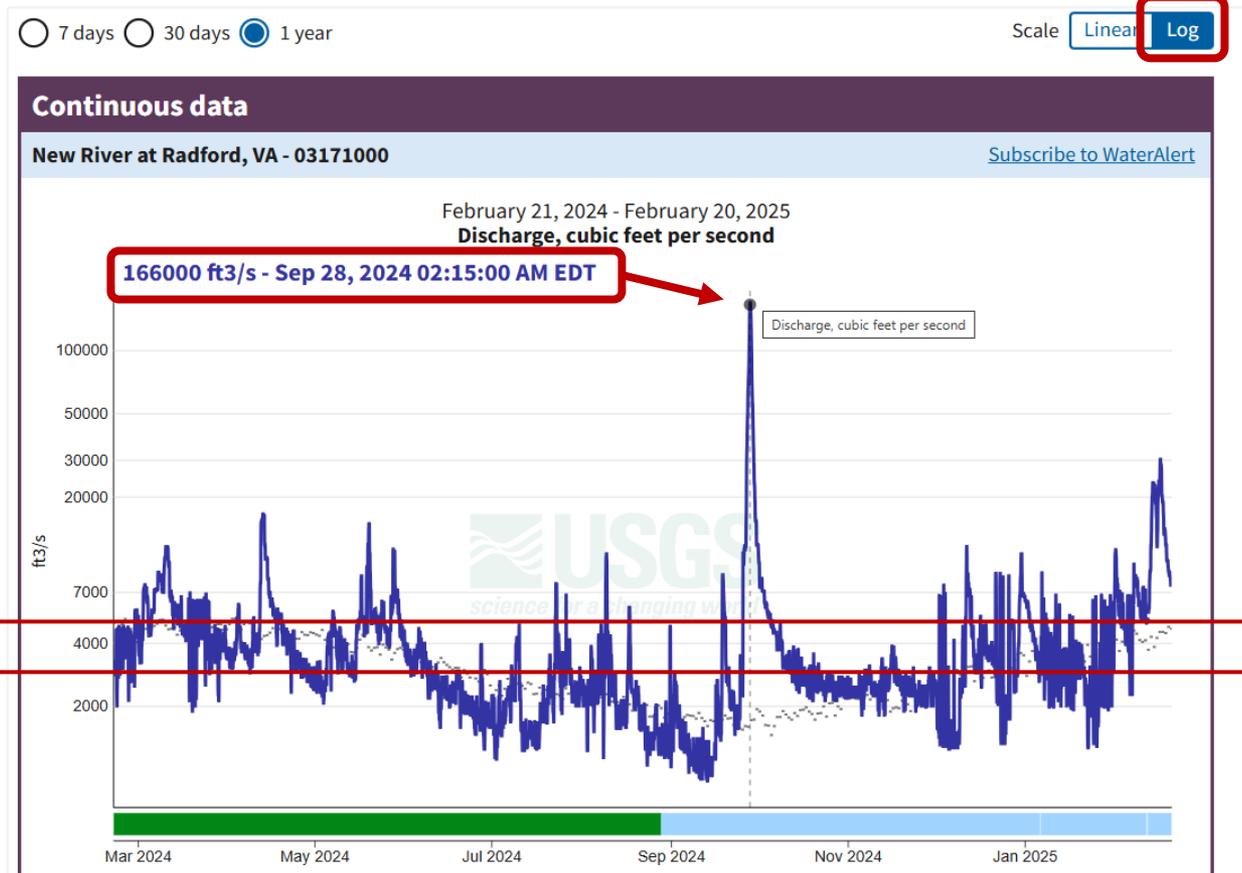
USGS Streamflow Data

During TS Helene, the New River saw historic flooding.

- The river flow rate was 166,000 ft³/s or 107,000 MGD.
- The river flows were moving more than 34 times the mean flow rate.

Mean flow: 4,800 ft³/s

25th Percentile: 2,840 ft³/s



Source: https://waterdata.usgs.gov/monitoring-location/03171000/?agency_cd=USGS#dataTypeId=continuous-00060-0&period=P365D&showMedian=true

