



Alabama Department of Environmental Management
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July 5, 2024

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 Comment: *Feasibility Study for Organizational Maintenance Shop 28 (OMS 28)*, dated October 30, 2023
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 (FS) for OMS 28* and determined that it is incomplete and additional information and/or data is required.

Comments regarding ALARNG's subject document are provided in the attached document. A revised document or appropriate revisions addressing all comments should be submitted to the Department within 45 days of receipt of this letter. If ALARNG chooses to submit revised pages, please date and code each page. For example, **25(r-8/15/24)** would be page 25 revised August 15, 2024.



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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.

Sincerely,



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

ATM/CJM/mlw

Attachment

cc/via email: Melissa Shirley, USACE
Steve Holt, AECOM
Tim Renn, AECOM
Mary Catherine Muscha, ADEM

Brad Curvin, ALARNG
Vasi Kourlas, AECOM
Lee Thomas, ADEM

ATTACHMENT
ADEM Review Comments
Feasibility Study for OMS 28
Mobile, Alabama

General Comments

- 1) Perchloroethylene (PCE) and trichloroethylene (TCE) contamination is present in soil and groundwater in the following parcels: A, B, C, D, E, F, and G (Figures 1-10, 1-11, and 1-12). ALARNG states that the PCE contamination is unrelated to Mobile OMS 28 site activities and is, therefore, not the responsibility of ALARNG. Alternatives presented by ALARNG in this Feasibility Study only address TCE contamination in soil and groundwater.

Parcel F is often referred to as “Mobile Airport Authority (MAA) Property.” Brookley Air Force Base (AFB) was closed in 1969, and the MAA was created in 1972 when Department of Defense (DoD) returned Brookley AFB to the City of Mobile (Section 1.3.1).

Alabama Armory Commission owns the 5.9 acres of property on which the former OMS 28 is located. Currently, ALARNG operates the Field Maintenance Shop (FMS) at this site. The Alabama Armory Commission has owned this property since 1953 when the City of Mobile conveyed 25.66 acres to the Commission. In 2002, 6.43 acres west of the OMS 28 property reverted back to the City and the City subsequently conveyed the property to the MAA (SAIC, May 2013).

Please revise the FS to state whether or not Parcel A was included in the 6.43 acres west of OMS 28 that reverted back to the City of Mobile. If it was not, then a more extensive property ownership records search may be appropriate to determine who previously owned Parcels A, B and D from 1969, when Brookley AFB was closed and returned to the City of Mobile, to the present. Please submit this information to ADEM for review.

- 2) Please include any historical figures/maps that display a distinct visual boundary between Parcels A and F during the time of the contaminant release.
- 3) The FS states that according to an interview with a retired ALARNG employee, a cleaning agent named “gunk” was used at Mobile OMS 28 in the 1960’s and 1970’s. According to Material Safety Data Sheet, “gunk” is largely composed of PCE. This would indicate that PCE was used on site at OMS 28. Please address.
- 4) Table 2-1 lists the remedial goals (RGs) by parcel. RGs are not provided for Parcels A, B, C, F, G, and H for various reasons stated in the table’s footnotes. Please see the comments below regarding these footnotes. Also, General Comment 7 below further addresses groundwater sampling at OMS 28.

- a. Parcel A: *“RGs are not established for Parcel A because impacted groundwater is not the result of historical activities conducted on Parcel E (refer to Section 1.3.7.2 and Appendix C).”*

The Department does not agree with the conclusion that groundwater contamination on Parcel A is not the result of historical activities. The approximate groundwater plume presented in the Middle Surficial Aquifer sampling results shows a continuous plume extending from Parcel E into Parcel A. Please address.

- b. Parcel B: *“RGs are not established for Parcel B because impacted groundwater is the result of the breakdown of PCE from Parcel A to TCE on Parcel B (refer to Section 1.3.7.2).”*

The Department does not agree with the conclusion that groundwater contamination on Parcel B is the result of PCE contamination from Parcel A migrating to Parcel B and breaking down into TCE. The groundwater plume presented in the Middle Surficial Aquifer sampling results shows the extent of the plume ending on the boundary between Parcels A and B. However, this plume boundary is interpolated between several monitoring wells. If the plume is assumed to be migrating from Parcel A to Parcel B, it must be assumed that the plume extends to the next downgradient well that exhibits concentrations below respective Maximum Contaminant Levels (MCLs). Please address.

