



Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

www.deq.virginia.gov

Travis A. Voyles
Secretary of Natural and Historic Resources

Michael S. Rolband, PE, PWD, PWS Emeritus
Director

January 13, 2025

VIA ELECTRONIC MAIL

Ms. Melissa Lincoln
Environmental Manager
BAE Systems, Ordnance Systems, Inc.
Radford Army Ammunition Plant
4050 Pepper's Ferry Road
Radford, Virginia 24141

**Re: Variance to the Virginia Hazardous Waste Management Regulations - Approval
Radford Army Ammunition Plant
Radford, VA
EPA ID No. VA1210020730**

Ms. Lincoln:

Please accept this as a response to your variance petition submitted to the department on date August 14, 2024. The public participation period for tentative approval of the variance ended on November 25, 2024. No comments requiring changes to the variance were received. The applicant and all persons who commented during the public participation period have been sent a response to their comments.

The variance as approved is to 9VAC20-60-1390.B.4. The variance approves the Radford Army Ammunition Plant (RFAAP) facility to accept and recycle a hazardous secondary material that will be transferred for reclamation under 9VAC20-1390.B.4 and 40 CFR 261.4(a)(24). The approval is subject to the following conditions:

1. In the event of a change in circumstances that affect how a hazardous secondary material meets the relevant criteria contained in 9VAC20-60-1390 upon which a variance determination has been based, the RFAAP facility must send a description of the change in circumstances to the director. The Director may issue a determination that the hazardous secondary material continues to meet the relevant criteria of the variance or may require the RFAAP facility to reapply for the variance.
2. This variance shall be effective for a fixed term not to exceed 10 years and will expire on January 13, 2035. No later than six months prior to the end of this term, the RFAAP facility must reapply for a variance. If the RFAAP facility reapplies for a variance within six months,

Ms. Melissa Lincoln
Environmental Manager
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the RFAAP facility may continue to operate under an expired variance until receiving a decision on the reapplication from the Director.

3. The RFAAP facility receiving this variance must provide notification as required by 40 CFR 260.42 as incorporated by reference.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date of service of this decision to initiate an appeal of this decision, by filing notice with:

Michael S. Rolband, Director
Department of Environmental Quality
P.O. Box 1105
Richmond, Virginia 23218

The Virginia Department of Environmental Quality appreciates the courtesy and professionalism shown during the permitting process. If you have any questions regarding this matter, please contact Mr. Ashby Scott, of my staff by phone at (804) 350-5623 or by email at Ashby.Scott@deq.virginia.gov.

Respectfully,



Kathryn Perszyk
Director, Land Protection and Revitalization Division

Attachments:

Enclosure 1: Final Variance for Radford Army Ammunition Plant, Radford, Virginia Facility

Enclosure 2: Response to Comments Document

cc: Jacqueline Morrison, EPA Region III (3LC50)
Nichole Herschler, Rebecca Wright, DEQ, BRRO
Brent Williams, Ashby Scott, DEQ, CO
CO File

Enclosure 1
Final Variance for Radford Army
Ammunition Plant Facility
EPA ID Number VA1210020730
January 13, 2025



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Travis A. Voyles
Secretary of Natural and Historic Resources

Michael S. Rolband, PE, PWD, PWS Emeritus
Director

**VARIANCE TO THE VIRGINIA HAZARDOUS WASTE MANAGEMENT REGULATIONS
Radford Army Ammunition Plant and BAE Systems, Inc.
4050 Peppers Ferry Road
Radford, VA 24143
EPA I.D. #: VA1210020730**

In response to a variance petition submitted on August 21, 2024, and amended on November 13, 2024, by the United States Army and BAE Systems, Inc. for the Radford Army Ammunition Plant (RFAAP) facility, the requested variance to the Virginia Hazardous Waste Management Regulations (VHWMR), per Title 9 of the Virginia Administrative Code (9 VAC 20-60-1390.B.4) is hereby granted. This variance request will allow the RFAAP facility to accept and recycle hazardous secondary material that will be transferred to the RFAAP facility from two facilities, one in Tennessee and one in Florida, for reclamation under Title 40 of the Code of Federal Regulations (40 CFR 261.4(a)(24)) as it appears in EPA's Definition of Solid Waste rule (80 FR 1694, January 13, 2015). This variance will be limited by the following conditions:

1. The RFAAP facility shall operate in compliance with the VHWMR, Resource Conservation and Recovery Act (RCRA) permits issued to the RFAAP facility, and all applicable local, state, and federal laws, regulations, ordinances, and zoning.
2. The Virginia Department of Environmental Quality (DEQ) decision was based on the criteria set forth in 9 VAC20-60-1390.B.4.
 - a. The RFAAP facility has demonstrated that the reclamation process for the hazardous secondary materials is legitimate pursuant to 40 CFR 260.43;
 - i. The hazardous secondary material, spent acid, will be legitimately recycled as it provides a useful contribution to the existing recycling process and production at RFAAP. Nitric acid and sulfuric acid are valuable ingredients, used by the recycler (RFAAP) for use in commercial production as an ingredient in propellant manufacturing. The spent acid is a valuable source that can be continually recycled into Strong Nitric Acid (SNA) and Strong Sulfuric Acid (SSA). It is beneficial to derive SNA and SSA from recycling, rather than to continually purchase as raw materials and dispose of the material once used.

The Hazardous Secondary Material (HSM), spent acid, shall be transferred, stored, and managed in a safe and appropriate manner, as a valuable commodity, and in a similar manner as the management of raw acids at RFAAP. There are numerous engineering

and administrative controls for acid storage (raw or spent) in the acid tank farm which ensures proper storage and containment.

- b. The RFAAP facility is a federal facility which is exempt from the financial assurance condition in 40 CFR 261.4(a)(24)(vi)(F), as stated in 40 CFR 261.140(b);
- c. The RFAAP facility must not be subject to a formal enforcement action in the previous three years and not be classified as a significant noncomplier under RCRA Subtitle C, or must provide credible evidence that the facility will manage the hazardous secondary materials properly. Credible evidence may include a demonstration that the facility has taken remedial steps to address the violations and prevent future violations, or that the violations are not relevant to the proper management of the hazardous secondary materials;
- d. The RFAAP facility must have the equipment and trained personnel needed to safely manage the hazardous secondary material and must meet emergency preparedness and response requirements under 40 CFR Part 261 Subpart M;
 - i. The RFAAP facility has existing equipment and trained personnel to safely manage the hazardous secondary material, spent acid. RFAAP has been recycling and managing the same spent acid material on-site in a continuous recycling process. RFAAP maintains a Hazardous Waste Contingency Plan, updated regularly and shared with local emergency responders. Additionally, there is an onsite Fire Department, trained and supplied, to respond to major emergencies at RFAAP. Mutual aid agreements exist with multiple local emergency agencies. An intercom emergency alarm system is utilized at RFAAP and tested at regular intervals, in the event of any major emergency.
- e. If residuals are generated from the reclamation of the excluded hazardous secondary materials, the RFAAP facility must have the permits required (if any) to manage the residuals, have a contract with an appropriately permitted facility to dispose of the residuals, or present credible evidence that the residuals will be managed in a manner that is protective of human health and the environment.
 - i. There are wastewater and air emission residuals produced by this recycling activity, which are addressed by the following:
 - The excess wastewater from Nitric Acid Concentrator/Sulfuric Acid Concentrator (NAC/SAC) is sent to the acidic wastewater system, where it is neutralized and ultimately discharged into the New River pursuant to its Virginia Pollutant Discharge Elimination System (VPDES) discharge permit (Permit No. VA0000248), under which RFAAP maintains multiple wastewater treatment sewer lines and stormwater outfalls.
 - Air emissions from the NAC/SAC and acid storage area are covered under the facility's air permit. Air emission controls are in place to reduce and minimize any environmental impact from facility operations.

- f. The RFAAP facility must address the potential for risk to proximate populations from unpermitted releases of the hazardous secondary material to the environment (i.e., releases that are not covered by a permit, such as a permit to discharge to water or air), which may include potential releases through surface transport by precipitation runoff, releases to soil and groundwater, wind-blown dust, fugitive air emissions, and catastrophic unit failures, and must include consideration of potential cumulative risks from other nearby potential stressors.

- i. RFAAP is a large facility with several process safety management and risk management plan covered processes. These programs require both management of change requirements and in-depth evaluations of risks associated with the handling and possible release scenarios associated with strong acid releases. The risks of acid tank farm storage and NAC/SAC operations are fully evaluated, explored, and updated by Process Hazard Analysis (PHA) every five years or when major process changes occur. The PHA process and the resulting recommendations help the organization identify a range of risks, evaluate the consequences of hazardous chemical releases for the facility and surrounding public, and mitigate those hazards and risks.

The risk matrix that is utilized during a PHA evaluation, takes into account frequency and magnitude of health, safety, and environmental risks for every node of a system. For the environmental aspect, this includes evaluating releases no matter how small or large, including if releases leave the site boundaries.

Additionally, there are numerous engineering and administrative safeguards including relief systems/alarms/controls, containment dikes, operating procedures for emergency shutdown and release response.

The RFAAP facility has an internal fire department, fully capable and trained in hazardous material response. RFAAP also maintains support agreements with Montgomery County, Pulaski County and the City of Radford fire departments should additional assistance be required. Onsite responders include trained hazardous materials technicians. Additional support can be mobilized through the state if additional hazardous material teams are required.

- g. The RFAAP facility has submitted a notification, using EPA Form 8700-12, claiming the exclusion under 9VAC20-60-1390.B.4 as required under 9VAC20-60-1420.B.5 and will continue to submit a notification by March 1st of each even numbered calendar after the issuance of this variance.
- 3. Before acceptance of any HSM under this variance the generating facilities in Tennessee and Florida will provide the RFAAP facility with analytical results for each lot of HSM proposed to be transferred. RFAAP will verify the HSM meets the specifications for use in the NAC/SAC unit before scheduling transport of the HSM. If, after evaluation, the material does not meet the specifications for use in the NAC/SAC unit for recycling, the HSM will

not be accepted by RFAAP. Testing results shall be maintained on-site at the RFAAP facility for review by DEQ for three years.

4. Only certified hazardous waste transporter companies shall be used to transfer the HSM from the generating facilities in Tennessee and Florida to the RFAAP facility. HSM received by the RFAAP facility shall be loaded into the tank farm, as soon as practical, and will not be speculatively accumulated on-site. Any records of HSM shipments to the RFAAP facility shall be maintained on-site for three years for review by DEQ.
5. The RFAAP facility shall provide the DEQ, upon request and within a reasonable time frame, copies of all information relating to this variance within its respective possession or control, or within the possession or control of its respective contractors or agents including, but not limited to, documents and information related to the issuance, use and implementation of this variance.

In accordance with §10.1-1458 of the Code of Virginia (1950, as amended), the RFAAP facility may claim any information this variance requires, or is otherwise submitted to the DEQ as a trade secret. If no such claim of confidentiality accompanies the documents and other information when submitted to the DEQ, the documents and other information may be made available to the public without notice to the Applicant.