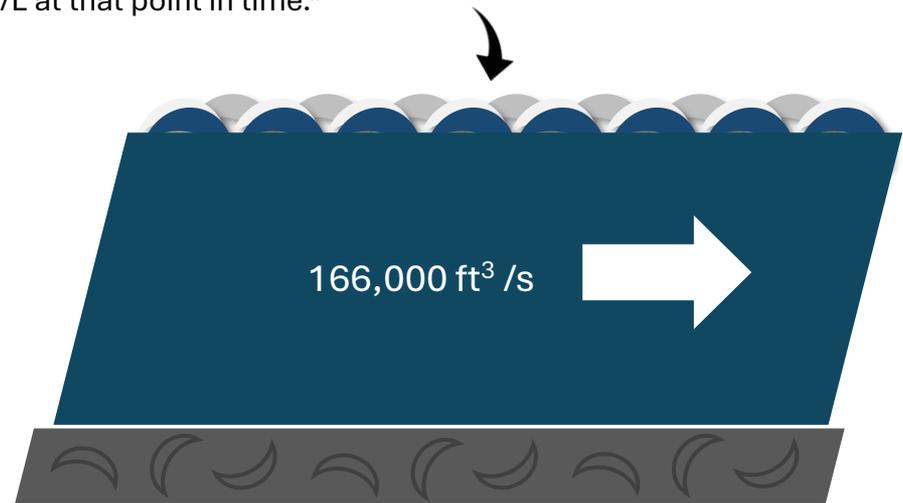
Risk evaluation

Worst case discharge of dibutyl phthalate (DBP):

- 13 totes
- Tote capacity: 275 gallons
- Total volume: 3,575 gallons



If the entire volume of DBP discharged to the river at once, the DBP flow would have represented $3.33E^{-06}$ % (or 0.000003%) of the river flow, and the highest possible DBP concentration would have been 35 ug/L at that point in time.*



During this historic flooding event, the river was moving at such a high flow rate that the chemical would have been immediately carried downstream and dispersed further due to additional runoff. There would be no opportunity for the chemical to settle out of the water column.

* Based on recovered totes and chemical, we know the entire volume was not discharged.

Helene Response

September 29 – January 24, 2025

Small Containers (<55 gallons)
3,405

Small Cylinders (<20 pounds)
1,596

Drums (55 gallons)
146

Large Cylinders (>20 pounds)
68

Large Containers (>55 gallons)
139

Propane Tanks (20 pounds)
133

Source: EPA and DEQ

RESPONSE PARTNERS

- Virginia Department of Emergency Management
- Virginia Department of Environmental Quality and State-Lead Contractor
- US Environmental Protection Agency and emergency response contractors

COUNTIES

Response and recovery efforts were concentrated in:

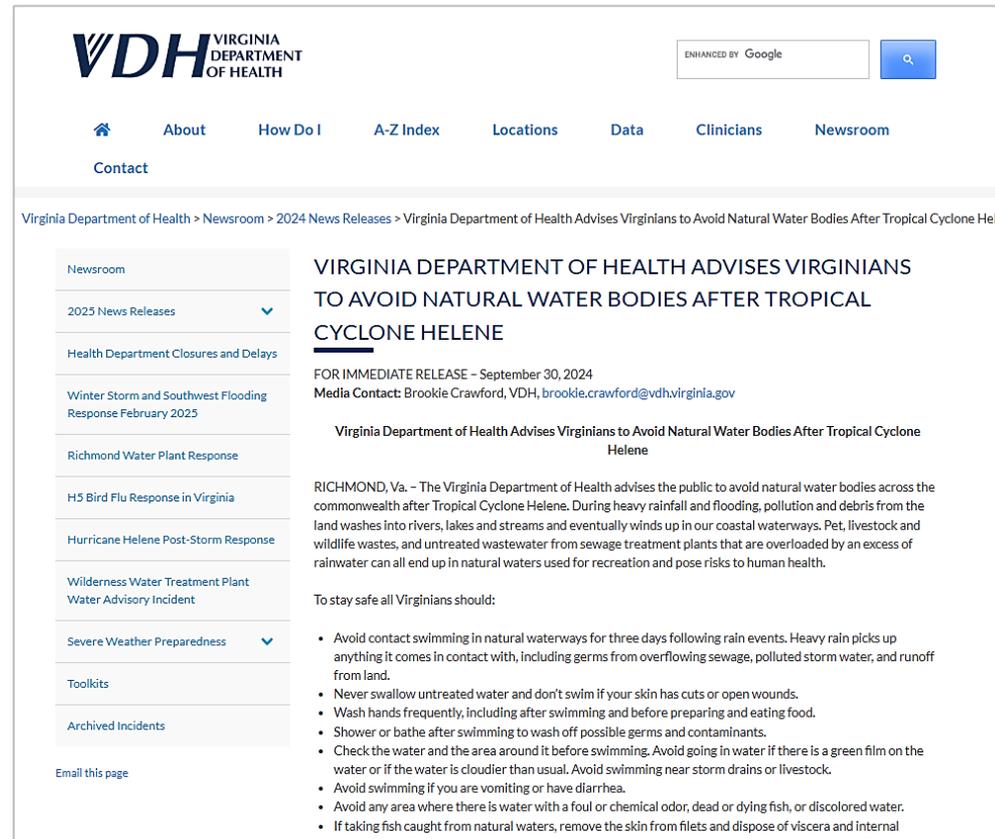
- Giles*
- Grayson*
- Montgomery*
- Pulaski*
- Washington
- Wythe*

