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January 17, 2024

Mr. Jason Wilson, Chief Solid Waste Branch
Alabama Department of Environmental Management
Solid Waste Branch, Land Division
P.O. Box 301463
Montgomery, Alabama 36130-1463

SUBJECT: **Groundwater Monitoring Report, September 2023**
Butler Green Industrial Landfill, Parcel 175(5) (Permit No. 08-02)
McClellan, Anniston, Alabama

Dear Mr. Wilson,

On behalf of the McClellan Development Authority (MDA), Matrix Environmental Services, LLC (MES) is pleased to submit the Groundwater Monitoring Report for the September 2023 semi-annual groundwater monitoring event at the Butler Green Industrial Landfill, Parcel 175(5). This report was completed in accordance with the requirements of the Solid Waste Disposal Facility Permit No. 08-02 for the Butler Green Industrial Landfill, the *Alabama Department of Environmental Management (ADEM) Land Division Solid Waste Program Division 13 Regulations* (*ADEM Division 13 Regulations*), and the *Alabama Groundwater Monitoring Reporting Guidance for Solid Waste Facilities*.

The September 2023 groundwater monitoring event was performed under the Assessment Monitoring program. During this monitoring event, there were the following SSI occurrences: cobalt and nickel in well LF4-MW1; cobalt, nickel, and zinc in well LF4-MW2 and chlorobenzene, and trichloroethene in well LF4-MW4. Analytical results were consistent with historical detections. This letter serves to inform you of the SSIs pursuant to subparagraph (2)(n) of Code Rule 335-13-4-27 of the *ADEM Division 13 Regulations*.

The concentrations of the SSI constituents were compared to the groundwater protection standards, i.e., the maximum contaminant levels (MCLs) or to background in the case of cobalt which does not have a promulgated MCL. The MDA proposes the Assessment Monitoring program continue with the next semi-annual groundwater monitoring event scheduled for March 2024.

Please contact me at (256) 847-0780 (Anniston) or (770) 594-0331 (Atlanta) should you have any questions or comments.

Sincerely,

Matrix Environmental Services, LLC

Richard Satkin, P.G.
McClellan Program Manager

CC: Mr. Jason Odom, MDA (transmittal letter only)
Ms. Heather Jones, ADEM
Ms. Lisa Holstein, Army (three paper and 2 electronic copies)
MES Project File

Groundwater Monitoring Report, September 2023
Butler Green Industrial Landfill, Parcel 175(5)
(Permit No. 08-02)
McClellan, Anniston, Alabama

Prepared for:

McCLELLAN
DEVELOPMENT AUTHORITY

Prepared by:

Matrix
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January 2024

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LIST OF ABBREVIATIONS AND ACRONYMS

ADEM	Alabama Department of Environmental Management
ADEM Division 7 Regulations	*Alabama Department of Environmental Management Water Division Water Supply Program Division 335-7*
ADEM Division 13 Regulations	*Alabama Department of Environmental Management (ADEM) Land Division Solid Waste Program Division 13 Regulations*
AGMRG	*Alabama Groundwater Monitoring Reporting Guidance for Solid Waste Facilities*
ARBCA	*Alabama Risk-Based Corrective Action Guidance Manual*
Army	United States Department of the Army
BTOC	Below top of casing
CA	Cleanup agreement
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CUSUM	Shewhart Cumulative Sum
DO	Dissolved oxygen
DVS	Data Validation Summary
EPA	United States Environmental Protection Agency
ESCA	Environmental Services Cooperative Agreement
Fill Area Definition Report	*Draft Final Site Investigation and Fill Area Definition Report, Parcels 78(6), 79(6), 80(6), 81(5), 175(5), 230(7), 227(7), 126(7), 229(7), 231(7), 233(7), and 82(7), Fort McClellan, Calhoun County, Alabama, Revision 1*
Final EE/CA	*Final Revision 1 Engineering Evaluation/Cost Analysis Landfills and Fill Areas, Landfills 1, 2, 4, and Industrial Landfill, Parcels 78(6), 79(6), 81(5), 175(5), McClellan, Anniston, Alabama*
ft	feet
ft/ft	feet per foot
GWMR	Groundwater monitoring report
h	decision internal value
ICP	Inductively-coupled plasma
Industrial Landfill	Butler Green Industrial Landfill, Parcel 175(5)
IT	IT Corporation
k	reference value
Landfill 4	Landfill 4, Parcel 81(5)
McClellan	McClellan, Anniston, Alabama
MCL	Maximum contaminant level
MDA	McClellan Development Authority
MDL	Method detection limit
MES	Matrix Environmental Services, LLC
µg/L	micrograms per liter
ORP	Oxidation-reduction potential
Permit	Solid Waste Disposal Facility Permit No. 08-02
QAP	*Quality Assurance Plan*
RBTL	Risk-based target level
RL	Reporting limit
SCL	Shewhart control limit

Shaw	Shaw Environmental, Inc.
Site	Landfill 4, Parcel 81(5) and the Butler Green Industrial Landfill, 175(5)
SSI	Statistically Significant Increase
TCE	trichloroethene
TDS	Total dissolved solids
U.S.	United States
VOC	Volatile Organic Compound
Zi	standardized means

EXECUTIVE SUMMARY

Matrix Environmental Services, L.L.C. (MES) has prepared this groundwater monitoring report (GWMR) on behalf of the McClellan Development Authority (MDA) to meet the requirements of the Solid Waste Disposal Facility Permit No. 08-02 (permit) for the Butler Green Industrial Landfill, formerly the McClellan Industrial Landfill, Parcel 175(5) located within McClellan, Anniston, Alabama (McClellan), formerly known as Fort McClellan. Figure 1-1 shows a map of McClellan and Figure 1-2 shows the parcel location. As shown in Figure 1-2, the Butler Green Industrial Landfill, Parcel 175(5) (Industrial Landfill) is located in the northeast corner of Landfill 4, Parcel 81(5) (Landfill 4). The area was permitted as the McClellan Industrial Landfill (Permit No. 08-02). In July 2017, the MDA requested the Alabama Department of Environmental Management (ADEM) to change the name of the Industrial Landfill from the McClellan Industrial Landfill to the Butler Green Industrial Landfill. This request was granted in a letter from the Department dated August 23, 2017. In this GWMR Landfill 4 and the Industrial Landfill will collectively be referred to as "the Site". The MDA completed capping and closing of the landfill in March 2022 and no longer accepts waste for disposal.

This GWMR presents results related to the implementation of groundwater monitoring under the requirements of the permit and the *Alabama Department of Environmental Management Land Division Solid Waste Program Division 13 Regulations* (*ADEM Division 13 Regulations*) for solid waste facilities.

The September 2023 monitoring event was performed under the Assessment Monitoring program, described in Section 2.4.3. Groundwater samples were collected from five residuum monitoring wells at the Site on September 6, 2023. The groundwater samples were analyzed for the constituents listed in *Appendix I* of ADEM Admin. Code 335-13-4-27 of the *ADEM Division 13 Regulations* (Table 2-2).

Groundwater elevations showed groundwater at the Site flowed in a north and northwesterly direction. The horizontal hydraulic gradients were low over the Site, ranging from 0.007 feet per foot (ft/ft) to 0.019 ft/ft, averaging 0.013 ft/ft Site-wide.

During the September 2023 monitoring event, volatile organic compounds chlorobenzene and trichloroethene were detected in well LF4-MW4. All VOC detections are considered statistically significant increase (SSI) occurrences. VOC concentrations detected in LF4-MW4 were consistent with historical results and below maximum contaminant levels (MCLs).

To evaluate whether there were any SSI occurrences for metal constituents in groundwater at the Site, a statistical analysis was performed on the metals data using Shewhart Cumulative Sum (CUSUM) control charts in accordance with Code Rule 335-13-4-27, subparagraph (2) of the *ADEM Division 13 Regulations* and applicable United States Environmental Protection Agency (EPA) guidance. The statistical analysis showed SSI occurrences for cobalt and nickel in well LF4-MW1 and cobalt, nickel, and zinc in well LF4-MW2. All results were consistent with historical data.

The concentrations of the SSI constituents were compared to the groundwater protection

standards for the Site. MCLs, as listed in the *Alabama Department of Environmental Management Water Division Water Supply Program Division 335-7 Regulations* (*ADEM Division 7 Regulations*), were used as the groundwater protection standards for the SSIs. Nickel, zinc, chlorobenzene, and trichloroethene concentrations were below MCLs. Because there is no promulgated MCL for cobalt, the concentration for the cobalt SSI in wells LF4-MW1 and LF4-MW2 were compared to the cobalt concentration for background well LF4-MW5. The concentration for metal SSI constituent cobalt in LF4-MW1 (23 µg/L) and LF4-MW2 (140 µg/L) were greater than the background concentration (10.5 µg/L).

MDA recommends that natural attenuation and land use controls be allowed to continue, and the site continue to be monitored on a semi-annual basis under the assessment monitoring program.

1.0 INTRODUCTION

Matrix Environmental Services, L.L.C. (MES) has prepared this groundwater monitoring report (GWMR) on behalf of the McClellan Development Authority (MDA) to meet the requirements of the Solid Waste Disposal Facility Permit No. 08-02 (permit) for the Butler Green Industrial Landfill, formerly the McClellan Industrial Landfill, Parcel 175(5) located within McClellan, Anniston, Alabama (McClellan), formerly known as Fort McClellan. Figure 1-1 shows a map of McClellan and Figure 1-2 shows the parcel location. As shown in Figure 1-2, the Butler Green Industrial Landfill, Parcel 175(5) (Industrial Landfill) is located in the northeast corner of Landfill 4, Parcel 81(5) (Landfill 4). The area was permitted as the McClellan Industrial Landfill (Permit No. 08-02). In July 2017, the MDA requested the Alabama Department of Environmental Management (ADEM) to change the name of the Industrial Landfill from the McClellan Industrial Landfill to the Butler Green Industrial Landfill. This request was granted in a letter from the Department dated August 23, 2017(ADEM, 2017). In this GWMR Landfill 4 and the Industrial Landfill will collectively be referred to as "the Site".

This GWMR presents results related to the implementation of groundwater monitoring under the requirements of the permit and the *Alabama Department of Environmental Management (ADEM) Land Division Solid Waste Program Division 13 Regulations* (*ADEM Division 13 Regulations*) for solid waste facilities.

1.1 Purpose and Objectives

The purpose of this GWMR is to describe the activities performed and present the results of the September 2023 groundwater monitoring event. The objectives of the September 2023 groundwater monitoring event and this GWMR include the following:

- Summarize data from previous monitoring events and present analytical results for the September 2023 monitoring event.
- Evaluate the groundwater analytical data and demonstrate compliance with the permit and the *ADEM Division 13 Regulations*.

1.2 Report Organization

Section 2.0 of this report presents a summary of the background information including the parcel location, description, and physical characteristics. Section 3.0 presents a summary of the September 2023 sampling activities. Section 4.0 describes the results of the September 2023 sampling activities. Section 5.0 presents the evaluation of the groundwater data. Section 6.0 presents the conclusions and recommendations. Section 7.0 provides the references cited in this report. Tables and figures follow the text and the appendices are organized as follow:

Appendix A Groundwater Sample Collection Logs, September 2023
Appendix B Chains-of-Custody, September 2023
Appendix C Data Validation Summary and Laboratory Report
Appendix D Statistical Evaluation of Metals Data, September 2023

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2.0 BACKGROUND

This section provides background information about the Site. Parts of this section are adapted from the *Final Revision 1 Engineering Evaluation/Cost Analysis Landfills and Fill Areas, Landfills 1, 2, 4, and Industrial Landfill, Parcels 78(6), 79(6), 81(5), 175(5), McClellan, Anniston, Alabama* (*Final EE/CA*) (MES, 2006) and the *Draft Final Site Investigation and Fill Area Definition Report, Parcels 78(6), 79(6), 80(6), 81(5), 175(5), 230(7), 227(7), 126(7), 229(7), 231(7), 233(7), and 82(7), Fort McClellan, Calhoun County, Alabama, Revision 1* (*Fill Area Definition Report*) (IT Corporation [IT], 2002a).

2.1 Site Location and Description

Landfill 4 operated as the main sanitary landfill for McClellan from 1967 to 1994. The unlined landfill used trench and fill as the method of disposal and was not equipped with a leachate collection system. The landfill reportedly received the McClellan household garbage, construction and demolition debris, oil-contaminated soil, and dead animals. One pound of waste Diazinon dust (pesticide) was also reportedly disposed at Landfill 4 and the Industrial Landfill (IT, 2002).

The landfill was closed in April 1994 because of changes in the permit requirements governing sanitary landfills, including that sanitary landfills be lined. A temporary permit was issued to the Army in 1993 to dispose of industrial and construction debris at the landfill. A permanent industrial landfill permit (Permit Number 08-02) allowing the disposal of waste with a 30-ton per day limit in a previously unused section of the landfill property was issued in October 1995. This permit was transferred from the Army to the MDA (MES, 2006). The permit was renewed by the MDA on January 5, 2016, effective January 9, 2016, and expired on January 8, 2021. The total permitted disposal area for Permit 08-02 was approximately 53 acres. The permit for the Industrial Landfill allowed 3,204 cubic yards per day of disposal. The active disposal area for industrial and construction debris at the Industrial Landfill was approximately 12-13 acres. The MDA completed capping and closing of the landfill in March 2022 and no longer accepts waste for disposal.

2.2 Site Characterization

This subsection summarizes the physical setting, geology and hydrogeology at the Site.

2.2.1 Physical Setting

All of Landfill 4, including the Industrial Landfill, is covered with an engineered, low permeability clay cover that meets the landfill closure requirements. Landfill 4 is devoid of natural vegetation, but is currently covered with seeded grasses and vegetation. A concrete-lined drainage swale runs from west to east across most of the Site. The Site is bound on the north by mixed coniferous/deciduous forest and the Fill Area Northwest of Reilly Airfield, Parcel 229(7) (FANWR), on the east by mixed coniferous/deciduous forest, on the south by a soil borrow area, on the west by a road, and on the northwest by Landfill 3, Parcel 80(6) (Landfill 3). Much of the

perimeter of the Site is enclosed by chain-link fence that restricts access to the Site (MES, 2006).

Surface water generally follows the sloping surface topography collecting in drainage ditches on the south, east and north sides of the landfill before converging into an unnamed creek that flows toward the northwest. Surface water is also diverted through a concrete ditch that runs through the center of the landfill toward the east and converging into the unnamed creek.

2.2.2 Site Geology and Hydrogeology

The bedrock mapped beneath the Site is the Cambrian Conasauga Formation. The Cambrian Conasauga Formation is comprised of dark gray, finely to coarsely crystalline medium- to thick-bedded dolomite with minor shale and chert (IT, 2002). A geologic map of the Site is presented in Figure 2-1.

Underlying soils at the Site include the Cumberland loam, Purdy silt loam, Tyler silt loam, and the Anniston Gravelly loam. These soils were derived mainly from limestone, shale, and sandstone and are classified generally as silts to silty and clayey sands. The color of these soils are generally brown to dark brown with lesser amount of reddish-brown, grayish-brown, and yellowish-brown (IT, 2002).

The topography of the combined Landfill 4 and Industrial Landfill area is relatively flat of which a portion is within the floodplain of Cave Creek (Figure 2-2). Groundwater flow has generally been to the northwest and north (MES, 2006). Static groundwater levels measured during the historical monitoring events at the Site are presented in Table 4-1. See Section 4.1 for further details concerning groundwater elevations, groundwater flow, and gradients at the Site.

2.3 Groundwater Monitoring System

Five monitoring wells (LF4-MW1, LF4-MW2, LF4-MW3, LF4-MW4, and LF4-MW5) were installed at the Site in 1994 and completed in the residuum zone, i.e., first zone of saturation. None of the borings for these wells penetrated fill material (IT, 2002). A monitoring well construction summary is included in Table 2-1. Figure 1-2 shows the well locations.

Well LF4-MW5 is the upgradient background monitoring well used for the detection of representative background groundwater quality at the Site. Wells LF4-MW1, LF4-MW2, LF4-MW3, and LF4-MW4 are the downgradient monitoring wells used for the detection of representative groundwater quality at the Site.

2.4 Groundwater Monitoring History

The groundwater monitoring history of the Site including detection monitoring and assessment monitoring sampling events are summarized in this section.

2.4.1 Previous Monitoring Events

Semi-annual groundwater monitoring was conducted at the Site by the Army, pursuant to the

permit, from March 2000 through September 2003. The MDA assumed the semi-annual groundwater monitoring at the Site in March 2004 and has continued the long-term groundwater monitoring to the present. The MDA conducted a detection monitoring program at the Site from March 2004 through September 2009 and an assessment monitoring program from March 2010 to the present. A summary of the historical detected volatile organic compound (VOC) and metals data are presented in Tables 4-4 and 4-5 (see Section 4.4 for details concerning Tables 4-4 and 4-5). A summary of the Detection Monitoring and Assessment Monitoring programs performed at the Site is described below.

2.4.2 Detection Monitoring Program

During the detection monitoring events from March 2004 through September 2009, groundwater samples were collected at wells LF4-MW1, LF4-MW2, LF4-MW3, LF4-MW4, and LF4-MW5 and analyzed for the constituents listed in *Appendix I* of ADEM Admin. Code r 335-13-4-27 of the *ADEM Division 13 Regulations* (ADEM, 2016). The *Appendix I* constituents are shown in Table 2-2 of this report.

The detection monitoring data at the Site demonstrated compliance with the permit and *ADEM Division 13 Regulations* until the March 2009 sampling event when a SSI occurred for zinc in downgradient well LF4-MW2. Please see Section 5.1 for details concerning the statistical analysis performed on the semi-annual groundwater monitoring results collected. Pursuant to subparagraph (2)(n) of Rule 335-13-4-27, a letter was sent by the MDA informing ADEM of the SSI. Because this was the first SSI occurrence, and because the groundwater sample with the SSI showed a high level of turbidity (145 NTU), the detection monitoring program continued with the September 2009 monitoring event to confirm whether the SSI from the March 2009 monitoring event was an isolated occurrence, a result of an error in sampling or analysis, or due to natural variation in groundwater quality. The September 2009 sampling round confirmed the SSI occurrence of zinc in downgradient well LF4-MW2. In accordance with Rule 335-13-4-27 subparagraph (3)(c) of the *ADEM Division 13 Regulations*, an assessment monitoring program was initiated pursuant to subparagraphs (4)(a) through (4)(j).

2.4.3 Assessment Monitoring Program

An Assessment Monitoring program was initiated during the March 2010 groundwater monitoring event and conducted in accordance with the permit and *ADEM Division 13 Regulations*, which continues to the present.

Pursuant to subparagraph (4)(b)1 of the *ADEM Division 13 Regulations*, during an Assessment Monitoring program groundwater must be sampled and analyzed for the constituents listed in *Appendix II* of the *ADEM Division 13 Regulations*. No additional constituents from the *Appendix II* list that were not already on the *Appendix I* list were detected during previous groundwater sampling events performed by the Army and the MDA, as indicated in the *Final EE/CA* (MES, 2006). Therefore, during the assessment monitoring March 2010 and September 2010 events at the Industrial Landfill, the *Appendix I* list of constituents were sampled and analyzed in lieu of the *Appendix II* list, as allowed by subparagraph (4)(b)2 of the *ADEM Division 13 Regulations*.

For the March 2010 and September 2010 groundwater monitoring events, metal constituents cobalt, nickel, and zinc were determined to be SSIs in well LF4-MW2. Although there were some VOC detections, no organic constituents were considered to be SSIs during any of the previous monitoring events at the Site. Because historical statistical analyses showed SSIs for only metal constituents, only metals were sampled and analyzed during the March 2011 monitoring event. The concentrations of constituents detected in groundwater samples collected during past and current monitoring events are presented in Tables 4-4 (VOCs) and 4-5 (metals).

In March 2011 ADEM issued the *Alabama Groundwater Monitoring Reporting Guidance for Solid Waste Facilities* (*AGMRG*) (ADEM, 2011) to be used in conjunction with the *ADEM Division 13 Regulations*. Subparagraph 2.2.10.3.7 of the *AGMRG* stated "the detection of any organic constituents is considered an SSI". Because historical sampling events showed metal and VOC detections in groundwater at the Site, in a letter dated August 5, 2011 the MDA proposed to analyze groundwater samples collected at the Site under the Assessment Monitoring program for the *Appendix I* list of constituents (Table 2-2), which include metals and VOCs, starting with the September 2011 monitoring event. The MDA received concurrence from ADEM in a letter dated August 16, 2011 to use the *Appendix I* list of constituents (Table 2-2) for the Assessment Monitoring program at the Site.

In a letter dated September 13, 2016, ADEM issued comments on the March 2016 GWMR requesting MDA conduct an assessment of corrective measures (ACM) in accordance with ADEM Admin. Code r. 335-13-4-.27(4)(g) related to the detection of cobalt in LF4-MW2 and trichloroethene in LF4-MW4 and include surface water samples from the stream downgradient of LF4-MW4. In December 2016, MDA responded to ADEM comments and explained the stream is an ephemeral feature that channels storm water around the site and does not influence groundwater flow to which ADEM concurred on April 20, 2017. MDA also collected three surface water samples in January 2017 for *Appendix I* constituents and all were non-detect for chlorinated VOCs. Cobalt was detected at 11.6 µg/L which is well below the site-wide surface water risk-based target level (RBTL) of 30 µg/L. These findings were provided to ADEM in a letter dated February 8, 2017.

In the December 2016 response to ADEM comments, MDA proposed an alternate groundwater protection standard (GWPS) for cobalt of 5400 µg/L based on a site-specific risk-based evaluation of exposure pathways. ADEM responded in a letter dated April 20, 2017 that the proposed 5400 ug/L GWPS was not applicable and cobalt concentration should be compared to the highest detected concentration in background well LF4-MW5. The highest detected cobalt concentration in LF4-MW5 is 10.5 µg/L sampled on September 21, 2010. ADEM also requested that MDA comply with ADEM Admin. Code r. 335-13-4-.27(4)(g) and conduct an ACM. In June 2017, MDA responded to ADEM and summarized the ACM conducted to date and existing land use controls and proposed that natural attenuation be allowed to continue and the site continue to be monitored on a semi-annual basis under the assessment monitoring program. ADEM concurred with MDA's proposal in June 2017.

3.0 SUMMARY OF SEPTEMBER 2023 ACTIVITIES

During the September 2023 monitoring event, groundwater samples were collected and analyzed for the parameters on the *Appendix I* of ADEM Admin. Code r 335-13-4-27 of the *ADEM Division 13 Regulations* (Table 2-2). The September 2023 monitoring event was performed under the Assessment Monitoring program, discussed in Section 2.4.3.

To meet the recommended actions outlined in the permit, *ADEM Division 13 Regulations*, and applicable United States Environmental Protection Agency (EPA) guidance, the following activities were performed during the September 2023 monitoring event:

- Measured groundwater levels in the monitoring wells.
- Collected groundwater samples from five monitoring wells.
- Analyzed the groundwater samples for the constituents listed in *Appendix I* of Code Rule 335-13-4-27 of the *ADEM Division 13 Regulations* (Table 2-2) by Methods SW8260B (VOCs), SW6020B (Inductively Coupled Plasma-Atomic Emission Spectrometry [ICP-MS metals], and SW7470A (mercury).
- Performed statistical analysis on the metals results (described in Section 5.0).

3.1 Groundwater Sampling

Groundwater samples were collected using low-flow sampling procedures, i.e., using an adjustable rate pump to remove water from the screened interval at a rate that produces minimal drawdown, as well as turbidity in the sample. Tubing leading from the discharge side of the submersible pump was connected to a flow-through cell equipped with a YSI Pro Plus to measure chemical and physical parameters including temperature, conductivity, dissolved oxygen, oxidation-reduction potential, total dissolved solids, turbidity, and pH. These measurements were used to indicate when groundwater quality stabilized and sampling could begin.

Groundwater samples were collected on September 6, 2023 from five residuum monitoring wells, LF4-MW1 through LF4-MW5. The sample containers were labeled, placed in a chilled cooler and shipped under chain-of-custody procedures to TestAmerica in Savannah, Georgia. The groundwater samples for monitoring wells LF4-MW1 through LF4-MW5 were analyzed for VOCs and metals. Figure 1-2 shows the groundwater sampling locations. The groundwater sample collection logs are provided in Appendix A and the chain-of-custody forms for the groundwater samples collected during the September 2023 monitoring event are provided in Appendix B.

3.2 Data Quality Review

MES reviewed the analytical data for the groundwater samples collected during the September 2023 monitoring event. The data quality review was performed in accordance with the *Quality Assurance Plan (QAP)* in *Appendix A* of the *Final Installation-Wide Sampling and Analysis Plan* (MES, 2013) to assess compliance with quality assurance objectives, and to assess hard copy and electronic deliverable consistency and integrity. Appendix C presents the analytical data collected during the September 2023 monitoring event. The Data Validation Summary (DVS)

for the September 2023 groundwater samples is included in Appendix C. The laboratory data forms showing the validated results are also included in Appendix C.

4.0 RESULTS OF SEPTEMBER 2023 GROUNDWATER SAMPLING

This section discusses the results of the September 2023 groundwater monitoring event at the Site.

4.1 Groundwater Levels

On September 6, 2023, groundwater elevations were measured to the nearest hundredth of a foot using a Solinst water level meter and recorded. Groundwater elevations are presented in Table 4-1. Figure 4-1 shows groundwater elevations and potentiometric surface contours for the residuum monitoring wells based on the September 2023 water level measurements. As indicated in Figure 4-1, groundwater flowed in a north and northwesterly direction.

To further aid in assessing groundwater flow at the Site, horizontal hydraulic gradients were calculated using the groundwater data collected during the September 2023 monitoring event, presented in Table 4-2. The horizontal hydraulic gradients were low over the Site, ranging from 0.007 feet per foot (ft/ft) to 0.019 ft/ft. Site-wide horizontal hydraulic gradients averaged 0.013 ft/ft.

Based on the groundwater flow direction (Figure 4-1) and horizontal hydraulic gradients (Table 4-2), the groundwater monitoring well network at the Site is functioning as intended and is sufficient for determining the facility's impact on the quality of groundwater in the first zone of saturation at the Site.

4.2 Analytical Data and Data Quality Review

The analytical data for the September 2023 samples is provided in Appendix C. Groundwater samples were analyzed for VOCs and metals. MES reviewed the analytical data in accordance with the *QAP* (MES, 2013). Based on the data quality review, the analytical data generated for these monitoring events are adequate to fulfill program objectives and are suitable for preparation of this report. A more detailed discussion of the analytical results can be found in the Data Validation Summary (DVS) provided in Appendix C.

4.3 Groundwater Field Parameter Results

Field screening parameters, including pH, conductivity, DO, ORP, TDS, turbidity, and temperature, and other sampling data (e.g., groundwater depths, well depths, sampling conditions, etc.) were recorded on the Groundwater Sampling Logs included in Appendix A. The field parameters for the groundwater samples are summarized in Table 4-3.

4.4 Summary of Groundwater Analytical Results

Groundwater samples were collected from five monitoring wells during the September 2023 monitoring event and analyzed for VOCs and metals. This section describes the analytical results for the groundwater samples.

4.4.1 Volatile Organic Compounds Analytical Results

Chlorobenzene, and trichloroethene were detected in well LF4-MW4 during the September 2023 sampling event. The analytical results for VOCs including historical data are presented in Table 4-4. Review of the current and historical analytical results indicate concentrations detected were all within the range of previous detections for LF4-MW4.

4.4.2 Metals Analytical Results

The analytical results for metals in the groundwater samples during the September 2023 monitoring event are presented in Table 4-5. Eleven of the 16 target metals, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, vanadium, and zinc were detected in groundwater samples from at least one of the monitoring wells during September 2023 monitoring event. Antimony, mercury, selenium, silver, and thallium were not detected during the September 2023 monitoring event. All reporting limits (RLs) and method detection limits (MDLs) were below the MCL.

To simplify the presentation of historical analytical results and facilitate identification of downward or upward trends in metal concentrations, analytical results from previous sampling events are also presented in Table 4-5. Further details concerning trends in metal concentrations over time are described in Section 5.0.