6. In accordance with 9VAC20-60-1420.3., in the event of a change in circumstances that affect how a hazardous secondary material meets the relevant criteria contained in 9VAC20-60-1390 upon which a variance has been based, the RFAAP must send a description of the change in circumstances to the DEQ. The DEQ may issue a determination that the hazardous secondary material continues to meet the relevant criteria of the variance or may require the RFAAP facility to reapply for the variance.
7. In accordance with 9VAC20-60-1420.4, this variance shall be effective for a fixed term not to exceed 10 years. No later than six months prior to the end of this term, the RFAAP facility must reapply for a variance. If the RFAAP facility reapplies for a variance within six months, the facility may continue to operate under an expired variance until receiving a decision on their reapplication from the DEQ.
8. This variance may be terminated upon a finding by the DEQ that the applicant has failed to comply with any variance requirements.

APPROVED: _____

Kathryn Perszyk

Director, Land Protection & Revitalization Division

DATE: January 13, 2025

Enclosure 2
Response to Comments
Radford Army Ammunition Plant Facility
EPA ID Number VA1210020730
January 13, 2025

Comment 1 –Reference October 30, 2024 verbal comment by Adam Hamze at Public Hearing held at the Radford Public Library, Radford, Virginia, Page 8, Lines 1-22: My name is Adam Hamze, I am a resident of the city of Radford, and I attend Radford University as well. I'd just like to, first, thank you guys for being here and hearing our concerns. I think the main issue that we have in the community and on campus, that I see, is a lack of education and awareness of what's going on. I can assure you that none of my classmates know that this meeting was being held today, nor did they know about the variance that was being proposed. I do think it is the DEQ's responsibility to appropriately invite members of the community and notify them of variances that are happening and encourage them to come speak, and I think that the DEQ has failed at doing this. And, you know, we're a community that has been exploited for years, and regulatory agencies are put into place to stop exploitation, and I think if it's truly, you know, your responsibility to do this and it's in your best interest to put, you know, the community first. Thank you.

Response: The DEQ employed an enhanced public participation process for the variance request in anticipation of the public interest around the Radford Army Ammunition Plant (RFAAP) facility. The public participation procedures for the variance request are found Title 9 of the Virginia Administrative Code (9VAC) 20-60-1420.B.2, which only require a 30-day public comment period. DEQ proactively scheduled a 60-day public comment period with an informational briefing and public hearing halfway through the comment period to allow any interested parties ample time to formulate any questions and/or comment and allow for further comments to be received. The facility mailing list was notified at the start of the comment period as well as the variance request documents being published on the DEQ's public notice webpage and notice of the public hearing published on Virginia's Regulatory Town Hall.

Comment 2 – Reference October 30, 2024 verbal comment by Megan Peterson at Public Hearing held at the Radford Public Library, Radford, Virginia, Pages 8-9, Lines 25-19: Hi, my name is Megan Peterson, and my comment is that due to the impact of Hurricane Helene, which occurred in early October 2024, after this process already started, my recommendation is that this variance permits process should be restarted after the impacts to the facility from the historic flooding have been assessed and are publicly available. In which case, any of that information is pertinent to that process, even if it isn't, we won't know until that information is available. And I also would like to say that I personally object to the entire Radford Army Ammunition Plant's goal of producing 155 mm howitzer round charges due to, or because they have been, I believe sold to the government of Israel, who is currently committing a genocide against Palestinians and violating international law.

Response: DEQ has been in contact with the RFAAP facility regarding the impacts of the flooding from Hurricane Helene. While the flooding did suspend the production operations at the facility until the recovery operations were concluded there were no impacts to the Nitric Acid Concentration/Sulfuric Acid Concentrator (NAC/SAC) unit or the associated tank farm, which are the primary units associated with this variance request. Additionally, all HSM received by the RFAAP facility will be managed and stored in the same manner as any existing spent acid or virgin acid received on-site, which requires the same safety procedures to be followed. DEQ did not receive any comments during the comment period which would prompt the restarting of the public comment period.

Comment 3 – Reference October 30, 2024 verbal comment by Alyssa Carpenter at Public Hearing held at the Radford Public Library, Radford, Virginia, Pages 10-12, Lines 1-25:

Hi, my name is Alyssa Carpenter, and I am a resident of Blacksburg, Virginia. I've been a longtime citizen of this community, and I care very deeply about our health and safety as well as the health and safety of the children that live here. These children don't have a choice of where they go to school, where they live, and where they grow up, and, unfortunately, they grow up right outside of a facility that is practicing open burning and other processes of harmful toxic chemicals that are being released into the environment. We are a community of hard-working, valuable, caring people who just want to make sure that our community is safe. We are really tired of being sacrificed in the name of public defense when we are in need of protection from our own facility that is in our community. Many of these chemicals have no safe level of exposure and there are no risks that needs to show us how all of these hazardous processes function together to create a burden onto the community. Each time we go through one of these processes it's piecemeals, you know, bit by bit by bit and that creates a difficult ability for us to understand what the entire burden is that we are experiencing. It's disappointing that when we ask about the public's ability to access any evaluation of the risks to our nearby communities from RFAAP managing the additional asset, the DEQ shared there is nothing that would be made accessible for the public to view. It's really difficult for us to be a part of this public process and understand what is going on when, as many people mentioned in the Q and A session, we don't have any access to the documents to be able learn about it to make a technical comment. So, we don't, we feel like we don't stand a fighting chance to understand but also to protect our community and make sure that we are safe amidst the ongoing processes at this facility. Considering that there was a recent formal enforcement action from the EPA Region 3 against RFAAP for failures to follow legal requirements concerning the processes involving nitric acid and sulfuric acid. It's exhausting to watch this facility continue to be permitted for these hazardous processes after violating and violating and violating the permits that they received. We would really love to see some stronger enforcement happen when they are constantly violating these permits and spewing excessive amounts of chemicals into our community rather than just a small fine that they are already budgeting into their operating costs. They should be taking that money and using it to invest in safer processes. So not only our community members grow up and experience their futures without experiencing debilitating illnesses, but also so that the people who work there don't have to have their lives shortened by these debilitating illnesses that they are all receiving after having worked near these toxic chemicals. We are being led to believe that we can participate in these processes, but we aren't really given any information to do so and which makes us just feel like we're are being placated when we come here and show up and try to engage because there doesn't seem to be a real opportunity for us to advocate for our health and safety. And so, I would like to say that I also would like to be in the queue to deny this variance request as well. Thank you.

Response: The operation of the NAC/SAC unit and associated tank farm are covered under the RFAAP facility's Clean Air Act and Virginia Pollution Discharge Elimination System (VPDES) permits. As the use of the spent acid material would be a substitution of material made for virgin acid there is no anticipated increase in air emissions or water discharges which would not be covered under the already existing permit limits.

Additionally, in the development of the variance request DEQ worked with the RFAAP facility to provide as much information as possible to the public to show the satisfaction of the variance requirements in 9VAC20-60-1390, without compromising the operational security of the RFAAP facility and remain in compliance with the requirements of the International Traffic in Arms Regulations (ITAR), promulgated in Title 22 of the Code of Federal Regulations, Parts 120 through 130. Any specific plans mentioned in the variance request which were not made publicly available as part of the request submission have been verified on-site at the RFAAP facility by DEQ staff and review of this documentation to ensure compliance with the variance requirements is established by Conditions 2.f and 5. Information on the RFAAP facility is also available on the DEQ website at <https://www.deq.virginia.gov/topics-of-interest/radford-army-ammunition-plant>, which is updated to reflect the current hazardous waste permits and any additional information of interest to the community.

Comment 4 – Reference October 30, 2024 verbal comment by James Kern at Public Hearing held at the Radford Public Library, Radford, Virginia, Page 13, Lines 3-11: Hi, my name is James Kern and I'm a citizen of Radford, Virginia and my experience is with water quality and another is impaired for PCBs and has a TMDL developed on it, so I'm concerned about byproducts from this waste assets made right in and whether it's being tested for those PCBs and whether those could end up in the river where we are already dumping too many PCBs. That's it.

Response: The spent acid materials covered under the variance are not anticipated to contain PCBs at any levels. However, as described in Condition 3 of the variance, the Hazardous Secondary Material (HSM) will be tested by the generating facility and RFAAP will evaluate the analytical results before acceptance and scheduling the shipment. If unexpected contaminants are found in the analytical results the generating facility will instead ship the material off-site to an appropriate RCRA permitted Treatment, Storage or Disposal (TSD) facility or another facility which can process the material as HSM.

Comment 5 – Reference October 30, 2024 verbal comment by Joshua Vana at Public Hearing held at the Radford Public Library, Radford, Virginia, Pages 13-15, Lines 24-23: My name is Joshua Vana and I'm a Roanoke County resident and, yeah, I just think it might be a good, in the meeting for question-and-answer period preceding this hearing, I heard some conflicting details that, from the DEQ and a representative of RFAAP concerning treatment of incoming waste materials and testing and processing of those waste materials. And I think it would probably be a good idea to have those discrepancies ironed out and be consistent for public information. What I recognized, and, you know, maybe someone can correct me, after the hearing, if I'm wrong, there wasn't really an opportunity for other discussion before this. So, whether every load of incoming waste material is going to be tested for impurities and other possible toxins that RFAAP would like to weed out of its process, you know, I think if DEQ is to tell the public that every single load is going to be tested then that ought to be the case, it seemed like that was not the case coming from the representative of RFAAP. And not being an expert on these processes, there are things that, you know, I just don't know, and I don't know what I don't know and it seems like it would be good to have a consistent line on that. And it appeared that maybe DEQ and RFAAP were not exactly on the same page about some of those details which, to me, seemed to be pretty important in lying at the crux of, you know, why these types of

variances are issued. So, I don't know if those inconsistencies come from RFAAP not being clear with DEQ and the front of this process when they first applied for the variance or not. But whether every incoming load of waste materials is to be tested and whether materials that needed to be treated were going to be treated on-site or off-site, those seem to be the areas that I think the public could use some clarification. I do agree with previous commenters concerning the dangers to the public health, I would like to add workers to that as well. I understand that that is not the subject of this variance request neither is, you know, the U.S. munitions participating in the genocide of people on the other side of the world, but I do think it bears mentioning, so I don't know whether that's going to get my comment thrown out or not, but who knows?

Response: Condition 3 of the variance details the testing and acceptance procedure for the HSM before being shipped to the RFAAP facility. The generating facilities will test each lot of the material proposed to be transferred and provide the RFAAP facility with the analytical results to determine if the material meets the specifications for use in the NAC/SAC unit before arranging for transportation of the HSM.

Comment 6 – Reference October 30, 2024 verbal comment by Garrett Williams at Public Hearing held at the Radford Public Library, Radford, Virginia, Page 16, Lines 4-19: My name is Garrett Williams; I am a Montgomery County resident. My problems and issues probably are that this variance as much as it is with understanding and knowing that these recent flooding events and current containing systems are functioning as they should because I do think that plays, in fact, into the experience because it's all the combined naval system here. So, I think that there's probably some testing, hopefully, in some things that have occurred recently. They probably need some evaluation prior to determining if, you know, Radford Ammunition really is even able to meet the current standards. If this can be tested before anything else really, thank you.

Response: DEQ has confirmed with the RFAAP facility that there were no impacts to the NAC/SAC unit and associated tank farm's secondary containment units during the flooding caused by Hurricane Helene.

Comment 7 – Reference October 30, 2024 verbal comment by Tristan Mortenson at Public Hearing held at the Radford Public Library, Radford, Virginia, Pages 16-17, Lines 22-7: I just want to say that I agree with previous speakers, especially Megan and I really just can't believe that there are only representatives from one organization in this state here that really limits the opportunities. I'm not sure who else I would invite, or maybe some organizations that were not state government organizations, but I just feel like we're being placated here and probably every time we've been here, even though this is my first time. Thank you.