*New River flows through these counties

Avoiding Flood Waters

Whenever possible, avoid contact with flood waters. Possible contaminants in floodwater include:

- Sewage and wastewater
- Animal waste
- Industrial and agricultural chemicals
- Chemicals
- Debris and sharp objects



The screenshot shows the Virginia Department of Health (VDH) website. The header includes the VDH logo, a search bar, and navigation links for Home, About, How Do I, A-Z Index, Locations, Data, Clinicians, and Newsroom. The main content area features a news release titled "VIRGINIA DEPARTMENT OF HEALTH ADVISES VIRGINIANS TO AVOID NATURAL WATER BODIES AFTER TROPICAL CYCLONE HELENE". The release is dated September 30, 2024, and includes a media contact: Brookie Crawford, VDH, at brookie.crawford@vdh.virginia.gov. The text of the release advises the public to avoid natural water bodies across the commonwealth after Tropical Cyclone Helene, due to heavy rainfall and flooding. It lists several safety instructions for Virginians, including avoiding contact swimming, never swallowing untreated water, washing hands frequently, and avoiding swimming if one is vomiting or has diarrhea.

VDH VIRGINIA DEPARTMENT OF HEALTH

ENHANCED BY Google

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Contact

Virginia Department of Health > Newsroom > 2024 News Releases > Virginia Department of Health Advises Virginians to Avoid Natural Water Bodies After Tropical Cyclone Helene

Newsroom

2025 News Releases

Health Department Closures and Delays

Winter Storm and Southwest Flooding Response February 2025

Richmond Water Plant Response

H5 Bird Flu Response in Virginia

Hurricane Helene Post-Storm Response

Wilderness Water Treatment Plant Water Advisory Incident

Severe Weather Preparedness

Toolkits

Archived Incidents

Email this page

VIRGINIA DEPARTMENT OF HEALTH ADVISES VIRGINIANS TO AVOID NATURAL WATER BODIES AFTER TROPICAL CYCLONE HELENE

FOR IMMEDIATE RELEASE – September 30, 2024
Media Contact: Brookie Crawford, VDH, brookie.crawford@vdh.virginia.gov

Virginia Department of Health Advises Virginians to Avoid Natural Water Bodies After Tropical Cyclone Helene

RICHMOND, Va. – The Virginia Department of Health advises the public to avoid natural water bodies across the commonwealth after Tropical Cyclone Helene. During heavy rainfall and flooding, pollution and debris from the land washes into rivers, lakes and streams and eventually winds up in our coastal waterways. Pet, livestock and wildlife wastes, and untreated wastewater from sewage treatment plants that are overloaded by an excess of rainwater can all end up in natural waters used for recreation and pose risks to human health.

To stay safe all Virginians should:

- Avoid contact swimming in natural waterways for three days following rain events. Heavy rain picks up anything it comes in contact with, including germs from overflowing sewage, polluted storm water, and runoff from land.
- Never swallow untreated water and don't swim if your skin has cuts or open wounds.
- Wash hands frequently, including after swimming and before preparing and eating food.
- Shower or bathe after swimming to wash off possible germs and contaminants.
- Check the water and the area around it before swimming. Avoid going in water if there is a green film on the water or if the water is cloudier than usual. Avoid swimming near storm drains or livestock.
- Avoid swimming if you are vomiting or have diarrhea.
- Avoid any area where there is water with a foul or chemical odor, dead or dying fish, or discolored water.
- If taking fish caught from natural waters, remove the skin from filets and dispose of viscera and internal organs.