5.0 EVALUATION OF GROUNDWATER ANALYTICAL DATA

The analytical results for groundwater collected during the September 2023 groundwater monitoring event were evaluated to determine whether there was an SSI over background groundwater quality at the Site.

5.1 Evaluation of Groundwater VOCs Quality Data

Detections of organic constituents are considered SSIs, as per the *Alabama Groundwater Monitoring Report Guidance for Solid Waste Facilities* (2011). During the September 2023 groundwater sampling event, chlorobenzene and trichloroethene were detected. All VOCs detected are considered SSIs. Concentrations of chlorobenzene and trichloroethene were below MCLs.

5.2 Evaluation of Groundwater Metals Quality Data

To evaluate whether there were any SSI occurrences for metal constituents in groundwater at the Site a statistical analysis was performed on the metals data using control charts in accordance with ADEM Admin. Code r 335-13-4-27, subparagraph (2) of the *ADEM Division 13 Regulations* and applicable United States Environmental Protection Agency (EPA) guidance.

Control charts are used to monitor the inherent statistical variation of the data collected within a single well. Because intrawell comparisons involve a single well, significant changes in the level of contamination in a well cannot be attributed to spatial and/or hydrogeological differences between wells. Intrawell control charts employ historical measurements from a compliance point well as background. Control charts are mostly appropriate for analytes with a reasonably high detection frequency in monitoring wells. Control charts allow data from a well to be viewed graphically over time (EPA, 2009).

The combined Shewhart Cumulative Sums (CUSUMs) control charts assesses two statistical quantities at every sampling event, both the new individual measurement and the CUSUM of past and current measurements. The Shewhart portion compares compliance measurements against a background limit. The CUSUM portion sequentially analyzes each new measurement with prior compliance data. Both portions are used to assess the similarity of compliance data to background. The baseline parameters for the chart, estimates of the mean and standard deviation, are obtained from historical background data collected from the specific compliance well. These baseline measurements characterize the expected background concentrations at compliance wells. As future compliance observations are collected, the baseline parameters are used to standardize the newly gathered data (EPA, 2009).

The combined CUSUM control chart is declared out-of-control in one of two ways. First, the standardized means (Z_i) computed at each sampling period may cross the Shewhart control limit (SCL). Such a change signifies a rapid increase in well concentration levels among the most recent sample data. Second, the CUSUM of the standardized means (Z_i) may become too large, crossing the "decision internal value" (h). Crossing the h threshold can mean either a sudden rise in concentration levels or a gradual increase over a longer span of time. A gradual increase or

trend is particularly indicated if the CUSUM crosses its threshold but the standardized mean Z_i does not. The reason for this is that several consecutive small increases in Z_i will not trigger the SCL threshold but may trigger the CUSUM threshold. As such, the control chart can indicate the onset of either sudden or gradual contamination at the compliance point. Three parameters are necessary to construct a CUSUM control chart, a reference value (k), h, and SCL. The combination of k = 1, h = 5 and SCL = 4.5 was determined to be the most appropriate for the application of CUSUM control charts for groundwater monitoring (EPA, 2009).

The CUSUM control charts are constructed with respect to a log scale. The lognormal distribution is a frequently used model in groundwater statistics and is generally more appropriate as a default statistical model than the normal distribution (EPA, 2009). The log-mean and the log-standard deviation represent the sample mean and standard deviation computed using log-transformed values instead of the raw measurements.

5.2.1 Metals Background Groundwater Quality Data

For the statistical analyses performed on the March 2004 to March 2007 semi-annual groundwater sampling events, the results from the March 2000 to the September 2003 sampling events were used for the background data. However, several metals had only one or no background results out of the eight sampling events from March 2000 to September 2003. As of the September 2007 groundwater sampling event, four additional metals (cobalt, copper, nickel, and zinc) had 9 sampling events and at least one groundwater sample with nondetects less than 50%. However, these metals only had one background result out of the eight sampling events from March 2000 to September 2003. ADEM Admin. Code r 335-13-4-27, subparagraphs (3)(b) and (4)(b) of the *ADEM Division 13 Regulations* and the permit requires that a minimum of four independent samples from each well be used to establish background. In addition, the *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities: Unified Guidance* (EPA, 2009) recommends that if control charts remain "in control" for a long period of time the baseline parameters should be updated to include more recent background data.

A two-sample t-test was performed comparing the March 2004 through September 2005 data with the previous background data set from March 2000 through September 2003 data to ensure there were no significant differences at the 95 percent confidence level between the two data sets. Details of the t-test are presented in the *Statistical Analysis of Semi-Annual Groundwater Sampling Results September 2008 Groundwater Sampling Event, Fort McClellan Industrial Landfill (Permit No. 08-02), Ft. McClellan, Anniston, Calhoun County, Alabama* (MDA, 2008). The t-tests showed there were no significant differences at the 95 percent confidence level between the March 2004 to September 2005 data set and the March 2000 to September 2003 data set. Therefore, the data from the twelve sampling events from March 2000 to September 2005 were used for the background during the statistical analysis of metal constituents in wells that had 9 or more sampling events and percentages of nondetects less than 50%, starting with the September 2007 sampling event and continuing to the present.

5.2.2 September 2023 Metals Groundwater Quality Data

Statistical analysis was performed for the September 2023 groundwater metals data using

CUSUM control charts in accordance with ADEM Admin. Code r 335-13-4-27, subparagraph (2) of the *ADEM Division 13 Regulations* and applicable EPA guidance. Because control charts must be constructed from a data set large enough to characterize the behavior of a specific well and because control charts do not efficiently handle data sets with a significant fraction of nondetects (EPA, 2009), control charts were developed for those metal constituents in wells that had nine (9) or more sampling events and the percentage of nondetects was less than 50%. The results of the statistical analysis performed for the September 2023 groundwater metals data are provided in Appendix D. Attachment D1 summarizes the number of analyses and percentage of nondetects. Attachment D2 provides the calculations for the CUSUMs and Attachment D3 provides the CUSUM control charts for the statistical analyses.

The CUSUMs for cobalt (15.42) and nickel (33.92) in well LF4-MW1; and cobalt (48.58), nickel (36.64), and zinc (132.49) in well LF4-MW2 were above the threshold value of 5 and are therefore considered SSI occurrences.

5.3 SSI Occurrences in Groundwater for the September Sampling Event

Table 5-1 presents a summary of the SSI occurrences for the September 2023 groundwater sampling event. The concentrations of the SSI constituents were compared to the groundwater protection standards (Table 5-1). In accordance with Code Rule 335-13-4-27, subparagraph (4)(h), the maximum contaminant levels (MCLs) were used as the groundwater protection standards for the SSIs. For constituents for which MCLs have not been promulgated (cobalt), the background well concentrations were used as the groundwater protection standards, as per ADEM Admin. Code r 335-13-4-27, subparagraph (4)(h)2.

SSI occurrences of nickel, zinc, chlorobenzene, and trichloroethene were all below the groundwater protection standards or MCLs. The concentrations for metal SSI constituent cobalt (23 µg/L) in LF4-MW1 and (140 µg/L) in well LF4-MW2, were greater than the background concentration in LF4-MW5 (10.5 µg/L).

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6.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This section summarizes the activities performed and the results of the September 2023 monitoring event, and provides conclusions and recommendations based on the results of the groundwater monitoring activities.

6.1 Summary of Activities and Results

The September 2023 monitoring event was performed under the Assessment Monitoring program. Groundwater samples were collected from five residuum monitoring wells at the Site on September 6, 2023. The groundwater samples were analyzed for the constituents listed in *Appendix I* of ADEM Admin. Code r 335-13-4-27 of the *ADEM Division 13 Regulations* (Table 2-2).

Groundwater elevations showed groundwater at the Site flowed in a north and northwesterly direction. The horizontal hydraulic gradients were low over the Site, ranging from 0.007 ft/ft to 0.019 ft/ft.

During the September 2023 monitoring event, two VOCs in well LF4-MW4 were detected and considered SSIs. To evaluate whether there were any SSI occurrences for metal constituents in groundwater at the Site a statistical analysis was performed on the metals data using CUSUM control charts in accordance with ADEM Admin. Code r 335-13-4-27, subparagraph (2) of the *ADEM Division 13 Regulations* and applicable EPA guidance. The statistical analysis showed SSI occurrences for cobalt and nickel in well LF4-MW1; and cobalt, nickel and zinc in well LF4-MW2 during September 2023 groundwater monitoring event. Concentrations were consistent with historical data.

The concentrations of the SSI constituents were compared to the groundwater protection standards for the Site (Table 5-1). MCLs, as listed in the *ADEM Division 7 Regulations*, were used as the groundwater protection standards for the SSIs. Because there is no promulgated MCL for cobalt, the concentration for the cobalt SSI in wells were compared to the cobalt concentration for background well LF4-MW5.

6.2 Conclusions and Recommendations

The concentrations for metal SSI constituent cobalt (23 µg/L) in LF4-MW1 and (140 µg/L) in well LF4-MW2, were greater than the groundwater protection standard or background concentration (10.5 µg/L). All other SSI constituents were below groundwater protection standards. MDA recommends that natural attenuation and land use controls be allowed to continue, and the site continue to be monitored on a semi-annual basis under the assessment monitoring program.

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7.0 REFERENCES

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8.0 Professional Groundwater Scientist Certification

I certify that I currently hold an active license in the State of Alabama and the groundwater monitoring report activities undertaken by Matrix Environmental Services, LLC. as described in this report were performed in general accordance with the requirements of the Solid Waste Disposal Facility Permit No. 08-02 and Alabama Department of Environmental Management Land Division Solid Waste Program Division 13 Regulations (ADEM Division 13 Regulations).

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Alabama P.G. # 965

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Tables

Table 2-1. Monitoring Well Construction Summary
Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Well ID	Permit Design	Northing	Easting	Ground Elevation (ft msl)	TOC Elevation (ft msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Well Depth (ft bgs)	Well Material
LF4-MW1	CMP	1180041.4	669625.24	737.13	739.79	15	40	40	4" ID PVC
LF4-MW2	CMP	1180244.71	670492.08	738.5	738.5	6	36	36	4" ID PVC
LF4-MW3	CMP	1180197.72	671013.48	739.78	739.78	11	31	31	4" ID PVC
LF4-MW4	CMP	1179683.62	671522.79	743.35	743.35	5	25	25	4" ID PVC
LF4-MW5	BKG	1178445.5	669747.69	753.32	753.32	12	32	32	4" ID PVC

Notes:
bgs = below ground surface
BKG = Background well
CMP = Compliance/downgradient well
ft = feet
msl = Mean sea level
NM = Not Measured
TOC = Top of Casing
4" ID = 4-inch inside diameter
PVC = polyvinyl chloride

Table 2-2. Analyte List
Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Method	Parameters	CAS No.
Volatile Organic Compounds		
SW8260B	1,1,1,2-Tetrachloroethane	630-20-6
SW8260B	1,1,1-Trichloroethane	71-55-6
SW8260B	1,1,2,2-Tetrachloroethane	79-34-5
SW8260B	1,1,2-Trichloroethane	79-00-5
SW8260B	1,1-Dichloroethane	75-34-3
SW8260B	1,1-Dichloroethene	75-35-4
SW8260B	1,2,3-Trichloropropane	96-18-4
SW8260B	1,2-Dibromo-3-Chloropropane	96-12-8
SW8260B	1,2-Dibromoethane	106-93-4
SW8260B	1,2-Dichlorobenzene	95-50-1
SW8260B	1,2-Dichloroethane	107-06-2
SW8260B	1,2-Dichloropropane	78-87-5
SW8260B	1,4-Dichlorobenzene	106-46-7
SW8260B	2-Butanone (MEK)	78-93-3
SW8260B	2-Hexanone	591-78-6
SW8260B	4-Methyl-2-Pentanone (MIBK)	108-10-1
SW8260B	Acetone	67-64-1
SW8260B	Acrylonitrile	107-13-1
SW8260B	Benzene	71-43-2
SW8260B	Bromochloromethane	74-97-5
SW8260B	Bromodichloromethane	75-27-4
SW8260B	Bromoform	75-25-2
SW8260B	Bromomethane	74-83-9
SW8260B	Carbon Disulfide	75-15-0
SW8260B	Carbon Tetrachloride	56-23-5
SW8260B	Chlorobenzene	108-90-7
SW8260B	Chloroethane	75-00-3
SW8260B	Chloroform	67-66-3
SW8260B	Chloromethane	74-87-3
SW8260B	Cis-1,2-Dichloroethene	156-59-2
SW8260B	Cis-1,3-Dichloropropene	10061-01-5
SW8260B	Dibromochloromethane	124-48-1
SW8260B	Dibromomethane	74-95-3
SW8260B	Ethylbenzene	100-41-4
SW8260B	Iodomethane	74-88-4
SW8260B	Methylene Chloride	75-09-2
SW8260B	Styrene	100-42-5
SW8260B	Tetrachloroethene	127-18-4
SW8260B	Toluene	108-88-3
SW8260B	Trans-1,2-Dichloroethene	156-60-5
SW8260B	Trans-1,3-Dichloropropene	10061-02-6
SW8260B	Trans-1,4-Dichloro-2-Butene	110-57-6
SW8260B	Trichloroethene	79-01-6
SW8260B	Trichlorofluoromethane	75-69-4
SW8260B	Vinyl Acetate	108-05-4
SW8260B	Vinyl Chloride	75-01-4
SW8260B	Xylenes (Total)	1330-20-7

Method	Parameters	CAS No.
Metals		
SW6020A	Antimony	7440-36-0
SW6020A	Arsenic	7440-38-2
SW6020A	Barium	7440-39-3
SW6020A	Beryllium	7440-41-7
SW6020A	Cadmium	7440-43-9
SW6020A	Chromium	7440-47-3
SW6020A	Cobalt	7440-48-4
SW6020A	Copper	7440-50-8
SW6020A	Lead	7439-92-1
SW6020A	Nickel	7440-02-0
SW6020A	Selenium	7782-49-2
SW6020A	Silver	7440-22-4
SW6020A	Thallium	1314-32-5
SW6020A	Vanadium	7440-62-2
SW6020A	Zinc	7440-66-6
SW7470A	Mercury	7487-94-7

µg/L = micrograms per liter

mg/L = milligrams per liter

Analyte list from Appendix I of Code Rule 335-13-4-27 of the Alabama Department of Environmental Management Land Division Solid Waste Program Division 13 Regulations

Table 4-1: Groundwater Elevations
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Measurement Date	Well Depth (ft BTOC)	Depth to Water (ft BTOC)	Groundwater Elevation (ft msl)
LF4-MW1	9/6/23	42.5	19.11	720.68
LF4-MW2	9/6/23	40.3	24.34	714.16
LF4-MW3	9/6/23	34.2	15.73	724.05
LF4-MW4	9/6/23	26.8	8.93	734.42
LF4-MW5	9/6/23	34.6	13.30	740.02

ft BTOC = feet below top of casing
ft msl = feet above mean sea level.

Table 4-2: Horizontal Hydraulic Gradients, September 2023
Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Upgradient Well	Groundwater Elevation	Downgradient Well	Groundwater Elevation	Estimated Groundwater Flow Direction	Horizontal Distance	Groundwater Elevation Difference (feet)	Horizontal Gradient (ft/ft)
LF4-MW5	740.02	LF4-MW1	720.68	north	1601	19.34	0.012
LF4-MW4	734.42	LF4-MW3	724.05	northwest	724	10.37	0.014
LF4-MW3	724.05	LF4-MW2	714.16	west	524	9.89	0.019
LF4-MW1	720.68	LF4-MW2	714.16	northeast	890	6.52	0.007
					Average Horizontal Gradient:		**0.013**

Notes:
Elevations in feet above mean sea level.
ft/ft = feet per foot

Table 4-3: Groundwater Field Parameters, September 2023
Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Sample Location	Sample Date	Temperature (^{o}C)	Conductivity (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH
LF4-MW1	9/6/23	20.0	119	0.5	118	0.08	82	4.9
LF4-MW2	9/6/23	19.7	543	0.2	70	0.35	131	5.3
LF4-MW3	9/6/23	20.9	62	0.3	278	0.04	27	4.4
LF4-MW4	9/6/23	21.0	867	0.2	53	0.57	4	6.0
LF4-MW5	9/6/23	18.6	33	0.5	163	0.02	24	4.1

Notes:

^{o}C = Degrees Celsius
µs/cm = Microsiemens per centimeter
mg/L = Milligrams per liter
mV = Millivolts
NM = Not measured
NTU = Nephelometric turbidity units
ORP = Oxidation-reduction potential
TDS = Total Dissolved Solids

Table 4-4: Analytical Data for VOCs Detected in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	1,1-DCE	1,4-DCB	Acetone	Benzene	Carbon Disulfide	Chloro-benzene	Chloro-ethane	Chloro-form	c-1,2-DCE	Ethyl-benzene	Toluene	t-1,2-DCE	TCE	VC
LF4-MW1	3/29/00	< 0.5	< 0.5	< 5	< 0.5	< 5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
LF4-MW1	9/26/00	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW1	4/24/01	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW1	9/28/01	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	0.7	1.9	< 0.5	< 0.5	--
LF4-MW1	4/2/02	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW1	9/18/02	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW1	3/5/03	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW1	9/26/03	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW1	3/31/04	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW1	9/29/04	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW1	3/16/05	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW1	9/28/05	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW1	3/13/06	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW1	9/13/06	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW1	3/6/07	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW1	9/24/07	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW1	3/26/08	<1	<1	< 10 (UJC)	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW1	9/16/08	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	3/17/09	<1	<1	8.4 J	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	9/17/09	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	3/17/10	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	9/21/10	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	9/8/11	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	3/14/12	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	9/6/12	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	3/5/13	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	9/11/13	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	3/5/14	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	9/4/14	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	3/13/15	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	9/16/15	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	3/16/16	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	9/21/16	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	3/15/17	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	9/8/17	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW1	3/8/18	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8

Table 4-4: Analytical Data for VOCs Detected in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	1,1-DCE	1,4-DCB	Acetone	Benzene	Carbon Disulfide	Chloro-benzene	Chloro-ethane	Chloro-form	c-1,2-DCE	Ethyl-benzene	Toluene	t-1,2-DCE	TCE	VC
LF4-MW1	9/11/18	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	1.1	< 1	< 1	< 1	< 1	< 1
LF4-MW1	3/7/19	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW1	9/5/19	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW1	3/12/20	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW1	9/15/20	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW1	3/4/21	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW1	3/2/22	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW1	8/31/22	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW1	3/6/23	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW1	9/6/23	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW2	3/29/00	< 0.5	< 0.5	< 5	< 0.5	< 5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
LF4-MW2	9/26/00	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW2	4/24/01	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW2	9/28/01	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	0.6	2	< 0.5	< 0.5	--
LF4-MW2	4/2/02	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW2	9/18/02	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW2	3/5/03	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW2	9/26/03	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW2	3/31/04	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW2	9/29/04	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW2	3/16/05	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW2	9/28/05	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW2	3/13/06	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW2	9/13/06	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW2	3/6/07	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW2	9/24/07	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW2	3/26/08	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW2	9/16/08	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	3/17/09	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	9/17/09	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	3/17/10	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	9/21/10	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	9/8/11	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	3/14/12	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	9/6/12	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	3/5/13	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8

Table 4-4: Analytical Data for VOCs Detected in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	1,1-DCE	1,4-DCB	Acetone	Benzene	Carbon Disulfide	Chloro-benzene	Chloro-ethane	Chloro-form	c-1,2-DCE	Ethyl-benzene	Toluene	t-1,2-DCE	TCE	VC
LF4-MW2	9/11/13	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	3/5/14	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	9/4/14	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	3/13/15	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	9/16/15	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	3/16/16	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	9/21/16	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	3/15/17	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	9/8/17	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	3/8/18	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW2	9/11/18	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW2	3/7/19	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW2	9/5/19	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW2	3/12/20	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW2	9/15/20	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW2	3/4/21	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW2	3/2/22	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW2	8/31/22	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW2	3/6/23	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW2	9/6/23	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW3	3/29/00	< 0.5	< 0.5	< 5	< 0.5	< 5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
LF4-MW3	9/26/00	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW3	4/24/01	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW3	9/28/01	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW3	4/2/02	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW3	9/18/02	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW3	3/5/03	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW3	9/26/03	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW3	3/31/04	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW3	9/29/04	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW3	3/16/05	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW3	9/29/05	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW3	3/13/06	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW3	9/14/06	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW3	3/6/07	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW3	9/25/07	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1

Table 4-4: Analytical Data for VOCs Detected in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	1,1-DCE	1,4-DCB	Acetone	Benzene	Carbon Disulfide	Chloro-benzene	Chloro-ethane	Chloro-form	c-1,2-DCE	Ethyl-benzene	Toluene	t-1,2-DCE	TCE	VC
LF4-MW3	3/26/08	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW3	9/16/08	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	3/17/09	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	9/17/09	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	3/17/10	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	9/21/10	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	9/8/11	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	3/14/12	<1	<1	< 10	<1	<1	<1	<2	0.46 J	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	9/6/12	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	3/5/13	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	9/11/13	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	3/5/14	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	9/4/14	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	3/13/15	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	9/16/15	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	3/16/16	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	9/21/16	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	3/15/17	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	9/8/17	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	3/8/18	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW3	9/11/18	< 1	< 1	< 10 (UJL)	< 1	< 2	< 1	< 5 (UJL)	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW3	3/7/19	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW3	9/5/19	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1 (UJM)	< 1	< 1	< 1	< 1	< 1
LF4-MW3	3/12/20	< 1 H (UJH)	< 1 (JH)	< 10 (JH)	< 1 (JH)	< 2 (JH)	< 1 (JH)	< 5 (JH)	< 1 (JH)	< 1 (JH)	< 1 (JH)	< 1 (JH)	< 1 (JH)	< 1 (JH)	< 1
LF4-MW3	9/15/20	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW3	3/4/21	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW3	3/2/22	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW3	8/31/22	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW3	3/6/23	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW3	9/6/23	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW4	3/29/00	< 0.5	< 0.5	< 5	< 0.5	< 5	3.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
LF4-MW4	9/26/00	< 0.5	--	--	< 0.5	--	4.1	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW4	4/24/01	< 0.5	--	--	< 0.5	--	2.6	--	--	--	< 0.5	< 0.5	< 0.5	10.4	--
LF4-MW4	9/28/01	< 0.5	--	--	< 0.5	--	7.8	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW4	4/2/02	< 0.5	--	--	< 0.5	--	5.6	--	--	--	< 0.5	< 0.5	< 0.5	6	--
LF4-MW4	9/18/02	< 0.5	--	--	< 0.5	--	6.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--

Table 4-4: Analytical Data for VOCs Detected in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	1,1-DCE	1,4-DCB	Acetone	Benzene	Carbon Disulfide	Chloro-benzene	Chloro-ethane	Chloro-form	c-1,2-DCE	Ethyl-benzene	Toluene	t-1,2-DCE	TCE	VC
LF4-MW4	3/5/03	< 0.5	--	--	< 0.5	--	1.9	--	--	--	< 0.5	< 0.5	< 0.5	7.2	--
LF4-MW4	9/26/03	< 0.5	--	--	< 0.5	--	7.4	--	--	--	< 0.5	< 0.5	< 0.5	0.6	--
LF4-MW4	3/31/04	<1	<1	< 10	<1	<1	3.7	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW4	9/29/04	<1	0.99 J	< 10	0.5 J	<1	8.5	0.35 J	<1	<1	<1	<1	<1	<1	<1
LF4-MW4	3/15/05	<1	<1	2.9 J	<1	<1	1.4	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW4	9/29/05	<1	0.36 J	< 10	<1	<1	4.1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW4	3/14/06	<1	<1	< 10	<1	<1	0.82 J	<2	<1	1.3	<1	<1	<1	7	<1
LF4-MW4	9/14/06	<1	<1	< 10	<1	<1	1.7	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW4	3/7/07	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW4	9/25/07	<1	0.7 J	< 10	0.37 J	2.8	13	0.25 J	<1	<1	<1	<1	<1	<1	<1
LF4-MW4	3/26/08	<1	<1	< 10 (UJC)	<1	<1	1.9	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW4	9/17/08	<1	0.93 J	< 10	0.42 J	< 1 (UJCL)	15	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW4	3/17/09	<1	0.39 J	< 10	<1	<1	4.9	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW4	9/21/09	<1	0.24 J	< 10	<1	<1	3.6	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW4	3/17/10	0.22 J	<1	< 10	<1	<1	2.1	<2	<1	16	<1	<1	2.4	61	0.21 J
LF4-MW4	9/21/10	<1	0.53 J	< 10	<1	<1	7.6	<2	<1	<1	<1	<1	<1	0.22 J	< 0.8
LF4-MW4	9/8/11	<1	0.54 J	< 10	<1	<1	7.5	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW4	3/14/12	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW4	9/6/12	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW4	3/5/13	<1	0.23 J	< 10	<1	<1	2.8	<2	<1	16	<1	<1	1.6	40	< 0.8
LF4-MW4	9/11/13	<1	0.5 J	< 10	<1	<1	7.7	<2	<1	2.9	<1	<1	<1	1.7	< 0.8
LF4-MW4	3/5/14	<1	0.28 J	< 10	<1	<1	3.7	<2	<1	19	<1	<1	1.3	17	0.25 J
LF4-MW4	9/4/14	<1	0.21 J	< 10	<1	<1	4.6	<2	<1	7.7	<1	<1	0.45 J	6.1	< 0.8
LF4-MW4	3/13/15	<1	<1	< 10	<1	<1	1.3	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW4	9/16/15	<1	0.33 J	< 10	<1	<1	5.6	<2	<1	0.38 J	<1	<1	<1	0.33 J	< 0.8
LF4-MW4	3/16/16	<1	<1	< 10	<1	<1	1	<2	<1	30	<1	<1	2.3	32	< 0.8
LF4-MW4	9/21/16	<1	0.31 J	< 10	<1	<1	5	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW4	3/15/17	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW4	9/8/17	<1	<1	< 10	<1	<1	2.6	<2	<1	2.1	<1	<1	<1	1	< 0.8
LF4-MW4	3/8/18	<1	<1	< 10	<1	<1	1.6	<2	<1	20	<1	<1	1.6	27	< 0.8
LF4-MW4	9/11/18	< 1	< 1	< 10	< 1	< 2	3.2	< 5	< 1	0.6 J	< 1	< 1	< 1	< 1	< 1
LF4-MW4	3/7/19	< 1	< 1	< 10	< 1	< 2	1.2	< 5	< 1	35	< 1	< 1	2.8	34	< 1
LF4-MW4	9/5/19	< 1	< 1	< 10	< 1	< 2	3.5	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW4	3/12/20	< 1	< 1	< 10	< 1	< 2	1.3	< 5	< 1	25	< 1	< 1	2.2	30	< 1
LF4-MW4	9/15/20	< 1	< 1	< 10	< 1	< 2	2.4	< 5	< 1	1.5	< 1	< 1	< 1	1.2	< 1.0
LF4-MW4	3/4/21	< 1	< 1	< 10	< 1	< 2	0.71 J	< 5	< 1	2.1	< 1	< 1	< 1	1.9	< 1.0

Table 4-4: Analytical Data for VOCs Detected in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	1,1-DCE	1,4-DCB	Acetone	Benzene	Carbon Disulfide	Chloro-benzene	Chloro-ethane	Chloro-form	c-1,2-DCE	Ethyl-benzene	Toluene	t-1,2-DCE	TCE	VC
LF4-MW4	3/2/22	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	21	< 1	< 1	1.8	20	< 1
LF4-MW4	8/31/22	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	0.56 J	< 1	< 1	< 1	< 1	< 1
LF4-MW4	3/6/23	< 1	< 1	< 10	< 1	< 2	0.75 J	< 5	< 1	32	< 1	< 1	1.9	9.7	< 1
LF4-MW4	9/6/23	< 1	< 1	< 10	< 1	< 2	2.4	< 5	< 1	< 1	< 1	< 1	< 1	0.37 J	< 1
LF4-MW5	3/29/00	< 0.5	< 0.5	< 5	< 0.5	< 5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
LF4-MW5	9/26/00	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW5	4/24/01	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW5	9/28/01	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW5	4/2/02	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW5	9/18/02	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW5	3/5/03	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW5	9/26/03	< 0.5	--	--	< 0.5	--	< 0.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
LF4-MW5	3/31/04	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW5	9/29/04	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW5	3/16/05	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW5	9/29/05	<1	<1	< 10 (UJI)	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW5	3/14/06	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW5	9/14/06	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW5	3/7/07	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW5	9/24/07	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW5	3/26/08	<1	<1	< 10 (UJC)	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
LF4-MW5	9/16/08	<1	<1	< 10	<1	< 1 (UJC)	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	3/18/09	<1	<1	5.5 J	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	9/17/09	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	3/17/10	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	9/21/10	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	9/8/11	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	3/14/12	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	9/6/12	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	0.67 J	<1	<1	< 0.8
LF4-MW5	3/5/13	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	9/11/13	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	3/5/14	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	9/4/14	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	3/13/15	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	9/16/15	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	3/16/16	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8

Table 4-4: Analytical Data for VOCs Detected in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	1,1-DCE	1,4-DCB	Acetone	Benzene	Carbon Disulfide	Chloro-benzene	Chloro-ethane	Chloro-form	c-1,2-DCE	Ethyl-benzene	Toluene	t-1,2-DCE	TCE	VC
LF4-MW5	9/21/16	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	3/15/17	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	9/8/17	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	3/8/18	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
LF4-MW5	9/11/18	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW5	3/7/19	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW5	9/5/19	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW5	3/12/20	< 1	< 1	7.0 J	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW5	9/15/20	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW5	3/4/21	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW5	3/2/22	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW5	8/31/22	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW5	3/6/23	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
LF4-MW5	9/6/23	< 1	< 1	< 10	< 1	< 2	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Notes:

-- = Not analyzed
< = Indicates the analyte was not detected at the reported quantitation limit shown.
1,1-DCE = 1,1-Dichloroethene
1,4-DCB = 1,4-Dichlorobenzene
c-1,2-DCE = Cis-1,2-Dichloroethene
t-1,2-DCE = Trans-1,2-Dichloroethene
TCE = Trichloroethene
VC = Vinyl Chloride
VOC = Volatile organic compound

Data reported in micrograms per liter (µg/L)
Samples collected 2000 through 2003 by IT Corporation/Shaw Environmental.
Samples collected in 2004 to the present by Matrix Environmental Services, LLC (MES).

