



**Alabama Department of Environmental Management**  
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May 1, 2025

**ELECTRONICALLY TRANSMITTED**

Queenie Mungin-Davis, PG  
Program Manager, Cleanup Branch  
Army National Guard, G9  
Installations & Environment – Cleanup Branch  
111 S. George Mason Drive  
Arlington, VA 22204

**Re: ADEM Review and Evaluations: Feasibility Study Revision 1 for Organizational Maintenance Shop 28 [OMS 28] and Responses to Comments**, dated October 2, 2024  
Mobile OMS 28, Mobile County, AL  
DSMOA ID: 535-223-0031

Dear Ms. Mungin-Davis:

The Alabama Department of Environmental Management (ADEM or the Department) has completed the review of the Alabama Army National Guard's (ALARNG) Feasibility Study Revision 1 for OMS 28 and determined that it is incomplete and additional information and/or data is required.

Evaluations regarding ALARNG's subject document are provided in the attached document. Please note that if a comment-response evaluation is not included in the attachment, then the comment is resolved. A revised document or appropriate revisions addressing all comments should be submitted to the Department. If ALARNG chooses to submit revised pages, please date and code each page. For example, **25(r-5/15/25)** would be page 25 revised May 15, 2025.



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If questions should arise concerning this matter, please contact Mr. Colin Mitchell of the Governmental Hazardous Waste Branch at 334-271-7967 or via e-mail at [cjmitchell@adem.alabama.gov](mailto:cjmitchell@adem.alabama.gov).

Sincerely,



Ashley T. Mastin, Chief  
Governmental Hazardous Waste Branch  
Land Division

ATM/MCM/CJM/mlw

Attachment

cc/via email:	Melissa Montgomery, USACE	Melissa Shirley, USACE
	Brad Curvin, ALARNG	Evelyn Rogers, AECOM
	Vasi Kourlas, AECOM	Tim Renn, AECOM
	Mary Catherine Muscha, ADEM	Lee Thomas, ADEM

**ATTACHMENT**  
**ADEM Review Evaluations**  
**Feasibility Study Revision 1 for OMS 28**  
**Mobile, Alabama**

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**General Comments**

- 1) ADEM requests that ALARNG provide property ownership maps showing the location of the 25.66 acres that was conveyed to the Alabama Armory Commission in 1953. These maps should demonstrate that Parcel A was not part of the 25.66 acre tract. Also, please provide ownership records of Parcel A to support the rationale that the property was never part of OMS 28.

Additionally, insufficient soil and groundwater data have been collected from Parcel F in close enough proximity to the samples with elevated concentrations that were collected from Parcel A to verify the conclusion that the tetrachloroethylene (PCE) found on Parcel A is the sole source of the PCE in groundwater on Parcel F (Figures 1-5 through 1-9). No soil samples were collected immediately south of SB27 or SB31 on Parcel F. Similarly, no groundwater samples were collected on Parcel F immediately south of GW22, GW23 and GW19 (Figures 1-10 through 1-13). There is a notable data gap for both soil and groundwater in the area on Parcel F, lying between GW38, GW21 and GW17. Therefore, additional soil and groundwater samples are recommended in the aforementioned areas on Parcel F in order to verify that additional soil sources for PCE are not present on Parcel F.

- 3) Please see Comment 1 above in regard to the soil and groundwater data gaps. Also, please note that groundwater sampling data collected via temporary wells or direct push technology are considered screening tools. The only permanent monitoring well with groundwater data results that reported PCE concentrations exceeding the maximum contaminant level (MCL) is monitoring well 28-5, which is located on Parcel F. Please address.
- 4)
  - a) The Department has not concurred with ALARNG's conclusion that PCE or any contamination that possibly originated on the border of Parcels A and F is not the result of historic activities associated with OMS 28. This disagreement underlies the ongoing discussion regarding which Remedial Goals are necessary for which parcels and, subsequently, the scope of each Remedial Alternative presented in the Feasibility Study (FS).

It is the Department's understanding that ALARNG has operated on Parcel F (Mobile Airport Authority [MAA] property) with the cooperation of the MAA for many years now. Parcel F exhibits an extensive trichloroethylene (TCE) plume. Supplemental Data Gap Investigation (SDGI) Figures 4-6, 4-7, 4-8, and 5-1 show PCE and TCE contamination on Parcel F. The ALARNG agrees that at least a portion of the plume on Parcel F originates from activities on Parcel E (Mobile OMS 28).

The Department cannot reasonably approve of a Remedial Alternative that divides this plume and assigns responsibility to two parties, one of which remains unknown. Further, there is little evidence that another unknown party contaminated the soils of Parcel A with PCE. The contamination on Parcel A exists in close proximity to the parcels in which ALARNG activities have been conducted for many years. The evidence that PCE on Parcel A degraded into TCE and the two separate TCE plumes of Parcel A and Parcel E flowed directly towards each other and intermingled is insufficient. It could be equally surmised that TCE from Parcel E flowed northwest and now underlies the location of the PCE soil contamination. The current remedial alternatives are designed to bisect a plume into two parts. This design disregards the remediation of a portion of the plume. Therefore, please provide remedial goals for the PCE plume that underlies Parcel A.