Response: As the variance is being issued under the requirements of the Virginia Hazardous Waste Management Regulations the DEQ is the responsible agency for administering those regulations and ensuring that the requirements are being met in order to issue the variance for the RFAAP facility to recycle the HSM.

Comment 8 – Reference October 30, 2024 verbal comment by Georgia Doreemus at Public Hearing held at the Radford Public Library, Radford, Virginia, Pages 17-19, Lines 12-14:

That's all right. I was ready. I'm Georgia Doreemus, I am a resident of Montgomery County, and I'm speaking as a concerned citizen and a mom, and I want to go on record and say that I agree with all the concerns our community members have brought up. I think the main issue for us is a lack of transparency, right? It's very hard for us to understand what's going on at this facility, and when there is very little to no information provided to the public. I'm not a scientist, I'm not a chemist but I think it is, it doesn't take a scientist to understand that when you're talking about 27 million tons of said acid coming into our community, that is very concerning to us, right? So, I do know that sulfuric acid is very toxic to be in contact with, so this poses a risk to workers and it poses a risk to everywhere that these trucks are coming through our community, that's a concern to me. I also want to echo what's been said already, I think a huge elephant in the room that's not being discussed is we don't know what happened after the hurricane. We don't know the state of the ammunition plant right now, right? So, I'm going to assume, since I have friends that live down the river that lost everything, I'm going to assume that the arsenal also was flooded, right? So, how are we supposed to make decisions on bringing in more toxic hazardous waste to the facility that potentially is already completely contaminated the new river and doesn't have capacity to even process what is already there, right? So, I think that if you're going to approve, before approving anything, before bringing in any more burdens to our community, you need to really assess what the damage has already happened from the hurricane, so I'll just leave it there. And also, I want to go on record that I'm a member of this community, but I'm also a member of the global community, so I do not consent to any additional munitions being made in our community to then go kill Palestinian children. We are directly connected, and we are directly complicit in that genocide, so I just want to go on record and say our community doesn't want that, we don't want to be poisoned, we don't want our children to be poisoned, we don't want to use these ammunitions to then go kill children across the world. So, thank you.

Response: An error in the EPA 8700-12 notification form submitted with the variance requested was resolved when a revised form was submitted on November 14, 2024 to note the correct total amount of HSM to be recycled was not 27,000,000,000 short tons of HSM when the facility had intended the maximum amount of HSM to be recycled is 27,000,000,000 pounds (13,500 short tons). The corrected 8700-12 form will be entered into the RCRAinfo database once the final variance is issued.

As stated in the response to Comment 3 the DEQ and RFAAP worked together to ensure the information submitted in the variance request complied with the ITAR requirements to provide the public with the opportunity to review the plan but not compromise the RFAAP facility's operational security.

Additionally, please note the HSM spent acids will be substituting for virgin acid material so the environmental impact from air emissions and water discharges will not exceed what the RFAAP facility is currently permitted for.

Comment 9 – Reference October 30, 2024 verbal comment by Trisha McLawhorn at Public Hearing held at the Radford Public Library, Radford, Virginia, Pages 20-23, Lines 2-4: My name is Trisha McLawhorn. I just want to say that I'm speaking on behalf of not just myself, but those that are not here, or they don't have a voice here because they were not notified properly, publicly. And also, I'm speaking for those who don't have a voice here which are living inside of

the ecosystem, the snails, the hellbenders, the crabs, the fish, the deer, the vultures that hang out at the arsenal. That is a metaphor, that is a sign, right? All of the life, the wildlife around the area that gets polluted constantly, so not just for myself, my family, my neighbors, but all of the life that exists around this facility that has been decimated for decades. And why? Because a private for-profit contractor can come over here from another part of the world, aided by elected officials, boards, commissions, committees, the Virginia DEQ, and they can continue to get variances upon variances upon permits upon permits on top of non-compliance and fines and as was stated during the meeting, no interference. But when it's happening, no one is coming to stop them. No one comes to stop them. And we're told that we have to submit right here a technical comment or a written technical public comment and when we do that in any one of these processes, tonight included, we are then told on phone calls, Virginia DEQ hearings on calls about how insufficient our comments are and how they don't apply to the variance or the permit, because as several other people have mentioned, because we're not technical so we don't have the expertise to form the comment to address the variance in the way that the arsenal can show behind closed doors what they're doing, and we don't get that. We don't get that. You know, I'm frustrated as you can tell. I'm pretty pissed off, I'm pretty tired of year, I've been in this process, I have your business card, I look at it every day, it sits right on the computer several years now, right? I'm tired of having to show up here, take time out of my life, my work, my kids, to show up here to say the same thing over and over and over and over again. Every time the arsenal wants to do something that is basically poisoning the fuck out of us, day in and day out, that is not up for debate, it is happening, right? And no one wants to hear that, no one wants to listen. So, we have to come here to beg not to be poisoned, not to have our children poisoned at the two elementary schools that are right near this facility, it's insane, it is insane. And why is all of that happening, why? Aided again by elected officials. Republics, Democrats, all in between, everyone, right? In our own community. Our mayor, our council member, everyone in here that is in an elected fucking capacity, we have to still come here and beg for the ability to breathe clean air and drink clean water and not have the wildlife that we depend on in the ecosystem that we are a part of, like, poisoned? It's absolute insanity. And again, why do we go through this whole process? So, a for-profit corporation can come over here from a different part of the world and they can make bombs to send to other parts of the world to kill lots of innocent people. And if that does not sit on you day in and day out while you are under there doing that, you're poisoning us, you're killing them. There is a freaking lack of humanity in this entire process. So, my public comment is not necessarily as much of a DEQ, as it is for the folks sitting in this room that are complicit and do whatever...

Response: DEQ follows the administrative procedures for decision making detailed in Title 40 of the Code of Federal Regulations (40 CFR) § 124, and incorporated by reference in 9 VAC20-60-124, as well as the variance specific procedures detailed in 9VAC20-60-1420.B. These procedures are followed to help ensure any interested party is able to review the associated documentation and make comments before DEQ finalizes any decision to issue or deny a variance or permit under RCRA. After Ms. McLawhorn's comment DEQ did check the recipients on the public mailing list of the tentative decision to issue the variance and Ms. McLawhorn's email was listed. The tentative decision was public noticed in a local newspaper and radio station around the facility area. The tentative decision was added to DEQ's public notice website and notice of the informational briefing and public hearing was added to the regulatory town hall. Given the public interest in the RFAAP facility, the DEQ doubled the

required length of the public comment period, specified in 9VAC20-60-1420.B.2, from 30 days to 60 days.

To help facilitate any technical comments on the draft variance DEQ held an informational briefing at the Radford public library on October 30, 2024 to answer any questions about the tentative decision to issue the variance request.

Please note that the manufacturing activities performed at the RFAAP facility are covered under a variety of environmental permits and the facility is regularly inspected to ensure compliance with the regulatory requirements. The use of the HSM spent acid in the NAC/SAC unit and the associated tank farm in lieu of virgin acid is covered under these permits as well.

Comment 10 – Reference November 11, 2024 written comment by Thien Chau at Earth Justice: Dear Mr. Scott,

We write on behalf of Citizens for Arsenal Accountability to request that the Virginia Department of Environmental Quality (“VDEQ”) (1) correct and re-issue the tentatively approved “Variance Request to Recycle Hazardous Secondary Material – Spent Acid” for the Radford Army Ammunition Plant (“RFAAP”) dated September 26, 2024, and (2) extend the public comment period to 60 days from the issuance of the corrected tentative approval. We make this request due to a significant substantive error discovered in the variance request and tentative approval. This error, and the associated public misinformation disseminated as a result, render it impossible for the community to meaningfully participate in the public comment process without a re-issued notice and comment period.

The variance request, dated August 14, 2024, provides for the management of 27 million short tons of excluded hazardous secondary material per year.¹ At the informational briefing held on October 30, 2024, however, you told the public that RFAAP was seeking to manage 27 million pounds of spent acid. We followed up for clarification and were initially told that 27 million short tons was the correct amount. Upon investigation, however, VDEQ discovered and then informed us that the correct anticipated volume is indeed 27 million pounds, not short tons, of spent acid. You informed us that RFAAP will amend its form 8700-12 but VDEQ was not planning to reissue public notice and allow the public more time to comment on the corrected variance application and any tentative approval.

The provision of accurate information is necessary to enable VDEQ to appropriately consider a variance application. And where, as here, the law requires that VDEQ publish notice and accept comments on a tentative decision,² it is crucial that the public have access to the same accurate information that forms the basis of VDEQ’s decision in order to meaningfully participate in the public comment process and inform the agency of technical deficiencies in the request.

Here, the public notice included grossly inaccurate hazardous secondary material volume estimates, and the informational briefing held on October 30, 2024, disseminated conflicting information. Verbal comments shared at the public hearing, also held on October 30, were thus potentially influenced by inaccurate and conflicting information.

In addition to the inaccurate and conflict information, community members are concerned with the lack of transparency and communication regarding the impacts of the recent flooding of RFAAP's facility from Hurricane Helene. The flooding occurred on September 27, 2024—after the variance request was submitted and public notice of VDEQ's tentative decision was issued—and was severe enough to temporarily shut down plant operations, leaving several hundred people out of work. No supplemental information has been provided to the public on how the flooding impacts RFAAP's ability to manage spent acid in a manner that protects human health and the environment.

To ensure meaningful public participation in this decision-making process, we urge VDEQ to correct and reissue the tentatively approved variance request and allow the public 60 days from the reissuance to respond.

Response: DEQ provided a response to Earth Justice's request in writing on November 15, 2024. The body of that letter is copied below:

“Dear Mr. Chau,

Thank you for your letter, dated November 11, 2024, regarding the hazardous secondary materials variance request for the Radford Army Ammunition Plant in Radford, Virginia. Due to the public interest in this facility the Virginia Department of Environmental Quality has taken steps to provide enhanced public participation and electronic access to documents at the time of receipt, such as an extended comment period of sixty days and providing an informational briefing and public hearing to receive comments on October 30, 2024.

It is important to note that the draft notice tentatively granting the variance request has been issued pursuant to the procedures in the Code of Federal Regulation (CFR) and Virginia Solid Waste Management Regulations (VSWMR). The variance request was evaluated using the criteria in 9VAC20-60-1390.B.4 for reclaimers of hazardous secondary materials. The relevant public participation procedures for this variance request are found in 40 CFR § 260.33 and 9VAC20-60-1420. Based on the comments received to date as well as the verbal comments received during the public hearing held on October 30, 2024, no new technical information, data, or substantial issues have been raised or identified that would warrant extension (e.g. reopening) of the public comment period. As a result, only those public comments received by the November 25, 2024 deadline will be considered by the DEQ in making a final decision with respect to the draft notice tentatively granting the variance request.

I hope this information provides more clarity regarding the required public participation process.”

Comment 11 – Reference November 12, 2024 written comment by Mya Riner: Hello,

I am a worried citizen of Blacksburg, VA. I could go on and on about the Radford Arsenal's variance request, but I have a feeling you won't read a lengthy email like that. Instead, I will just say that I am worried out of my mind being near a plant like RFAAP. I'd say a lot of Blacksburg and the surrounding area is. Someone like you has power. You have the power to stop 27 million

pounds of spent acid to be transported all the way from out of state. There are many issues with this that I am beyond anxious about.