Lab Flag:

J = Estimated detection. Concentration is between the method detection limit and the practical quantitation limit.

Validation Flags:

(JH) = Data is estimated. Analytical method holding time exceeded.
(UJC) = Reported quantitation limit is estimated; continuing calibration was outside method-specific control limits.
(UJI) = Reported quantitation limit is estimated; initial calibration was outside method-specific control limits.
(UJL) = Reported quantitation limit is estimated; the LCS and LCSD recoveries were outside laboratory historical control limits.
(UJM) = Reported quantitation limit is estimated; the MS and MSD recoveries were outside laboratory historical control limits.

Table 4-5: Analytical Data for Metals in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	Antimony (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Cobalt (µg/L)	Copper (µg/L)	Lead (µg/L)	Mercury (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Silver (µg/L)	Thallium (µg/L)	Vanadium (µg/L)	Zinc (µg/L)
LF4-MW1	3/29/00	< 5.0	< 5.0	< 50	< 1.0	< 1.0	< 5.0	< 500	< 5.0	< 3.0	< 1	18	< 5.0	--	< 2.0	< 100	71
LF4-MW1	9/26/00	--	< 5.0	60	--	< 1.0	12.4	--	--	28.4	< 1	--	< 5.0	--	--	--	--
LF4-MW1	4/24/01	--	< 5.0	< 50	--	< 1.0	17.8	--	--	21.1	< 1	--	< 5.0	--	--	--	--
LF4-MW1	9/28/01	--	< 5.0	< 50	--	< 1.0	< 5.0	--	--	< 3.0	< 1	--	< 5.0	--	--	--	--
LF4-MW1	4/2/02	--	< 5.0	60	--	< 1.0	< 5.0	--	--	< 3.0	< 1	--	< 5.0	--	--	--	--
LF4-MW1	9/18/02	--	< 5.0	60	--	< 1.0	< 5.0	--	--	3.0	< 1	--	< 5.0	--	--	--	--
LF4-MW1	3/5/03	--	< 5.0	< 50	--	< 1.0	< 5.0	--	--	< 3.0	< 1	--	< 5.0	--	--	--	--
LF4-MW1	9/26/03	--	< 5.0	< 50	--	1.0	< 5.0	--	--	13	< 1	--	< 5.0	--	--	--	--
LF4-MW1	3/31/04	< 100	< 10	40.8	< 10	< 10	< 20 (UJ-)	8.81 J (J-)	< 20	2.1 J (J-)	< 0.4	< 20	< 10	< 20 (UJ-)	< 10	< 10	21.6 J
LF4-MW1	9/29/04	< 100	< 10	41.2	< 10	2.31 J	< 20	30.5	< 20	2.25 J (J-)	< 0.4	13.1 J	< 10	5.11 J	< 10	< 10	51.9 J
LF4-MW1	3/16/05	< 100	< 10	29.1	< 10	< 10	< 20	8.6 J	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	14.4 J
LF4-MW1	9/28/05	< 100	< 10	43.2	< 10	< 10	< 20	14.6 J	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	100 U^ (UB)
LF4-MW1	3/13/06	< 100	< 10	71.5	1.62 J	< 10	7.94 J	17.8 J	15.1 J	< 10	< 0.4	20 U^ (UB)	< 10	20 U^ (UB)	< 10	14.3	83.1 J
LF4-MW1	9/13/06	< 100	5.07 J	41.6	1.13 J	< 10	< 20	8.79 J	10.1 J	2.86 J	< 0.4	12.9 J	< 10	38	< 10	< 10	30.4 J
LF4-MW1	3/6/07	< 100	< 10	40	< 10	< 10	< 20	8.36 J	9.69 J	4.77 J	< 0.4	< 20	< 10	< 20	< 10	< 10	39.5 J
LF4-MW1	9/24/07	< 100	< 10	32.1	< 10	< 10	< 20	9.65 J	6.72 J	3.48 J	< 0.4	10.2 J	< 10	< 20	< 10	< 10	100 U^ (UB)
LF4-MW1	3/26/08	< 100	< 10	50.3	< 10	< 10	< 20	28.6	9.1 J	7.19 J	< 0.4	16.3 J	< 10	< 20	< 10	< 10	41.7 J
LF4-MW1	9/16/08	< 100	< 10	31.3	< 10	< 10	< 20	10.6 J	6.42 J	< 10	< 0.4	10.1 J	< 10	< 20	< 10	< 10	23.9 J
LF4-MW1	3/17/09	< 100	< 10	28.7	< 10	< 10	< 20	19.9 J	4.64 J	< 10	< 0.8	12.3 J	< 10	< 20	6.41 J	< 10	34.9 J
LF4-MW1	9/17/09	< 100	< 10	33.1	< 10	< 10	< 20	14.7 J	4.63 J	3.4 J	< 0.4	11 J	< 10	< 20	< 10	< 10	31.3 J
LF4-MW1	3/17/10	< 100	< 10	32.5	< 10	< 10	< 20	12.6 J	4.74 J	5.31 J	< 0.4	6.78 J	< 10	< 20	< 10	< 10	13.1 J
LF4-MW1	9/21/10	100 U^ (UB)	< 10	29.9	< 10	< 10	< 20	21.7	2.12 J	< 10	< 0.4	13.8 J	< 10	< 20	< 10	< 10	41.2 J
LF4-MW1	3/15/11	< 100	< 10	40.9	< 10	< 10	< 20	26.7	17.8 J	< 10	< 0.4	19.1 J	< 10	< 20	< 10	< 10	65.9 J
LF4-MW1	9/8/11	< 100	< 10	39.1	< 10	< 10	< 20	31.9	< 20	3.17 J	< 2	19.1 J	< 10	< 20	< 10	< 10	52.1 J
LF4-MW1	3/14/12	< 100	< 10	47.2	< 10	< 10	< 20	32.8	< 20	3.18 J	< 0.4	20.5	< 10	< 20	< 10	< 10	52.8 J
LF4-MW1	9/6/12	< 100	< 10	46.6	< 10	< 10	< 20	36.8	< 20	< 10	< 0.4	25.4	< 10	< 20	< 10	< 10	55.9 J
LF4-MW1	3/5/13	< 100	< 10	47.7	< 10	< 10	< 20	33.0	< 20	3.26 J	< 0.4	23.1	< 10	< 20	< 10	< 10	62.9 J
LF4-MW1	9/11/13	< 100	< 10	36.1	< 10	< 10	< 20	22.1	3.11 J	7.36 J	< 0.4	15.4 J	< 10	< 20	< 10	< 10	39.1 J
LF4-MW1	3/5/14	< 1.0	0.258 J	37.1	0.284 J	< 1.0	< 1.0	26.4	2.74	0.223 J	< 0.4	17.7	< 1.0	< 1.0	< 1.0	< 1.0	43.3
LF4-MW1	9/4/14	< 1.0	0.263 J	36.0	0.391 J	< 1.0	0.296 J	24.3	2.71	0.378 J	< 0.4	14.7	< 1.0	< 1.0	< 1.0	< 1.0	39.3
LF4-MW1	3/13/15	< 1.0	0.227 J	43.5	0.289 J	< 1.0	< 1.0	33.6	1.45	0.282 J	< 0.4	19.4	< 1.0	< 1.0	< 1.0	< 1.0	59.5
LF4-MW1	9/16/15	< 1.0	0.513 J	42.3	0.497 J	< 1.0	1.89	25	4.87	3.77	< 0.4	16.4	< 1.0	< 1.0	< 1.0	1.77	40.5
LF4-MW1	3/16/16	< 1.0	< 1.0	42.7	0.275 J	0.201 J	< 1.0	39.5	1.78	0.374 J	< 0.4	22.1	< 1.0	< 1.0	< 1.0	< 1.0	60.5
LF4-MW1	9/21/16	< 1.0	0.314 J	40.7	0.429 J	< 1.0	0.408 J	30.4	2.16	0.722 J	< 0.4	18.3	<1.0	<1.0	<1.0	<1.0	47
LF4-MW1	3/15/17	< 1.0	0.309 J	45.5	0.276 J	0.249 J	0.481 J	33.7	1.31	0.472 J	< 0.4	21.8	<1.0	<1.0	<1.0	<1.0	55.8
LF4-MW1	9/8/17	< 1	0.346 J	44	0.224 J	< 1	0.377 J	37.7	1.33	0.368 J	< 0.4	22.9	< 1	< 1	< 1	< 1	60.9
LF4-MW1	3/8/18	< 1	1.48	44.6	0.207 J	< 1	1.45	27.9	2.23	1.67	< 0.4	18.3	< 1	< 1	< 1	1.58	50.3
LF4-MW1	9/11/18	< 20	< 20	47	0.19 J	< 5	< 10	33	< 20	< 10	< 0.2	23 J	< 20	< 10	6.5 J	1.1 J	73
LF4-MW1	3/7/19	< 5	< 3	47	0.17 J	< 0.5	1.7 J	38	1.7 J	1.7 J	< 0.2	23	< 2.5	< 1	< 1	< 10	58
LF4-MW1	9/5/19	< 5	< 3	44	0.34 J	< 0.5	< 5	34	2.3 J	1.5 J	0.09 J B (UB)	21	< 2.5	< 1	< 1	< 10	150
LF4-MW1	3/12/20	< 5	< 3	46	0.27 J	< 0.5	< 5	35 ^	2.6 J	1.6 J	< 0.20	22	< 2.5	< 1	< 1	< 10	57
LF4-MW1	9/15/20	< 5	< 3	46 B	0.3 J	0.2 J	< 5	38	< 5	< 2.5	< 0.2	23	< 2.5	< 1	< 1	< 10	82
LF4-MW1	3/4/21	< 5	< 3	49	0.35 J	< 0.5	1.9 J	36	3.7 J	2.6	< 0.2	23	< 2.5	< 1	< 1	< 10	86
LF4-MW1	9/9/21	< 5	2.2	55	0.17 J	0.16 J	< 5	37	1.9 J	1 J	< 0.2	21	< 2.5	< 1	< 1	< 10	99

Table 4-5: Analytical Data for Metals in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	Antimony (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Cobalt (µg/L)	Copper (µg/L)	Lead (µg/L)	Mercury (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Silver (µg/L)	Thallium (µg/L)	Vanadium (µg/L)	Zinc (µg/L)
LF4-MW1	3/2/22	< 5	2.2 J	52	0.37 J	0.13 J	< 5	34	3.3 J	3	< 0.2	23	< 2.5	< 1	< 1	2.9 J	140
LF4-MW1	8/31/22	< 5	< 3	42	0.29 J	0.11 J	< 5	32	1.2 J	0.94 J	< 0.2	19	< 2.5	< 1	< 1	< 10	50
LF4-MW1	3/6/23	< 5	4.4	42	< 0.5	0.085 J	< 5	23	< 5	0.49 J	< 0.2	18	< 2.5	< 1	< 1	< 10	33
LF4-MW1	9/6/23	< 5	5.4	47	0.26 J	0.15 J	< 5	23	2.7 J	1.1 J	< 0.2	15	< 2.5	< 1	< 1	< 10	31
LF4-MW2	3/29/00	< 5	4.4	42	< 0.5	0.085 J	< 5	23	< 5	0.49 J	< 0.2	18	< 2.5	< 1	< 1	< 10	33
LF4-MW2	9/26/00	< 5	4.4	42	< 0.5	0.085 J	< 5	23	< 5	0.49 J	< 0.2	18	< 2.5	< 1	< 1	< 10	33
LF4-MW2	4/24/01	< 5	4.4	42	< 0.5	0.085 J	< 5	23	< 5	0.49 J	< 0.2	18	< 2.5	< 1	< 1	< 10	33
LF4-MW2	9/28/01	--	< 5.0	70	--	< 1.0	5.77	--	--	8.14	< 1.0	--	< 5.0	--	--	--	--
LF4-MW2	4/2/02	--	< 5.0	120	--	< 1.0	< 5.0	--	--	5.69	< 1.0	--	< 5.0	--	--	--	--
LF4-MW2	9/18/02	--	< 5.0	110	--	< 1.0	< 5.0	--	--	3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW2	3/5/03	--	< 5.0	60	--	< 1.0	9.0	--	--	10	< 1.0	--	< 5.0	--	--	--	--
LF4-MW2	9/26/03	--	< 5.0	90	--	1.0	< 5.0	--	--	15	< 1.0	--	< 5.0	--	--	--	--
LF4-MW2	3/31/04	< 100	< 10	87.2	< 10	< 10	< 20 (UJ-)	7.27 J (J-)	< 20	4.27 J (J-)	< 0.4	< 20	< 10	< 20 (UJ-)	< 10	< 10	50.4 J
LF4-MW2	9/29/04	< 100	15.2	227	4.41 J	< 10	30.1	27.2	55.6	78.8	0.188 J	33.2	< 10	< 20	< 10	101	92.9 J
LF4-MW2	3/16/05	< 100	< 10	60.3	< 10	< 10	< 20	8.53 J	< 20	2.71 J	< 0.4	< 20	< 10	< 20	< 10	< 10	65.6 J
LF4-MW2	9/28/05	< 100	< 10	87.7	1.32 J	< 10	< 20	22.0	< 20	< 10	< 0.4	14.8 J	< 10	< 20	< 10	< 10	100 U^ (UB)
LF4-MW2	3/13/06	< 100	< 10	25.4	< 10	< 10	< 20	6.39 J	10.7 J	10.1	< 0.4	< 20	< 10	20 U^ (UB)	< 10	< 10	54.2 J
LF4-MW2	9/13/06	46.2 J	6.34 J	111	2.38 J	< 10	5.68 J	15 J	16.1 J	12.1	< 0.4	18.7 J	< 10	20 U^ (UB)	10 U^ (UB)	18.7	96 J
LF4-MW2	3/6/07	< 100	< 10	94.7	< 10	< 10	< 20	14.6 J	9.44 J	7.79 J	< 0.4	10.8 J	< 10	< 20	< 10	6.95 J	35.5 J
LF4-MW2	9/24/07	< 100	< 10	82	< 10	< 10	< 20	12.7 J	2.59 J	4.45 J	< 0.4	10.8 J	< 10	< 20	< 10	< 10	100 U^ (UB)
LF4-MW2	3/26/08	< 100	< 10	133	< 10	< 10	< 20	9.79 J	4.98 J	7.24 J	< 0.4	9.77 J	< 10	< 20	< 10	< 10	17.1 J
LF4-MW2	9/16/08	< 100	< 10	97.6	< 10	< 10	< 20	19.4 J	4.2 J	5.01 J	< 0.4	14.8 J	< 10	< 20	< 10	< 10	30.6 J
LF4-MW2	3/17/09	< 100	< 10	125	1.06 J	< 10	< 20	96.4	3.4 J	< 10	< 0.8	68.3	< 10	< 20	5.84 J	< 10	501
LF4-MW2	9/17/09	< 100	< 10	93.4	< 10	< 10	< 20	113	3.54 J	< 10	< 0.4	70.1	< 10	< 20	6.54 J	< 10	608
LF4-MW2	3/17/10	< 100	< 10	89.8	2.02 J	1.01 J	3.36 J	87	24.3	9.3 J	< 0.4	64.8	< 10	< 20	< 10	< 10	887
LF4-MW2	9/21/10	< 100	8.3 J	99.7	< 10	< 10	< 20	31.3	< 20	< 10	< 0.4	20.5	< 10	< 20	< 10	< 10	105
LF4-MW2	3/15/11	< 100	< 10	102	< 10	< 10	< 20	23.5	< 20	< 10	< 0.4	14.6 J	< 10	< 20	< 10	< 10	703 J
LF4-MW2	9/8/11	< 100	5.4 J	107	< 10	< 10	< 20	24.6	< 20	< 10	< 2.0	15 J	< 10	< 20	< 10	< 10	73.7 J
LF4-MW2	3/14/12	< 100	< 10	107	< 10	< 10	< 20	19.9 J	< 20	< 10	< 0.4	11.6 J	< 10	< 20	< 10	< 10	54.9 J
LF4-MW2	9/6/12	< 100	< 10	109	< 10	< 10	< 20	18.7 J	4.79 J	< 10	< 0.4	15.4 J	< 10	< 20	< 10	< 10	62.4 J
LF4-MW2	3/5/13	< 100	< 10	128	< 10	< 10	< 20	142	11.8 J	3.74 J	< 0.4	83.4	< 10	< 20	< 10	< 10	733
LF4-MW2	9/11/13	< 100	< 10	75.4	< 10	< 10	< 20	109	< 20	4.31 J	< 0.4	61.6	< 10	< 20	< 10	< 10	410
LF4-MW2	3/5/14	< 1.0	1.38	63	0.8 J	1.08	2.4	175	23.5	2.2	< 0.4	99	0.771 J	< 1.0	< 1.0	< 1.0	1020
LF4-MW2	9/4/14	< 1.0	1.96	57.6	0.11 J	0.303 J	0.667 J	90.6	1.86	0.987 J	< 0.4	44.2	< 1.0	< 1.0	< 1.0	0.639 J	311
LF4-MW2	3/13/15	< 1.0	2.36	73.6	0.709 J	0.715 J	2.04	139	15.1	2.08	< 0.4	75.4	1.04	< 1.0	< 1.0	< 1.0	826
LF4-MW2	9/16/15	< 1.0	4.05	79.1	0.148 J	0.232 J	0.972 J	75.5	2.42	1.9	< 0.4	41.1	< 1.0	< 1.0	< 1.0	0.8 J	281
LF4-MW2	3/16/16	< 1.0	2.46	58.8	0.345 J	0.5 J	1.83	92.8	10.4	4.16	< 0.4	53.8	< 1.0	< 1.0	< 1.0	1.4	434
LF4-MW2	9/21/16	<1.0	3.33	69.7	0.14 J	0.282 J	1	91.7	2.54	1.8	< 0.4	49.1	<1.0	<1.0	<1.0	0.895 J	389
LF4-MW2	3/15/17	<1.0	2.85	66.5	0.119 J	<1.0	0.854 J	55.7	2.31	2.24	< 0.4	27.5	<1.0	<1.0	<1.0	1.4	175
LF4-MW2	9/8/17	< 1	5.43	87.3	0.115 J	< 1	1.22	51.3	2.11	1.93	< 0.4	25.3	< 1	< 1	< 1	1.96	180
LF4-MW2	3/8/18	< 1	2.74	77	0.542 J	0.915 J	2.97	125	10.9	3.91	< 0.4	64.8	0.608 J	< 1	< 1	2.52	732
LF4-MW2	9/11/18	< 20	9.9 J	74	0.15 J	< 5	< 10	100	2.3 J	< 10	< 0.2	53	< 20	< 10	< 25	< 10	390
LF4-MW2	3/7/19	< 5	< 3	59	1.3	1.3	4.7 J	160	27	4.7	< 0.2	96	1.3 J	< 1	< 1	< 10	1200

Table 4-5: Analytical Data for Metals in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	Antimony (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Cobalt (µg/L)	Copper (µg/L)	Lead (µg/L)	Mercury (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Silver (µg/L)	Thallium (µg/L)	Vanadium (µg/L)	Zinc (µg/L)
LF4-MW2	9/5/19	0.65 J	2.4 J	68	0.24 J	0.37 J	3.2 J	120	4.4 J	2.2 J	0.095 J B (UB)	63	< 2.5	< 1	< 1	< 10	520
LF4-MW2	3/12/20	< 5	3.1	63	0.8	0.74	3.9 J	100 ^	19	16	< 0.20	59	< 2.5	< 1	< 1	< 10	540
LF4-MW2	9/15/20	< 5	3.3	69 B	0.42 J	0.21 J	4.5 J	130	5.1	6.2	< 0.2	65	< 2.5	< 1	< 1	< 10	460
LF4-MW2	3/4/21	< 5	3.3	62	0.25 J	0.18 J	1.9 J	65	6.9	7.4	< 0.2	33	< 2.5	< 1	< 1	< 10	210
LF4-MW2	9/9/21	< 5	4.1	100	0.31 J	0.34 J	2.1 J (J)	99	9.4	5.4	< 0.2	50	< 2.5	< 1	< 1	< 10	360
LF4-MW2	3/2/22	< 5	3.2	60	0.5	0.39 J	< 5	71	10	6.8	< 0.2	39	< 2.5	< 1	< 1	2 J	310
LF4-MW2	8/31/22	< 5	2.3 J	73	0.24 J	0.27 J	3 J	110	4.8 J	4.9 (J)	< 0.2	49	< 2.5	< 1	< 1	< 10	400
LF4-MW2	3/6/23	< 5	2.1 J	68	0.28 J	0.34 J	1.6 J	92	6.4	4.6	< 0.2	48	< 2.5	< 1	< 1	< 10	430
LF4-MW2	9/6/23	< 5	4.3	96	0.39 J	0.32 J	3.2 J	140	8.3	16	< 0.2	63	< 2.5	< 1	< 1	< 10	480
LF4-MW3	3/29/00	< 5.0	< 5.0	< 50	< 1.0	< 1.0	< 5.0	< 500	< 5.0	4.0	< 1.0	< 5.0	< 5.0	--	< 2.0	< 100	< 30
LF4-MW3	9/26/00	--	< 5.0	60	--	< 1.0	6.23	--	--	11.4	< 1.0	--	< 5.0	--	--	--	--
LF4-MW3	4/24/01	--	< 5.0	60	--	< 1.0	< 5.0	--	--	5.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW3	9/28/01	--	6.0	< 50	--	< 1.0	< 5.0	--	--	< 3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW3	4/2/02	--	< 5.0	60	--	< 1.0	< 5.0	--	--	< 3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW3	9/18/02	--	< 5.0	70	--	< 1.0	< 5.0	--	--	< 3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW3	3/5/03	--	< 5.0	50	--	< 1.0	7.0	--	--	< 3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW3	9/26/03	--	< 5.0	70	--	< 1.0	< 5.0	--	--	17	< 1.0	--	< 5.0	--	--	--	--
LF4-MW3	3/31/04	< 100	< 10	53.7	< 10	< 10	< 20 (UJ-)	< 20 (UJ-)	27.4	5.34 J (J-)	< 0.4	< 20	< 10	< 20 (UJ-)	< 10 (UJ-)	< 10	69.4 J
LF4-MW3	9/29/04	< 100	< 10	66.8	< 10	< 10	< 20	12.3 J	< 20	< 10 (UJ-)	< 0.4	< 20	< 10	< 20	< 10	< 10	100 U^ (UB)
LF4-MW3	3/16/05	< 100	< 10	36.3	< 10	< 10	< 20	< 20	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	5.05 J
LF4-MW3	9/29/05	< 100	< 10	54.1	< 10	< 10	< 20	< 20	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	100 U^ (UB)
LF4-MW3	3/13/06	< 100	< 10	57	< 10	< 10	< 20	< 20	6.48 J	5.43 J	< 0.4	< 20	< 10	20 U^ (UB)	< 10	7.06 J	21.1 J
LF4-MW3	9/14/06	< 100	5.12 J	65.4	< 10	< 10	20 U^ (UB)	14 J	7.02 J	3.01 J	< 0.4	15.4 J	< 10	< 20 (UJ-)	5.41 J	5.79 J	25.1 J
LF4-MW3	3/6/07	< 100	< 10	48.3	< 10	< 10	< 20	< 20	< 20	2.38 J	< 0.4	< 20	< 10	< 20 (UJM)	< 10	< 10	26.2 J
LF4-MW3	9/25/07	< 100	< 10	59.7	< 10	< 10	< 20	7.41 J	< 20	< 10	< 0.4	6.81 J	< 10	< 20	< 10	< 10	15.6 J
LF4-MW3	3/26/08	< 100	< 10	69.8	< 10	< 10	< 20	< 20	2.46 J	4.79 J	< 0.4	6.14 J	< 10	< 20	< 10	< 10	15.9 J
LF4-MW3	9/16/08	< 100	< 10	51.9	< 10	< 10	< 20	< 20	3.72 J	< 10	< 0.4	3.94 J	< 10	< 20	< 10	< 10	8.07 J
LF4-MW3	3/17/09	< 100	< 10	53.5	< 10	< 10	< 20	< 20	2.2 J	< 10	< 0.8	3.49 J	< 10	< 20	< 10	< 10	15 J
LF4-MW3	9/17/09	< 100	22.4	76.3	< 10	< 10	< 20	< 20	< 20	29.1	< 0.4	6.87 J	< 10	< 20	< 10	< 10	26.6 J
LF4-MW3	3/17/10	< 100	< 10	58.5	< 10	< 10	< 20	< 20	2.03 J	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	7.51 J
LF4-MW3	9/21/10	< 100	< 10	39.2	< 10	< 10	< 20	3.39 J	< 20	< 10	< 0.4	2.66 J	< 10	< 20	< 10	< 10	5.95 J
LF4-MW3	3/15/11	< 100	< 10	69.2	< 10	< 10	< 20	2.92 J	6.07 J	5.0 J	< 0.4	3.87 J	< 10	< 20	< 10	< 10	20.6 J
LF4-MW3	9/8/11	< 100	< 10	57.1	< 10	< 10	< 20	2.74 J	< 20	< 10	< 2.0	3.49 J	< 10	< 20	< 10	< 10	10.1 J
LF4-MW3	3/14/12	< 100	< 10	60.8	< 10	< 10	< 20	< 20	3.23 J	< 10	< 0.4	3.43 J	< 10	< 20	< 10	< 10	14.7 J
LF4-MW3	9/6/12	< 100	< 10	59	< 10	< 10	< 20	< 20	3.05 J	< 10	< 0.4	3.62 J	< 10	< 20	< 10	< 10	17.1 J
LF4-MW3	3/5/13	< 100	< 10	75.7	< 10	< 10	< 20	< 20	3.46 J	4.5 J	< 0.4	4.38 J	< 10	< 20	< 10	< 10	16.6 J
LF4-MW3	9/11/13	< 100	< 10	52.2	< 10	< 10	< 20	9.77 J	< 20	3.13 J	< 0.4	< 20	< 10	< 20	< 10	< 10	< 100
LF4-MW3	3/5/14	< 1.0	0.272 J	54.7	0.27 J	< 1.0	0.256 J	1.76	1.74	2.01	< 0.4	2.85	< 1.0	< 1.0	< 1.0	< 1.0	< 20
LF4-MW3	9/4/14	< 1.0	679 J	67200	0.35 J	0.243 J	0.654 J	4.03	1.67	2.01	< 0.4	3.4	< 1.0	< 1.0	< 1.0	1.28	< 20
LF4-MW3	3/13/15	< 1.0	0.648 J	84.5	0.597 J	< 1.0	0.356 J	1.61	1.93	4.32	< 0.4	3.37	< 1.0	< 1.0	< 1.0	< 1.0	14.9 J
LF4-MW3	9/16/15	< 1.0	0.432 J	97.8	0.308 J	0.248 J	0.406 J	17.7	1.1	1.53	< 0.4	6.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20
LF4-MW3	3/16/16	< 1.0	0.352 J	56.7	0.31 J	< 1.0	0.34 J	1.49	1.91	2.41	< 0.4	2.9	< 1.0	< 1.0	< 1.0	< 1.0	< 20
LF4-MW3	9/21/16	<1.0	0.992 J	86.8	0.508 J	0.262 J	1.19	1.02	2.26	3.16	< 0.4	3.93	<1.0	<1.0	<1.0	1.83	11.2 J

