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July 29, 2019

Mr. Jason Wilson Chief  
c/o Mrs. Brandi Little  
Governmental Hazardous Waste Branch Land Division  
Alabama Department of Environmental Management  
P.O. Box 301463  
Montgomery, Alabama 36130-1463

SUBJECT: Response to ADEM Review and Comments dated June 18, 2019 RE: Corrective Measures Effectiveness Report, May 2017 to May 2018 Monitoring Events, Landfill 3 and FANWR Parcels 80(6) and 229(7); dated October 26, 2018

Dear Mr. Wilson:

On behalf of the McClellan Development Authority (MDA), Matrix Environmental Services, LLC (MES) is pleased to submit the Response to ADEM Comments dated June 18, 2019 associated with the Corrective Measures Effectiveness Report, May 2017 to May 2018 Monitoring Events, Landfill 3 and FANWR Parcels 80(6) and 229(7); dated October 26, 2018. Also included are two copies of the revised document and a redline strike out version to assist in your review.

Two hard copies have been provided to Mrs. Brandi Little. Please contact me at (256) 847-0780 should you have any questions or comments.

Sincerely,  
**MATRIX ENVIRONMENTAL SERVICES, LLC**

A handwritten signature in black ink that reads "Richard Satkin".

Richard Satkin, P.G  
McClellan Program Manager

Enclosure

CC: Mrs. Brandi Little, ADEM (two paper copies)  
Mr. Jason Odom, MDA (transmittal letter only)  
Ms. Lisa Holstein, U.S. Army (one paper copy)  
MES Files (one paper copy)

## **Response to ADEM Review and Comments dated June 18, 2019**

RE: *Corrective Measures Effectiveness Report, May 2017 to May 2018 Monitoring Events, Landfill 3 and FANWR, Parcels 80(6) and 229(7); dated October 26, 2018*

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### **General Comment 1**

*As stated in ADEM's June 14, 2019 comment letter for the Corrective Measures Implementation Report (CMIR), additional transition zone wells should be installed west of the site (i.e., West of Highway 21). These wells are necessary to: 1) define the western boundary of the plume in the transition zone; 2) verify that the groundwater flow direction is controlled by the fault lying west of Highway 21; and, 3) verify that the groundwater plume in the transition zone is not migrating to offsite properties west of the fault. Furthermore, samples from additional downgradient transition zone wells would help assess the effectiveness of the corrective measures on offsite groundwater. Please address.*

### **MDA Response:**

As stated in the RTCs on LF3 Groundwater CMIR, the MDA believes installation and sampling of additional off-site transition zone wells is unnecessary. There are several existing off-site transition wells that provide definition of the contaminant plume (OLF-G18, OLF-G26, OLF-G19, OLF-G12, OLF-G24, OLF-G49) and sufficient detail to monitor the effectiveness of the remedy west of the landfill site. In addition, MDA recently installed transition wells OLF-G77 and OLF-G78 and multi-level wells OLF-G71, OLF-G72, OLF-G73, and OLF-G74 screened in both the transition and bedrock zones west of the landfill between the landfill boundary and Alabama Highway 21 that provide further detail as to the effectiveness of the remedy. Furthermore, one of the main conclusions and recommendations of the RFI which ADEM concurred with was that “*no further actions with respect to environmental data collection are required to adequately define the nature and extent of contamination at the Site*”. The MDA has concerns about requiring additional wells at the CMIR stage of the remediation process as these issues should have been raised during the RFI and/or CMIP phases. Additional well installation to ‘completely’ define the western boundary of the plume in the transition is unwarranted in our opinion.

Our conceptual site model is that the plume is bounded to the west by the Jacksonville Fault, which generally runs parallel to and slightly west of Highway 21. Since approval of the RFI and CMIP there has been no new information to alter our conceptual site model of groundwater flow at the Site. Although as the 2008 CMIP does state that wells in the transition zone did not bound the plume west of the site, a number of wells were installed west of the fault line during the RFI process and with one exception were all non-detect. This was the basis for concentrating remedial efforts in the area between Landfill 3 and the fault line (Highway 21). MDA has agreed to add additional monitoring wells to the compliance monitoring network and three (3) of these wells OLF-G19, OLF-G26, and OLF-G49 are transition wells located either in or west of Highway 21.

### **General Comment 2**

*Baseline groundwater samples were required to be obtained from 18 monitoring wells prior to injection of the groundwater amendments per the underground injection control (UIC) permit dated January 27, 2017. This data was not provided in the CMIR or the subject CMER. Please provide this data for comparative purposes.*

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### **MDA Response:**

Baseline groundwater sampling results have been added to Appendix D.

### **General Comment 3**

*The Corrective Measures Implementation Plan and CMIR list two of the chemicals of concern as 1,1,2,2-tetrachloroethane (1,1,2,2-TeCA) and tetrachloroethene (PCE). The subject CMER lists these chemicals of concern as 1,1,2,2-PCA and PERC. While these are also correct, please revise the CMER to be consistent with the CMIP and CMIR.*

### **MDA Response:**

Text has been added to clarify acronym usage; 1,1,2,2-PCA and PERC will be used in this CMER and future CMERs.

### **Specific Comment 1**

*Appendix D. The text states that analytical data is presented in Appendix D. While sampling data is presented in Appendix D, laboratory analytical reports are not included. Please address.*

### **MDA Response:**

Appendix D has been revised to include laboratory analytical reports.