1. These dangerous chemicals that are nitric and sulfuric acid cause cancer, they are explosion hazards, and they literally burn skin, eyes, and lungs.
2. What if there is a transportation issue? Just sit and think about all of those risks.
3. RFAAP already has a history of failing to properly manage these acids.
4. What about the poor workers? The people who just need to put food on the table.

Please, as a citizen that lives 7 miles from this plant, I kindly ask you to consider my plea.

Thank you for your time.

Response: The spent acid proposed for recycling as HSM under the variance request will be handled the same way as virgin acid currently used by the RFAAP facility. The explosion hazards of the materials are well documented and since the RFAAP facility manufactures single, double and triple base propellants, it has significant experience addressing the hazards of reactive materials through best practices.

Transportation of the HSM is covered in Condition 4 of the variance. The Condition requires only certified hazardous waste transporter companies are to be used to transport the HSM. This requirement ensures the HSM is being transported by trained and licensed operators if any issues during transportation arise.

The workers at the RFAAP facility are trained to handle these materials as part of their internal training program.

Comment 12 – Reference November 25, 2024 written comment by Andrew Detwiler: Hello Mr. Scott,

I am Andrew Detwiler, a student at Virginia Tech. Recently, I learned about the Radford Army Ammunition Plant (RFAAP)'s plan to accept 27 million pounds of spent acid, consisting mostly of nitric and sulfuric acid, from outside facilities. I also understand that the RFAAP recently submitted a request to the Virginia Department of Environmental Quality (DEQ) asking to waive the spent acid's "hazardous waste" designation, thus loosening the management restrictions around the acid.

The RFAAP's request for variance stated that it would accept 27 million *tons* of spent acid per year, but a later public hearing regarding the request revealed that RFAAP plans to accept 27 millions *pounds* of spent acid. This significant inconsistency concerns me, and leads me to question the DEQ's thoroughness while reviewing the request and deciding to tentatively accept it earlier this year. Additionally, the RFAAP's request to waive the spent acid's "hazardous waste" designation is suspicious, given that as recently as September 2023, the EPA stated that the RFAAP fails to properly manage nitric and sulfuric acid.

Given the lack of public information regarding the safety of this spent acid, as well as RFAAP's historic issues with pollution and inadequate public communication, I urge the DEQ to extend the public questioning period for the RFAAP's spent acid variance request. I ask the RFAAP and DEQ to provide adequate information about the consequences of the spent acid delivery regarding local public and environmental health, as well as the reasoning behind and consequences of waiving the acid's designation as "hazardous waste."

Thank you,

Andrew Detwiler
dandrew23@vt.edu
240-688-7902

Response: The comment period was not extended as no technical justification for the additional time, over the extended comment period provided initially, was given.

As detailed in the response to Comment #8 the RFAAP facility submitted a revised 8700-12 form to include the corrected amount of spent acid proposed to be covered under the variance request.

As stated in the response to Comment #3 the DEQ and RFAAP facility worked to provide as much information in the variance request to be made publicly available without violating the ITAR requirements.

The spent acids are designated as hazardous secondary material (HSM). As HSM the spent acids must still be transferred, stored, and managed in a safe and appropriate manner, as a valuable commodity, and in a similar manner as the management of raw acids at RFAAP, as per Condition 2a.

Comment 13 – Reference November 25, 2024 written comment by Alissa Ganser: Dear Mr. Scott,

I urge the Department of Environmental Quality to deny the Radford Army Ammunition Plant's request for a variance to accept and manage 27 million pounds of spent acid per year.

The spent acid includes dangerous chemicals like nitric acid and sulfuric acid that threaten the health and safety of community members and the environment. The Radford Arsenal has a history of failing to properly manage these chemicals and has not provided enough information in its variance request to show that it will have adequate equipment and procedures in place to protect the public, workers, and the environment.

Unlike virgin acid, spent acid includes more impurities like energetic material and potentially other contaminants which the Arsenal has not disclosed to the public. Concealing this information keeps communities in the dark about the types and degree of risk posed by the Arsenal's request.

The area surrounding the Arsenal is an environmental justice community and has long suffered from the facility's releases of millions of pounds of pollutants, including from its hazardous waste burning operations. Young children and the elderly are uniquely at risk from toxic pollutants, and there are several day-care centers, elementary schools, and nursing homes near the facility. Allowing the Arsenal to import and manage millions of pounds of spent acid adds to the existing risks from its current operations and historic pollution and would be an environmental injustice.

The Department must deny the Radford Arsenal's variance request in order to protect the public and environment.

Sincerely,

Alissa Ganser
Vinton, VA 24179
218-390-3559

Response: DEQ staff performed a site visit to the RFAAP facility on January 11, 2024 to discuss the variance request and meet with staff responsible for the NAC/SAC unit and the associated tank farm to verify the equipment and operating procedures for the process units. During that site visit DEQ discussed the spill response and emergency response procedures associated with units and verified the secondary containment for the tank farm met the volume requirements under RCRA. As stated in the response to Comment #3 the DEQ and RFAAP facility worked to provide as much information in the variance request to be made publicly available without violating the ITAR requirements.

As described in Section 1 of the variance request the RFAAP facility routinely purchases spent acid material for use in the NAC/SAC unit. While it is not anticipated that the spent acid HSM covered under the variance would contain contaminants not normally found in the purchased spent acid currently used Condition #3 of the variance requires the generators to provide analytical data to the RFAAP facility to verify the material would be acceptable before arranging transportation.

Additionally, the HSM would be a substitution of the spent acid or virgin acid material currently being purchased and would not increase air or water emissions above what the facility is currently permitted for. The use of HSM in the RFAAP facility's production process will promote legitimate recycling and reduce the amount of hazardous waste which would otherwise need to be treated and disposed of.

Comment 14 – Reference November 25, 2024 written comment by Thien Chau at Earth Justice: On behalf of Citizens for Arsenal Accountability, Earthjustice submits these comments concerning the Virginia Department of Environmental Quality's ("VDEQ") tentative decision to grant the Radford Army Ammunition Plant ("RFAAP") a variance, under 9 Va. Admin. Code. § 20-60-1390, from the Virginia Hazardous Waste Management Regulations to allow RFAAP to accept and recycle spent acid. As detailed below, RFAAP's requested hazardous waste management activity does not meet the criteria for the variance and threatens nearby

communities, workers, and the environment. VDEQ must deny RFAAP's variance request to protect human health and the environment.

I. BACKGROUND

A. RFAAP's History of Pollution

Since the start of its operations in 1941, RFAAP has emitted millions of pounds of toxic pollutants into the air, soil, and water, poisoning surrounding communities and the environment. RFAAP was ranked as Virginia's biggest emitter of toxic pollution every year from 2001 to 2023.¹ In 2023, RFAAP reported releases of more than 11.9 million pounds of pollutants,² including 1,088 pounds of lead.³ These pollutants impact nearby population centers, affecting people in towns including Radford, Blacksburg, and Christiansburg, as well as students and staff at nearby universities, including Virginia Tech and Radford University. Further, RFAAP's pollution threatens children, the elderly and people with existing health problems—populations that are uniquely susceptible to toxic pollutants. There are twelve day-care centers, eight elementary schools, three nursing homes, and two hospitals within a ten-kilometer area around RFAAP.⁴ The elementary schools located near RFAAP are among the most at-risk in the nation and state because of the toxic pollutants in the air.

B. Risks of Spent Acid

RFAAP's request states that the spent acid it seeks to accept and recycle "consists mainly of nitric acid, sulfuric acid, water, and trace amounts of energetic material, varying in concentration and composition."⁵ RFAAP does not explain what the specific types of energetic material are and what other pollutants could be in the spent acid.

1. Nitric Acid

Nitric acid is corrosive and can "severely irritate and burn the skin and eyes with possible eye damage."⁶ It can also irritate the lungs and cause nausea, vomiting, diarrhea, and abdominal pain.⁷ "Inhalation can permanently damage mucous membranes and the lungs and cause pulmonary edema."⁸ Nitric acid "ignites on contact with many organic chemicals" and, as a strong oxidizer, it can "increase the flammability and ignitability of materials."⁹ Mixing nitric acid with incompatible materials "has resulted in violent spontaneous reactions, ignition, and explosions. Closed containers holding an incompatible reaction can rupture."¹⁰

2. Sulfuric Acid

Sulfuric acid is a carcinogen that is corrosive and can cause irritation to the skin, eyes, nose, throat, and lungs.¹¹ Exposure can also cause headaches, nausea, and vomiting.¹² Sulfuric acid is reactive and considered to be a dangerous explosion hazard.¹³ Further: Sulfuric acid mist is a corrosive chemical and can severely burn the skin and eyes. It may cause third degree burns and blindness on contact. Exposure to sulfuric acid mist can irritate the eyes, nose, throat and lungs, and at higher levels can cause a buildup of fluid in the lungs (pulmonary

edema). Asthmatics are particularly sensitive to the pulmonary irritation. Repeated exposures may cause permanent damage to the lungs and teeth.¹⁴

3. Energetic Material and Other Potential Contaminants

RFAAP's request states that the facilities that RFAAP seeks to accept spent acid from "generate a similar spent acid stream to what is produced at RFAAP, through the manufacturing of Nitroglycerin (NG) and Nitrocellulose."¹⁵ The energetic material in the spent acid therefore potentially could include nitroglycerin and nitrocellulose.¹⁶ Nitroglycerin can cause a range of health issues including "headaches, nausea, convulsions, cyanosis, circulatory collapse, or death" from acute exposure.¹⁷ Chronic exposure can lead to "severe headaches, hallucinations, and skin rashes."¹⁸ Many of these symptoms are due to the fact that nitroglycerin interferes with the ability of the blood to carry oxygen.¹⁹ Nitrocellulose can irritate the skin, eyes, nose, and throat, and can cause headaches, dizziness, difficulty breathing, and loss of consciousness.²⁰ RFAAP also states that the facilities it seeks to accept spent acid from "operate explosive and/or propellant manufacturing processes and R&D operations."²¹ Propellant and munitions production processes can include highly toxic pollutants such as per- and polyfluoroalkyl substances ("PFAS") and perchlorate.²²

PFAS chemicals are extremely toxic and have been shown to impair development, reproduction, thyroid function, the immune system, and increase risk of certain cancers at extremely low exposure levels.²³ PFAS chemicals are also highly persistent in the environment and known to bioaccumulate in humans and wildlife.²⁴ Indeed, PFAS chemicals will often remain in the environment for decades, burdening generations to come.²⁵

Perchlorate is an ingredient in propellants and has been used for decades in explosives and in the manufacture, testing, and firing of missiles and rockets. Perchlorate is "readily dissolved and transported in water and has been found in groundwater, surface water, drinking water, and soil across the country."²⁶ Perchlorate accumulates in food crop leaves, and the Food and Drug Administration has detected it in food crops and milk.²⁷ The Department of Defense has detected perchlorate in the groundwater at RFAAP at levels as high as 127 ppb.²⁸ Perchlorate can impact the uptake of iodine in the thyroid gland, thus interfering with thyroid function and negatively impacting metabolism and fetal and infant brain development and growth.²⁹ Short-term exposure to high doses can cause eye and skin irritation, coughing, nausea, vomiting, and diarrhea.³⁰

C. RFAAP's Significant Noncompliance History

RFAAP has repeatedly violated various environmental laws, endangering workers, community members, and the environment. RFAAP has faced twenty-eight informal enforcement actions and eleven formal enforcement actions that have resulted in more than \$1.27 million in penalties in the past ten years.³¹