Table 4-5: Analytical Data for Metals in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	Antimony (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Cobalt (µg/L)	Copper (µg/L)	Lead (µg/L)	Mercury (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Silver (µg/L)	Thallium (µg/L)	Vanadium (µg/L)	Zinc (µg/L)
LF4-MW3	3/15/17	<1.0	0.782 J	60.3	0.373 J	< 1.0	0.786 J	1.5	1.3	3.05	< 0.4	3.0	<1.0	<1.0	<1.0	0.949 J	10.4 J
LF4-MW3	9/8/17	< 1	0.207 J	59.3	0.224 J	< 1	0.591 J	1.86	3.36	0.935 J	< 0.4	3.4	< 1	< 1	< 1	< 1	18 J
LF4-MW3	3/8/18	< 1 (UJM)	0.715 J	58.1	0.329 J	< 1	0.841	1.38	1.58	2.91	< 0.4	2.8	< 1	< 1	< 1	0.898 J	14.2 J
LF4-MW3	9/11/18	< 20	< 20	57	0.28 J	< 5	< 10	6.4 J	< 20	< 10	< 0.2	4.7 J	< 20	< 10	< 25	1.2 J	15J F1 F2
LF4-MW3	3/7/19	< 5	< 3	68	0.44 J	< 0.5	2.4 J	1.3	2.5 J	4.1	< 0.2	3.3 J	< 2.5	< 1	< 1	< 10	16 J
LF4-MW3	9/5/19	< 5	< 3	73	0.32 J	< 0.5	1.6 J	0.59	< 5	1.5 J	0.094 J B (UB)	3.5 J	< 2.5	< 1	< 1	< 10	41
LF4-MW3	3/12/20	< 5	3.5	85	0.69	< 0.5	4.2 J	1.5 ^	4.1 J	8.9	< 0.20	4.5 J	2.2 J	< 1	< 1	< 10	19 J
LF4-MW3	9/15/20	< 5	< 3	42 (JM)	0.41 J	0.17 J	2.4 J	1.1 (B)	1.7 J	2 J	< 0.2	2.7 J	< 2.5	< 1	< 1	< 10	53 F2
LF4-MW3	3/4/21	< 5	< 3	83	0.81	< 0.5	< 5	2.4	5.8	5.8	< 0.2 F1	5.6	< 2.5	< 1	< 1	0.44 F1	44
LF4-MW3	9/9/21	< 5	< 3	60	0.39 J	< 0.5	< 5	6.3	< 5	3.5	< 0.2	2.8 J	< 2.5	< 1	< 1	< 10	< 20
LF4-MW3	3/2/22	< 5	1.1 J	60	0.48 J	0.1 J	< 5	3.4	2 J	5	< 0.2	3.7 J	< 2.5	< 1	< 1	2.6 J	11 J
LF4-MW3	8/31/22	< 5	< 3	52	0.3 J	0.09 J	< 5	11	0.96 J	1.8 J	< 0.2	3 J	< 2.5	< 1	< 1	< 10	< 20
LF4-MW3	3/6/23	< 5	< 3	54	0.25 J	< 0.5	< 5	2.1	1.2 J	1.2 J	< 0.2	2.7 J	< 2.5	< 1	< 1	< 10	7.4 J
LF4-MW3	9/6/23	< 5	< 3	41	0.3 J	0.12 J	< 5	9.3	2.8 J	2.2 J	< 0.2	2.8 J	< 2.5	< 1	< 1	< 10	5.5 J
LF4-MW4	3/29/00	< 5.0	< 5.0	245	< 1	< 1.0	< 5.0	< 500	< 5.0	6.0	< 1.0	< 5.0	< 5.0	--	< 2.0	< 100	< 30
LF4-MW4	9/26/00	--	< 5.0	200	--	< 1.0	5.55	--	--	22.3	< 1.0	--	< 5.0	--	--	--	--
LF4-MW4	4/24/01	--	< 5.0	140	--	< 1.0	< 5.0	--	--	< 3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW4	9/28/01	--	6.0	250	--	< 1.0	< 5.0	--	--	< 3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW4	4/2/02	--	< 5.0	250	--	< 1.0	< 5.0	--	--	< 3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW4	9/18/02	--	< 5.0	240	--	< 1.0	< 5.0	--	--	5.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW4	3/5/03	--	< 5.0	170	--	< 1.0	< 5.0	--	--	5.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW4	9/26/03	--	< 5.0	230	--	2.0	< 5.0	--	--	15	< 1.0	--	< 5.0	--	--	--	--
LF4-MW4	3/31/04	< 100	< 10	197	< 10	< 10	< 20 (UJ-)	6.45 J (J-)	< 20	< 10 (UJ-)	< 0.4	< 20	< 10	< 20 (UJ-)	< 10 (UJ-)	< 10	17.5 J
LF4-MW4	9/29/04	< 100	< 10	181	< 10	< 10	< 20	< 20	< 20	6.94 J (J-)	< 2.0	< 20	< 10	< 20	< 10	< 10	100 U^ (UB)
LF4-MW4	3/15/05	< 100	< 10	152	< 10	< 10	< 20	< 20 (UJ-)	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	10.4 J
LF4-MW4	9/29/05	< 100	< 10	186	< 10	< 10	< 20	< 20	< 20	2.7 J	< 0.4	< 20	< 10	< 20	< 10	< 10	100 U^ (UB)
LF4-MW4	3/14/06	< 100	< 10	145	< 10	< 10	< 20	< 20	< 20	11.6	< 0.4	< 20	< 10	< 20	< 10	6.87 J	25.5 J
LF4-MW4	9/14/06	< 100	5.18 J	180	< 10	< 10	20 U^ (UB)	< 20	8.16 J	28.5	< 0.4	< 20	< 10	< 20 (UJ-)	< 10	12.5	45 J
LF4-MW4	3/7/07	< 100	5.59 J	119	< 10	< 10	< 20	< 20	< 20	5.62 J	< 0.4	< 20	< 10	< 20	< 10	< 10	9.82 J
LF4-MW4	9/25/07	< 100	< 10	209	< 10	< 10	< 20	4.34 J	< 20	5 J	< 0.4	5.16 J	< 10	< 20	< 10	< 10	14 J
LF4-MW4	3/26/08	< 100	< 10	143	< 10	< 10	< 20	6.95 J	< 20	< 10	< 0.4	4.22 J	< 10	< 20	8.84 J	< 10	7.11 J
LF4-MW4	9/17/08	68.6 J	< 10	193	< 10	< 10	< 20	4.32 J	2.4 J	5.62 J	< 0.4	4.99 J	< 10	3.37 J (JM)	10.7	< 10	17.8 J
LF4-MW4	3/17/09	< 100	< 10	139	< 10	< 10	< 20	5.29 J	< 20	4.94 J	< 0.8	4.39 J	< 10	< 20	11.8	< 10	19.3 J
LF4-MW4	9/21/09	< 100	< 10	115	< 10	< 10	< 20	< 20	2.06 J	5.62 J	< 0.4	2.83 J	< 10	< 20	< 10	< 10	7.15 J
LF4-MW4	3/17/10	36.7 J	< 10	129	< 10	< 10	< 20	2.63 J	2 U^ (UB)	3.32 J	< 0.4 (UJM)	4.59 J	< 10	< 20	< 10	< 10	6.8 J
LF4-MW4	9/21/10	< 100	< 10	177	< 10	1.62 J	< 20	4.49 J	< 20	3.58 J	< 0.4	3.93 J	< 10	< 20	< 10	< 10	12.9 J
LF4-MW4	3/15/11	< 100	< 10	89.8	< 10	< 10	< 20	3.02 J	3.05 J	3.56 J	< 0.4	< 20	< 10	< 20	< 10	< 10	12.7 J
LF4-MW4	9/8/11	< 100	< 10	169	< 10	< 10	< 20	4.25 J	< 20	3.69 J	< 2.0	3.72 J	< 10	< 20	< 10	2.75 J	10.2 J
LF4-MW4	3/14/12	< 100	< 10	136	< 10	< 10	< 20	3.92 J	3.03 J	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	< 100
LF4-MW4	9/6/12	< 100	< 10	115	< 10	< 10	< 20	< 20	4.83 J	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	< 100
LF4-MW4	3/5/13	< 100	< 10	162	< 10	< 10	< 20	2.86 J	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	12.7 J
LF4-MW4	9/11/13	< 100	< 10	201	< 10	< 10	< 20	6.32 J	< 20	4.8 J	< 0.4	8.64 J	< 10	< 20	< 10	< 10	11.8 J
LF4-MW4	3/5/14	< 1.0	2.03	174	< 1.0	< 1.0	< 1.0	3.05	1.37	1.01	< 0.4 (UJM)	2.57	< 1.0	< 1.0	< 1.0	< 1.0	< 20

Table 4-5: Analytical Data for Metals in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	Antimony (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Cobalt (µg/L)	Copper (µg/L)	Lead (µg/L)	Mercury (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Silver (µg/L)	Thallium (µg/L)	Vanadium (µg/L)	Zinc (µg/L)
LF4-MW4	9/4/14	< 1.0	2720	188000	0.114 J	0.926 J	< 1.0	3.31	0.889 J	4.09	< 0.4	3.73	< 1.0	< 1.0	< 1.0	2.33	< 20
LF4-MW4	3/13/15	< 1.0	2.29	112	< 1.0	< 1.0	0.22 J	5.34	< 1.0	0.601 J	< 0.4	2.11	< 1.0	< 1.0	< 1.0	1.28	< 20
LF4-MW4	9/16/15	< 1.0	1.3	174	0.196 J	1.5	1.95	4.47	2.53	10.9	< 0.4	4.35	0.308 J	< 1.0	< 1.0	7.32	17.3 J
LF4-MW4	3/16/16	< 1.0	5.22	186	< 1.0	< 1.0	< 1.0	2.11	< 1.0	0.407 J	< 0.4	2.2	< 1.0	< 1.0	< 1.0	< 1.0	< 20
LF4-MW4	9/21/16	<1.0	1.02	160	<1.0	0.508 J	<1.0	4.22	1.17	3.2	< 0.4	3.16	<1.0	<1.0	<1.0	2.91	17.1 J
LF4-MW4	3/15/17	<1.0	3.28	127	<1.0	< 1.0	0.289 J	7.09	0.501 J	0.711 J	< 0.4	2.29	<1.0	<1.0	<1.0	2.09	< 20
LF4-MW4	9/8/17	< 1	6.17	225	0.103 J	0.892 J	0.709 J	8.34	1.28	8.82	< 0.4	3.63	0.463 J	< 1	< 1	3.91	23.5
LF4-MW4	3/8/18	< 1	2.47	197	< 1	< 1	0.253 J	2.71	< 1	0.547 J	< 0.4	1.47	< 1	< 1	< 1	0.799 J	< 20
LF4-MW4	9/11/18	< 20	7.0 J	160	< 4	< 5	< 10	4.3 J	< 20	7.2 J	< 0.2	4.8 J	< 20	< 10	< 25	< 10	46
LF4-MW4	3/7/19	< 5	5	180	< 0.5	< 0.5	< 5	1.9	< 5	1.2 J	< 0.2	< 5	< 2.5	< 1	< 1	< 10	56
LF4-MW4	9/5/19	1.2 J	1.6 J	160	< 0.5	1	< 5	4	< 5	5.2	< 0.2	3.4 J	< 2.5	< 1	< 1	< 10	92
LF4-MW4	3/12/20	< 5	5.9	170	< 0.5	0.21 J	< 5	2.2 ^	< 5	3.3	< 0.20	2.2 J	< 2.5	< 1	< 1	< 10	12 J
LF4-MW4	9/15/20	< 5	< 3	160 B	< 0.5	0.7	< 5	3.4	< 5	5.2	< 0.2	2.6 J	< 2.5	< 1	< 1	< 10	27
LF4-MW4	3/4/21	< 5	2.9 J	190	< 0.5	< 0.5	< 5	3.3	< 5	1.1 J	< 0.2	2.4 J	< 2.5	< 1	< 1	< 10	< 20
LF4-MW4	9/9/21	< 5	6.4	330	0.42 J	0.63	< 5	4.1	2.1 J	24	0.15 J	3 J	1.1 J	< 1	< 1	< 10	31
LF4-MW4	3/2/22	< 5	4.3	220	0.34 J	0.54	< 5	2	1.6 J	7.7	< 0.2	1.8 J	< 2.5	< 1	< 1	4.2 J	11 J
LF4-MW4	8/31/22	< 5	1.5 J	110	< 0.5	0.3 J	< 5	7.9	1.4 J	2.7	< 0.2	3.9 J	< 2.5	< 1	0.31 J	2 J	31
LF4-MW4	3/6/23	< 5	3.9	130	< 0.5	< 0.5	< 5	3.2	< 5	1.6 J	< 0.2	1.5 J	< 2.5	< 1	< 1	2.4 J	< 20
LF4-MW4	9/6/23	< 5	1.6 J	190	< 0.5	< 0.5	< 5	3.9	< 5	0.75 J	< 0.2	3.2 J	< 2.5	< 1	< 1	< 10	6.8 J
LF4-MW5	3/29/00	< 5.0	< 5.0	< 50	< 1	< 1.0	< 5.0	< 500	< 5.0	3.0	< 1.0	< 5.0	< 5.0	--	< 2.0	< 100	< 30
LF4-MW5	9/26/00	--	< 5.0	< 20	--	< 1.0	< 5.0	--	--	11.2	< 1.0	--	< 5.0	--	--	--	--
LF4-MW5	4/24/01	--	< 5.0	< 50	--	< 1.0	< 5.0	--	--	< 3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW5	9/28/01	--	< 5.0	< 50	--	< 1.0	< 5.0	--	--	< 3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW5	4/2/02	--	< 5.0	< 50	--	< 1.0	< 5.0	--	--	< 3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW5	9/18/02	--	< 5.0	< 50	--	< 1.0	< 5.0	--	--	3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW5	3/5/03	--	< 5.0	< 50	--	< 1.0	< 5.0	--	--	< 3.0	< 1.0	--	< 5.0	--	--	--	--
LF4-MW5	9/26/03	--	< 5.0	< 50	--	< 1.0	< 5.0	--	--	17	< 1.0	--	< 5.0	--	--	--	--
LF4-MW5	3/31/04	< 100	< 10	14.4	< 10	< 10	< 20 (UJ-)	< 20 (UJ-)	29.2	4.98 J (J-)	< 0.4	< 20	< 10	< 20 (UJ-)	< 10 (UJ-)	< 10	67.5 J
LF4-MW5	9/29/04	< 100	< 10	12.7	< 10	< 10	< 20	7.63 J	< 20	< 10 (UJ-)	< 0.4	< 20	< 10	< 20	< 10	< 10	100 U^ (UB)
LF4-MW5	3/16/05	< 100	< 10	15.8	< 10	< 10	< 20	< 20	< 20	3.87 J	< 0.4	< 20	< 10	< 20	< 10	< 10	7.98 J
LF4-MW5	9/29/05	< 100	< 10	11.6	< 10	< 10	< 20	< 20	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	< 100
LF4-MW5	3/14/06	< 100	< 10	20.4	< 10	< 10	< 20	7.09 J	< 20	4.51 J	< 0.4	< 20	< 10	20 U^ (UB)	6.92 J	9.47 J	12.8 J
LF4-MW5	9/14/06	< 100	< 10	20.8	< 10	< 10	< 20	6.42 J	< 20	10.7	< 0.4	< 20	< 10	< 20 (UJ-)	8.76 J	7.5 J	20.9 J
LF4-MW5	3/7/07	< 100	< 10	14.5	< 10	< 10	< 20	< 20	< 20	3.2 J	< 0.4	< 20	< 10	< 20	< 10	< 10	18.8 J
LF4-MW5	9/24/07	< 100	< 10	20.5	< 10	< 10	< 20	4.25 J	2.14 J	5 J	< 0.4	3.21 J	< 10	< 20	< 10	< 10	100 U^ (UB)
LF4-MW5	3/26/08	< 100	< 10	12.2	< 10	< 10	< 20	2.59 J	< 20	< 10	< 0.4	2.75 J	< 10	< 20	< 10	< 10	6.55 J
LF4-MW5	9/16/08	< 100	< 10	10.7	< 10	< 10	< 20	3.33 J	< 20	< 10	< 0.4	2.58 J	< 10	< 20	< 10	< 10	6.3 J
LF4-MW5	3/18/09	< 100	< 10	13.1	< 10	< 10	< 20	2.91 J	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	8.63 J
LF4-MW5	9/17/09	< 100	< 10	9.23 J	< 10	< 10	< 20	4.33 J	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	5.65 J
LF4-MW5	3/17/10	< 100	< 10	13.6	< 10	< 10	< 20	6.24 J	< 20	< 10	< 0.4	3.17 J	< 10	< 20	< 10	< 10	< 100
LF4-MW5	9/21/10	100 U^ (UB)	< 10	12.5	< 10	< 10	< 20	10.5 J	< 20	< 10	< 0.4	3.69 J	< 10	< 20	< 10	< 10	8.21 J
LF4-MW5	3/15/11	< 100	< 10	28.9	< 10	< 10	4.91 J	2.95 J	4.69 J	9.14 J	< 0.4	5.17 J	< 10	< 20	< 10	12.5	15 J
LF4-MW5	9/8/11	< 100	< 10	17.2	< 10	< 10	< 20	7.26 J	< 20	< 10	< 2.0	3.14 J	< 10	< 20	< 10	< 10	< 100
LF4-MW5	3/14/12	< 100	< 10	12.5	< 10	< 10	< 20	3.17 J	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	11.5 J

Table 4-5: Analytical Data for Metals in Groundwater
Industrial Landfill, Parcel 175(5)
McClellan, Anniston Alabama

Well ID	Sample Date	Antimony (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Cobalt (µg/L)	Copper (µg/L)	Lead (µg/L)	Mercury (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Silver (µg/L)	Thallium (µg/L)	Vanadium (µg/L)	Zinc (µg/L)
LF4-MW5	9/6/12	< 100	< 10	11.1	< 10	< 10	< 20	2.34 J	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	< 100
LF4-MW5	3/5/13	< 100	< 10	12	< 10	< 10	< 20	2.76 J	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	11 J
LF4-MW5	9/11/13	< 100	< 10	< 10	< 10	< 10	< 20	< 20	< 20	< 10	< 0.4	< 20	< 10	< 20	< 10	< 10	< 100
LF4-MW5	3/5/14	< 1.0	0.21 J	11.6	< 1.0	< 1.0	< 1.0	4.02	1.1	0.943 J	< 0.4	2.36	< 1.0	< 1.0	< 1.0	< 1.0	< 20
LF4-MW5	9/4/14	< 1.0	226 J	10100	0.101 J	< 1.0	< 1.0	3.24	0.788 J	0.638 J	< 0.4	1.61	< 1.0	< 1.0	< 1.0	< 1.0	< 20
LF4-MW5	3/13/15	< 1.0	< 1.0	13.5	0.102 J	< 1.0	< 1.0	3.15	0.624 J	0.923 J	< 0.4	1.89	< 1.0	< 1.0	< 1.0	< 1.0	< 20
LF4-MW5	9/16/15	< 1.0	< 1.0	10.8	< 1.0	< 1.0	0.206 J	2.31	< 1.0	0.6 J	< 0.4	1.46	< 1.0	< 1.0	< 1.0	< 1.0	< 20
LF4-MW5	3/16/16	< 1.0	0.284 J	16.2	0.101 J	< 1.0	0.402 J	4.38	1.13	2.28	< 0.4	2.63	< 1.0	< 1.0	< 1.0	1.0 J	11.6 J
LF4-MW5	9/21/16	<1.0	<1.0	14.7	0.163 J	<1.0	<1.0	6.56	0.616 J	0.647 J	< 0.4	3.3	<1.0	<1.0	<1.0	<1.0	< 20
LF4-MW5	3/15/17	<1.0	<1.0	14.8	0.125 J	<1.0	0.477 J	2.67	1.22	1.24	< 0.4	2.07	<1.0	<1.0	<1.0	0.903 J	< 20
LF4-MW5	9/8/17	< 1	0.232 J	11.8	0.124 J	< 1	0.388 J	3.05	1.15	0.715 J	< 0.4	1.46	< 1	< 1	< 1	< 1	< 20
LF4-MW5	3/8/18	< 1	0.658 J	17.4	0.123 J	< 1	0.796	4.09	1.7	3.18	< 0.4	2.77	< 1	< 1	< 1	2.46	59.7
LF4-MW5	9/11/18	<20	< 20	11	< 4	< 5	< 10	2.7 J	< 20	< 10	< 0.2	3.9 J	< 20	< 10	< 25	<10	120
LF4-MW5	3/7/19	< 5	< 3	23	< 0.5	< 0.5	2.6 J	4.3	2 J	2.3 J	< 0.2	3.9 J	< 2.5	< 1	< 1	5.4 J	21
LF4-MW5	9/5/19	< 5	< 3	13	< 0.5	< 0.5	< 5	6.7	< 5	< 2.5	0.096 J B (UB)	3.1 J	< 2.5	< 1	< 1	< 10	11 J
LF4-MW5	3/12/20	< 5	< 3	18	< 0.5	< 0.5	< 5	3.6 ^	< 5	1.5 J	< 0.20	2.4 J	< 2.5	< 1	< 1	< 10	13 J
LF4-MW5	9/15/20	< 5	< 3	16 B	0.21 J	< 0.5	2.3 J	3.5	2.1 J	3	< 0.2	2.6 J	< 2.5	< 1	< 1	< 10	1000
LF4-MW5	3/4/21	< 5	< 3	21	0.38 J	< 0.5	3.2 J	4.4	3.7 J	3.5	< 0.2	5.3	< 2.5	< 1	< 1	6.7 J	28
LF4-MW5	9/9/21	< 5	< 3	14	< 0.5	< 0.5	< 5	4.1	< 5	< 2.5	< 0.2	< 5	< 2.5	< 1	< 1	< 10	27
LF4-MW5	3/2/22	< 5	0.87 J	20	0.52	< 0.5	< 5	5.4	2.1 J	2.6	< 0.2	4 J	< 2.5	< 1	< 1	4.1 J	< 20
LF4-MW5	8/31/22	< 5	< 3	12	< 0.5	< 0.5	< 5	3.9	1.1 J	2.3 J	< 0.2	2.2 J	< 2.5	< 1	< 1	< 10	99
LF4-MW5	3/6/23	< 5	< 3	19	0.22 J	< 0.5	< 5	4.2	2.1 J	3	< 0.2	2.9 J	< 2.5	< 1	< 1	1.6 J	6.1 J
LF4-MW5	9/6/23	< 5	1.9 J	12	< 0.5	< 0.5	< 5	4.7	1.1 J	2 J	< 0.2	2.5 J	< 2.5	< 1	< 1	1.5 J	5 J

Notes:
-- = Not analyzed
< = Indicates the analyte was not detected at the reported quantitation limit shown.
µg/L = micrograms per liter
mg/L = milligrams per liter

Samples collected 2000 through 2003 by IT Corporation/Shaw Environmental.
Samples collected in 2004 to the present by Matrix Environmental Services, LLC.

Lab Flags:
J = Estimated detection. Concentration is between the method detection limit and the practical quantitation limit.

