



# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

[www.deq.virginia.gov](http://www.deq.virginia.gov)

Molly Joseph Ward  
Secretary of Natural Resources

David K. Paylor  
Director

(804) 698-4000  
1-800-592-5482

February 10, 2016

### VIA ELECTRONIC MAIL

Mr. Jay Stewart  
Environmental Manager  
Radford Army Ammunition Plant  
4050 Pepper's Ferry Road  
Radford, Virginia 24141

**Re: Radford Army Ammunition Plant, Radford, VA  
EPA ID No. VA1210020730, Open Burning Ground Risk Assessment for 2014 Soil  
Monitoring Event Date – Notice of Deficiency**

Dear Mr. Stewart,

The Virginia Department of Environmental Quality (DEQ) has completed the review of the Radford Army Ammunition Plant's (RAAP) electronic submission of the Open Burning Ground Soil Quantitative Human Health Risk Assessment (OGB Soil Event HHRA), dated October 14, 2015, and received on October 22, 2015. The OBG Soil HHRA was submitted in response to the *Open Burning Ground Risk Assessment - Timing and Methodologies in Conjunction with the Annual Soil Monitoring Event – Guidance* letter dated April 29, 2015 and the subsequent 60 day extension which was granted on August 21, 2015.

Based on the review of the OBG Soil HHRA the following comments have been made:

1. **Table 2** - Please correct the units for dioxin- the table lists Dioxin EPC as 5.018 mg/kg. The REAMS output shows that 0.00005018 mg/kg was used for risk calculations.
2. **Section 2.4. Screening of Constituents of Potential Concern Applied to Risk Assessment, Page 6** - While lead cannot be included in the quantitative risk assessment, the maximum detected concentration must be compared to the industrial screening level of 800 mg/kg. Per Table 2, the maximum detected concentration for lead is 610 mg/kg therefore no further discussion regarding lead is necessary at this time.
3. **Section 4.2. Recommendation and Future Evaluation, Page 16** - The last paragraph in this section indicates that the facility believes that this risk assessment is 'baseline' and that

quantitative risk assessment for annual soil monitoring will not be conducted again. The term 'baseline' as used by EPA and DEQ does not describe what this current risk assessment represents. In simplistic terms, a baseline risk assessment is representative of the risk from contaminated site in the absence of remediation. The current risk assessment is conducted to evaluate the status of ongoing contamination levels in the soils and groundwater to meet the permit requirements at an operating facility. Furthermore, DEQ has discussed this particular scenario where the current quantitative risk assessment (QRA) may be consulted to evaluate future annual soil monitoring results and DEQ has explicitly explained that for this risk assessment to be applicable to future monitoring results, several criteria must be met which are listed as:

- i. The list of contaminants detected are the same as used in this QRA,
- ii. The measured concentration of the contaminants is the same or lower than the concentrations used in this QRA (i.e. EPC),
- iii. The toxicity values, other chemical properties, VOC status, mutagen designation, and all the other exposure defaults used in the calculations are the same as used in this QRA,
- iv. Detection limits are the same or lower, *and*
- v. The screening values used are the same as in this QRA.

If any one of the above items are different than the results of the current QRA cannot be applied directly to evaluate new data. Please make a note of these important limitations. DEQ recognizes the limitations listed by the facility regarding REAMS software.

Based on the information provided by the facility and results of this risk assessment for the annual soil monitoring evaluation, the soils at the open burning ground meet the current risk based performance level of cumulative risk art or below  $1E-4$  and HI of 1 or below for an industrial worker.

Please review the comments and submit the requested response on a comment by comment basis within 30 days of your receipt of this letter (March 11, 2016). If more time is needed, please contact me at the email address or phone number listed below prior to the expiration of the 30 day deadline.

Additionally please provide an update on the status of the 2015 Soil Monitoring Event Report as the sampling was conducted in August of 2015 but DEQ has not received a copy of the report yet.

If you have any questions concerning the information provided in this letter, please contact me at (804) 698-4467 or by email at [Ashby.Scott@deq.virginia.gov](mailto:Ashby.Scott@deq.virginia.gov).

Mr. Jay Stewart  
Page 3  
February 10, 2016

Sincerely,

A handwritten signature in black ink, appearing to read 'Ashby R. Scott', written in a cursive style.

Ashby R. Scott  
Hazardous Waste Permit Writer  
Office of Financial Responsibility and Waste  
Programs

cc: Andrea Barbieri, EPA, Region III (3LC50)  
Aziz Farahmand, DEQ, Blue Ridge Regional Office  
Leslie A. Romanchik, DEQ, CO  
Sonal Iyer, DEQ, CO  
Hasan Keceli, DEQ, CO  
Russell McAvoy  
Julia King-Collins, DEQ, CO  
Central Hazardous Waste Files