Most recently, in September 2024, RFAAP was issued an Administrative Compliance Order by the U.S. Environmental Protection Agency ("EPA") Region 3 related to the facility's failure to follow the Clean Air Act's requirements regarding the prevention of accidental releases by "failing to follow recognized and generally accepted good engineering practices (RAGAGEP) in

the areas of process safety, process hazard analysis, mechanical integrity, compliance audits, and training.”³² RFAAP also failed “to design and maintain a safe facility related to a process involving ammonia under the threshold quantity and a process involving sulfuric acid.”³³ EPA specifically noted that this case “seeks to ensure that the facility, which stores extremely hazardous substances, safely stores its chemicals to reduce the likelihood of accidental chemical releases and the resulting potential harm to neighboring communities and the environment, which is especially important in potential [environmental justice] areas.”³⁴

Additionally, the facility has had numerous incidents involving spills, many involving the same chemicals that RFAAP is seeking a variance to manage. For instance, in 2012, RFAAP illegally discharged 15,000 gallons of fuming sulfuric acid into a containment dike.³⁵ In 2015, the facility released 3,200 pounds of sulfuric acid and 3,200 pounds of nitric acid due to broken lines.³⁶ In 2017, the facility again released nitric acid from two tanks totaling about 4,000–4,500 gallons.³⁷ The released nitric acid produced an orange vapor cloud that moved off-site and was visible for about five hours.³⁸ In August 2019, RFAAP released 110 gallons of nitric acid into the New River,³⁹ and then in September 2019, RFAAP spilled 161 gallons of a nitric acid/sulfuric acid mixture due to a burst pipe.⁴⁰ In 2021, a power outage resulted in a release of 2,000 gallons of industrial wastewater that contained nitric acid, sulfuric acid, and nitrocellulose.⁴¹ The next year, the facility had another incident involving the release of 473 pounds of sulfuric acid and 420 pounds of nitric acid.⁴² And in 2023, the facility had three separate incidents: (1) an unknown amount of sulfuric acid and nitric acid leaked from a pipe;⁴³ (2) 66,000 gallons of wastewater containing nitric acid and sulfuric acid were released into a drainage ditch;⁴⁴ and (3) 200 gallons of acidic wastewater leaked from a faulty pipe into RFAAP’s stormwater system.⁴⁵

II. ISSUES AND DEFICIENCIES WITH RFAAP’S VARIANCE REQUEST

RFAAP’s variance request lacks critical information and is insufficient to demonstrate that RFAAP meets the criteria to obtain a variance under 9 Va. Admin. Code § 20-60-1390 to be considered a verified recycler of spent acid. The information that has been shared with the public nonetheless demonstrates that RFAAP’s request to accept and manage 27 million pounds of spent acid per year presents serious risks to communities, workers, and the environment. Moreover, VDEQ’s failure to ensure public access to information necessary to understand the *full scope* of risks involved hinders meaningful public participation in the decision-making process, contravening the Resource Conservation and Recovery Act (“RCRA”) and Virginia Environmental Justice Act. Given these significant deficiencies, VDEQ must deny RFAAP’s variance request.

A. RFAAP’s Request Fails to Satisfy the Criteria for a Variance

RFAAP must satisfy the criteria outlined in 9 Va. Admin. Code § 20-60-1390 for a variance as a verified reclamation facility. RFAAP has failed to demonstrate that it meets these criteria, and VDEQ therefore must deny the request.

1. Risks to proximate populations

As the reclamation facility for the spent acid, RFAAP “must address the potential for risk to proximate populations from unpermitted releases of the hazardous secondary material to the environment . . . and must include consideration of potential cumulative risks from other nearby potential stressors.”⁴⁶ RFAAP does not mention cumulative risk anywhere in its variance request, let alone address it as required by law. Indeed, RFAAP characterizes this criterion as requiring that “[t]he intermediate or reclamation facility must address the potential for risk to proximate populations from unpermitted releases of the hazardous secondary material to the environment[.]”⁴⁷ omitting entirely the mandate to consider cumulative risks. RFAAP has therefore failed to address cumulative risks caused from multiple sources of pollution, including the many polluting activities on-site, such as RFAAP’s open burning ground, hazardous waste incinerators, and propellant manufacturing process.

RFAAP’s failure to address cumulative risk is particularly problematic given that the surrounding communities are in an environmental justice area and,⁴⁸ as explained further below, face a disproportionate burden from the cumulative risks of toxic pollution.⁴⁹ The Virginia Environmental Justice Act provides that “[i]t is the policy of the Commonwealth to promote environmental justice and ensure that it is carried out throughout the Commonwealth, with a focus on environmental justice communities and fenceline communities.”⁵⁰ “‘Environmental justice’ means the fair treatment and meaningful involvement of every person, regardless of race, color, national origin, income, faith, or disability, regarding the development, implementation, or enforcement of any environmental law, regulation, or policy.”⁵¹ Granting the variance without considering the cumulative risks to the environmental justice communities surrounding RFAAP, as required by law, would contravene Virginia’s goal of providing fair treatment by failing to give “equitable consideration of all people whereby no group of people bears a disproportionate share of any negative environmental consequence resulting from an industrial, governmental, or commercial operation, program, or policy.”⁵²

In addition to ignoring cumulative risk entirely, RFAAP also fails to provide information to show it has “address[ed] the potential for risk to proximate populations from unpermitted releases of the hazardous secondary material to the environment.”⁵³ Instead, RFAAP makes unsupported statements in its variance request that say nothing about the actual risks to nearby populations from unpermitted releases of spent acid to the environment. RFAAP claims:

The risks of acid tank farm storage and NACSAC operations are fully evaluated, explored, and updated by Process Hazard Analysis (PHA) every five years or when major process changes occur. The PHA process and the resulting recommendations help the organization identify a range of risks, evaluate the consequences of hazardous chemical releases for the facility and surrounding public, and mitigate those hazards and risks. The risk matrix that is utilized during a PHA evaluation, takes into account frequency and magnitude of health, safety, and environmental risks for every node of a system. For the environmental aspect, this includes evaluating releases no matter how small or large, including if releases leave the site boundaries. The last full PHA evaluation of the NAC/SAC and acid tank farms was completed in 2020.⁵⁴ These statements merely conclude that RFAAP has taken some sort of look at the risk from its acid tank storage and concentrator operations, without providing any supporting documentation to show that it has adequately addressed those risks.⁵⁵ Moreover, it is not clear whether an evaluation completed in 2020 would adequately address the risks from the activity RFAAP plans

to conduct under this variance request. RFAAP essentially makes the circular claim that it satisfies this requirement because it has satisfied this requirement. VDEQ cannot grant a variance based on such unsupported claims.

RFAAP further claims that “there are numerous engineering and administrative safeguards including relief systems/alarms/controls, containment dikes, operating procedures for emergency shutdown and release response.”⁵⁶ Merely concluding, without any supporting information, that its existing systems are adequate safeguards from the risks of unpermitted releases is not sufficient to demonstrate RFAAP has adequately addressed risks to proximate populations. Indeed, RFAAP’s history of noncompliance—including violations related to risk management and containment of nitric and sulfuric acid—reinforce the need for RFAAP to provide more than mere conclusions that its existing systems are sufficient. Most recently, EPA Region 3 found that RFAAP failed to implement written procedures for maintaining the mechanical integrity of its process equipment, including recommendations from compliance audits conducted in 2017 and 2020.⁵⁷

2. Formal enforcement

To be eligible for the variance, RFAAP “must not be subject to a formal enforcement action in the previous three years and not be classified as a significant noncomplier under RCRA Subtitle C, or must provide credible evidence that the facility will manage the hazardous secondary materials properly.”⁵⁸ Formal enforcement action includes referral by the EPA “to the U.S. Department of Justice for the commencement of a criminal or civil action in the appropriate U.S. District Court, or the filing of an administrative complaint, or the issuance of an order, requiring compliance and a sanction.”⁵⁹

As explained in Part I.C, on September 27, 2024, EPA Region 3 issued an Administrative Compliance Order to RFAAP’s operator for violations of the Clean Air Act involving failures to follow requirements for prevention of accidental releases and “failing to design and maintain a safe facility related to a process involving ammonia under the threshold quantity and a process involving sulfuric acid.”⁶⁰ Nitric acid was also a pollutant involved in the enforcement action.⁶¹ Given this formal enforcement action, RFAAP “must provide credible evidence that the facility will manage the hazardous secondary materials properly” to receive a variance.⁶² “Credible evidence may include a demonstration that the facility has taken remedial steps to address the violations and prevent future violations, or that the violations are not relevant to the proper management of the hazardous secondary materials.”⁶³ RFAAP’s variance request, submitted August 14, 2024, states that it “has not been subject to formal enforcement action,”⁶⁴ and RFAAP has not submitted a correction to its request. A VDEQ official also stated at the October 30 informational briefing that RFAAP is not subject to any formal enforcement action. These statements are inconsistent with the reality that RFAAP was issued an Administrative Compliance Order for violations highly relevant to the management of nitric and sulfuric acid just one day after VDEQ issued public notice of its tentative decision to grant RFAAP the variance. RFAAP has not submitted any supplemental information to VDEQ to support its variance request and therefore clearly has not submitted any “credible evidence” to demonstrate it is not disqualified from receiving a variance due to this recent formal enforcement action. This deficiency is particularly egregious given that these most

recent violations build upon decades of RFAAP's numerous releases of toxic compounds, including releases of nitric acid and sulfuric acid, that pollute the environment and threaten human health.⁶⁵

3. Management of residuals

RFAAP must demonstrate:

If residuals are generated from the reclamation of the excluded hazardous secondary materials, the reclamation facility must have the permits required (if any) to manage the residuals, have a contract with an appropriately permitted facility to dispose of the residuals, or present credible evidence that the residuals will be managed in a manner that is protective of human health and the environment[.]⁶⁶

RFAAP claims that, in addition to producing the end products of strong nitric acid and strong sulfuric acid, "[o]ther residuals produced *include* wastewater and air emissions."⁶⁷ But RFAAP does not explain what specific chemicals could be in the wastewater and air emissions and what other residuals are produced. Without specific details on the composition of the spent acid⁶⁸ and the residuals that are generated from reclaiming spent acid, RFAAP cannot demonstrate that it will be able to manage the residuals as required by law.

For instance, RFAAP claims that the wastewater will be neutralized and discharged into the New River, and this process is covered under its Virginia Pollutant Discharge Elimination System discharge permit.⁶⁹ But without explaining fully what residuals from the reclamation process it will need to manage and how its existing wastewater treatment equipment will be able to manage those residuals, RFAAP cannot demonstrate that its discharge permit will adequately cover management of the residuals. RFAAP also claims that its air pollution control devices will recover and control nitrous oxide and treat carbon monoxide emitted through its reclamation process, and that these processes are covered by its air permit.⁷⁰ However, RFAAP does not explain whether there are other air emissions and how those air emissions would be controlled. Again, without a full description of the waste composition and all the residuals expected to be generated, RFAAP cannot demonstrate that its air pollution control equipment and air permit are sufficient to cover management of the residuals.