Table 5-1 - Summary of Statistically Significant Increases, September 2023 Sampling Event
Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Well Location	SSI Analyte	CUSUM	Sample Concentration	MCL	BKG Concentration	Units
LF4-MW1	Cobalt	15.42	23	NA	10.5	µg/L
	Nickel	33.92	15	100	--	µg/L
LF4-MW2	Cobalt	48.58	140	NA	10.5	µg/L
	Nickel	36.64	63	100	--	µg/L
	Zinc	132.49	480	5000*	--	µg/L
LF4-MW4	Chlorobenzene	--	2.4	100	--	µg/L
	Trichloroethene	--	0.37 J	5	--	µg/L

Notes:

-- = Not applicable or not established

µg/L = micrograms per liter

BKG = Background well LF4-MW5

CUSUM = Shewhart Cumulative Sum

MCL = Maximum contaminant level (Codes 335-7-2-.03, 335-7-2-.05, and 335-7-3-.02 of the *ADEM Division 7 Regulations* [ADEM, 2014])

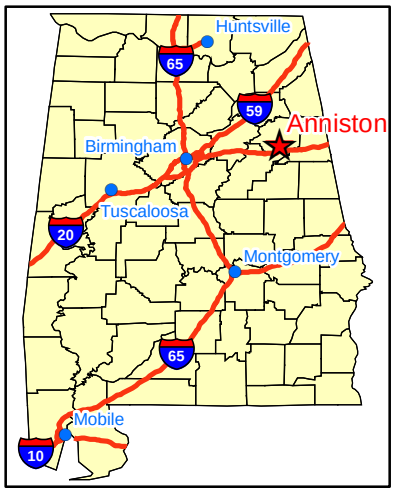
NA = Promulgated MCL not available

SSI = Statistically Significant Increase

* Secondary MCL (Code 335-7-3-.02 of the *ADEM Division 7 Regulations* [ADEM, 2014])

Sample concentration > MCL or BKG Concentration

Figures



PELHAM RANGE

CHOCCOLOCCO CORRIDOR

McCLELLAN

21

431

78

20

20

431

CALHOUN COUNTY

CLEBURNE COUNTY

CALHOUN COUNTY

CLEBURNE COUNTY

TALLADEGA COUNTY

0 1 2 4

Miles

Figure 1-1
Location Map
McClellan, Anniston, Alabama

Matrix ENVIRONMENTAL

FILE: G:\gis_projects\Fort McClellan\03_094.007\active\mxd\EA-81(5)\Figure1-1_Location_Map.mxd, 11/19/2019, Rachel Perstorff

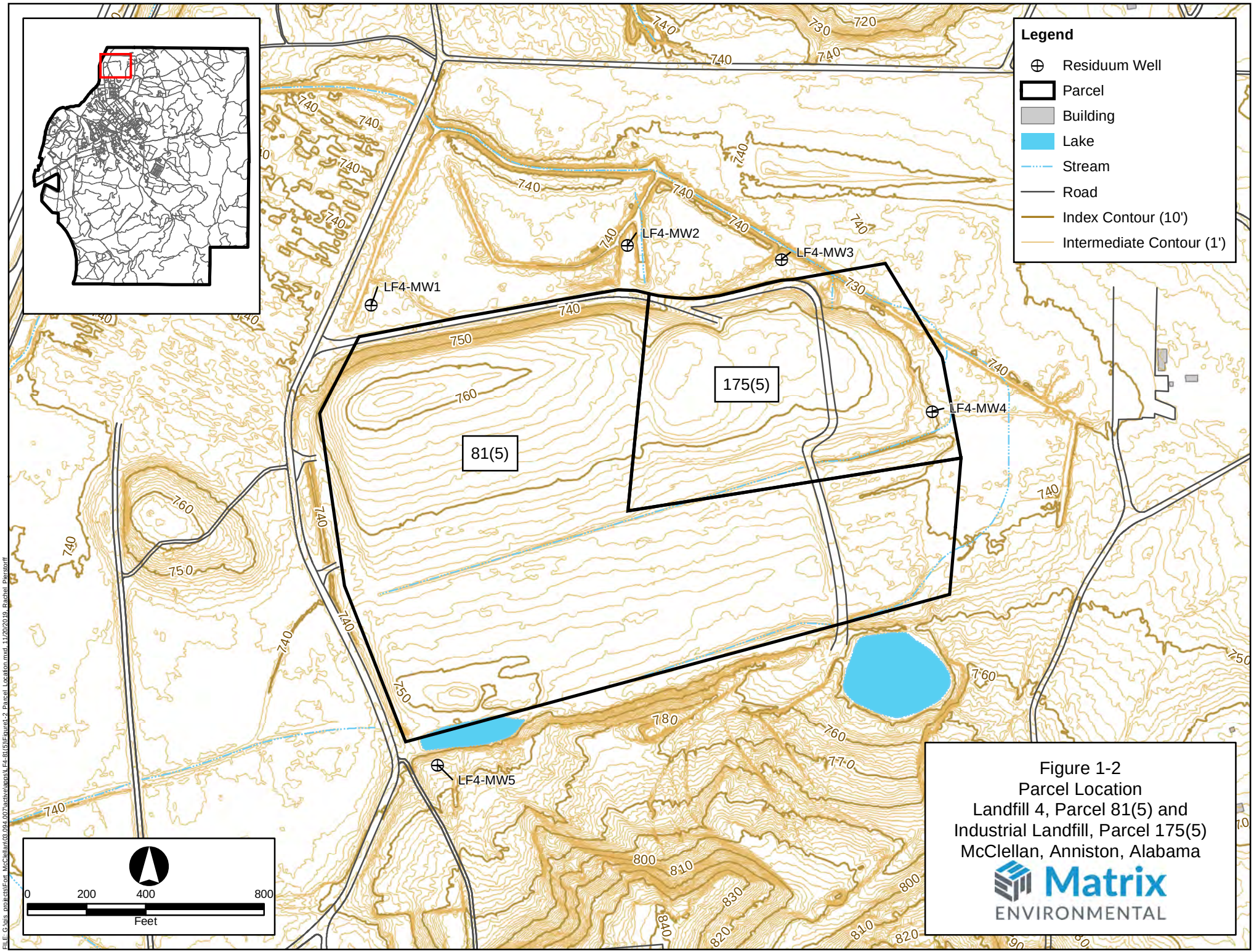


Figure 1-2
Parcel Location
Landfill 4, Parcel 81(5) and
Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Matrix ENVIRONMENTAL

FILE: G:\gis projects\Fort_McClellan\03.004.007\active\apps\LF4-81(5)\Figure1-2 Parcel Location.mxd 11/20/2019, Rachel Perstorff

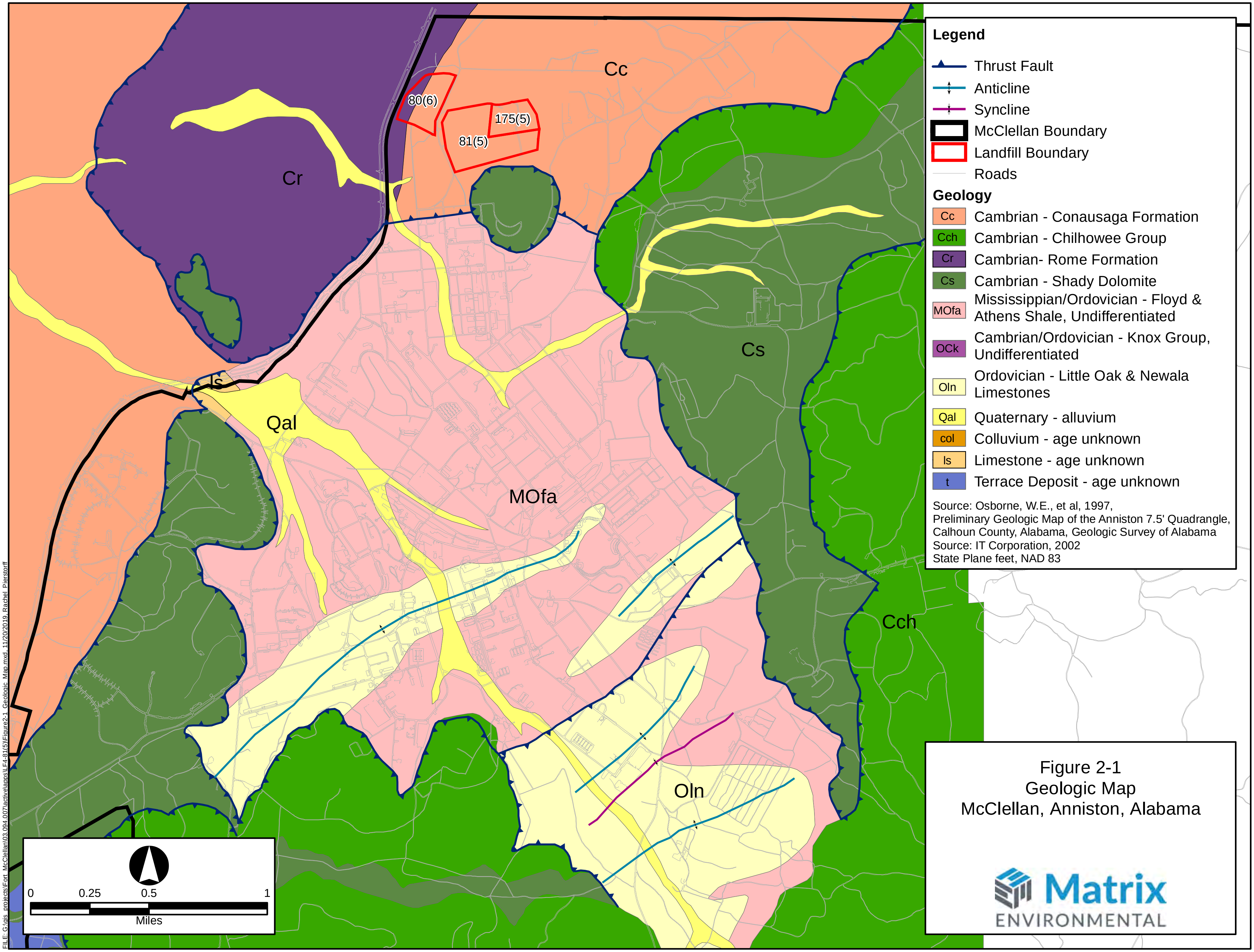
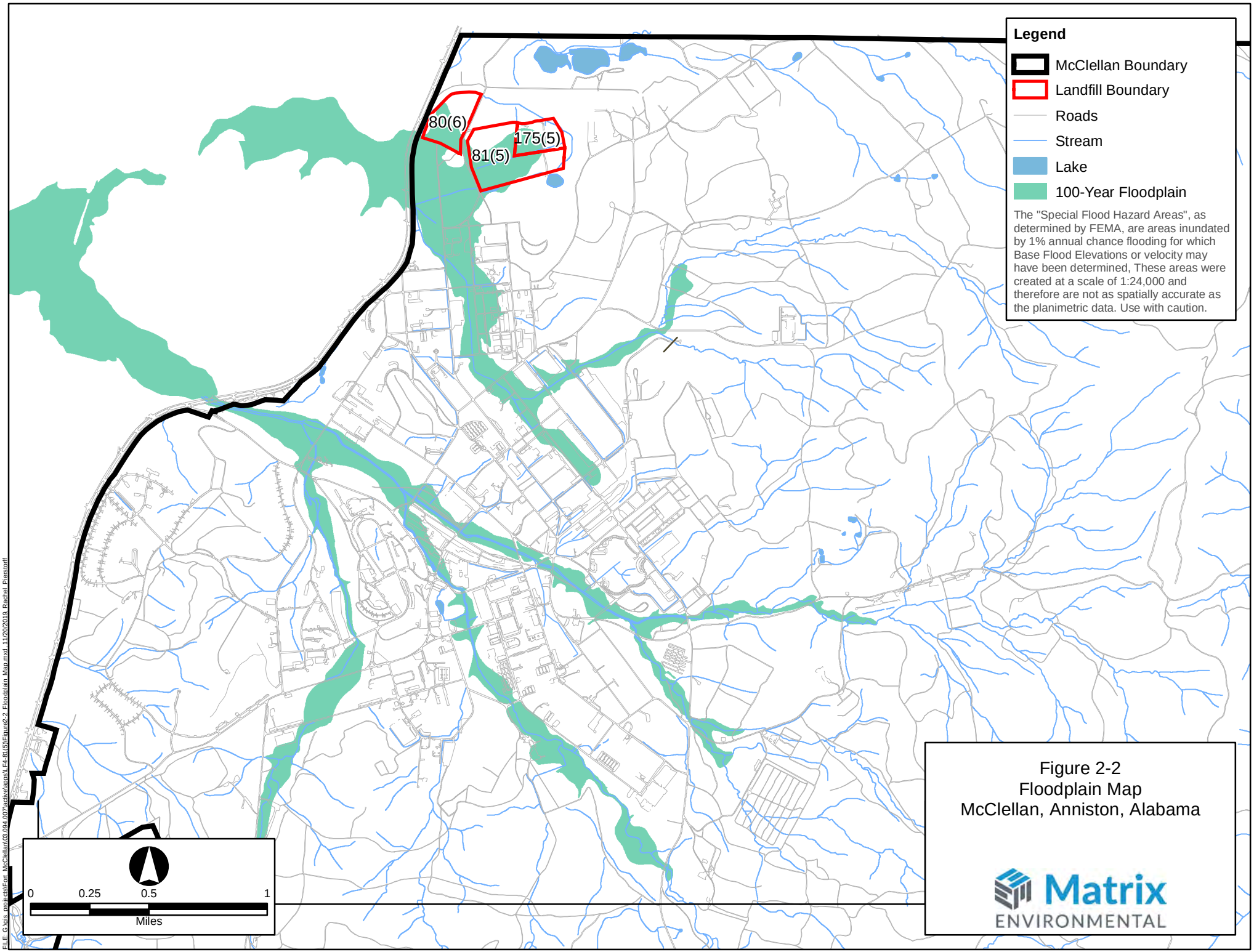


Figure 2-1
Geologic Map
McClellan, Anniston, Alabama

FILE: G:\gis_projects\Fort_McClellan\03.094.007\active\apps\LF4-81(5)\Figure2-1_Geologic_Map.mxd, 11/20/2019, Rachel_Pierstorff


80(6)
81(5)
175(5)
Legend
McClellan Boundary
Landfill Boundary
Roads
Stream
Lake
100-Year Floodplain
The "Special Flood Hazard Areas", as determined by FEMA, are areas inundated by 1% annual chance flooding for which Base Flood Elevations or velocity may have been determined, These areas were created at a scale of 1:24,000 and therefore are not as spatially accurate as the planimetric data. Use with caution.
0
0.25
0.5
1
Miles
Figure 2-2
Floodplain Map
McClellan, Anniston, Alabama
Matrix
ENVIRONMENTAL
FILE: G:\gis_projects\Fort_McClellan\03.004.007\active\mxd\F4-81(5)\Figure2-2_Floodplain_Map.mxd 11/20/2019, Rachel Pierstorff

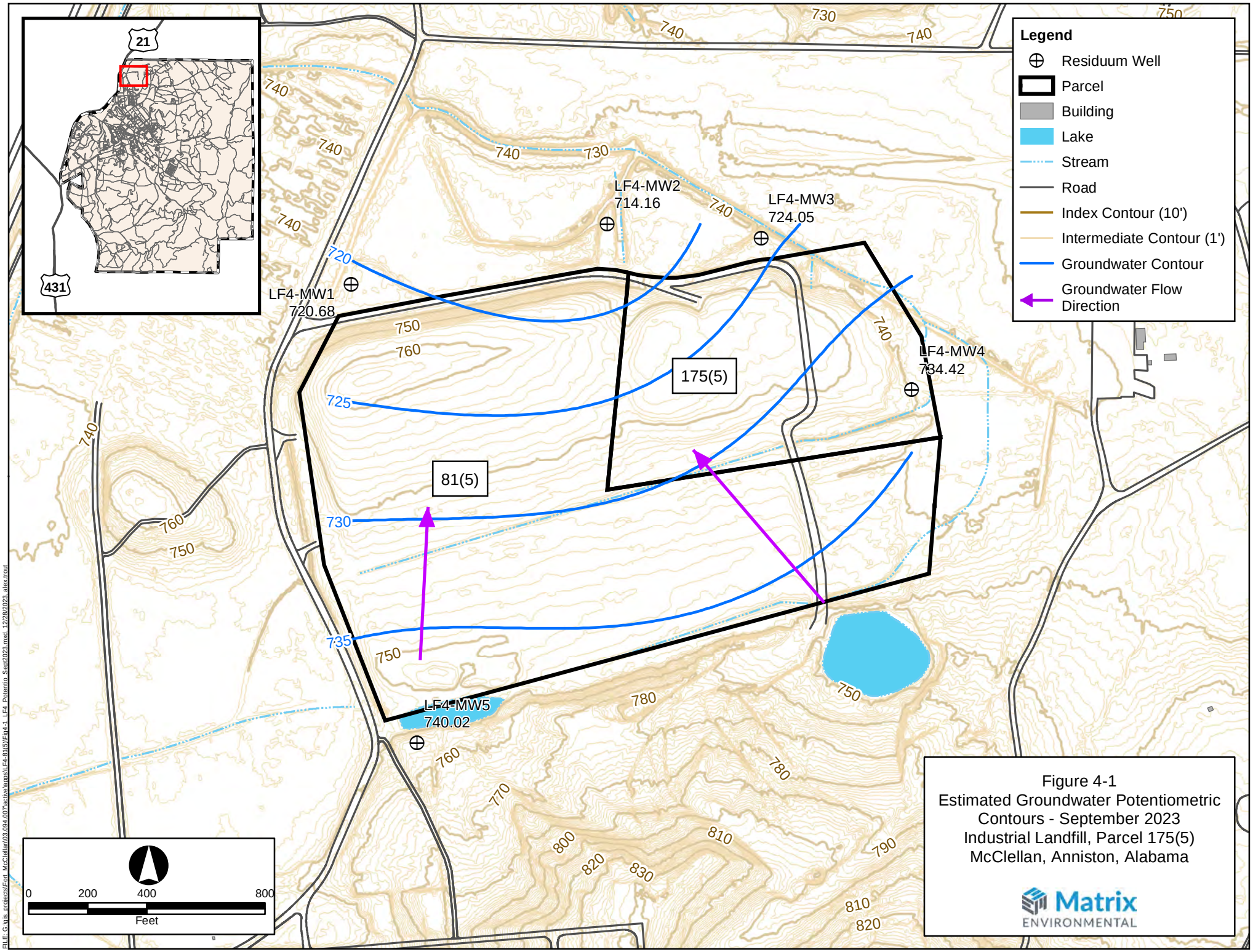


Figure 4-1
Estimated Groundwater Potentiometric Contours - September 2023
Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Matrix ENVIRONMENTAL

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APPENDICES

Groundwater Monitoring Report, September 2023
Butler Green Industrial Landfill, Parcel 175(5)
(Permit No. 08-02)
McClellan, Anniston, Alabama

APPENDIX A

Groundwater Sample Logs

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, Alabama 36205
(256) 847-0780

Station Name/Sample ID	
LF4-MW01	
Project	**Project Number**
McClellan	22.094.23-07.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 19.11 feet	**Sample Method** Low Flow	**Sampler** David Abernathy	**Date** 9/6/2023
Well Depth (TOC) 42.5 feet		**Location (Site)** Landfill 4	**Begin Time** 10:10
Water Column Thickness 23.39 feet	**Equipment** Geotech Bladder Pump Geotech Geocontrol Pro	**Laboratory** Eurofins/TestAmerica	**Sample Depth** 32
		Sample Suite See COCs	
Casing Diameter 4 inches	**Temperature (°F)** 82°	**Meters** YSI Pro Plus Solinst Water Level Meter Micro TPW Turbidimeter	**Serial numbers**
Casing Volume 15.20 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Overcast	**Calibration** 9/6/2023	**Ferrous Iron (Fe II) (mg/L) (for MNA sampling)** Not Applicable
Well Elevation (TOC) 739.79 feet			
Groundwater Elevation 720.68 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** No	**Depth to product** Not Applicable

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
1015	0	20.9	127	1.0	122	0.08	41	4.6	cloudy	white	none
1020	750	20.1	125	0.4	120	0.08	43	4.6	cloudy	white	none
1025	750	19.9	125	0.4	119	0.08	55	4.7	cloudy	white	none
1030	750	19.9	125	0.3	117	0.08	68	4.7	cloudy	white	none
1035	750	19.7	124	0.3	116	0.08	81	4.7	cloudy	white	none
1040	750	20.4	123	0.4	114	0.08	83	4.8	cloudy	white	none
1045	750	20.2	123	0.4	113	0.08	82	5.1	cloudy	white	none
1050	750	20.0	121	0.4	118	0.08	82	5.0	cloudy	white	none
1055	750	20.1	121	0.4	120	0.08	82	4.8	cloudy	white	none
1100	750	20.1	120	0.5	120	0.08	82	4.8	cloudy	white	none
1105	750	20.0	119	0.5	118	0.08	82	4.9	cloudy	white	none
1110	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
55	7500	No	

QA/QC Samples	Signature
MS/MSD	

Rev 5/30/08

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, Alabama 36205
(256) 847-0780

Station Name/Sample ID	
LF4-MW02	
Project	**Project Number**
McClellan	22.094.23-07.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 24.34 feet	**Sample Method** Low Flow	**Sampler** David Abernathy	**Date** 9/6/2023
Well Depth (TOC) 40.25 feet		**Location (Site)** Landfill 4	**Begin Time** 1210
Water Column Thickness 15.91 feet	**Equipment** Geotech Bladder Pump Geotech Geocontrol Pro	**Laboratory** Eurofins/Test America	**Sample Depth** 32
		Sample Suite See COCs	
Casing Diameter 4 inches	**Temperature (°F)** 88°	**Meters** YSI Pro Plus Solinst Water Level Meter Micro TPW Turbidimeter	**Serial numbers**
Casing Volume 10.34 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Sunny	**Calibration** 9/6/2023	**Ferrous Iron (Fe II) (mg/L) (for MNA sampling)** Not Applicable
Well Elevation (TOC) 738.5			
Groundwater Elevation 714.16 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** No	**Depth to product** Not Applicable

Time	Volume removed (gallon)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
1215	0	21.2	547	0.8	75	0.36	230	5.1	Cloudy	Brown	None
1220	450	20.0	547	0.4	77	0.35	216	5.1	Cloudy	Brown	None
1225	450	19.9	546	0.4	74	0.35	199	5.2	Cloudy	Brown	None
1230	450	19.8	545	0.3	72	0.35	174	5.2	Cloudy	Brown	None
1235	450	19.7	544	0.3	71	0.35	159	5.3	Cloudy	Brown	None
1240	450	19.8	544	0.2	71	0.35	145	5.3	Cloudy	Brown	None
1245	450	20.0	543	0.2	71	0.35	137	5.3	Cloudy	Brown	None
1250	450	20.3	544	0.2	70	0.35	134	5.4	Cloudy	Brown	None
1255	450	20.1	543	0.2	71	0.35	132	5.4	Cloudy	Brown	None
1300	450	19.9	543	0.2	72	0.35	130	5.3	Cloudy	Brown	None
1305	450	19.7	543	0.2	70	0.35	131	5.3	Cloudy	Brown	None
1310	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
55	4500	No	

QA/QC Samples N/A

Signature

Matrix Environmental Services
283 Rucker Street
Anniston, Alabama 36205
(256) 847-0780

Station Name/Sample ID	
LF4-MW03	
Project	**Project Number**
McClellan	22.094.23-07.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 15.73 feet	**Sample Method** Low Flow	**Sampler** David Abernathy	**Date** 9/6/2023
Well Depth (TOC) 34.2 feet		**Location (Site)** Landfill 4	**Begin Time** 1350
Water Column Thickness 18.47 feet	**Equipment** Geotech Bladder Pump Geotech Geocontrol Pro	**Laboratory** Eurofins/Test America	**Sample Depth** 25
		Sample Suite See COCs	
Casing Diameter 4 inches	**Temperature (°F)** 89°	**Meters** YSI Pro Plus Solinst Water Level Meter Micro TPW Turbidimeter	**Serial numbers**
Casing Volume 12.01 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Sunny	**Calibration** 9/6/2023	**Ferrous Iron (Fe II) (mg/L) (for MNA sampling)** Not Applicable
Well Elevation (TOC) 739.78			
Groundwater Elevation 724.05 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** No	**Depth to product** Not Applicable

Time	Volume removed (gallon)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
1355	0	23.1	69	1.8	197	0.05	37	5.0	Cloudy	White	None
1400	750	21.2	69	0.7	260	0.04	28	4.4	Clear	Clear	None
1405	750	21.0	66	0.4	275	0.04	27	4.3	Clear	Clear	None
1410	750	20.8	65	0.3	283	0.04	27	4.2	Clear	Clear	None
1415	750	20.6	64	0.3	282	0.04	27	4.2	Clear	Clear	None
1420	750	20.8	63	0.3	279	0.04	27	4.3	Clear	Clear	None
1425	750	21.0	63	0.3	276	0.04	27	4.4	Clear	Clear	None
1430	750	20.9	62	0.3	277	0.04	27	4.4	Clear	Clear	None
1435	750	20.9	62	0.3	278	0.04	27	4.4	Clear	Clear	None
1440	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
45	6000	No	

QA/QC Samples
N/A

Signature

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, Alabama 36205
(256) 847-0780

Station Name/Sample ID	
LF4-MW04	
Project	**Project Number**
McClellan	22.094.23-07.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 8.93 feet	**Sample Method** Low Flow	**Sampler** David Abernathy	**Date** 9/6/2023
Well Depth (TOC) 26.8 feet		**Location (Site)** Landfill 4	**Begin Time** 1515
Water Column Thickness 17.87 feet	**Equipment** Geotech Bladder Pump Geotech Geocontrol Pro	**Laboratory** Eurofins/TestAmerica	**Sample Depth** 20
		Sample Suite See COCs	
Casing Diameter 4 inches	**Temperature (°F)** 90°	**Meters** YSI Pro Plus Solinst Water Level Meter Micro TPW Turbidimeter	**Serial numbers**
Casing Volume 11.62 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Sunny	**Calibration** 9/6/2023	**Ferrous Iron (Fe II) (mg/L) (for MNA sampling)** Not Applicable
Well Elevation (TOC) 743.35 feet			
Groundwater Elevation 734.42 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** No	**Depth to product** Not Applicable

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
1520	0	22.1	890	1.2	61	0.58	4	6.0	Clear	Clear	None
1525	750	21.5	891	1.1	70	0.58	4	5.8	Clear	Clear	None
1530	750	21.2	882	0.8	64	0.57	4	5.9	Clear	Clear	None
1535	750	21.0	875	0.5	61	0.57	4	5.9	Clear	Clear	None
1540	750	21.3	867	0.3	60	0.57	4	5.9	Clear	Clear	None
1545	750	21.5	863	0.3	55	0.56	4	6.0	Clear	Clear	None
1550	750	21.2	868	0.3	53	0.57	4	6.0	Clear	Clear	None
1555	750	21.0	867	0.2	53	0.57	4	6.0	Clear	Clear	None
1600	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
40	5250	No	

QA/QC Samples N/A

Signature

Rev 5/30/08

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, Alabama 36205
(256) 847-0780

Station Name/Sample ID: LF4-MW05

Project: McClellan

Project Number: 22.094.23-07.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 13.3 feet	**Sample Method** Low Flow	**Sampler** David Abernathy	**Date** 9/6/2023
Well Depth (TOC) 34.6 feet		**Location (Site)** Landfill 4	**Begin Time** 0845
Water Column Thickness 21.3 feet	**Equipment** Geotech Bladder Pump; Geotech Geocontrol Pro	**Laboratory** Eurofins/TestAmerica	**Sample Depth** 25
		Sample Suite See COCs	
Casing Diameter 4 inches	**Temperature (°F)** 69°	**Meters** YSI Pro Plus; Solinst Water Level Meter; Micro TPW Turbidimeter	**Serial numbers**
Casing Volume 13.85 gallons (1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4)	**Weather Conditions** Overcast	**Calibration** 9/6/2023	**Ferrous Iron (Fe II) (mg/L) (for MNA sampling)** Not Applicable
Well Elevation (TOC) 753.32 feet			
Groundwater Elevation 740.02 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** No	**Depth to product** Not Applicable

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
0850	0	18.8	34	1.3	205	0.02	24	3.5	Clear	Clear	None
0855	750	19.0	34	1.1	196	0.02	24	3.7	Clear	Clear	None
0900	750	19.1	34	1.0	185	0.02	24	3.8	Clear	Clear	None
0905	750	19.1	34	0.7	173	0.02	24	4.0	Clear	Clear	None
0910	750	19.2	33	0.7	166	0.02	24	4.1	Clear	Clear	None
0915	750	19.1	33	0.6	163	0.02	24	4.2	Clear	Clear	None
0920	750	18.7	33	0.5	162	0.02	24	4.1	Clear	Clear	None
0925	750	18.6	33	0.5	163	0.02	24	4.1	Clear	Clear	None
0930	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
40	5250	No	

QA/QC Samples: DUP 424

Signature:

Rev 5/30/08

APPENDIX B

Chains-of-Custody, September 2023

MATRIX ENVIRONMENTAL SERVICES CHAIN OF CUSTODY RECORD

COC Number 68019843
Cooler ID 1 of 1
Page 1 of 1

Laboratory Eurofins
Lab Contact Noel Savoie and Beth Daughtry
MES Contact Betty Van Pelt
MES Phone 801-699-1246
Project Parcel 81(5), Landfill 4
Task # 22.094.23-07.1
Lab contract: 22.094.23-07.1.500

Samplers Signature

SWMU	Station ID	QC Code	Station Code	Matrix	Sample Method	Date Collected	Sample Time	Analysis: SW8260D - VOC 3 - 40 ml vials, HCl	Analysis: 6020A/7470A Metals (Total) 1 - 250 ml poly HNO3	Analysis: SW8260D - VOC 2 - 40 ml vials, HCl	Analysis:
Parcel 81(5), Landfill 4	LF4-MW1	NS	MW	Water	Grab	9/6/2023	11:10	X	X		
Parcel 81(5), Landfill 4	LF4-MW1	MS/MSD	MW	Water	Grab	9/6/2023	11:10	X	X		
Parcel 81(5), Landfill 4	LF4-MW2	NS	MW	Water	Grab	9/6/2023	13:10	X	X		
Parcel 81(5), Landfill 4	LF4-MW3	NS	MW	Water	Grab	9/6/2023	14:40	X	X		
Parcel 81(5), Landfill 4	LF4-MW4	NS	MW	Water	Grab	9/6/2023	16:00	X	X		
Parcel 81(5), Landfill 4	LF4-MW5	NS	MW	Water	Grab	9/6/2023	9:30	X	X		
Parcel 81(5), Landfill 4	DUP424	FD	MW	Water	Grab	9/6/2023	N/A	X	X		
Parcel 81(5), Landfill 4	TB614	TB	WQ	Water	Grab	9/7/2023	8:37			X	

NOTES:

QC Code: NS = Investigative Sample, FD = Field Duplicate, MS/MSD = Matrix Spike/Matrix Spike Duplicate, EB = Equipment Blank, TB = Trip Blank, WQ = Water Quality, WS = Source Water