DBP Tote Recovery at RFAAP

- **Dibutyl phthalate (DBP) Intermediate Bulk Containers**
 - RFAAP experienced historic, record flood impacts from Hurricane Helene on Friday, September 27, 2024
 - 9 totes identified and recovered; 4 totes outstanding
 - Cumulative volume of release 1,575 gallons
- **Working with our partners : Search Continues**
 - ✓ Continue working with local organization searching along the New River; using aerial assets, boats, and employees on foot to search along a 70-mile radius between Radford and the Blue Stone Dam
 - ✓ Remain in lockstep with U.S. Army
 - ✓ Local first responders
 - ✓ Frequent update calls with VA DEQ and timely updates on findings and potential releases
- ✓ **Continue to work with the Army to modernize RFAAP to reduce future storm impacts.**





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BAE Systems' Tote Search Efforts



Most expansive search effort of any company along the New River

By the Numbers		As of 02/25/2025	
4 months of continuous search	67 miles of river by boat	9 Recovered	
13 sq miles by foot	67 miles of river by helicopter		
60 miles of river by drone	22 local/state first responders and agencies contacted		
			4 At-large

Elements of Search Efforts

- Ongoing, with evaluation of efficient search methods
- Foot and vehicle searches of focus areas
- Drones
- Helicopter searches by government and private entities
- Boat searches by local government and private entities
- Continued coordination with Montgomery/Pulaski/Giles counties' emergency services leadership and first responders
- Public messaging

Challenges

- **Debris piles 10-12 feet high**
- Extensive amount of material that is not BAE Systems' throughout area, including drums and chemical containers.





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BAE Systems' Tote Search Efforts

- ✓ **BAE Systems seeks continued support from the community.**
- ✓ **If totes are found in areas downstream of RFAAP, please contact the non-emergency line of your respective county's sheriff's department, providing contact information.**
- ✓ **BAE Systems personnel will reach out to schedule an in-person visual assessment of the tote to determine if it was released from RFAAP.**
- ✓ **If the tote is confirmed to be property of BAE Systems, we will replace it with a new tote of the same volume, if desired.**

TOTE CHARACTERISTICS

White in color; translucent

Metal cage and pallet

Black, green, or red lid

300-gallon volume (4' x 3.5' x 4')

Labels (Chemical – Dibutyl Phthalate;
Manufacturer – Island Pyrochemicals)

Small, blue asset tags on lid and/or
valve





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Environmental Performance Post-Hurricane Helene Flooding

- ✓ **Extensive controls and safety measures**, including stringent permitting and reporting requirements, **are in place to ensure the health and safety of the surrounding communities and to protect the environment.**

- Wastewater treatment system exceedances in Q4 caused by the late-September flood. BAE Systems has begun a treatment solution. Team continues frequent evaluation and monitoring. The exceedances were reported to Virginia DEQ, as required by RFAAP's wastewater discharge permit.
Public health was not jeopardized, and there were no observed impacts to the environment.

- Two wastewater system samples inadvertently missed in Q4. Ongoing evaluation to mitigate future occurrences. Each instance was reported to Virginia DEQ, as required by RFAAP's wastewater discharge permit. **Public health was not jeopardized, and there were no observed impacts to the environment.**

- Due to late collected samples of Radford AAP on-site drinking water, three (3) administrative notices of alleged violation (NOV) were issued by the Virginia Department of Health. Drinking water is solely produced for consumption for those on-site.
Sampling of noted parameters was completed in January, showing no compliance/quality concerns of on-site drinking water.

- ✓ **Acidic Wastewater Process Improvements:**
 - ✓ More frequent inspections to ensure process controls
 - ✓ Continued additional testing focused on multiple contributors
 - ✓ Evaluations of discharge system for improvement opportunities
 - ✓ Evaluations of pretreatment options for mechanical filtration of solids





Request for Acid Recycling Variance

- Virginia Department of Environmental Quality approved the RFAAP request for variance to recycle used acid from other sources to use in production process on site.
- **In RFAAP's effort to boost sustainability and efficiency**, variance allows RFAAP to serve as a secondary source to recycle acid and use in production processes.
 - Use of this acid reduces amount of new acid RFAAP purchases by supplementing with recycling offsite acids from external defense affiliates.
 - Acid will only be transported to Radford when production levels allow.
- RFAAP already receives shipment, recycles, and reuses acid produced on site. Variance allows for up to 2.1 million gallons of nitric acid to be reused by the facility, shifting from all new acid to new and recycled acid transported to site.
- Variance conditions require testing of material at off-site facilities before RFAAP will accept
- **To ensure safety**: there are significant, strict controls for transport, storage, and handling on site.
 - RFAAP will continue safety measures, including stringent permitting and reporting requirements.
 - These requirements ensure the health and safety of the surrounding communities and protect the environment