Unsupported conclusions are not sufficient to demonstrate that the residuals will be managed under appropriate permits, nor are they "credible evidence that the residuals will be managed in a manner that is protective of human health and the environment[.]"⁷¹

4. Emergency preparedness

RFAAP's variance request fails to demonstrate that it has "the equipment and trained personnel needed to safely manage the hazardous secondary material" and that it "meet[s] emergency preparedness and response requirements under 40 CFR Part 261 Subpart M."⁷² For instance, Subpart M requires the facility to have a contingency plan that is "designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous secondary material or hazardous secondary material constituents to air, soil, or surface water."⁷³ As a facility that generates or accumulates more than 6,000 kilograms of hazardous secondary material, RFAAP can satisfy this requirement if it already has

a contingency plan, but it must “amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of this part.”⁷⁴ RFAAP’s variance request states that it has been recycling and managing its own spent acid for more than ten years and already maintains a hazardous waste contingency plan.⁷⁵ However, RFAAP does not explain whether and how that plan covers the specific spent acid waste stream it seeks to accept from other facilities through this variance. For example, RFAAP does not explain whether the spent acid it has been generating and managing has the same composition and presents the same risks as the spent acid it seeks to accept from other facilities. RFAAP also fails to explain how its existing equipment and procedures are sufficient to deal with emergencies associated with this specific spent acid waste stream. Additionally, EPA Region 3 recently found that RFAAP did not properly train its employees in maintaining the on-going integrity of process equipment to assure the employee can perform the job tasks in a safe manner.⁷⁶

5. Containment

The variance requirements provide that VDEQ “may grant requests for a variance from classifying as a solid waste those hazardous secondary materials that are transferred for reclamation under 40 C.F.R. 261.4(a)(24)”⁷⁷ As RFAAP acknowledges in its variance request, Virginia retained 40 C.F.R. § 261.4(a)(24) as it appears in EPA’s Definition of Solid Waste rule from 2015.⁷⁸ The 2015 Rule requires that the “reclaimer and intermediate facility must manage the hazardous secondary material in a manner that is at least as protective as that employed for analogous raw material and must be *contained*.”⁷⁹ “Contained” means “held in a unit” that meets criteria such as (1) being “in good condition, with no leaks or other continuing or intermittent unpermitted releases of the hazardous secondary materials to the environment, and is designed, as appropriate for the hazardous secondary materials, to prevent releases of hazardous secondary materials to the environment”; (2) being “properly labeled or otherwise [having] a system (such as a log) to immediately identify the hazardous secondary materials in the unit”; and (3) holding only “hazardous secondary materials that are compatible with other hazardous secondary materials placed in the unit and is compatible with the materials used to construct the unit and addresses any potential risks of fires or explosions.”⁸⁰

RFAAP’s variance request states:

Spent acid, managed as hazardous secondary material, accepted by RFAAP will be contained in one of several spent acid storage tanks managed in the facility’s acid tank farm. The acid tank farm contains multiple tanks, all are located within secondary containment dikes. Administrative procedures, preventative maintenance inspections, and engineered controls ensure the adequacy and maintenance of the tank farm.⁸¹

Again, RFAAP merely makes conclusory statements that its equipment and procedures are sufficient to satisfy the requirements. RFAAP provides no supporting information to demonstrate, for example, that the storage tanks and containment dikes are in good condition without leaks and are designed as appropriate for this spent acid waste stream to prevent releases, and that there will be a proper system to identify the waste in the storage units. Indeed, EPA Region 3 recently found that RFAAP’s existing sulfuric acid process piping was missing proper labeling and its deteriorated piping coating indicated failures to adequately inspect the piping.⁸² Without supporting information, VDEQ cannot ensure that the spent acid will properly be contained and thus cannot grant RFAAP’s variance request.

B. RFAAP's Requested Hazardous Waste Management Activity Threatens Communities, Workers, and the Environment

1. Risks of spent acid

Transporting millions of pounds of spent acid from other facilities and managing it at RFAAP poses significant risks to communities, workers, and the environment. Further, granting RFAAP a variance to do so without the protections of a hazardous waste operating permit and standards under 9 Va. Admin. Code § 20-60-264 and 40 C.F.R. Part 264 (including unit-specific design, operating, and closure requirements) exacerbates the risks.

RFAAP does not fully detail the composition of the spent acid it seeks to accept and manage, failing to inform the public of the full scope of risk involved. But from the information that has been provided—that the spent acid includes nitric acid, sulfuric acid, and energetic material—there are clear risks from managing this material that would be considered hazardous waste if it were being discarded.⁸³ As explained, nitric acid, sulfuric acid, energetic material, and potential contaminants such as PFAS and perchlorate present serious risks to human health, including lung damage, interference with thyroid function, impairment of fetal and infant brain development, and cancer.⁸⁴

RFAAP's history of noncompliance further illustrates the risk posed by this variance request. As explained, RFAAP has repeatedly violated various environmental laws—endangering workers, community members, and the environment.⁸⁵ RFAAP has faced twenty-eight informal enforcement actions and eleven formal enforcement actions in the past ten years.⁸⁶ Its most recent formal enforcement action is for failing to comply with Clean Air Act requirements to ensure against accidental releases of toxic constituents including nitric acid and sulfuric acid.⁸⁷ The facility has had numerous past incidents involving spills, including of the same chemicals that RFAAP is seeking a variance to manage.⁸⁸ RFAAP also has been cited for perchlorate exceedances at least twice since 2005, following sampling of wells near its open burning ground.⁸⁹

Workers at the facility are at a unique risk from management of millions of pounds of spent acid. Workplace incidents involving sulfuric acid and nitric acid have included deadly explosions and chemical burns requiring hospitalization.⁹⁰ It is thus highly concerning that EPA Region 3 recently found that RFAAP failed to properly train its employees in maintaining process equipment and the hazards involved in order to perform their job tasks in a safe manner.⁹¹ Additionally, transporting millions of pounds of spent acid by tanker truck poses significant risks. Between 2012 to 2023, truck-related hazardous material incidents were responsible for 83 fatalities throughout the country.⁹² There have been several incidents of nitric acid and sulfuric acid spills from truck transportation within the past few years. For example, thousands of gallons of sulfuric acid spilled into a tributary of Nevada's Humboldt River after a truck crashed over an embankment, prompting concerns among residents about threats to people or animals on the river.⁹³ A crash in Arizona involving a truck carrying nitric acid prompted evacuation of the immediate area and a shelter in place order that warned residents not to run any heaters or air conditioners that bring in outside air.⁹⁴

Managing spent acid is inherently risky for all of the reasons discussed above, and RFAAP has not adequately demonstrated that it has proper safeguards in place to minimize these risks and ensure protection of community members, workers, and the environment.

2. Cumulative risks

The risks associated with RFAAP's request to accept and manage spent acid must be considered together with the risk to the community and environment from other sources of pollution, including RFAAP's historic and current polluting operations. Addressing risks to the surrounding community from exposure to other sources of pollution is critical because such exposures increase the vulnerability of a community to new and additional toxic emissions releases and discharges.

EPA has outlined a framework for cumulative risk assessment, recognizing that polluting sources create disproportionate health risk for minority and lower-income communities. EPA defines cumulative risk as “the combined risks from aggregate exposures to multiple agents or stressors.”⁹⁵ In conducting a cumulative risk assessment, it is important to consider nearby populations (or receptors) and to account for multiple routes of exposure, including ingestion and inhalation.⁹⁶ Further, as a commonly applied practice, EPA recognizes the importance of assessing the combined impact of cancer risks from different carcinogens to create a combined cancer risk from inhalation exposure and that it must assess the combined chronic non-cancer risk for different chemicals that affect the same target organ.⁹⁷ Such assessment is essential, and consistent with existing science. Additionally, the National Academies of Sciences suggests that a cumulative risk assessment should consider both chemical and non-chemical stressors as well as how these stressors work in concert to promote adverse health outcomes.⁹⁸

As noted, RFAAP has been Virginia's biggest emitter of toxic pollution since at least 2001.⁹⁹ Moreover, its releases have increased from approximately 8.5 million pounds in 2013 to 11.9 million pounds in 2023—a 3.4-million-pound increase in annual releases.¹⁰⁰ Yet, RFAAP has not submitted an assessment to address the cumulative impact and risk caused by exposure to multiple sources of toxic air emissions and discharges. This failure is highly concerning considering RFAAP's historic and current polluting operations.

Further, the Agency for Toxic Substances and Disease Registry conducted a health consultation in 2015 with a goal “to ensure that the people living near the Radford Army Ammunition Plant (RFAAP) in southwestern Virginia have the best information possible to safeguard their health.”¹⁰¹ The consultation identified and evaluated at least 50 metals, inorganics, and explosives-related compounds for their levels in groundwater near the facility. In addition to identifying high levels of nitrate and sulfate, perchlorate levels were found to be up to 143 ug/L, which is nearly ten times higher than EPA's health advisory level.¹⁰² A total of 57 compounds were identified at concentrations above health-based drinking water levels.¹⁰³ Since this consultation was published in 2015, RFAAP has been permitted to drastically increase its production and disposal of hazardous waste products.

Moreover, increased emissions and discharges are likely to exacerbate existing environmental justice issues, as evidenced by EPA's Environmental Justice Screening and Mapping Tool (EJScreen) profile for the communities near RFAAP. The overall environmental burden

indicators for toxic releases to air, hazardous waste proximity, and wastewater discharge place the communities within a 10-mile radius of RFAAP within the 95-100 percentiles, statewide, for each indicator.¹⁰⁴

RFAAP's request to accept and manage millions of pounds of spent acid is thus not only risky on its own but also threatens a greater cumulative risk to communities, workers, and the environment. RFAAP has not even considered this cumulative risk, let alone demonstrate that it will adequately safeguard against it to protect human health and the environment.

C. VDEQ Has Failed to Ensure Meaningful Public Participation

In evaluating applications for a variance under 9 Va. Admin. Code § 20-60-1390, VDEQ must "issue a draft notice tentatively granting or denying the application" and "accept comment on the tentative decision."¹⁰⁵ VDEQ cannot hollowly go through the motions of providing notice and an opportunity for comment; it must provide for meaningful public participation to satisfy RCRA's objectives and the Virginia Environmental Justice Act.

RCRA mandates that "[p]ublic participation in the development, revision, implementation, and enforcement of any regulation, guideline, information, or program under this chapter shall be provided for, encouraged, and assisted by the Administrator and the States."¹⁰⁶ States and substate agencies that carry out activities covered by RCRA have the following objectives:

- (1) To assure that the public has the opportunity to understand official programs and proposed actions, and that the government fully considers the public's concerns;
- (2) To assure that the government does not make any significant decision on any activity covered by this part without consulting interested and affected segments of the public;
- (3) To assure that government action is as responsive as possible to public concerns;
- (4) To encourage public involvement in implementing environmental laws;
- (5) To keep the public informed about significant issues and proposed project or program changes as they arise;
- (6) To foster a spirit of openness and mutual trust among EPA, States, substate agencies and the public; and
- (7) To use all feasible means to create opportunities for public participation, and to stimulate and support participation.¹⁰⁷

The Virginia Environmental Justice Act provides that "[i]t is the policy of the Commonwealth to promote environmental justice and ensure that it is carried out throughout the Commonwealth, with a focus on environmental justice communities and fenceline communities."¹⁰⁸

"'Environmental justice' means the fair treatment and *meaningful involvement* of every person, regardless of race, color, national origin, income, faith, or disability, regarding the development, implementation, or enforcement of any environmental law, regulation, or policy."¹⁰⁹

VDEQ's failure to provide crucial information to the public concerning RFAAP's variance request fails to ensure meaningful public participation. As explained, RFAAP's request is fatally devoid of information necessary to demonstrate that a variance from the safeguards of hazardous waste management regulations is warranted. And while VDEQ staff stated at the October 30

informational briefing that they have reviewed additional documents at the facility to form the agency's tentative decision to grant the variance, VDEQ would not give the public access to those documents. RFAAP and VDEQ essentially are telling the public that it should just trust, without necessary supporting information to verify, that RFAAP's requested activity satisfies the legal requirements and will protect human health and the environment. This approach eviscerates the point of public participation and contravenes RCRA and the Virginia Environmental Justice Act.