Station Type = MW = Monitoring Well, BH = Bore Hole, SD = Sediment, SW = Surface Water, SS = Surface Soil, SU = Sump, WS = Waste Solid/Soil, WW = Waste Water

White Copy = Lab COC, Yellow COC = Field Copy, Pink COC = Data Mgmt

Double the number of bottles for MS/MSD

COMMENTS: See Task Order 22.094.23-07.1 500 for required list of VOCs and metals **Collect FEII in the field

Relinquished by (Signature): Date/Time: 9/7/2023 Received by (Signature): FedEx 1030

Relinquished by (Signature): David Abernathy Date/Time: 1030 Received by (Signature): TA 9-8-23 959

1.9/2.0

680-240065 Chain of Custody

APPENDIX C

Data Valdation Summary, September 2023

Data Validation Review e-Checklist

Laboratory Name:	TALSAV	Report Package Date:	9/19/2023
Project Name:	LF4	Review Date:	12/5/2023
Sample Delivery Group (SDG):	680-240065-1		
Reviewer Name:	BVP & OS		
Parameters:	Metals and VOC		
Methods:	SW6020B, SW7470A, SW8260D		
Matrix:	ground water		

	Yes	No	N/A	Comment
Report Completeness & Sample Log-In Condition				
1 Were holding tImes met?	X			
2 Were sample storage and preservation requirements met	X			
Laboratory Method Blanks and Field Blanks				
1 Were appropriate types of laboratory method blanks analyzed?	X			
2 Were the laboratory method blanks analyzed at the appropriate frequency?	X			
3 Was the method blank free of contamination (i.e., less than the MDL or RL)?		X		1
4 Did the method blank contamination affect the final results?	X			
5 Was a trip blank required and submitted with the samples?	X			
6 Was the trip blank free of contamination (i.e., less than the MDL or RL)?	X			
7 Did the trip blank contamination affect the final results?		X		
8 Was an equipment blank required and submitted with the samples?		X		
9 Was the equipment blank free of contamination (i.e., less than the MDL or RL)?			X	
10 Did the equipment blank contamination affect the final results?			X	
11 Were Continuing Calibration Blanks analyzed?	X			
12 Were Continuing Calibration Blanks within the control window?	X			
13 Did the Continuing Calibration Blanks contamination affect the final results?		X		
Surrogates				
1 Were surrogates added prior to extraction for all appropriate methods?	X			
2 Were surrogate percent recoveries within laboratory control limits?	X			
3 Did the surrogate percent recoveries affect the final results?	X			
Laboratory Control Samples				
1 Were Laboratory Control Sample analyzed at a frequency of one per batch?	X			
2 Were Laboratory Control Sample spiked with appropriate list of target compounds?	X			
3 Were Laboratory Control Sample percent recoveries within laboratory control limits?		X		2
4 Did the Laboratory Control Sample percent recoveries affect the final results?		X		
5 If performed, was Laboratory Control Sample Duplicate data provided?	X			
6 Were the LCS/LCSD relative percent difference values within laboratory control limits?	X			
Matrix Spikes				
1 Were matrix spike/matrix spike duplicates analyzed at a frequency of one per batch?		X		3
Sample used/methods: LF4-MW1				
2 Were matrix spike/matrix spike duplicates performed on a project sample selected by the laboratory?		X		
Sample used/methods: none				
3 Were matrix spike/matrix spike duplicates spiked with appropriate list of target compounds?	X			
4 Were matrix spike/matrix spike duplicate percent recoveries within laboratory control limits?		X		3
5 Did the matrix spike/matrix spike duplicate percent recoveries affect the final results? If yes, narrate.		X		3
6 Were the matrix spike/matrix spike duplicate relative percent difference values within laboratory control limits?		X		
7 Did the matrix spike/matrix spike duplicate relative percent differences affect the final results?	X			

Laboratory Name:	TALSAV	Report Package Date:	9/19/2023
Project Name:	LF4	Review Date:	12/5/2023
Sample Delivery Group (SDG):	680-240065-1		
Reviewer Name:	BVP & OS		
Parameters:	Metals and VOC		
Methods:	SW6020B, SW7470A, SW8260D		
Matrix:	ground water		

		Yes	No	N/A	Comment
	Field and Laboratory Duplicates				
1	Was a field duplicate submitted with this sample delivery group?	X			
	Field Duplicate ID: LF4-MW5 = DUP424				
2	Were the field sample relative percent difference values less than review criteria?	X			
3	Did the field duplicate relative percent difference results affect the final results? If so, narrate.		X		
	Other Laboratory QC Data				
1	Were internal standard data reported? (organics and inorganics by 6020)	X			
2	Were internal standard area counts and retention times within method required limits?	X			
3	Were data associated with manual integration flagged on the test reports?			X	
4	Did dual-column confirmation results meet method-required QC limits of <25% difference?			X	
5	Was an interference check sample analyzed and were percent recoveries within QC limits?	X			
6	If serial dilutions were analyzed using a project sample, were the percent differences within QC limits?		X		4
7	Was a CRDL check sample analyzed and were the percent recoveries within QC limits?	X			
8	If post-digestion spikes were performed for metals, were percent recoveries with QC limits?	X			
9	If ICV/CCV was stated in the case narrative, did the ICV/CCV affect the project samples?	X			
10	Were the total metal results greater than the dissolved metal results?			X	

Comment No.	*Description (data usability; note any estimated and/or rejected data):*
1	Method blank detections in : **Batch 797541** Iodomethane 7.83 J µg/L - not detected in associated samples - no quals; **Batch 797474** Nicke l1.31 J µg/L - LF4-MW3, LF4-MW4, and LF4-MW5 and its dup all UB qualified.
2	**Batch 797541 - LCS and LCSD high recoveries for Iodomethane - not detected in associated samples - no quals, chloroethane relative percent difference high -LCS and LCSD met criteria - no quals** **Batch 798109 - LCS and LCSD high recoveries for Vinyl chloride - not detected in associated samples - no quals.**
3	VOC - LF4-MW1 MS and/or MSD had many recoveries above criteria. See pages 21-23 in the lab report. Analytes not detected - no quals. Metals - LF4-MW1 Copper MS high recovery, MSD met criteria - no qual
4	Serial dilution on LF4-MW1 barium and cobalt failed % difference but concentrations not 50X reporting limit. No quals.

Notes: (only those not defined above)
CRDL - contract required detection limit
dup - duplicate
ICV/CCV - initial calibration verification/continuing calibration verfication
LCS/LCSD - laboratory control sample/laboratory control sample duplicate
MS/MSD - matrix spike/matrix spike duplicate
MDL - method detection limit
µg/L - microgram per liter
N/A - not applicable
QC - quality control
RL - reporting limit
SDG - Sample delivery group
TALSAV - Eurofins Savannah (formerly TestAmerica)
VOC - Volatile organic compounds
Qualifiers (quals):
J - Data is estimated. Result is between the RL and MDL.
UB - Analyte considered not detected based on detection in an associated blank.

Table C1: Sample Index
Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

SiteName	Station	QCCode	Matrix	Sample Date	Lab	Delivery Group	LabSampleID	Method
PARCEL 81(5) LANDFILL 4	LF4-MW1	NS	WG	09/06/23	TALSAV	680-240065-1	680-240065-1	SW6020B
PARCEL 81(5) LANDFILL 4	LF4-MW1	NS	WG	09/06/23	TALSAV	680-240065-1	680-240065-1	SW7470A
PARCEL 81(5) LANDFILL 4	LF4-MW1	NS	WG	09/06/23	TALSAV	680-240065-1	680-240065-1	SW8260D
PARCEL 81(5) LANDFILL 4	LF4-MW1	MS	WG	09/06/23	TALSAV	680-240065-1	680-240065-1 MS	SW6020B
PARCEL 81(5) LANDFILL 4	LF4-MW1	MS	WG	09/06/23	TALSAV	680-240065-1	680-240065-1 MS	SW7470A
PARCEL 81(5) LANDFILL 4	LF4-MW1	MS	WG	09/06/23	TALSAV	680-240065-1	680-240065-1 MS	SW8260D
PARCEL 81(5) LANDFILL 4	LF4-MW1	MSD	WG	09/06/23	TALSAV	680-240065-1	680-240065-1 MSD	SW6020B
PARCEL 81(5) LANDFILL 4	LF4-MW1	MSD	WG	09/06/23	TALSAV	680-240065-1	680-240065-1 MSD	SW7470A
PARCEL 81(5) LANDFILL 4	LF4-MW1	MSD	WG	09/06/23	TALSAV	680-240065-1	680-240065-1 MSD	SW8260D
PARCEL 81(5) LANDFILL 4	LF4-MW2	NS	WG	09/06/23	TALSAV	680-240065-1	680-240065-2	SW6020B
PARCEL 81(5) LANDFILL 4	LF4-MW2	NS	WG	09/06/23	TALSAV	680-240065-1	680-240065-2	SW7470A
PARCEL 81(5) LANDFILL 4	LF4-MW2	NS	WG	09/06/23	TALSAV	680-240065-1	680-240065-2	SW8260D
PARCEL 81(5) LANDFILL 4	LF4-MW3	NS	WG	09/06/23	TALSAV	680-240065-1	680-240065-3	SW6020B
PARCEL 81(5) LANDFILL 4	LF4-MW3	NS	WG	09/06/23	TALSAV	680-240065-1	680-240065-3	SW7470A
PARCEL 81(5) LANDFILL 4	LF4-MW3	NS	WG	09/06/23	TALSAV	680-240065-1	680-240065-3	SW8260D
PARCEL 81(5) LANDFILL 4	LF4-MW4	NS	WG	09/06/23	TALSAV	680-240065-1	680-240065-4	SW6020B
PARCEL 81(5) LANDFILL 4	LF4-MW4	NS	WG	09/06/23	TALSAV	680-240065-1	680-240065-4	SW7470A
PARCEL 81(5) LANDFILL 4	LF4-MW4	NS	WG	09/06/23	TALSAV	680-240065-1	680-240065-4	SW8260D
PARCEL 81(5) LANDFILL 4	LF4-MW5	NS	WG	09/06/23	TALSAV	680-240065-1	680-240065-5	SW6020B
PARCEL 81(5) LANDFILL 4	LF4-MW5	NS	WG	09/06/23	TALSAV	680-240065-1	680-240065-5	SW7470A
PARCEL 81(5) LANDFILL 4	LF4-MW5	NS	WG	09/06/23	TALSAV	680-240065-1	680-240065-5	SW8260D
PARCEL 81(5) LANDFILL 4	LF4-MW5	FD	WG	09/06/23	TALSAV	680-240065-1	680-240065-6	SW6020B
PARCEL 81(5) LANDFILL 4	LF4-MW5	FD	WG	09/06/23	TALSAV	680-240065-1	680-240065-6	SW7470A
PARCEL 81(5) LANDFILL 4	LF4-MW5	FD	WG	09/06/23	TALSAV	680-240065-1	680-240065-6	SW8260D
MCCLELLAN FIELD QC	TRIP BLANK	TB	W	09/07/23	TALSAV	680-240065-1	680-240065-7	SW8260D

Notes:
FD - field duplicate
MS - matrix spike
MSD - matrix spike duplicate
NS - normal sample
QC - quality control
TALSAV - Eurofins Savannah (formerly TestAmerica)
TB - trip blank
W - water
WG - ground water

Table C2 - Summary of Field Duplicate Relative Percent Recoveries.
Industrial Landfill, Parcel 175(5)

Station	Sample Date	Parameter	Units	NS Value	NS Flag	FD Value	FD Flag	RPD	RPD Limit
LF4-MW5 (DUP424)	09/06/23	Arsenic	µg/L	1.9	J	1.9	J	0	50
LF4-MW5 (DUP424)	09/06/23	Barium	µg/L	12		12		0	50
LF4-MW5 (DUP424)	09/06/23	Cobalt	µg/L	4.7		5		6	50
LF4-MW5 (DUP424)	09/06/23	Lead	µg/L	2	J	2	J	0	50
LF4-MW5 (DUP424)	09/06/23	Nickel	µg/L	2.5	J	2.6	J	4	50
LF4-MW5 (DUP424)	09/06/23	Vanadium	µg/L	1.5	J	1.3	J	14	50
LF4-MW5 (DUP424)	09/06/23	Zinc	µg/L	5	J	5	J	0	50

Notes:
FD - field duplicate
µg/L - microgram per liter
NS - normal sample
RPD - relative percent difference
Flag:
J - Result it estimated. Result is between the reporting limit and method detection limit.

ATTACHMENT C1 Laboratory Data,

September 2023

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Betty Van Pelt
Matrix Environmental Services, LLC
707 17th Street
Suite 3150
Denver, Colorado 80202

Generated 9/19/2023 10:45:10 PM

JOB DESCRIPTION

Parcel 81(5), Landfill 4

JOB NUMBER

680-240065-1

Eurofins Savannah
5102 LaRoche Avenue
Savannah GA 31404

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization

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Authorized for release by
Noel Savoie, Project Manager I
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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Matrix Environmental Services, LLC
Job ID: 680-240065-1
Project/Site: Parcel 81(5), Landfill 4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-240065-1	LF4-MW1	Water	09/06/23 11:10	09/08/23 09:59
680-240065-2	LF4-MW2	Water	09/06/23 13:10	09/08/23 09:59
680-240065-3	LF4-MW3	Water	09/06/23 14:40	09/08/23 09:59
680-240065-4	LF4-MW4	Water	09/06/23 16:00	09/08/23 09:59
680-240065-5	LF4-MW5	Water	09/06/23 09:30	09/08/23 09:59
680-240065-6	DUP424	Water	09/06/23 00:00	09/08/23 09:59
680-240065-7	TB614	Water	09/07/23 08:37	09/08/23 09:59

Job ID: 680-240065-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-240065-1

Receipt
The samples were received on 9/8/2023 9:59 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.0°C

GC/MS VOA
Method 8260D: The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) for analytical batch 680-797541 recovered outside control limits for the following analyte: Trichlorofluoromethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method 8260D: The matrix spike/matrix spike duplicate (MS/MSD) and %RPD recoveries for analytical batch 680-797541 were outside advisory control limits for several analytes. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) met acceptance criteria; therefore, the results have been reported and qualified.

Method 8260D: The method blank for analytical batch 680-797541 contained Iodomethane above the method detection limit (MDL). Associated samples were not re-analyzed because the method blank results were less than the reporting limit (RL).

Method 8260D: The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) for analytical batch 680-798109 recovered outside control limits for the following analyte: Vinyl chloride. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method 8260D: The %RPD of the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) for analytical batch 680-798109 recovered outside control limits for the following analyte: Chloroethane.

Method 8260D: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-798109.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals
Method 6020B: The matrix spike/matrix spike duplicate (MS/MSD) associated with prep batch 680-797270 and analytical batch 680-797474 recovered outside advisory control limits for Copper. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) met acceptance criteria; therefore, the results have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-240065-1

Client Sample ID: LF4-MW1
Date Collected: 09/06/23 11:10
Date Received: 09/08/23 09:59

Lab Sample ID: 680-240065-1
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U F1	10	3.7	ug/L			09/12/23 19:29	1
Acrylonitrile	5.5	U F1	20	5.5	ug/L			09/12/23 19:29	1
Benzene	0.27	U F1	1.0	0.27	ug/L			09/12/23 19:29	1
Bromochloromethane	0.34	U F1	1.0	0.34	ug/L			09/12/23 19:29	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			09/12/23 19:29	1
Bromoform	0.59	U	1.0	0.59	ug/L			09/12/23 19:29	1
Bromomethane	3.7	U F1	5.0	3.7	ug/L			09/12/23 19:29	1
2-Butanone (MEK)	6.4	U F1	10	6.4	ug/L			09/12/23 19:29	1
Carbon disulfide	0.43	U F1	2.0	0.43	ug/L			09/12/23 19:29	1
Carbon tetrachloride	0.30	U F1	1.0	0.30	ug/L			09/12/23 19:29	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			09/12/23 19:29	1
Chloroethane	4.6	U F1 F2	5.0	4.6	ug/L			09/12/23 19:29	1
Chloroform	0.27	U F1	1.0	0.27	ug/L			09/12/23 19:29	1
Chloromethane	0.54	U F1	1.0	0.54	ug/L			09/12/23 19:29	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			09/12/23 19:29	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			09/12/23 19:29	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			09/12/23 19:29	1
Dibromomethane	0.34	U F1	1.0	0.34	ug/L			09/12/23 19:29	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			09/12/23 19:29	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			09/12/23 19:29	1
trans-1,4-Dichloro-2-butene	1.3	U F1	2.0	1.3	ug/L			09/12/23 19:29	1
1,1-Dichloroethane	0.33	U F1	1.0	0.33	ug/L			09/12/23 19:29	1
1,2-Dichloroethane	0.25	U F1	1.0	0.25	ug/L			09/12/23 19:29	1
cis-1,2-Dichloroethene	0.25	U F1	1.0	0.25	ug/L			09/12/23 19:29	1
trans-1,2-Dichloroethene	0.34	U F1	1.0	0.34	ug/L			09/12/23 19:29	1
1,1-Dichloroethene	0.33	U F1	1.0	0.33	ug/L			09/12/23 19:29	1
1,2-Dichloropropane	0.22	U F1	1.0	0.22	ug/L			09/12/23 19:29	1
1,3-Dichloropropane	0.36	U F1	1.0	0.36	ug/L			09/12/23 19:29	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			09/12/23 19:29	1
trans-1,3-Dichloropropene	0.23	U F1	1.0	0.23	ug/L			09/12/23 19:29	1
Ethylbenzene	0.20	U F1	1.0	0.20	ug/L			09/12/23 19:29	1
2-Hexanone	3.2	U F1	10	3.2	ug/L			09/12/23 19:29	1
Iodomethane	3.9	U F1	10	3.9	ug/L			09/12/23 19:29	1
Methylene Chloride	3.2	U F1	5.0	3.2	ug/L			09/12/23 19:29	1
4-Methyl-2-pentanone (MIBK)	2.7	U F1	10	2.7	ug/L			09/12/23 19:29	1
Methyl tert-butyl ether	0.81	U F1	5.0	0.81	ug/L			09/12/23 19:29	1
Styrene	0.27	U	1.0	0.27	ug/L			09/12/23 19:29	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			09/12/23 19:29	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			09/12/23 19:29	1
Tetrachloroethylene	0.35	U F1	1.0	0.35	ug/L			09/12/23 19:29	1
Toluene	0.25	U F1	1.0	0.25	ug/L			09/12/23 19:29	1
1,1,1-Trichloroethane	0.21	U F1	1.0	0.21	ug/L			09/12/23 19:29	1
1,1,2-Trichloroethane	0.32	U F1	1.0	0.32	ug/L			09/12/23 19:29	1
Trichloroethene	0.20	U F1	1.0	0.20	ug/L			09/12/23 19:29	1
Trichlorofluoromethane	0.33	U *+ F1	1.0	0.33	ug/L			09/12/23 19:29	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			09/12/23 19:29	1
Vinyl acetate	0.69	U F1	2.0	0.69	ug/L			09/12/23 19:29	1
Vinyl chloride	0.40	U F1	1.0	0.40	ug/L			09/12/23 19:29	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			09/12/23 19:29	1

Client Sample ID: LF4-MW1

Lab Sample ID: 680-240065-1

Date Collected: 09/06/23 11:10

Matrix: Water

Date Received: 09/08/23 09:59

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*110*		*70 - 130*		*09/12/23 19:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*114*		*60 - 124*		*09/12/23 19:29*	*1*
Dibromofluoromethane (Surr)	*117*		*70 - 130*		*09/12/23 19:29*	*1*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*09/12/23 19:29*	*1*

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.34	U	5.0	0.34	ug/L		09/11/23 05:23	09/11/23 15:32	1
Arsenic	**5.4**		3.0	0.86	ug/L		09/11/23 05:23	09/11/23 15:32	1
Barium	**47**		5.0	0.89	ug/L		09/11/23 05:23	09/11/23 15:32	1
Beryllium	**0.26**	**J**	0.50	0.20	ug/L		09/11/23 05:23	09/11/23 15:32	1
Cadmium	**0.15**	**J**	0.50	0.078	ug/L		09/11/23 05:23	09/11/23 15:32	1
Chromium	1.2	U	5.0	1.2	ug/L		09/11/23 05:23	09/11/23 15:32	1
Cobalt	**23**		0.50	0.22	ug/L		09/11/23 05:23	09/11/23 15:32	1
Copper	**2.7**	**J F1**	5.0	1.1	ug/L		09/11/23 05:23	09/11/23 15:32	1
Lead	**1.1**	**J**	2.5	0.21	ug/L		09/11/23 05:23	09/11/23 15:32	1
Nickel	**15**		5.0	0.42	ug/L		09/11/23 05:23	09/11/23 15:32	1
Selenium	0.99	U	2.5	0.99	ug/L		09/11/23 05:23	09/11/23 15:32	1
Silver	0.39	U	1.0	0.39	ug/L		09/11/23 05:23	09/11/23 15:32	1
Thallium	0.26	U	1.0	0.26	ug/L		09/11/23 05:23	09/11/23 15:32	1
Vanadium	0.63	U	10	0.63	ug/L		09/11/23 05:23	09/11/23 15:32	1
Zinc	**31**		20	2.8	ug/L		09/11/23 05:23	09/11/23 15:32	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		09/11/23 11:54	09/12/23 12:11	1

Client Sample ID: LF4-MW2

Lab Sample ID: 680-240065-2

Date Collected: 09/06/23 13:10

Matrix: Water

Date Received: 09/08/23 09:59

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			09/12/23 19:51	1
Acrylonitrile	5.5	U	20	5.5	ug/L			09/12/23 19:51	1
Benzene	0.27	U	1.0	0.27	ug/L			09/12/23 19:51	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			09/12/23 19:51	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			09/12/23 19:51	1
Bromoform	0.59	U	1.0	0.59	ug/L			09/12/23 19:51	1
Bromomethane	3.7	U	5.0	3.7	ug/L			09/12/23 19:51	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			09/12/23 19:51	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			09/12/23 19:51	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			09/12/23 19:51	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			09/12/23 19:51	1
Chloroethane	4.6	U	5.0	4.6	ug/L			09/12/23 19:51	1
Chloroform	0.27	U	1.0	0.27	ug/L			09/12/23 19:51	1
Chloromethane	0.54	U	1.0	0.54	ug/L			09/12/23 19:51	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			09/12/23 19:51	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			09/12/23 19:51	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			09/12/23 19:51	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			09/12/23 19:51	1

Client Sample ID: LF4-MW2
Lab Sample ID: 680-240065-2
Date Collected: 09/06/23 13:10
Matrix: Water
Date Received: 09/08/23 09:59

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			09/12/23 19:51	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			09/12/23 19:51	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			09/12/23 19:51	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			09/12/23 19:51	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			09/12/23 19:51	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			09/12/23 19:51	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			09/12/23 19:51	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			09/12/23 19:51	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			09/12/23 19:51	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			09/12/23 19:51	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			09/12/23 19:51	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			09/12/23 19:51	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			09/12/23 19:51	1
2-Hexanone	3.2	U	10	3.2	ug/L			09/12/23 19:51	1
Iodomethane	3.9	U	10	3.9	ug/L			09/12/23 19:51	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			09/12/23 19:51	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			09/12/23 19:51	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			09/12/23 19:51	1
Styrene	0.27	U	1.0	0.27	ug/L			09/12/23 19:51	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			09/12/23 19:51	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			09/12/23 19:51	1
Tetrachloroethylene	0.35	U	1.0	0.35	ug/L			09/12/23 19:51	1
Toluene	0.25	U	1.0	0.25	ug/L			09/12/23 19:51	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			09/12/23 19:51	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			09/12/23 19:51	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			09/12/23 19:51	1
Trichlorofluoromethane	0.33	U *+	1.0	0.33	ug/L			09/12/23 19:51	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			09/12/23 19:51	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			09/12/23 19:51	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			09/12/23 19:51	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			09/12/23 19:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*108*		*70 - 130*		*09/12/23 19:51*	*1*
1,2-Dichloroethane-d4 (Surr)	*112*		*60 - 124*		*09/12/23 19:51*	*1*
Dibromofluoromethane (Surr)	*113*		*70 - 130*		*09/12/23 19:51*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*09/12/23 19:51*	*1*

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.34	U	5.0	0.34	ug/L		09/11/23 05:23	09/11/23 16:29	1
Arsenic	**4.3**		3.0	0.86	ug/L		09/11/23 05:23	09/11/23 16:29	1
Barium	**96**		5.0	0.89	ug/L		09/11/23 05:23	09/11/23 16:29	1
Beryllium	**0.39**	**J**	0.50	0.20	ug/L		09/11/23 05:23	09/11/23 16:29	1
Cadmium	**0.32**	**J**	0.50	0.078	ug/L		09/11/23 05:23	09/11/23 16:29	1
Chromium	**3.2**	**J**	5.0	1.2	ug/L		09/11/23 05:23	09/11/23 16:29	1
Cobalt	**140**		0.50	0.22	ug/L		09/11/23 05:23	09/11/23 16:29	1
Copper	**8.3**		5.0	1.1	ug/L		09/11/23 05:23	09/11/23 16:29	1
Lead	**16**		2.5	0.21	ug/L		09/11/23 05:23	09/11/23 16:29	1
Nickel	**63**		5.0	0.42	ug/L		09/11/23 05:23	09/11/23 16:29	1

Client Sample ID: LF4-MW2

Lab Sample ID: 680-240065-2

Date Collected: 09/06/23 13:10

Matrix: Water

Date Received: 09/08/23 09:59

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	0.99	U	2.5	0.99	ug/L		09/11/23 05:23	09/11/23 16:29	1
Silver	0.39	U	1.0	0.39	ug/L		09/11/23 05:23	09/11/23 16:29	1
Thallium	0.26	U	1.0	0.26	ug/L		09/11/23 05:23	09/11/23 16:29	1
Vanadium	0.63	U	10	0.63	ug/L		09/11/23 05:23	09/11/23 16:29	1
Zinc	480		20	2.8	ug/L		09/11/23 05:23	09/11/23 16:29	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		09/11/23 11:54	09/12/23 12:29	1

Client Sample ID: LF4-MW3

Lab Sample ID: 680-240065-3

Date Collected: 09/06/23 14:40

Matrix: Water

Date Received: 09/08/23 09:59

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			09/12/23 20:13	1
Acrylonitrile	5.5	U	20	5.5	ug/L			09/12/23 20:13	1
Benzene	0.27	U	1.0	0.27	ug/L			09/12/23 20:13	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			09/12/23 20:13	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			09/12/23 20:13	1
Bromoform	0.59	U	1.0	0.59	ug/L			09/12/23 20:13	1
Bromomethane	3.7	U	5.0	3.7	ug/L			09/12/23 20:13	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			09/12/23 20:13	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			09/12/23 20:13	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			09/12/23 20:13	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			09/12/23 20:13	1
Chloroethane	4.6	U	5.0	4.6	ug/L			09/12/23 20:13	1
Chloroform	0.27	U	1.0	0.27	ug/L			09/12/23 20:13	1
Chloromethane	0.54	U	1.0	0.54	ug/L			09/12/23 20:13	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			09/12/23 20:13	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			09/12/23 20:13	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			09/12/23 20:13	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			09/12/23 20:13	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			09/12/23 20:13	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			09/12/23 20:13	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			09/12/23 20:13	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			09/12/23 20:13	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			09/12/23 20:13	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			09/12/23 20:13	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			09/12/23 20:13	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			09/12/23 20:13	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			09/12/23 20:13	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			09/12/23 20:13	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			09/12/23 20:13	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			09/12/23 20:13	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			09/12/23 20:13	1
2-Hexanone	3.2	U	10	3.2	ug/L			09/12/23 20:13	1
Iodomethane	3.9	U	10	3.9	ug/L			09/12/23 20:13	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			09/12/23 20:13	1