- c. Parcel C: *“RGs are not established for Parcel C because groundwater results collected during the [Supplemental Data Gap Investigation] have never exceeded the maximum contaminant levels (MCLs) (refer to Section 1.3.7.2).”*

Groundwater monitoring wells located on Parcels B and D exhibit concentrations above MCLs in several wells. These portions of the plume are visualized as an interpolated plume centered around a single well. If these plume boundaries are extended to the nearest downgradient well that exhibits concentrations below respective MCLs, it is possible that the groundwater contamination on Parcels B and D will extend into Parcel C. Please address.

- d. Parcels G and H: *“There was no risk identified for Parcels G or H.”*

Please revise this statement to reflect whether or not an *acceptable* risk is present at Parcels G or H.

- 5) Please address the following comments regarding the land use control (LUC) boundary proposed as Alternative 2 in Figure 4-1:

- a. The boundary is drawn around the approximate interpolated MCL boundary for the TCE contaminant plume. This aspect of the remedy will be impossible to

evaluate unless this exact boundary is verified with samples collected from a series of groundwater monitoring wells placed along the curving LUC boundary. If the plume were to extend beyond this boundary in the future, or if the boundary is not exactly correct, the remedy would be considered ineffective and would have to be modified.

- b. As stated in Section 4.1.2.1, the LUC boundary extends into parcels that are not owned by ALARNG. ALARNG cannot implement LUCs on non-federally-owned property without the permission of the landowner(s). Therefore, ALARNG should demonstrate that the landowner(s) are willing to implement and enforce the LUCs as proposed in ALARNG's selected remedy.
- 6) Please see General Comment 5(b) above and revise Alternative 3 accordingly.
 - 7) The current groundwater monitoring well network in the surficial aquifer is insufficient to capture the extent of the groundwater contaminant plume. The monitoring wells are screened too shallow in the surficial aquifer, and the three deep wells are screened below the subject confining unit. Additional upper/middle surficial aquifer monitoring wells should be installed along with wells in the lower surficial aquifer around the periphery of the plume to track plume migration and effectiveness of any proposed remedy. Deeper wells should be installed such that their screened intervals penetrate the gray stiff clay (reportedly encountered between approximately 16 and 35 feet below land surface [bls]) by approximately 2 to 3 feet. This would ensure that chlorinated solvents can be detected at the top of the confining unit where the density of the contaminants drives them to migrate. The Department notes that Alternative 2 includes provisions for eight additional monitoring wells. Please address.
 - 8) The groundwater elevation reported at B-13/MW-9 on Figure 1-4 may indicate a perched water zone. This relatively high groundwater elevation appears to be the only data point in the western portion of the investigation area that indicates an eastward groundwater flow. Please provide any additional information or data points that support ALARNG's assumptions regarding the groundwater flow in the western portion of the investigation area.
 - 9) Throughout the document, the text states that monitoring wells OMS-28-2 and OMS-28-6 have been destroyed. These wells should be abandoned as they can provide a vertical conduit for contaminated groundwater from the surficial aquifer to migrate into the deeper aquifer. Please address. Also, monitoring well MW-8 was reported to be damaged. Damaged wells must be repaired or replaced in accordance with the *Alabama Environmental Investigation and Remediation Guidance (AEIRG)*. Please provide the statuses of all damaged or destroyed wells.

Human Health Risk Assessment Comments

- 10) **Section 1.3.6.1.2 – Future Exposure Scenario:** The text states, "...there is some level of carcinogenic risk and/or non-carcinogenic hazard for future receptors...." Please define a

range of risk and/or Hazard Index estimates along with the appropriate receptor (e.g., future construction worker: 2E-05, future adult resident: 5E-05).

- 11) **Section 2.2 – Remedial Action Objectives:** The text states, “While Parcel C has an identified future risk to a construction work...” Please revise the text to state “worker” instead of “work.”

Screening Level Ecological Risk Assessment Comments

- 12) **Section 2.2 – Remedial Action Objectives:** This section states, “In addition, there is no ecological risk.” This sentence should be removed from the middle of this paragraph as it is describing human health risk and is also not consistent with the description in Section 1.3.6, which states, “...potential for exposure and risk to ecological receptors is minimal.” Please address.
- 13) **Section 5.1.1 – Overall Protection of Human Health and the Environment:** The text states that “... there is no quantifiable risk to ecological receptors at this site (AECOM, 2023).” However, Section 1.3.6.2 states, “...potential for exposure and risk to ecological receptors is minimal. PCE in surface soil, the only COPEC identified and located on Parcel A, warrants identification as a final COPEC due to its high concentrations within a small area of surface soil.” Please revise Section 5 to be consistent with the ecological risk assessment report conclusions.