



## NATIONAL GUARD BUREAU

111 SOUTH GEORGE MASON DRIVE  
ARLINGTON VA 22204-1382

November 10, 2021

Mr. Colin Mitchell  
Governmental Hazardous Waste Branch  
Alabama Department of Environmental Management  
1400 Coliseum Boulevard  
Montgomery, Alabama 36110-2400

Dear Mr. Mitchell:

Enclosed please find responses to your review comments dated February 15, 2021, on the Risk Assessment Report for Organizational Maintenance Shop 28 (OMS 28), Mobile, Alabama, dated 15 March 2019.

After I receive formal acceptance of these responses, I will provide revised pages incorporating these responses and annotated as requested in your letter.

If you have questions or require assistance, please contact me at 703-607-7955, [queenie.m.mungin-davis.civ@army.mil](mailto:queenie.m.mungin-davis.civ@army.mil).

Sincerely,

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Queenie M. Mungin-Davis, PG  
Program Manager, Cleanup and Restoration  
Branch, G-9 Army National Guard

Enclosure

**U.S. Army National Guard (ARNG) Responses provided November 10, 2021 to  
Alabama Department of Environmental Management (ADEM) Comments dated 25 February 2021 on  
Risk Assessment Report, Organizational Maintenance Shop 28 (OMS28), dated 15 March 2019**

**ADEM GENERAL COMMENT 1.** It does not appear that the text or the tables address the calculation of exposure intakes. Additionally, Tables 10 through 16 appear to be based upon the Risk Assessment Guidance for Superfund (RAGS) Part D tables. However, the last column titled "Intake Equation/Model Name" is missing. Please include this column which references the equation and/or model name that was used to calculate the exposure intakes.

**ARMY RESPONSE:** The Exposure Factor section of the text will be expanded to include a discussion of exposure intakes. Also, a column will be added to Tables 10 through 16 that references the equation used to calculate the exposure intake.

**ADEM GENERAL COMMENT 2.** Please include a signed certification page as required by Alabama Risk-Based Corrective Action (ARBCA) Guidance Section 3.6.

**ARMY RESPONSE:** The certification required in the ARBCA Guidance Manual, Section 3.6, entitled ARBCA-Evaluator Qualifications, applies to risk assessments prepared in accordance with the ARBCA Guidance Manual. These types of risk assessments are typically prepared for RCRA sites and installations that operate pursuant to an Alabama Hazardous Wastes Management and Minimization Act Corrective Action Permit, such as Fort Rucker, Redstone Arsenal, and Anniston Army Depot. As stated in the Risk Assessment Report, Section 1.3, page 1-3, the restoration activities at OMS 28 are conducted under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and the risk assessment follows principles and procedures consistent with published USEPA guidance documents as stated in the Risk Assessment Report Section 3.0, page 3-1, and Section 4.1, page 4-1. Therefore, signed certification as described in the ARBCA Guidance Manual is not applicable and will not be provided.

**ADEM HUMAN HEALTH RISK ASSESSMENT (HHRA) COMMENT 1.** The text states that the surface soil interval was chosen to be 0.5 – 1 ft. However, the ARBCA considers a surface soil interval to be 0-1 ft. Please provide the rationale for why the surface soil interval was modified.

**ARMY RESPONSE:** The text incorrectly stated the starting surface soil interval. It has been confirmed that the surface soil interval was 0 to 1 ft, and this change will be made in the text and on any affected tables.

**ADEM HHRA COMMENT 2.** Section 3.5, page 3-8. Please revise the text to include the following statement at the end of the first paragraph: "The toxicity criteria provided in USEPA's RSL tables follow this hierarchy and are updated twice per year."

**ARMY RESPONSE:** The statement will be added as requested.

**ADEM HHRA COMMENT 3.** Section 3.5, page 3-9. Please include a reference for the source of the subchronic toxicity factors.

**ARMY RESPONSE:** Sources for the subchronic toxicity factors are shown on Table 17 and will be added to the text.

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**ADEM HHRA COMMENT 4.** Section 3.6.1, pages 3-10, 3-11. Please provide a discussion of the future risks/hazards at Parcels A through F, including receptor, pathway, and magnitude of risk/hazard. This will facilitate discussion of the individual Site-Specific Screening Levels (SSSLs).

**ARMY RESPONSE:** A discussion of the future risks and hazards at Parcels A through F will be added to Section 3.6.1.

**ADEM HHRA COMMENT 5.** Section 3.6.2, pages 3-11, 3-12. See comment #4 regarding Section 3.6.1.

**ARMY RESPONSE:** A discussion of future risks and hazards at Parcels A through F will be added to Section 3.6.2.

**ADEM HHRA COMMENT 6.** Section 3.7, page 3-12. This section states that Hazard Quotients (HQs) of 0.1, 1, and 3 were used to develop SSSLs. Please clarify what a target HQ of 3 represents.