Client Sample ID: LF4-MW3

Lab Sample ID: 680-240065-3

Date Collected: 09/06/23 14:40

Matrix: Water

Date Received: 09/08/23 09:59

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			09/12/23 20:13	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			09/12/23 20:13	1
Styrene	0.27	U	1.0	0.27	ug/L			09/12/23 20:13	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			09/12/23 20:13	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			09/12/23 20:13	1
Tetrachloroethylene	0.35	U	1.0	0.35	ug/L			09/12/23 20:13	1
Toluene	0.25	U	1.0	0.25	ug/L			09/12/23 20:13	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			09/12/23 20:13	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			09/12/23 20:13	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			09/12/23 20:13	1
Trichlorofluoromethane	0.33	U *+	1.0	0.33	ug/L			09/12/23 20:13	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			09/12/23 20:13	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			09/12/23 20:13	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			09/12/23 20:13	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			09/12/23 20:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*110*		*70 - 130*		*09/12/23 20:13*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*60 - 124*		*09/12/23 20:13*	*1*
Dibromofluoromethane (Surr)	*117*		*70 - 130*		*09/12/23 20:13*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*09/12/23 20:13*	*1*

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.34	U	5.0	0.34	ug/L		09/11/23 05:31	09/12/23 00:00	1
Arsenic	0.86	U	3.0	0.86	ug/L		09/11/23 05:31	09/12/23 00:00	1
Barium	**41**		5.0	0.89	ug/L		09/11/23 05:31	09/12/23 00:00	1
Beryllium	**0.30**	**J**	0.50	0.20	ug/L		09/11/23 05:31	09/12/23 00:00	1
Cadmium	**0.12**	**J**	0.50	0.078	ug/L		09/11/23 05:31	09/12/23 00:00	1
Chromium	1.2	U	5.0	1.2	ug/L		09/11/23 05:31	09/12/23 00:00	1
Cobalt	**9.3**		0.50	0.22	ug/L		09/11/23 05:31	09/12/23 00:00	1
Copper	**2.8**	**J**	5.0	1.1	ug/L		09/11/23 05:31	09/12/23 00:00	1
Lead	**2.2**	**J**	2.5	0.21	ug/L		09/11/23 05:31	09/12/23 00:00	1
Nickel	**2.8**	**J B**	5.0	0.42	ug/L		09/11/23 05:31	09/12/23 00:00	1
Selenium	0.99	U	2.5	0.99	ug/L		09/11/23 05:31	09/12/23 00:00	1
Silver	0.39	U	1.0	0.39	ug/L		09/11/23 05:31	09/12/23 00:00	1
Thallium	0.26	U	1.0	0.26	ug/L		09/11/23 05:31	09/12/23 00:00	1
Vanadium	0.63	U	10	0.63	ug/L		09/11/23 05:31	09/12/23 00:00	1
Zinc	**5.5**	**J**	20	2.8	ug/L		09/11/23 05:31	09/12/23 00:00	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		09/11/23 11:54	09/12/23 12:30	1

Client Sample ID: LF4-MW4

Lab Sample ID: 680-240065-4

Date Collected: 09/06/23 16:00

Matrix: Water

Date Received: 09/08/23 09:59

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			09/15/23 16:17	1

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-240065-1

Client Sample ID: LF4-MW4
Date Collected: 09/06/23 16:00
Date Received: 09/08/23 09:59

Lab Sample ID: 680-240065-4
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrylonitrile	5.5	U	20	5.5	ug/L			09/15/23 16:17	1
Benzene	0.27	U	1.0	0.27	ug/L			09/15/23 16:17	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			09/15/23 16:17	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			09/15/23 16:17	1
Bromoform	0.59	U	1.0	0.59	ug/L			09/15/23 16:17	1
Bromomethane	3.7	U	5.0	3.7	ug/L			09/15/23 16:17	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			09/15/23 16:17	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			09/15/23 16:17	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			09/15/23 16:17	1
Chlorobenzene	**2.4**		1.0	0.15	ug/L			09/15/23 16:17	1
Chloroethane	4.6	U *1	5.0	4.6	ug/L			09/15/23 16:17	1
Chloroform	0.27	U	1.0	0.27	ug/L			09/15/23 16:17	1
Chloromethane	0.54	U	1.0	0.54	ug/L			09/15/23 16:17	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			09/15/23 16:17	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			09/15/23 16:17	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			09/15/23 16:17	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			09/15/23 16:17	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			09/15/23 16:17	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			09/15/23 16:17	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			09/15/23 16:17	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			09/15/23 16:17	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			09/15/23 16:17	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			09/15/23 16:17	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			09/15/23 16:17	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			09/15/23 16:17	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			09/15/23 16:17	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			09/15/23 16:17	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			09/15/23 16:17	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			09/15/23 16:17	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			09/15/23 16:17	1
2-Hexanone	3.2	U	10	3.2	ug/L			09/15/23 16:17	1
Iodomethane	3.9	U	10	3.9	ug/L			09/15/23 16:17	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			09/15/23 16:17	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			09/15/23 16:17	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			09/15/23 16:17	1
Styrene	0.27	U	1.0	0.27	ug/L			09/15/23 16:17	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			09/15/23 16:17	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			09/15/23 16:17	1
Tetrachloroethylene	0.35	U	1.0	0.35	ug/L			09/15/23 16:17	1
Toluene	0.25	U	1.0	0.25	ug/L			09/15/23 16:17	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			09/15/23 16:17	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			09/15/23 16:17	1
Trichloroethene	**0.37**	**J**	1.0	0.20	ug/L			09/15/23 16:17	1
Trichlorofluoromethane	0.33	U	1.0	0.33	ug/L			09/15/23 16:17	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			09/15/23 16:17	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			09/15/23 16:17	1
Vinyl chloride	0.40	U *+	1.0	0.40	ug/L			09/15/23 16:17	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			09/15/23 16:17	1

Client Sample ID: LF4-MW4

Lab Sample ID: 680-240065-4

Date Collected: 09/06/23 16:00

Matrix: Water

Date Received: 09/08/23 09:59

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*70 - 130*		*09/15/23 16:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*77*		*60 - 124*		*09/15/23 16:17*	*1*
Dibromofluoromethane (Surr)	*85*		*70 - 130*		*09/15/23 16:17*	*1*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*09/15/23 16:17*	*1*

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.34	U	5.0	0.34	ug/L		09/11/23 05:23	09/11/23 16:37	1
Arsenic	**1.6**	**J**	3.0	0.86	ug/L		09/11/23 05:23	09/11/23 16:37	1
Barium	**190**		5.0	0.89	ug/L		09/11/23 05:23	09/11/23 16:37	1
Beryllium	0.20	U	0.50	0.20	ug/L		09/11/23 05:23	09/11/23 16:37	1
Cadmium	0.078	U	0.50	0.078	ug/L		09/11/23 05:23	09/11/23 16:37	1
Chromium	1.2	U	5.0	1.2	ug/L		09/11/23 05:23	09/11/23 16:37	1
Cobalt	**3.9**		0.50	0.22	ug/L		09/11/23 05:23	09/11/23 16:37	1
Copper	1.1	U	5.0	1.1	ug/L		09/11/23 05:23	09/11/23 16:37	1
Lead	**0.75**	**J**	2.5	0.21	ug/L		09/11/23 05:23	09/11/23 16:37	1
Nickel	**3.2**	**J**	5.0	0.42	ug/L		09/11/23 05:23	09/11/23 16:37	1
Selenium	0.99	U	2.5	0.99	ug/L		09/11/23 05:23	09/11/23 16:37	1
Silver	0.39	U	1.0	0.39	ug/L		09/11/23 05:23	09/11/23 16:37	1
Thallium	0.26	U	1.0	0.26	ug/L		09/11/23 05:23	09/11/23 16:37	1
Vanadium	0.63	U	10	0.63	ug/L		09/11/23 05:23	09/11/23 16:37	1
Zinc	**6.8**	**J**	20	2.8	ug/L		09/11/23 05:23	09/11/23 16:37	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		09/11/23 11:54	09/12/23 12:32	1

Client Sample ID: LF4-MW5

Lab Sample ID: 680-240065-5

Date Collected: 09/06/23 09:30

Matrix: Water

Date Received: 09/08/23 09:59

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			09/15/23 16:55	1
Acrylonitrile	5.5	U	20	5.5	ug/L			09/15/23 16:55	1
Benzene	0.27	U	1.0	0.27	ug/L			09/15/23 16:55	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			09/15/23 16:55	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			09/15/23 16:55	1
Bromoform	0.59	U	1.0	0.59	ug/L			09/15/23 16:55	1
Bromomethane	3.7	U	5.0	3.7	ug/L			09/15/23 16:55	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			09/15/23 16:55	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			09/15/23 16:55	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			09/15/23 16:55	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			09/15/23 16:55	1
Chloroethane	4.6	U *1	5.0	4.6	ug/L			09/15/23 16:55	1
Chloroform	0.27	U	1.0	0.27	ug/L			09/15/23 16:55	1
Chloromethane	0.54	U	1.0	0.54	ug/L			09/15/23 16:55	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			09/15/23 16:55	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			09/15/23 16:55	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			09/15/23 16:55	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			09/15/23 16:55	1

Client Sample ID: LF4-MW5
Lab Sample ID: 680-240065-5
Date Collected: 09/06/23 09:30
Matrix: Water
Date Received: 09/08/23 09:59

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			09/15/23 16:55	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			09/15/23 16:55	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			09/15/23 16:55	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			09/15/23 16:55	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			09/15/23 16:55	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			09/15/23 16:55	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			09/15/23 16:55	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			09/15/23 16:55	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			09/15/23 16:55	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			09/15/23 16:55	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			09/15/23 16:55	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			09/15/23 16:55	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			09/15/23 16:55	1
2-Hexanone	3.2	U	10	3.2	ug/L			09/15/23 16:55	1
Iodomethane	3.9	U	10	3.9	ug/L			09/15/23 16:55	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			09/15/23 16:55	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			09/15/23 16:55	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			09/15/23 16:55	1
Styrene	0.27	U	1.0	0.27	ug/L			09/15/23 16:55	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			09/15/23 16:55	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			09/15/23 16:55	1
Tetrachloroethylene	0.35	U	1.0	0.35	ug/L			09/15/23 16:55	1
Toluene	0.25	U	1.0	0.25	ug/L			09/15/23 16:55	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			09/15/23 16:55	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			09/15/23 16:55	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			09/15/23 16:55	1
Trichlorofluoromethane	0.33	U	1.0	0.33	ug/L			09/15/23 16:55	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			09/15/23 16:55	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			09/15/23 16:55	1
Vinyl chloride	0.40	U *+	1.0	0.40	ug/L			09/15/23 16:55	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			09/15/23 16:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*70 - 130*		*09/15/23 16:55*	*1*
1,2-Dichloroethane-d4 (Surr)	*76*		*60 - 124*		*09/15/23 16:55*	*1*
Dibromofluoromethane (Surr)	*86*		*70 - 130*		*09/15/23 16:55*	*1*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*		*09/15/23 16:55*	*1*

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.34	U	5.0	0.34	ug/L		09/11/23 05:23	09/11/23 16:41	1
Arsenic	**1.9**	**J**	3.0	0.86	ug/L		09/11/23 05:23	09/11/23 16:41	1
Barium	**12**		5.0	0.89	ug/L		09/11/23 05:23	09/11/23 16:41	1
Beryllium	0.20	U	0.50	0.20	ug/L		09/11/23 05:23	09/11/23 16:41	1
Cadmium	0.078	U	0.50	0.078	ug/L		09/11/23 05:23	09/11/23 16:41	1
Chromium	1.2	U	5.0	1.2	ug/L		09/11/23 05:23	09/11/23 16:41	1
Cobalt	**4.7**		0.50	0.22	ug/L		09/11/23 05:23	09/11/23 16:41	1
Copper	**1.1**	**J**	5.0	1.1	ug/L		09/11/23 05:23	09/11/23 16:41	1
Lead	**2.0**	**J**	2.5	0.21	ug/L		09/11/23 05:23	09/11/23 16:41	1
Nickel	**2.5**	**J**	5.0	0.42	ug/L		09/11/23 05:23	09/11/23 16:41	1

Client Sample ID: LF4-MW5

Lab Sample ID: 680-240065-5

Date Collected: 09/06/23 09:30

Matrix: Water

Date Received: 09/08/23 09:59

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	0.99	U	2.5	0.99	ug/L		09/11/23 05:23	09/11/23 16:41	1
Silver	0.39	U	1.0	0.39	ug/L		09/11/23 05:23	09/11/23 16:41	1
Thallium	0.26	U	1.0	0.26	ug/L		09/11/23 05:23	09/11/23 16:41	1
Vanadium	**1.5**	**J**	10	0.63	ug/L		09/11/23 05:23	09/11/23 16:41	1
Zinc	**5.0**	**J**	20	2.8	ug/L		09/11/23 05:23	09/11/23 16:41	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		09/11/23 11:54	09/12/23 12:36	1

Client Sample ID: DUP424

Lab Sample ID: 680-240065-6

Date Collected: 09/06/23 00:00

Matrix: Water

Date Received: 09/08/23 09:59

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			09/15/23 17:14	1
Acrylonitrile	5.5	U	20	5.5	ug/L			09/15/23 17:14	1
Benzene	0.27	U	1.0	0.27	ug/L			09/15/23 17:14	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			09/15/23 17:14	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			09/15/23 17:14	1
Bromoform	0.59	U	1.0	0.59	ug/L			09/15/23 17:14	1
Bromomethane	3.7	U	5.0	3.7	ug/L			09/15/23 17:14	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			09/15/23 17:14	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			09/15/23 17:14	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			09/15/23 17:14	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			09/15/23 17:14	1
Chloroethane	4.6	U *1	5.0	4.6	ug/L			09/15/23 17:14	1
Chloroform	0.27	U	1.0	0.27	ug/L			09/15/23 17:14	1
Chloromethane	0.54	U	1.0	0.54	ug/L			09/15/23 17:14	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			09/15/23 17:14	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			09/15/23 17:14	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			09/15/23 17:14	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			09/15/23 17:14	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			09/15/23 17:14	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			09/15/23 17:14	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			09/15/23 17:14	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			09/15/23 17:14	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			09/15/23 17:14	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			09/15/23 17:14	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			09/15/23 17:14	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			09/15/23 17:14	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			09/15/23 17:14	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			09/15/23 17:14	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			09/15/23 17:14	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			09/15/23 17:14	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			09/15/23 17:14	1
2-Hexanone	3.2	U	10	3.2	ug/L			09/15/23 17:14	1
Iodomethane	3.9	U	10	3.9	ug/L			09/15/23 17:14	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			09/15/23 17:14	1

Client Sample ID: DUP424

Lab Sample ID: 680-240065-6

Date Collected: 09/06/23 00:00

Matrix: Water

Date Received: 09/08/23 09:59

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			09/15/23 17:14	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			09/15/23 17:14	1
Styrene	0.27	U	1.0	0.27	ug/L			09/15/23 17:14	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			09/15/23 17:14	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			09/15/23 17:14	1
Tetrachloroethylene	0.35	U	1.0	0.35	ug/L			09/15/23 17:14	1
Toluene	0.25	U	1.0	0.25	ug/L			09/15/23 17:14	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			09/15/23 17:14	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			09/15/23 17:14	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			09/15/23 17:14	1
Trichlorofluoromethane	0.33	U	1.0	0.33	ug/L			09/15/23 17:14	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			09/15/23 17:14	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			09/15/23 17:14	1
Vinyl chloride	0.40	U *+	1.0	0.40	ug/L			09/15/23 17:14	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			09/15/23 17:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*70 - 130*		*09/15/23 17:14*	*1*
1,2-Dichloroethane-d4 (Surr)	*76*		*60 - 124*		*09/15/23 17:14*	*1*
Dibromofluoromethane (Surr)	*85*		*70 - 130*		*09/15/23 17:14*	*1*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*09/15/23 17:14*	*1*

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.34	U	5.0	0.34	ug/L		09/11/23 05:23	09/11/23 16:33	1
Arsenic	**1.9**	**J**	3.0	0.86	ug/L		09/11/23 05:23	09/11/23 16:33	1
Barium	**12**		5.0	0.89	ug/L		09/11/23 05:23	09/11/23 16:33	1
Beryllium	0.20	U	0.50	0.20	ug/L		09/11/23 05:23	09/11/23 16:33	1
Cadmium	0.078	U	0.50	0.078	ug/L		09/11/23 05:23	09/11/23 16:33	1
Chromium	1.2	U	5.0	1.2	ug/L		09/11/23 05:23	09/11/23 16:33	1
Cobalt	**5.0**		0.50	0.22	ug/L		09/11/23 05:23	09/11/23 16:33	1
Copper	1.1	U	5.0	1.1	ug/L		09/11/23 05:23	09/11/23 16:33	1
Lead	**2.0**	**J**	2.5	0.21	ug/L		09/11/23 05:23	09/11/23 16:33	1
Nickel	**2.6**	**J**	5.0	0.42	ug/L		09/11/23 05:23	09/11/23 16:33	1
Selenium	0.99	U	2.5	0.99	ug/L		09/11/23 05:23	09/11/23 16:33	1
Silver	0.39	U	1.0	0.39	ug/L		09/11/23 05:23	09/11/23 16:33	1
Thallium	0.26	U	1.0	0.26	ug/L		09/11/23 05:23	09/11/23 16:33	1
Vanadium	**1.3**	**J**	10	0.63	ug/L		09/11/23 05:23	09/11/23 16:33	1
Zinc	**5.0**	**J**	20	2.8	ug/L		09/11/23 05:23	09/11/23 16:33	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		09/14/23 11:19	09/15/23 14:17	1

Client Sample ID: TB614

Lab Sample ID: 680-240065-7

Date Collected: 09/07/23 08:37

Matrix: Water

Date Received: 09/08/23 09:59

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			09/15/23 13:26	1

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-240065-1

Client Sample ID: TB614
Date Collected: 09/07/23 08:37
Date Received: 09/08/23 09:59

Lab Sample ID: 680-240065-7
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrylonitrile	5.5	U	20	5.5	ug/L			09/15/23 13:26	1
Benzene	0.27	U	1.0	0.27	ug/L			09/15/23 13:26	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			09/15/23 13:26	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			09/15/23 13:26	1
Bromoform	0.59	U	1.0	0.59	ug/L			09/15/23 13:26	1
Bromomethane	3.7	U	5.0	3.7	ug/L			09/15/23 13:26	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			09/15/23 13:26	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			09/15/23 13:26	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			09/15/23 13:26	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			09/15/23 13:26	1
Chloroethane	4.6	U *1	5.0	4.6	ug/L			09/15/23 13:26	1
Chloroform	0.27	U	1.0	0.27	ug/L			09/15/23 13:26	1
Chloromethane	0.54	U	1.0	0.54	ug/L			09/15/23 13:26	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			09/15/23 13:26	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			09/15/23 13:26	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			09/15/23 13:26	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			09/15/23 13:26	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			09/15/23 13:26	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			09/15/23 13:26	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			09/15/23 13:26	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			09/15/23 13:26	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			09/15/23 13:26	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			09/15/23 13:26	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			09/15/23 13:26	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			09/15/23 13:26	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			09/15/23 13:26	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			09/15/23 13:26	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			09/15/23 13:26	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			09/15/23 13:26	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			09/15/23 13:26	1
2-Hexanone	3.2	U	10	3.2	ug/L			09/15/23 13:26	1
Iodomethane	3.9	U	10	3.9	ug/L			09/15/23 13:26	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			09/15/23 13:26	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			09/15/23 13:26	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			09/15/23 13:26	1
Styrene	0.27	U	1.0	0.27	ug/L			09/15/23 13:26	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			09/15/23 13:26	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			09/15/23 13:26	1
Tetrachloroethylene	0.35	U	1.0	0.35	ug/L			09/15/23 13:26	1
Toluene	0.25	U	1.0	0.25	ug/L			09/15/23 13:26	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			09/15/23 13:26	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			09/15/23 13:26	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			09/15/23 13:26	1
Trichlorofluoromethane	0.33	U	1.0	0.33	ug/L			09/15/23 13:26	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			09/15/23 13:26	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			09/15/23 13:26	1
Vinyl chloride	0.40	U *+	1.0	0.40	ug/L			09/15/23 13:26	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			09/15/23 13:26	1

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-240065-1

Client Sample ID: TB614
Date Collected: 09/07/23 08:37
Date Received: 09/08/23 09:59

Lab Sample ID: 680-240065-7
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		70 - 130		09/15/23 13:26	1
1,2-Dichloroethane-d4 (Surr)	76		60 - 124		09/15/23 13:26	1
Dibromofluoromethane (Surr)	85		70 - 130		09/15/23 13:26	1
4-Bromofluorobenzene (Surr)	93		70 - 130		09/15/23 13:26	1

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-240065-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 680-797541/8
Matrix: Water
Analysis Batch: 797541

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			09/12/23 14:16	1
Acrylonitrile	5.5	U	20	5.5	ug/L			09/12/23 14:16	1
Benzene	0.27	U	1.0	0.27	ug/L			09/12/23 14:16	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			09/12/23 14:16	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			09/12/23 14:16	1
Bromoform	0.59	U	1.0	0.59	ug/L			09/12/23 14:16	1
Bromomethane	3.7	U	5.0	3.7	ug/L			09/12/23 14:16	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			09/12/23 14:16	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			09/12/23 14:16	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			09/12/23 14:16	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			09/12/23 14:16	1
Chloroethane	4.6	U	5.0	4.6	ug/L			09/12/23 14:16	1
Chloroform	0.27	U	1.0	0.27	ug/L			09/12/23 14:16	1
Chloromethane	0.54	U	1.0	0.54	ug/L			09/12/23 14:16	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			09/12/23 14:16	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			09/12/23 14:16	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			09/12/23 14:16	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			09/12/23 14:16	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			09/12/23 14:16	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			09/12/23 14:16	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			09/12/23 14:16	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			09/12/23 14:16	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			09/12/23 14:16	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			09/12/23 14:16	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			09/12/23 14:16	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			09/12/23 14:16	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			09/12/23 14:16	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			09/12/23 14:16	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			09/12/23 14:16	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			09/12/23 14:16	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			09/12/23 14:16	1
2-Hexanone	3.2	U	10	3.2	ug/L			09/12/23 14:16	1
Iodomethane	7.83	J	10	3.9	ug/L			09/12/23 14:16	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			09/12/23 14:16	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			09/12/23 14:16	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			09/12/23 14:16	1
Styrene	0.27	U	1.0	0.27	ug/L			09/12/23 14:16	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			09/12/23 14:16	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			09/12/23 14:16	1
Tetrachloroethylene	0.35	U	1.0	0.35	ug/L			09/12/23 14:16	1
Toluene	0.25	U	1.0	0.25	ug/L			09/12/23 14:16	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			09/12/23 14:16	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			09/12/23 14:16	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			09/12/23 14:16	1
Trichlorofluoromethane	0.33	U	1.0	0.33	ug/L			09/12/23 14:16	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			09/12/23 14:16	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			09/12/23 14:16	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			09/12/23 14:16	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 680-797541/8
Matrix: Water
Analysis Batch: 797541

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	0.23	U	1.0	0.23	ug/L			09/12/23 14:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*110*		*70 - 130*		*09/12/23 14:16*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*60 - 124*		*09/12/23 14:16*	*1*
Dibromofluoromethane (Surr)	*116*		*70 - 130*		*09/12/23 14:16*	*1*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*		*09/12/23 14:16*	*1*

Lab Sample ID: LCS 680-797541/4
Matrix: Water
Analysis Batch: 797541

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	231		ug/L		92	67 - 120
Acrylonitrile	500	495		ug/L		99	70 - 130
Benzene	50.0	51.2		ug/L		102	70 - 130
Bromochloromethane	50.0	48.5		ug/L		97	70 - 130
Bromodichloromethane	50.0	46.5		ug/L		93	70 - 130
Bromoform	50.0	55.7		ug/L		111	69 - 129
Bromomethane	50.0	67.1		ug/L		134	28 - 192
2-Butanone (MEK)	250	254		ug/L		102	69 - 120
Carbon disulfide	50.0	55.3		ug/L		111	70 - 130
Carbon tetrachloride	50.0	61.7		ug/L		123	70 - 130
Chlorobenzene	50.0	51.8		ug/L		104	70 - 130
Chloroethane	50.0	71.1		ug/L		142	31 - 213
Chloroform	50.0	48.9		ug/L		98	70 - 130
Chloromethane	50.0	57.5		ug/L		115	59 - 127
Dibromochloromethane	50.0	47.5		ug/L		95	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	47.4		ug/L		95	70 - 130
1,2-Dibromoethane	50.0	47.2		ug/L		94	70 - 130
Dibromomethane	50.0	48.6		ug/L		97	70 - 130
1,2-Dichlorobenzene	50.0	53.3		ug/L		107	70 - 130
1,4-Dichlorobenzene	50.0	50.4		ug/L		101	70 - 130
trans-1,4-Dichloro-2-butene	50.0	59.3		ug/L		119	67 - 120
1,1-Dichloroethane	50.0	50.1		ug/L		100	70 - 130
1,2-Dichloroethane	50.0	49.0		ug/L		98	70 - 130
cis-1,2-Dichloroethene	50.0	50.1		ug/L		100	70 - 130
trans-1,2-Dichloroethene	50.0	53.8		ug/L		108	70 - 130
1,1-Dichloroethene	50.0	55.5		ug/L		111	70 - 130
1,2-Dichloropropane	50.0	46.4		ug/L		93	70 - 130
1,3-Dichloropropane	50.0	52.0		ug/L		104	70 - 130
cis-1,3-Dichloropropene	50.0	46.5		ug/L		93	70 - 130
trans-1,3-Dichloropropene	50.0	47.9		ug/L		96	70 - 130
Ethylbenzene	50.0	55.8		ug/L		112	70 - 130
2-Hexanone	250	283		ug/L		113	70 - 130
Iodomethane	50.0	59.0		ug/L		118	52 - 129
Methylene Chloride	50.0	46.0		ug/L		92	70 - 130
4-Methyl-2-pentanone (MIBK)	250	277		ug/L		111	68 - 120

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 680-797541/4
Matrix: Water
Analysis Batch: 797541

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl tert-butyl ether	50.0	51.0		ug/L		102	70 - 130
Styrene	50.0	51.3		ug/L		103	70 - 130
1,1,1,2-Tetrachloroethane	50.0	49.8		ug/L		100	70 - 130
1,1,2,2-Tetrachloroethane	50.0	54.4		ug/L		109	70 - 130
Tetrachloroethylene	50.0	52.6		ug/L		105	70 - 130
Toluene	50.0	51.3		ug/L		103	70 - 130
1,1,1-Trichloroethane	50.0	58.2		ug/L		116	70 - 130
1,1,2-Trichloroethane	50.0	48.1		ug/L		96	70 - 130
Trichloroethene	50.0	53.8		ug/L		108	70 - 130
Trichlorofluoromethane	50.0	192	*+	ug/L		384	63 - 142
1,2,3-Trichloropropane	50.0	52.1		ug/L		104	70 - 130
Vinyl acetate	100	112		ug/L		112	67 - 135
Vinyl chloride	50.0	59.5		ug/L		119	66 - 129
Xylenes, Total	100	103		ug/L		103	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*98*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*97*		*60 - 124*
Dibromofluoromethane (Surr)	*108*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 680-797541/5
Matrix: Water
Analysis Batch: 797541