- b) As discussed in the Supplemental Data Gap Investigation (SDGI), this surficial aquifer consists of a heterogeneous mix of sands, clays, and combinations of the two. This local stratigraphy of interfingering sands, clays, clayey sands and sandy clays, etc., form semi confining conditions that produce tortuous preferential pathways for contaminants in groundwater to travel. The following are influential in regard to the dimensions and shape of a contaminant plume: precipitation, hydraulic conductivity, groundwater flow velocity, groundwater flow direction, the number and frequency of contaminant releases, contaminant concentrations, and density. These factors may result in a seemingly discontinuous plume when it is actually connected by some relatively obscure sand seam or other feature that has not been located within such heterogeneous sediments due to the “hit or miss” nature of soil and groundwater sampling locations and techniques.

Only TCE was found in discrete groundwater sample OMS-28-GW43 (10 micrograms per liter [ $\mu\text{g/L}$ ]) in the lower surficial aquifer on Parcel B. Similarly, only TCE was found in discrete grab sample OMS-28-GW46 (8.1  $\mu\text{g/L}$ ) from the middle surficial aquifer on Parcel D. TCE concentrations at both locations were less than the TCE concentrations in discrete grab samples from hydraulically upgradient locations OMS-28-GW10 (68.9  $\mu\text{g/L}$ ) and OMS-28-GW13 (37.2  $\mu\text{g/L}$ ), which were also collected from the middle surficial aquifer on Parcel F. Only TCE (i.e., no PCE) was reported in samples collected from OMS-28-GW10 and OMS-28-GW13. While TCE is a degradation product of the reductive dechlorination of PCE, its presence in GW43 and GW46 does not indicate that it was generated by the breakdown of PCE when considering the potentiometric surface of the surficial aquifer. Therefore, please provide remedial goals for the contaminants present in Parcel B.

- c) The Department takes a more conservative approach regarding the protection of potential receptors to groundwater contaminants. Groundwater contaminant plume boundaries are extended to the nearest downgradient well with concentrations below screening levels or MCLs. Without sampling points placed on the parcel boundary, the Department cannot determine if that contamination has not migrated into these adjacent parcels.

Please submit boundary-line data demonstrating that contamination has not migrated offsite as part of any remedial actions. Also, please provide remedial goals for the contaminants present in Parcel C.

- d) The parcels adjacent to Parcel G (Parcels A, B, and F) exhibit unacceptable risks (Table 18 of the Risk Assessment Report Revision 1). Section 3.6.2 of the Risk Assessment Report states that no receptors were evaluated at Parcel G because chemicals of potential concern (COPCs) were not identified in any media sampled at this parcel. However, Figures 1-10, 1-11, and 1-13 of the FS indicate that the PCE plume underlying Parcels A, B, and F extends into Parcel G. Therefore, please provide remedial goals for Parcel G.
- 6) ADEM notes that the SDGI did not propose to exclude PCE from the chemicals of concern (COCs) requiring remediation. This unexpected change occurred in the FS. If this is the path chosen, then the lateral extent of PCE contamination in soil and groundwater is not sufficiently delineated in the surficial aquifer. Please address.
- 7) The subject document states that Remedial Investigation (RI) Report Revision 2 was approved by ADEM in a letter dated August 8, 2023. However, the document was approved in August 2013. ADEM received the ALARNG letter regarding PCE contamination on September 10, 2020, after the SDGI had been approved on January 31, 2020. ADEM notes that neither the approved RI nor the SDGI excluded PCE as a COC. Please address.

ADEM General Comment 7 does not suggest that ALARNG should install wells that breach the confining unit. While remediating TCE separately from PCE in a commingled plume is impractical, complete delineation of the PCE plume is incomplete if the two plumes are addressed separately. This will require additional monitoring wells to be installed. Regardless of whether wells are installed for plume delineation or for monitoring of remedial progress, the previous well installation recommendations still apply. Please address.

- 8) The topographic maps referenced in the SDGI (Figures 3-2 and 3-3) did not include groundwater elevation data for MW-8 as it was reportedly damaged. Historic groundwater elevations for MW-8 (prior to its damage) indicate that the potentiometric surface elevation of the shallow groundwater table at this location is at a higher elevation than MW-9 and frequently higher than most other wells at the site. Groundwater elevation data from this well are essential to producing more accurate potentiometric surface maps and for the analysis of the contaminant plume. Please address.
- 9) The damaged wells should be able to be located as they have been surveyed and were located during the SDGI. Please repair or abandon these wells as soon as possible. These damaged wells, especially deep well OMS-28-6, can provide a potential vertical conduit for contamination of the deeper aquifer from the surficial aquifer and/or surface water.

#### New Comment

- 14) Section 4.1.2.1.1 states, "With regard to the affected offsite undeveloped parcels, the ALARNG can only recommend to the affected landowners that land use controls (LUCs) similar to those proposed for Parcel E be implemented." Figure 4-1 illustrates the proposed LUC boundaries. Please provide copies of correspondence between ALARNG and these

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offsite property owners identified by Remedial Alternative 2. The inability to implement LUCs on the properties shown in Figure 4-1 would make Remedial Alternative 2 impracticable. ALARNG is obligated to effectively remediate any offsite contamination associated with site activities.