**ARMY RESPONSE:** The text was written to address the following statement included in the USEPA Region 4 Human Health Risk Assessment Supplemental Guidance (March 2018) concerning Site-Specific Remediation Goals (SSRGs): "The SSRGs section should contain a table of media-specific cleanup levels for each COC in each land use scenario evaluated in the BRA. The table should include potential cleanup levels for  $1 \times 10^{-6}$ ,  $1 \times 10^{-5}$ , and  $1 \times 10^{-4}$  cancer risk levels for each carcinogenic COC. The table should also include potential cleanup levels for each non-carcinogenic COC at HQ levels of 0.1, 1 and 3." Region 4 has adopted the HQ range of 0.1 to 3 to span the uncertainty, perhaps an order of magnitude or greater, inherent in the reference dose (RfD). RfD is explained further on Pages 7-5 and 7-6 in the Risk Assessment Guidance for Superfund Volume I Human Health Evaluation Manual (Part A), Interim Final, December 1989. The range of cleanup levels is provided to address specific chemicals for which the use of an HQ greater or less than 1 may be justified".

**ADEM HHRA COMMENT 7.** Section 3.8, page 3-14. The word "insignificant" is used in several locations to describe risk and hazard levels of different receptors. Please replace the word "insignificant" with "below target risk and hazard levels."

**ARMY RESPONSE:** The word "insignificant" will be replaced with the suggested text.

**ADEM SPECIFIC HHRA COMMENT 8.** Section 3.8, page 3-15. Please revise this section to include lists of constituents of concern that are contributing to the excess cancer risk/hazard for each of the receptors.

**ARMY RESPONSE:** The COCs identified will be included in the Human Health Summary Section.

**ADEM HHRA COMMENT 9.** Table 18. Please revise the table to include an additional column that includes the constituents of concern that are contributing to the cancer risk/hazard calculations.

**ARMY RESPONSE:** A column will be added to Table 18 that includes the COCs that are contributing to the risk and hazard calculations.

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**ADEM SPECIFIC HHRA COMMENT 10.** Appendix A, Tables A-1 through A-4. Please include the parcel designations on the appropriate tables for the vapor intrusion screening levels (VISLs) that are used.

**ARMY RESPONSE:** The parcel designations will be added to the tables.

**ADEM SCREENING LEVEL ECOLOGICAL RISK ASSESSMENT (SLERA) COMMENT 1.** Please define the acronym "RSV" in the acronym list.

**ARMY RESPONSE:** The acronym "RSV" will be defined in the document acronym list.

**ADEM SLERA COMMENT 2.** Section 4.2.2.3, page 4-5. The text states that five soil sampling locations within Parcel A exhibited tetrachloroethylene (PCE) concentrations in excess of the mammalian toxicity reference value (TRV), and four soil sampling locations did not exceed this TRV. Please revise the last paragraph in Section 4.2.2.3 to identify which soil sample locations did and did not exceed the mammalian TRV. Also, Table 1a and Figure 3 only list eight soil sampling locations for Parcel A. Please clarify the discrepancy between the eight soil sampling locations listed in Table 1a and the nine locations noted in Section 4.2.2.3.

**ARMY RESPONSE:** The text will be revised as requested to identify the sample locations where the mammalian TRV for PCE was exceeded and was not exceeded. The discrepancy regarding the number of soil sampling locations for Parcel A will be clarified. The risk assessment will also make clear that the risk due to PCE is not the responsibility of the government. Additional discussion regarding PCE will be presented in the forthcoming Feasibility Study being prepared for OMS 28.

**ADEM SLERA COMMENT 3.** Section 4.2.3, page 4-5. The SLERA concludes that an ecological receptor would be unlikely to be adversely affected by the hot spot area of PCE since this 0.015 hectare (ha) area is less than the receptor's home range. Although this conclusion may possibly be correct, the SLERA should demonstrate that this is the case. Please model exposure to several small mammals (herbivore and insectivore) that have small home ranges such as the deer mouse (0.062 ha) and short-tailed shrew (0.39 ha) based on the mean upper confidence level (UCL) and average PCE concentrations present within Parcel A (as well as adjacent areas such as soil results from Parcel F if needed to comprise an area equal to each receptor's home range). The estimated exposure doses ingested by these receptors should be compared to a mammalian no-observed-adverse-effect level (NOAEL) and possibly a lowest-observed-adverse-effect level (LOAEL) TRV (if exposure exceeds the NOAEL TRV).

**ARMY RESPONSE:** As requested, the Ecological Risk Assessment process will be continued beyond the SLERA into Step 3.1, Refinement of Preliminary COPECs, in order to further evaluate potential risk to small mammals from the PCE hotspot in soil. The risk assessment will also make clear that the risk due to PCE is not the responsibility of the government. Additional discussion regarding PCE will be presented in the forthcoming Feasibility Study being prepared for OMS 28.