The public cannot meaningfully participate and express their full views on the proposed activity when critical information is missing from RFAAP's submission and VDEQ relies on information it refuses to provide to the public. Without ensuring that the public has the opportunity to understand the full scope of risks associated with the variance request, VDEQ fails to ensure that it "fully considers the public's concerns" and will take action "as responsive as possible to public concerns."¹¹⁰

VDEQ has also put out conflicting and inaccurate information but refuses to take action to properly inform the public and provide a fair opportunity to consider the corrected information. The variance request provides for the management of 27 million short tons of excluded hazardous secondary material per year.¹¹¹ After questioning from the public, VDEQ investigated and discovered that RFAAP made an error and is actually seeking a variance for 27 million pounds of spent acid. The public notice therefore included grossly inaccurate hazardous secondary material volume estimates, and the informational briefing held on October 30, 2024, provided conflicting information. Verbal comments shared at the public hearing, also held on October 30, were thus potentially influenced by inaccurate and conflicting information. No correction has been made to the public notice, however, and VDEQ has chosen not to reissue the notice to inform the public of the corrected amount and restart the comment period to provide the public with time to comment based on accurate information.¹¹²

If VDEQ decides to grant the variance, it will be doing so without providing the public with a fair chance to meaningfully participate in the decision-making process with complete and accurate information, contravening RCRA's objectives and the Virginia Environmental Justice Act.

Response: Earth Justice's comment contained a large volume of supplemental information in footnotes and appendices which were not specific comments on the variance request but were referenced materials. While the full comment document is included in the administrative record anything which is not a direct comment is not included here. In order to directly address the points made in the comment letter DEQ's response will be titled to the corresponding section of the letter as follows:

I. BACKGROUND, A. RFAAP's History of Pollution – The releases noted by the referenced Toxic Release Inventory (TRI) data are correct in stating that the RFAAP facility has consistently been the largest releaser of TRI reportable chemicals in Virginia. However, the cursory use of the TRI data does not include the context of what TRI reportable chemicals are being released and to what media. The vast majority of TRI reportable releases from the RFAAP

facility are for nitrate compounds to water. As stated in Executive Summary of the Reporting Year 2022 Virginia TRI Report:

“The overwhelming majority of the releases are regulated and permitted under other state and federal programs that are designed to protect human health and the environment. These programs include federal programs such as the Clean Air Act (CAA), Clean Water Act (CWA), and the Resource Conservation and Recovery Act (RCRA) and accompanying state laws such as the State Water Control Law, Air Pollution Control Board Law, and Virginia Waste Management Act. These programs include overall restrictions and standards established through permits or other applicable requirements.”

Additionally, the Reporting Year 2022 Virginia TRI Report’s Executive Summary states:

“The report provides the public with information concerning specified toxic chemicals and chemical compounds that are manufactured, processed, or otherwise used at Virginia facilities. Responsible use of the information can help the public and industry identify potential concerns and develop effective strategies for reducing toxic chemical usage and release. The TRI data does not, however, represent a measure of public exposure to chemicals, nor does it assess risk.”

While the RFAAP facility is the largest releaser of TRI reportable chemicals this does not mean that the release of these chemicals is placing an undue burden on the surrounding community. The vast majority of releases are done so under stringent environmental permit conditions which account for risks to the surrounding community under the current environmental regulatory requirements.

I. BACKGROUND, B. Risks of Spent Acid – The comment raised details the hazards of nitric and sulfuric acid, which are addressed by the RFAAP facility’s internal training and safety requirements for workers handling acidic material.

The comment’s main concern is about the unknown material in the HSM to be recycled. As mentioned in previous responses, this concern is mitigated directly by Condition #3 of the variance, which requires the generating facilities to provide analytical testing data to RFAAP to verify the material is acceptable for use in the NAC/SAC unit. PFAS is currently not regulated as a hazardous waste under RCRA and, as such, is not applicable to this variance request.

I. BACKGROUND, C. RFAAP’s Significant Noncompliance History – The requirements for a variance to be issued under 9VAC20-60-1390.B.4 requires the facility to have not been subject to a formal enforcement action in the previous three years and not be classified as a significant noncomplier under RCRA C, or must provide credible evidence that the facility will manage the hazardous secondary materials properly. The RFAAP facility has not been subject to a formal enforcement action under RCRA Subtitle C in the previous three years so this condition for variance approval has been met.

II. ISSUES AND DEFICIENCIES WITH RFAAP’S VARIANCE REQUEST - A. RFAAP’s Request Fails to Satisfy the Criteria for a Variance - 1. Risks to proximate populations – The commentors assertion that the variance request does not address the

“cumulative risks caused from multiple sources of pollution, including the many polluting activities on-site, such as RFAAP’s open burning ground, hazardous waste incinerators, and propellant manufacturing process” ignores that the activities are not a part of the request to receive the HSM and also ignores that the activities mentioned are regulated under the various permitting programs under the Clean Air Act, specifically the Title V permit, Virginia Pollutant Discharge Elimination System (VPDES) and RCRA. The NAC/SAC and associated tank farm are permitted under the RFAAP facility’s Title V (Registration #20656) and VPDES (Permit #VA0000248) permits. As the HSM would be substituted for either purchased spent acid or virgin acid there are no additional impact to the environment above what are currently permitted.

Additionally, the assertion that the RCRA permitted open burning ground and hazardous waste incinerators would pose an undue burden was not shown during the renewal process in which an extensive Human Health and Ecological Risk Assessment was performed for each permitted activity and no adverse impact to human health or the environment was demonstrated to the most sensitive off-site receptors.

As stated in the response to Comment #13, DEQ performed a site visit to the RFAAP facility to inspect the NAC/SAC and associated tank farm to determine if the equipment was suitable for the proposed recycling operation and met the required standards for secondary containment. The DEQ determined during the site visit that RFAAP had the necessary secondary containment for the tank farm and the equipment was in good working order. The RFAAP facility also maintains an internal fire department trained in emergency response procedures as well as internal training for operators to handle most spill responses. While it is understandable the commentor would want to see additional information to support the variance request, the ITAR regulations restrict what can be made publicly accessible.

II. ISSUES AND DEFICIENCIES WITH RFAAP’S VARIANCE REQUEST - A.

RFAAP’s Request Fails to Satisfy the Criteria for a Variance - 2. Formal enforcement – As stated earlier in this comment response, the commentor has misread the regulatory requirements for the variance request to include any enforcement action instead of the correct interpretation of only enforcement actions under RCRA C, as it is stated in 9VAC20-60-1390B.4.c. The RFAAP facility has not been subject to a formal enforcement action under RCRA Subtitle C in the previous three years so this condition of the variance request has been met.

II. ISSUES AND DEFICIENCIES WITH RFAAP’S VARIANCE REQUEST - A.

RFAAP’s Request Fails to Satisfy the Criteria for a Variance - 3. Management of residuals – The commentor’s assertion that any residuals from recycling the HSM are not covered by the facility’s existing permits is incorrect. As Condition #3 of the variance request requires the generating facilities of the HSM to provide analytical testing results to the RFAAP facility prior to acceptance and arranging transportation these analytical results will ensure that no contaminants outside of what the RFAAP facility’s current permits allow for will be introduced into the tank farm and NAC/SAC units.

II. ISSUES AND DEFICIENCIES WITH RFAAP’S VARIANCE REQUEST - A.

RFAAP’s Request Fails to Satisfy the Criteria for a Variance - 4. Emergency preparedness –The contingency plan for the RFAAP facility covers the current facility operations, which

include the NAC/SAC unit and tank farm. As stated in previous responses, to ensure the HSM will meet the specifications for acceptance to be recycled Condition #3 of the variance requires the generating facilities of the HSM to provide analytical testing results to the RFAAP facility prior to acceptance and arranging transportation these analytical results will ensure that no contaminants outside of what the RFAAP facility's current permits allow for will be introduced into the tank farm and NAC/SAC units. This condition ensures that no hazardous contaminants above what is covered in the contingency plan are introduced. Additionally, the RFAAP facility's internal fire department is trained in emergency response for all parts of the facility's operations.

II. ISSUES AND DEFICIENCIES WITH RFAAP'S VARIANCE REQUEST - A.

RFAAP's Request Fails to Satisfy the Criteria for a Variance - 5. Containment – This comment has been addressed by the response to Comment #13 as well as the response to Comment #14, II. ISSUES AND DEFICIENCIES WITH RFAAP'S VARIANCE REQUEST - A. RFAAP's Request Fails to Satisfy the Criteria for a Variance - 1. Risks to proximate populations – Paragraph 3.

II. ISSUES AND DEFICIENCIES WITH RFAAP'S VARIANCE REQUEST -B. RFAAP's Requested Hazardous Waste Management Activity Threatens Communities, Workers, and the Environment - 1. Risks of spent acid – The majority of this comment related to the risks of the spent acid has been addressed by a previous response in I. BACKGROUND, B. Risks of Spent Acid. The comment on the risks of transportation is addressed by Condition #4 of the variance, which requires only certified hazardous waste transporter companies to be used to transport the HSM.

II. ISSUES AND DEFICIENCIES WITH RFAAP'S VARIANCE REQUEST -B. RFAAP's Requested Hazardous Waste Management Activity Threatens Communities, Workers, and the Environment - 2. Cumulative risks – This comment was addressed in a previous response to II. ISSUES AND DEFICIENCIES WITH RFAAP'S VARIANCE REQUEST - A. RFAAP's Request Fails to Satisfy the Criteria for a Variance - 1. Risks to proximate populations.

II. ISSUES AND DEFICIENCIES WITH RFAAP'S VARIANCE REQUEST - C. VDEQ Has Failed to Ensure Meaningful Public Participation – Please see the response to Comment #9.

Additionally, DEQ provided an enhanced public participation process above what is required in 9VAC20-60-1420 for variance requests but pre-emptively scheduling an informational briefing and public hearing and expanding the public comment period from the required 30 day to 60 days. As stated in previous responses, DEQ worked with the RFAAP facility to provide as much information as possible in the variance request without violating the requirements of ITAR to ensure operational security is maintained for the RFAAP facility. RFAAP submitted a revised 8700-12 form to address the incorrect amount of HSM covered under the variance request on November 13, 2024 to reflect the correct amount of 27,000,000 pounds instead of short tons. The revised 8700-12 form was included on DEQ's public notice website when it was received.

Comment 15 – Reference November 25, 2024 written comment by Akshata Dusa: Re: Public Comment – Radford Army Ammunition Plant Variance Request for Hazardous Waste Management (EPA ID# VA1210020730)

Dear Mr. Scott,

I urge the Department of Environmental Quality to deny the Radford Army Ammunition Plant's request for a variance to accept and manage 27 million pounds of spent acid per year.

The spent acid includes dangerous chemicals like nitric acid and sulfuric acid that threaten the health and safety of community members and the environment. The Radford Arsenal has a history of failing to properly manage these chemicals and has not provided enough information in its variance request to show that it will have adequate equipment and procedures in place to protect the public, workers, and the environment.