Final HSM Variance for RAAP/ RCRA Permit Information

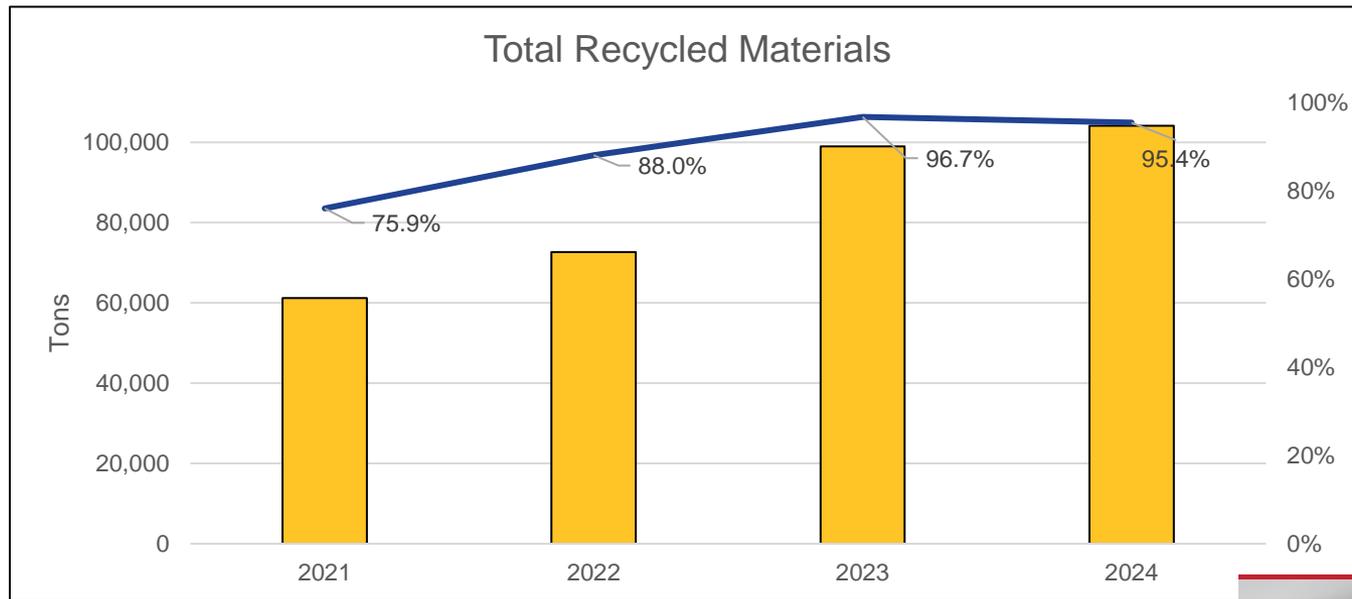
- Draft HSM variance public notice issued for 60 days (30 days is required)
- Informational briefing and public hearing held October 30, 2024
- Final HSM variance issued January 13, 2025, and public notice issued January 16, 2025
- Variance issued for 10-year term, expires on January 13, 2035 and requires renewal application
- RAAP Post-Closure Care (PCC) permit application currently being processed
- PCC renewal anticipated to be public noticed in summer 2025
- RAAP Corrective Action (CA) renewal permit application call-in letter to be sent May 13, 2025
- CA renewal application will be submitted within 6 month of call-in letter



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Radford AAP Environmental Performance

- ✓ Team has brought ideas together to **increase** recycled materials. Recent successes include approval of the HSM variance request, allowing for recycling/reuse of spent acid generated at two different facilities in FL and TN.
- ✓ The recycling rate has shown a notable increase, including a recent high of **96.7%** in 2023 and exhibiting steady performance in 2024, with a rate of **95.4%**.
- ✓ Recycling material = **reduction of carbon footprint** at RFAAP





Celebrating our People

- **BAE Systems remains committed to celebrating our dedicated workforce.**
 - Employee anniversary dinners
 - Years of service milestones: 5, 10, 15, 20, 40 years of service at Radford Army Ammunition Plant
 - Veteran's Day gift for veteran employees
 - Continuing to serve our nation at RFAAP by producing mission-critical product for our warfighters
 - With Thanks
 - Thanksgiving Turkey/ham vouchers for employees to express our gratitude for their continued dedication to our mission
 - Hurricane Helene Recovery Reception
 - Gathering in downtown Radford to celebrate the workforce's collective 16,000 hours of recovery work to safely bring our full team back to work
 - End of Year Celebration Dinners
 - Highlighting the year's work, giving thanks for all employees' contributions to team goals and successes





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Questions





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Information is Available

Our commitment to responding to your questions doesn't end tonight. Resources exist for you to research information on your own or ask us questions.

Resources

Facebook: Like us at [Radford Army Ammunition Plant](#)

Homepage: www.jmc.army.mil/Radford/RadfordDefault.aspx

Email: USARMY.RIA.JMC.MBX.AMSJM-PA@ARMY.MIL

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