Unlike virgin acid, spent acid includes more impurities like energetic material and potentially other contaminants which the Arsenal has not disclosed to the public. Concealing this information keeps communities in the dark about the types and degree of risk posed by the Arsenal's request.

The area surrounding the Arsenal is an environmental justice community and has long suffered from the facility's releases of millions of pounds of pollutants, including from its hazardous waste burning operations. Young children and the elderly are uniquely at risk from toxic pollutants, and there are several day-care centers, elementary schools, and nursing homes near the facility. Allowing the Arsenal to import and manage millions of pounds of spent acid adds to the existing risks from its current operations and historic pollution and would be an environmental injustice.

The Department must deny the Radford Arsenal's variance request in order to protect the public and environment.

Sincerely,
Akshata Dusa

Response: As this comment is identical to Comment #13 please see the response to that comment.

Comment 16 – Reference November 25, 2024 written comment by Michael Lemke at Virginia Scientist-Community Interface: To:

Ashby Scott (ashby.scott@deq.virginia.gov)

Re:

Public Comment – Radford Army Ammunition Plant Variance Request for Hazardous Waste Management (EPA ID# VA1210020730)

Dear Mr. Scott,

We urge the Department of Environmental Quality to deny the Radford Army Ammunition Plant's request for a variance to accept and manage 27 million pounds of spent acid per year. The spent acid includes dangerous chemicals like nitric acid and sulfuric acid that threaten the health and safety of community members and the environment. The Radford Arsenal not only has a history of failing to properly manage these chemicals, but has not provided enough information

in its variance request to show that it will have adequate equipment and procedures in place to protect the public, workers, and the environment.

Unlike virgin acid, spent acid includes more impurities like energetic material and other contaminants which the Arsenal has not disclosed to the public. Concealing this information keeps communities in the dark about the types and degree of risk posed by the Arsenal's request. Exposure to chemicals like this and others are a potential explanation for why residents in the Appalachian region are at a slightly higher risk for upper respiratory cancers like thyroid cancer^{1,2}. We describe these findings in a report sent to the EPA during a recent public comment period and published on our website³.

The area surrounding the Arsenal is an environmental justice community and has long suffered from the facility's releases of millions of pounds of pollutants, including from its hazardous waste burning operations. Young children and the elderly are uniquely at risk from toxic pollutants, and there are several day-care centers, elementary schools, and nursing homes near the facility. Allowing the Arsenal to import and manage millions of pounds of spent acid adds to the existing risks from its current operations and historic pollution and would be an environmental injustice that puts community health at risk.

The Department must deny the Radford Arsenal's variance request in order to protect the public and environment.

Sincerely,
Virginia Scientist-Community Interface (V-SCI)
info@virginiasci.org
<https://virginiasci.org/>

Response: The majority of this comment is identical to Comment #13 and is addressed in the response.

However, the comment made on the slightly higher risk for thyroid cancers has been addressed in previous response to comment documents for the RFAAP facility's permits. Previously, DEQ contacted the Virginia Department of Health (VDH) regarding information on any increase in thyroid disease in the area around the facility. VDH provided a copy of a presentation made to the local community in 2017 which discussed the relative local and state averages of thyroid diseases and the probable causes. The presentation provided information which indicates that lifestyle choices are the primary driver of thyroid issues. VDH also confirmed that no local physicians had contacted VDH regarding unusual numbers of thyroid disease in the area.

Comment 17 – Reference November 25, 2024 written comment by Diana Fernandez: Dear Mr. Scott,

I urge the Department of Environmental Quality to deny the Radford Army Ammunition Plant's request for a variance to accept and manage 27 million pounds of spent acid per year.

The spent acid includes dangerous chemicals like nitric acid and sulfuric acid that threaten the

health and safety of community members and the environment. The Radford Arsenal has a history of failing to properly manage these chemicals and has not provided enough information in its variance request to show that it will have adequate equipment and procedures in place to protect the public, workers, and the environment.

Unlike virgin acid, spent acid includes more impurities like energetic material and potentially other contaminants which the Arsenal has not disclosed to the public. Concealing this information keeps communities in the dark about the types and degree of risk posed by the Arsenal's request.

The area surrounding the Arsenal is an environmental justice community and has long suffered from the facility's releases of millions of pounds of pollutants, including from its hazardous waste burning operations. Young children and the elderly are uniquely at risk from toxic pollutants, and there are several day-care centers, elementary schools, and nursing homes near the facility. Allowing the Arsenal to import and manage millions of pounds of spent acid adds to the existing risks from its current operations and historic pollution and would be an environmental injustice.

The Department must deny the Radford Arsenal's variance request in order to protect the public and environment.

Sincerely,

Diana Fernandez
2300 San Marcos St. Blacksburg VA
7034799216

Response: As this comment is identical to Comment #13, please see the response to that comment.

Comment 18 – Reference November 25, 2024 written comment by Travis Williams: Dear Mr. Scott,

I urge the Department of Environmental Quality to deny the Radford Army Ammunition Plant's request for a variance to accept and manage 27 million pounds of spent acid per year.

The spent acid includes dangerous chemicals like nitric acid and sulfuric acid that threaten the health and safety of community members and the environment. The Radford Arsenal has a history of failing to properly manage these chemicals and has not provided enough information in its variance request to show that it will have adequate equipment and procedures in place to protect the public, workers, and the environment.

Unlike virgin acid, spent acid includes more impurities like energetic material and potentially other contaminants which the Arsenal has not disclosed to the public. Concealing this information keeps communities in the dark about the types and degree of risk posed by the Arsenal's request.

The area surrounding the Arsenal is an environmental justice community and has long suffered from the facility's releases of millions of pounds of pollutants, including from its hazardous waste burning operations. Young children and the elderly are uniquely at risk from toxic pollutants, and there are several day-care centers, elementary schools, and nursing homes near the facility. Allowing the Arsenal to import and manage millions of pounds of spent acid adds to the existing risks from its current operations and historic pollution and would be an environmental injustice.

The Department must deny the Radford Arsenal's variance request in order to protect the public and environment.

Sincerely,

Dr. Travis L. Williams, PhD
1 West Jackson St Unit 317
Richmond, Virginia
Mobile: (831)-331-7578

Response: As this comment is identical to Comment #13, please see the response to that comment.

Comment 19 – Reference November 25, 2024 written comment by Georgia Doremus: Dear Mr. Scott,

As a concerned community member, I am writing to urge DEQ to deny the Radford Army Ammunition Plant's request for a variance to accept and manage 27 million pounds of spent acid per year.

In light of the most recent example of the missing totes filled with DBP swept into the New River and the fact that the facility waited over a month before informing the public or notifying nearby residents who may potentially be at risk of exposure to these toxic chemicals, the Arsenal has proven time and time again that they are not trustworthy neighbors in this community.

It is clear to me that this facility is already operating beyond capacity and from the little that has been made public about the damage to the Arsenal after Hurricane Helene, the idea of introducing massive amounts of spent acid into this equation sounds disastrous.

The Arsenal has not disclosed to the public anything about the nature of this spent acid and it feels that our community is getting tricked into thinking this is a recycling program when to the contrary, it seems this variance will additionally burden our community with more toxic waste.

Our community has long suffered at the hands of the Radford Arsenal. I am asking you to please take further steps to review this variance and the additional burdens it will place on our already fragile and damaged ecosystem.

We don't want any more hazardous chemicals entering our community. The EPA should be working to start scaling down the toxicity of the New River, not opening it up to take on additional hazards. The Department must deny the Radford Arsenal's variance request in order to protect the public and environment.

Sincerely,
Georgia Doremus
Blacksburg, VA

Response: The majority of this comment is identical to Comment #13 and is addressed in the response. The RFAAP facility's permits allow for the current operations and have been deemed protective. DEQ reminds the commentor the variance will cover HSM which is intended to be substitute for purchased spent and virgin acid used in the production process and is not an increase above and beyond the production capacity which the facility is currently permitted for.

Comment 20 – Reference November 25, 2024 written comment by Carolyn Reilly: Dear Mr. Scott,

I urge the Department of Environmental Quality to deny the Radford Army Ammunition Plant's request for a variance to accept and manage 27 million pounds of spent acid per year.

The spent acid includes dangerous chemicals like nitric acid and sulfuric acid that threaten the health and safety of community members and the environment. The Radford Arsenal has a history of failing to properly manage these chemicals and has not provided enough information in its variance request to show that it will have adequate equipment and procedures in place to protect the public, workers, and the environment.

Unlike virgin acid, spent acid includes more impurities like energetic material and potentially other contaminants which the Arsenal has not disclosed to the public. Concealing this information keeps communities in the dark about the types and degree of risk posed by the Arsenal's request.

The area surrounding the Arsenal is an environmental justice community and has long suffered from the facility's releases of millions of pounds of pollutants, including from its hazardous waste burning operations. Young children and the elderly are uniquely at risk from toxic pollutants, and there are several day-care centers, elementary schools, and nursing homes near the facility. Allowing the Arsenal to import and manage millions of pounds of spent acid adds to the existing risks from its current operations and historic pollution and would be an environmental injustice.

The Department must deny the Radford Arsenal's variance request in order to protect the public and environment.

Sincerely,
Carolyn Reilly
4097 Bethlehem Church Road Ne

Pilot, VA 24138
540-488-4358

Response: As this comment is identical to Comment #13, please see the response to that comment.

Comment 21 – Reference November 25, 2024 written comment by Kailey Watson: Dear Mr. Scott,

I urge the Department of Environmental Quality to deny the Radford Army Ammunition Plant's request for a variance to accept and manage 27 million pounds of spent acid per year.

The spent acid includes dangerous chemicals like nitric acid and sulfuric acid that threaten the health and safety of community members and the environment. The Radford Arsenal has a history of failing to properly manage these chemicals and has not provided enough information in its variance request to show that it will have adequate equipment and procedures in place to protect the public, workers, and the environment.

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The Department must deny the Radford Arsenal's variance request in order to protect the public and environment.

Sincerely,
Kailey Watson.
520-227-8058

Response: As this comment is identical to Comment #13, please see the response to that comment.

Comment 22 – Reference November 25, 2024 written comment by Katy Schurtz: Dear Mr. Scott,

I want to ask the Department of Environmental Quality to deny the Radford Army Ammunition Plant's request for a variance to accept and manage 27 million pounds of spent acid per year. The spent acid includes dangerous chemicals like nitric acid and sulfuric acid that threaten the

health and safety of community members and the environment. The Radford Arsenal has a history of failing to properly manage these chemicals and has not provided enough information in its variance request to show that it will have adequate equipment and procedures in place to protect the public, workers, and the environment.

Unlike virgin acid, spent acid includes more impurities like energetic material and potentially other contaminants which the Arsenal has not disclosed to the public. Concealing this information keeps communities in the dark about the types and degree of risk posed by the Arsenal's request.

The area surrounding the Arsenal is an environmental justice community and has long suffered from the facility's releases of millions of pounds of pollutants, including from its hazardous waste burning operations. Young children and the elderly are uniquely at risk from toxic pollutants, and there are several day-care centers, elementary schools, and nursing homes near the facility. Allowing the Arsenal to import and manage millions of pounds of spent acid adds to the existing risks from its current operations and historic pollution and would be an environmental injustice.

The Department must deny the Radford Arsenal's variance request in order to protect the public and our environment. Thank you for your time and consideration.

Best regards, Katy Schurtz

Response: As this comment is identical to Comment #13, please see the response to that comment.