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone	250	223		ug/L		89	67 - 120	3	30
Acrylonitrile	500	488		ug/L		98	70 - 130	1	30
Benzene	50.0	51.4		ug/L		103	70 - 130	0	30
Bromochloromethane	50.0	49.0		ug/L		98	70 - 130	1	30
Bromodichloromethane	50.0	47.3		ug/L		95	70 - 130	2	30
Bromoform	50.0	55.7		ug/L		111	69 - 129	0	30
Bromomethane	50.0	63.2		ug/L		126	28 - 192	6	30
2-Butanone (MEK)	250	251		ug/L		100	69 - 120	1	30
Carbon disulfide	50.0	61.6		ug/L		123	70 - 130	11	30
Carbon tetrachloride	50.0	60.9		ug/L		122	70 - 130	1	30
Chlorobenzene	50.0	50.7		ug/L		101	70 - 130	2	30
Chloroethane	50.0	78.4		ug/L		157	31 - 213	10	30
Chloroform	50.0	49.1		ug/L		98	70 - 130	0	30
Chloromethane	50.0	58.9		ug/L		118	59 - 127	2	30
Dibromochloromethane	50.0	48.2		ug/L		96	70 - 130	1	30
1,2-Dibromo-3-Chloropropane	50.0	48.1		ug/L		96	70 - 130	1	30
1,2-Dibromoethane	50.0	47.7		ug/L		95	70 - 130	1	30
Dibromomethane	50.0	48.5		ug/L		97	70 - 130	0	30
1,2-Dichlorobenzene	50.0	53.4		ug/L		107	70 - 130	0	30
1,4-Dichlorobenzene	50.0	50.6		ug/L		101	70 - 130	0	30
trans-1,4-Dichloro-2-butene	50.0	58.4		ug/L		117	67 - 120	2	30
1,1-Dichloroethane	50.0	50.4		ug/L		101	70 - 130	1	30

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 680-797541/5
Matrix: Water
Analysis Batch: 797541

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichloroethane	50.0	49.9		ug/L		100	70 - 130	2	50
cis-1,2-Dichloroethene	50.0	51.7		ug/L		103	70 - 130	3	30
trans-1,2-Dichloroethene	50.0	54.1		ug/L		108	70 - 130	1	30
1,1-Dichloroethene	50.0	57.1		ug/L		114	70 - 130	3	20
1,2-Dichloropropane	50.0	47.9		ug/L		96	70 - 130	3	20
1,3-Dichloropropane	50.0	52.0		ug/L		104	70 - 130	0	20
cis-1,3-Dichloropropene	50.0	46.5		ug/L		93	70 - 130	0	20
trans-1,3-Dichloropropene	50.0	49.3		ug/L		99	70 - 130	3	30
Ethylbenzene	50.0	54.5		ug/L		109	70 - 130	2	20
2-Hexanone	250	279		ug/L		112	70 - 130	1	20
Iodomethane	50.0	61.2		ug/L		122	52 - 129	4	30
Methylene Chloride	50.0	46.8		ug/L		94	70 - 130	2	30
4-Methyl-2-pentanone (MIBK)	250	275		ug/L		110	68 - 120	1	30
Methyl tert-butyl ether	50.0	51.9		ug/L		104	70 - 130	2	30
Styrene	50.0	51.1		ug/L		102	70 - 130	0	30
1,1,1,2-Tetrachloroethane	50.0	49.1		ug/L		98	70 - 130	2	30
1,1,2,2-Tetrachloroethane	50.0	53.3		ug/L		107	70 - 130	2	30
Tetrachloroethylene	50.0	51.5		ug/L		103	70 - 130	2	30
Toluene	50.0	50.6		ug/L		101	70 - 130	1	30
1,1,1-Trichloroethane	50.0	58.6		ug/L		117	70 - 130	1	30
1,1,2-Trichloroethane	50.0	48.5		ug/L		97	70 - 130	1	30
Trichloroethene	50.0	52.8		ug/L		106	70 - 130	2	30
Trichlorofluoromethane	50.0	181	*+	ug/L		362	63 - 142	6	30
1,2,3-Trichloropropane	50.0	51.1		ug/L		102	70 - 130	2	30
Vinyl acetate	100	113		ug/L		113	67 - 135	1	30
Vinyl chloride	50.0	56.4		ug/L		113	66 - 129	5	30
Xylenes, Total	100	101		ug/L		101	70 - 130	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*101*		*60 - 124*
Dibromofluoromethane (Surr)	*106*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: 680-240065-1 MS
Matrix: Water
Analysis Batch: 797541

Client Sample ID: LF4-MW1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	3.7	U F1	250	305	F1	ug/L		122	67 - 120
Acrylonitrile	5.5	U F1	500	768	F1	ug/L		154	70 - 130
Benzene	0.27	U F1	50.0	79.6	F1	ug/L		159	70 - 130
Bromochloromethane	0.34	U F1	50.0	80.9	F1	ug/L		162	70 - 130
Bromodichloromethane	0.25	U	50.0	65.2		ug/L		130	70 - 130
Bromoform	0.59	U	50.0	51.2		ug/L		102	69 - 129
Bromomethane	3.7	U F1	50.0	106	F1	ug/L		213	28 - 192
2-Butanone (MEK)	6.4	U F1	250	370	F1	ug/L		148	69 - 120
Carbon disulfide	0.43	U F1	50.0	87.8	F1	ug/L		176	70 - 130

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-240065-1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 680-240065-1 MS
Matrix: Water
Analysis Batch: 797541

Client Sample ID: LF4-MW1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Carbon tetrachloride	0.30	U F1	50.0	82.9	F1	ug/L		166	70 - 130
Chlorobenzene	0.15	U	50.0	60.4		ug/L		121	70 - 130
Chloroethane	4.6	U F1 F2	50.0	187	F1	ug/L		375	31 - 213
Chloroform	0.27	U F1	50.0	70.1	F1	ug/L		140	70 - 130
Chloromethane	0.54	U F1	50.0	97.2	F1	ug/L		194	59 - 127
Dibromochloromethane	0.39	U	50.0	61.6		ug/L		123	70 - 130
1,2-Dibromo-3-Chloropropane	1.8	U	50.0	41.9		ug/L		84	70 - 130
1,2-Dibromoethane	0.33	U	50.0	63.5		ug/L		127	70 - 130
Dibromomethane	0.34	U F1	50.0	70.7	F1	ug/L		141	70 - 130
1,2-Dichlorobenzene	0.31	U	50.0	60.1		ug/L		120	70 - 130
1,4-Dichlorobenzene	0.31	U	50.0	57.7		ug/L		115	70 - 130
trans-1,4-Dichloro-2-butene	1.3	U F1	50.0	71.3	F1	ug/L		143	67 - 120
1,1-Dichloroethane	0.33	U F1	50.0	79.8	F1	ug/L		160	70 - 130
1,2-Dichloroethane	0.25	U F1	50.0	72.4	F1	ug/L		145	70 - 130
cis-1,2-Dichloroethene	0.25	U F1	50.0	71.6	F1	ug/L		143	70 - 130
trans-1,2-Dichloroethene	0.34	U F1	50.0	75.7	F1	ug/L		151	70 - 130
1,1-Dichloroethene	0.33	U F1	50.0	78.6	F1	ug/L		157	70 - 130
1,2-Dichloropropane	0.22	U F1	50.0	80.3	F1	ug/L		161	70 - 130
1,3-Dichloropropane	0.36	U F1	50.0	79.1	F1	ug/L		158	70 - 130
cis-1,3-Dichloropropene	0.26	U	50.0	61.8		ug/L		124	70 - 130
trans-1,3-Dichloropropene	0.23	U F1	50.0	72.6	F1	ug/L		145	70 - 130
Ethylbenzene	0.20	U F1	50.0	66.4	F1	ug/L		133	70 - 130
2-Hexanone	3.2	U F1	250	448	F1	ug/L		179	70 - 130
Iodomethane	3.9	U F1	50.0	64.7		ug/L		129	52 - 129
Methylene Chloride	3.2	U F1	50.0	67.5	F1	ug/L		135	70 - 130
4-Methyl-2-pentanone (MIBK)	2.7	U F1	250	453	F1	ug/L		181	68 - 120
Methyl tert-butyl ether	0.81	U F1	50.0	69.5	F1	ug/L		139	70 - 130
Styrene	0.27	U	50.0	58.4		ug/L		117	70 - 130
1,1,1,2-Tetrachloroethane	0.36	U	50.0	51.7		ug/L		103	70 - 130
1,1,2,2-Tetrachloroethane	0.40	U	50.0	62.9		ug/L		126	70 - 130
Tetrachloroethylene	0.35	U F1	50.0	72.2	F1	ug/L		144	70 - 130
Toluene	0.25	U F1	50.0	74.4	F1	ug/L		149	70 - 130
1,1,1-Trichloroethane	0.21	U F1	50.0	78.4	F1	ug/L		157	70 - 130
1,1,2-Trichloroethane	0.32	U F1	50.0	74.1	F1	ug/L		148	70 - 130
Trichloroethene	0.20	U F1	50.0	74.4	F1	ug/L		149	70 - 130
Trichlorofluoromethane	0.33	U *+ F1	50.0	389	E F1	ug/L		778	63 - 142
1,2,3-Trichloropropane	0.48	U	50.0	55.5		ug/L		111	70 - 130
Vinyl acetate	0.69	U F1	100	177	F1	ug/L		177	67 - 135
Vinyl chloride	0.40	U F1	50.0	112	F1	ug/L		224	66 - 129
Xylenes, Total	0.23	U	100	114		ug/L		114	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*112*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*109*		*60 - 124*
Dibromofluoromethane (Surr)	*112*		*70 - 130*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 680-240065-1 MSD
Matrix: Water
Analysis Batch: 797541

Client Sample ID: LF4-MW1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone	3.7	U F1	250	300		ug/L		120	67 - 120	2	30
Acrylonitrile	5.5	U F1	500	741	F1	ug/L		148	70 - 130	4	30
Benzene	0.27	U F1	50.0	80.1	F1	ug/L		160	70 - 130	1	30
Bromochloromethane	0.34	U F1	50.0	75.2	F1	ug/L		150	70 - 130	7	30
Bromodichloromethane	0.25	U	50.0	64.3		ug/L		129	70 - 130	1	30
Bromoform	0.59	U	50.0	49.3		ug/L		99	69 - 129	4	30
Bromomethane	3.7	U F1	50.0	110	F1	ug/L		220	28 - 192	3	30
2-Butanone (MEK)	6.4	U F1	250	366	F1	ug/L		146	69 - 120	1	30
Carbon disulfide	0.43	U F1	50.0	87.9	F1	ug/L		176	70 - 130	0	30
Carbon tetrachloride	0.30	U F1	50.0	68.6	F1	ug/L		137	70 - 130	19	30
Chlorobenzene	0.15	U	50.0	57.1		ug/L		114	70 - 130	6	30
Chloroethane	4.6	U F1 F2	50.0	133	F1 F2	ug/L		267	31 - 213	34	30
Chloroform	0.27	U F1	50.0	69.1	F1	ug/L		138	70 - 130	1	30
Chloromethane	0.54	U F1	50.0	99.0	F1	ug/L		198	59 - 127	2	30
Dibromochloromethane	0.39	U	50.0	59.9		ug/L		120	70 - 130	3	30
1,2-Dibromo-3-Chloropropane	1.8	U	50.0	43.0		ug/L		86	70 - 130	3	30
1,2-Dibromoethane	0.33	U	50.0	59.8		ug/L		120	70 - 130	6	30
Dibromomethane	0.34	U F1	50.0	67.8	F1	ug/L		136	70 - 130	4	30
1,2-Dichlorobenzene	0.31	U	50.0	59.4		ug/L		119	70 - 130	1	30
1,4-Dichlorobenzene	0.31	U	50.0	56.8		ug/L		114	70 - 130	2	30
trans-1,4-Dichloro-2-butene	1.3	U F1	50.0	66.0	F1	ug/L		132	67 - 120	8	30
1,1-Dichloroethane	0.33	U F1	50.0	78.5	F1	ug/L		157	70 - 130	2	30
1,2-Dichloroethane	0.25	U F1	50.0	70.1	F1	ug/L		140	70 - 130	3	50
cis-1,2-Dichloroethene	0.25	U F1	50.0	70.7	F1	ug/L		141	70 - 130	1	30
trans-1,2-Dichloroethene	0.34	U F1	50.0	74.9	F1	ug/L		150	70 - 130	1	30
1,1-Dichloroethene	0.33	U F1	50.0	81.1	F1	ug/L		162	70 - 130	3	20
1,2-Dichloropropane	0.22	U F1	50.0	77.4	F1	ug/L		155	70 - 130	4	20
1,3-Dichloropropane	0.36	U F1	50.0	76.2	F1	ug/L		152	70 - 130	4	20
cis-1,3-Dichloropropene	0.26	U	50.0	61.5		ug/L		123	70 - 130	1	20
trans-1,3-Dichloropropene	0.23	U F1	50.0	70.1	F1	ug/L		140	70 - 130	4	30
Ethylbenzene	0.20	U F1	50.0	63.6		ug/L		127	70 - 130	4	20
2-Hexanone	3.2	U F1	250	430	F1	ug/L		172	70 - 130	4	20
Iodomethane	3.9	U F1	50.0	74.9	F1	ug/L		150	52 - 129	15	30
Methylene Chloride	3.2	U F1	50.0	67.4	F1	ug/L		135	70 - 130	0	30
4-Methyl-2-pentanone (MIBK)	2.7	U F1	250	436	F1	ug/L		174	68 - 120	4	30
Methyl tert-butyl ether	0.81	U F1	50.0	71.1	F1	ug/L		142	70 - 130	2	30
Styrene	0.27	U	50.0	54.8		ug/L		110	70 - 130	6	30
1,1,1,2-Tetrachloroethane	0.36	U	50.0	48.7		ug/L		97	70 - 130	6	30
1,1,2,2-Tetrachloroethane	0.40	U	50.0	61.3		ug/L		123	70 - 130	3	30
Tetrachloroethylene	0.35	U F1	50.0	68.1	F1	ug/L		136	70 - 130	6	30
Toluene	0.25	U F1	50.0	72.4	F1	ug/L		145	70 - 130	3	30
1,1,1-Trichloroethane	0.21	U F1	50.0	77.9	F1	ug/L		156	70 - 130	1	30
1,1,2-Trichloroethane	0.32	U F1	50.0	70.8	F1	ug/L		142	70 - 130	5	30
Trichloroethene	0.20	U F1	50.0	72.1	F1	ug/L		144	70 - 130	3	30
Trichlorofluoromethane	0.33	U *+ F1	50.0	397	E F1	ug/L		795	63 - 142	2	30
1,2,3-Trichloropropane	0.48	U	50.0	52.8		ug/L		106	70 - 130	5	30
Vinyl acetate	0.69	U F1	100	172	F1	ug/L		172	67 - 135	3	30
Vinyl chloride	0.40	U F1	50.0	119	F1	ug/L		237	66 - 129	6	30

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 680-240065-1 MSD
Matrix: Water
Analysis Batch: 797541

Client Sample ID: LF4-MW1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Xylenes, Total	0.23	U	100	110		ug/L		110	70 - 130	3	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*112*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*103*		*60 - 124*
Dibromofluoromethane (Surr)	*109*		*70 - 130*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: MB 680-798109/7
Matrix: Water
Analysis Batch: 798109

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			09/15/23 12:43	1
Acrylonitrile	5.5	U	20	5.5	ug/L			09/15/23 12:43	1
Benzene	0.27	U	1.0	0.27	ug/L			09/15/23 12:43	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			09/15/23 12:43	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			09/15/23 12:43	1
Bromoform	0.59	U	1.0	0.59	ug/L			09/15/23 12:43	1
Bromomethane	3.7	U	5.0	3.7	ug/L			09/15/23 12:43	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			09/15/23 12:43	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			09/15/23 12:43	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			09/15/23 12:43	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			09/15/23 12:43	1
Chloroethane	4.6	U	5.0	4.6	ug/L			09/15/23 12:43	1
Chloroform	0.27	U	1.0	0.27	ug/L			09/15/23 12:43	1
Chloromethane	0.54	U	1.0	0.54	ug/L			09/15/23 12:43	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			09/15/23 12:43	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			09/15/23 12:43	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			09/15/23 12:43	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			09/15/23 12:43	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			09/15/23 12:43	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			09/15/23 12:43	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			09/15/23 12:43	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			09/15/23 12:43	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			09/15/23 12:43	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			09/15/23 12:43	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			09/15/23 12:43	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			09/15/23 12:43	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			09/15/23 12:43	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			09/15/23 12:43	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			09/15/23 12:43	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			09/15/23 12:43	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			09/15/23 12:43	1
2-Hexanone	3.2	U	10	3.2	ug/L			09/15/23 12:43	1
Iodomethane	3.9	U	10	3.9	ug/L			09/15/23 12:43	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			09/15/23 12:43	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			09/15/23 12:43	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 680-798109/7
Matrix: Water
Analysis Batch: 798109

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			09/15/23 12:43	1
Styrene	0.27	U	1.0	0.27	ug/L			09/15/23 12:43	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			09/15/23 12:43	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			09/15/23 12:43	1
Tetrachloroethylene	0.35	U	1.0	0.35	ug/L			09/15/23 12:43	1
Toluene	0.25	U	1.0	0.25	ug/L			09/15/23 12:43	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			09/15/23 12:43	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			09/15/23 12:43	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			09/15/23 12:43	1
Trichlorofluoromethane	0.33	U	1.0	0.33	ug/L			09/15/23 12:43	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			09/15/23 12:43	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			09/15/23 12:43	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			09/15/23 12:43	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			09/15/23 12:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*70 - 130*		*09/15/23 12:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*76*		*60 - 124*		*09/15/23 12:43*	*1*
Dibromofluoromethane (Surr)	*85*		*70 - 130*		*09/15/23 12:43*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*09/15/23 12:43*	*1*

Lab Sample ID: LCS 680-798109/3
Matrix: Water
Analysis Batch: 798109

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	218		ug/L		87	67 - 120
Acrylonitrile	500	405		ug/L		81	70 - 130
Benzene	50.0	51.0		ug/L		102	70 - 130
Bromochloromethane	50.0	47.9		ug/L		96	70 - 130
Bromodichloromethane	50.0	45.0		ug/L		90	70 - 130
Bromoform	50.0	44.9		ug/L		90	69 - 129
Bromomethane	50.0	78.6		ug/L		157	28 - 192
2-Butanone (MEK)	250	235		ug/L		94	69 - 120
Carbon disulfide	50.0	55.7		ug/L		111	70 - 130
Carbon tetrachloride	50.0	47.9		ug/L		96	70 - 130
Chlorobenzene	50.0	51.2		ug/L		102	70 - 130
Chloroethane	50.0	70.9		ug/L		142	31 - 213
Chloroform	50.0	41.9		ug/L		84	70 - 130
Chloromethane	50.0	62.2		ug/L		124	59 - 127
Dibromochloromethane	50.0	46.0		ug/L		92	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	44.4		ug/L		89	70 - 130
1,2-Dibromoethane	50.0	46.6		ug/L		93	70 - 130
Dibromomethane	50.0	41.8		ug/L		84	70 - 130
1,2-Dichlorobenzene	50.0	50.5		ug/L		101	70 - 130
1,4-Dichlorobenzene	50.0	48.8		ug/L		98	70 - 130
trans-1,4-Dichloro-2-butene	50.0	46.9		ug/L		94	67 - 120
1,1-Dichloroethane	50.0	48.0		ug/L		96	70 - 130

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 680-798109/3
Matrix: Water
Analysis Batch: 798109

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichloroethane	50.0	46.5		ug/L		93	70 - 130
cis-1,2-Dichloroethene	50.0	48.9		ug/L		98	70 - 130
trans-1,2-Dichloroethene	50.0	47.6		ug/L		95	70 - 130
1,1-Dichloroethene	50.0	52.1		ug/L		104	70 - 130
1,2-Dichloropropane	50.0	47.2		ug/L		94	70 - 130
1,3-Dichloropropane	50.0	47.0		ug/L		94	70 - 130
cis-1,3-Dichloropropene	50.0	49.7		ug/L		99	70 - 130
trans-1,3-Dichloropropene	50.0	48.5		ug/L		97	70 - 130
Ethylbenzene	50.0	54.8		ug/L		110	70 - 130
2-Hexanone	250	209		ug/L		84	70 - 130
Iodomethane	50.0	54.0		ug/L		108	52 - 129
Methylene Chloride	50.0	47.8		ug/L		96	70 - 130
4-Methyl-2-pentanone (MIBK)	250	210		ug/L		84	68 - 120
Methyl tert-butyl ether	50.0	42.9		ug/L		86	70 - 130
Styrene	50.0	53.8		ug/L		108	70 - 130
1,1,1,2-Tetrachloroethane	50.0	50.8		ug/L		102	70 - 130
1,1,2,2-Tetrachloroethane	50.0	43.4		ug/L		87	70 - 130
Tetrachloroethylene	50.0	54.5		ug/L		109	70 - 130
Toluene	50.0	53.5		ug/L		107	70 - 130
1,1,1-Trichloroethane	50.0	52.7		ug/L		105	70 - 130
1,1,2-Trichloroethane	50.0	43.2		ug/L		86	70 - 130
Trichloroethene	50.0	53.0		ug/L		106	70 - 130
Trichlorofluoromethane	50.0	52.0		ug/L		104	63 - 142
1,2,3-Trichloropropane	50.0	44.1		ug/L		88	70 - 130
Vinyl acetate	100	86.4		ug/L		86	67 - 135
Vinyl chloride	50.0	70.3	*+	ug/L		141	66 - 129
Xylenes, Total	100	108		ug/L		108	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*101*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*90*		*60 - 124*
Dibromofluoromethane (Surr)	*92*		*70 - 130*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*

Lab Sample ID: LCSD 680-798109/4
Matrix: Water
Analysis Batch: 798109

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone	250	224		ug/L		90	67 - 120	3	30
Acrylonitrile	500	415		ug/L		83	70 - 130	2	30
Benzene	50.0	51.1		ug/L		102	70 - 130	0	30
Bromochloromethane	50.0	48.5		ug/L		97	70 - 130	1	30
Bromodichloromethane	50.0	44.7		ug/L		89	70 - 130	1	30
Bromoform	50.0	45.7		ug/L		91	69 - 129	2	30
Bromomethane	50.0	81.2		ug/L		162	28 - 192	3	30
2-Butanone (MEK)	250	238		ug/L		95	69 - 120	1	30
Carbon disulfide	50.0	55.2		ug/L		110	70 - 130	1	30

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 680-798109/4
Matrix: Water
Analysis Batch: 798109

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Carbon tetrachloride			50.0	47.5		ug/L		95	70 - 130	1	30
Chlorobenzene			50.0	50.9		ug/L		102	70 - 130	1	30
Chloroethane			50.0	100	*1	ug/L		200	31 - 213	34	30
Chloroform			50.0	42.0		ug/L		84	70 - 130	0	30
Chloromethane			50.0	47.1		ug/L		94	59 - 127	28	30
Dibromochloromethane			50.0	46.1		ug/L		92	70 - 130	0	30
1,2-Dibromo-3-Chloropropane			50.0	46.1		ug/L		92	70 - 130	4	30
1,2-Dibromoethane			50.0	47.1		ug/L		94	70 - 130	1	30
Dibromomethane			50.0	42.4		ug/L		85	70 - 130	2	30
1,2-Dichlorobenzene			50.0	50.9		ug/L		102	70 - 130	1	30
1,4-Dichlorobenzene			50.0	48.0		ug/L		96	70 - 130	2	30
trans-1,4-Dichloro-2-butene			50.0	47.4		ug/L		95	67 - 120	1	30
1,1-Dichloroethane			50.0	48.3		ug/L		97	70 - 130	1	30
1,2-Dichloroethane			50.0	46.2		ug/L		92	70 - 130	1	50
cis-1,2-Dichloroethene			50.0	48.5		ug/L		97	70 - 130	1	30
trans-1,2-Dichloroethene			50.0	46.8		ug/L		94	70 - 130	2	30
1,1-Dichloroethene			50.0	52.0		ug/L		104	70 - 130	0	20
1,2-Dichloropropane			50.0	47.3		ug/L		95	70 - 130	0	20
1,3-Dichloropropane			50.0	47.0		ug/L		94	70 - 130	0	20
cis-1,3-Dichloropropene			50.0	48.7		ug/L		97	70 - 130	2	20
trans-1,3-Dichloropropene			50.0	48.2		ug/L		96	70 - 130	1	30
Ethylbenzene			50.0	54.5		ug/L		109	70 - 130	0	20
2-Hexanone			250	218		ug/L		87	70 - 130	4	20
Iodomethane			50.0	54.7		ug/L		109	52 - 129	1	30
Methylene Chloride			50.0	48.1		ug/L		96	70 - 130	1	30
4-Methyl-2-pentanone (MIBK)			250	216		ug/L		86	68 - 120	3	30
Methyl tert-butyl ether			50.0	42.6		ug/L		85	70 - 130	1	30
Styrene			50.0	53.6		ug/L		107	70 - 130	0	30
1,1,1,2-Tetrachloroethane			50.0	50.0		ug/L		100	70 - 130	2	30
1,1,2,2-Tetrachloroethane			50.0	44.2		ug/L		88	70 - 130	2	30
Tetrachloroethylene			50.0	54.3		ug/L		109	70 - 130	0	30
Toluene			50.0	53.5		ug/L		107	70 - 130	0	30
1,1,1-Trichloroethane			50.0	51.5		ug/L		103	70 - 130	2	30
1,1,2-Trichloroethane			50.0	43.1		ug/L		86	70 - 130	0	30
Trichloroethene			50.0	53.0		ug/L		106	70 - 130	0	30
Trichlorofluoromethane			50.0	50.6		ug/L		101	63 - 142	3	30
1,2,3-Trichloropropane			50.0	46.0		ug/L		92	70 - 130	4	30
Vinyl acetate			100	85.0		ug/L		85	67 - 135	2	30
Vinyl chloride			50.0	71.5	*+	ug/L		143	66 - 129	2	30
Xylenes, Total			100	107		ug/L		107	70 - 130	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*89*		*60 - 124*
Dibromofluoromethane (Surr)	*92*		*70 - 130*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 680-797270/1-A
Matrix: Water
Analysis Batch: 797474

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 797270

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.34	U	5.0	0.34	ug/L		09/11/23 05:23	09/11/23 15:24	1
Arsenic	0.86	U	3.0	0.86	ug/L		09/11/23 05:23	09/11/23 15:24	1
Barium	0.89	U	5.0	0.89	ug/L		09/11/23 05:23	09/11/23 15:24	1
Beryllium	0.20	U	0.50	0.20	ug/L		09/11/23 05:23	09/11/23 15:24	1
Cadmium	0.078	U	0.50	0.078	ug/L		09/11/23 05:23	09/11/23 15:24	1
Chromium	1.2	U	5.0	1.2	ug/L		09/11/23 05:23	09/11/23 15:24	1
Cobalt	0.22	U	0.50	0.22	ug/L		09/11/23 05:23	09/11/23 15:24	1
Copper	1.1	U	5.0	1.1	ug/L		09/11/23 05:23	09/11/23 15:24	1
Lead	0.21	U	2.5	0.21	ug/L		09/11/23 05:23	09/11/23 15:24	1
Nickel	0.42	U	5.0	0.42	ug/L		09/11/23 05:23	09/11/23 15:24	1
Selenium	0.99	U	2.5	0.99	ug/L		09/11/23 05:23	09/11/23 15:24	1
Silver	0.39	U	1.0	0.39	ug/L		09/11/23 05:23	09/11/23 15:24	1
Thallium	0.26	U	1.0	0.26	ug/L		09/11/23 05:23	09/11/23 15:24	1
Vanadium	0.63	U	10	0.63	ug/L		09/11/23 05:23	09/11/23 15:24	1
Zinc	2.8	U	20	2.8	ug/L		09/11/23 05:23	09/11/23 15:24	1

Lab Sample ID: LCS 680-797270/2-A
Matrix: Water
Analysis Batch: 797474

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 797270

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	50.0	50.6		ug/L		101	80 - 120
Arsenic	100	105		ug/L		105	80 - 120
Barium	100	103		ug/L		103	80 - 120
Beryllium	50.0	50.1		ug/L		100	80 - 120
Cadmium	50.0	48.9		ug/L		98	80 - 120
Chromium	100	105		ug/L		105	80 - 120
Cobalt	50.0	53.5		ug/L		107	80 - 120
Copper	100	109		ug/L		109	80 - 120
Lead	500	501		ug/L		100	80 - 120
Nickel	100	98.9		ug/L		99	80 - 120
Selenium	100	101		ug/L		101	80 - 120
Silver	50.0	52.4		ug/L		105	80 - 120
Thallium	50.0	48.5		ug/L		97	80 - 120
Vanadium	100	103		ug/L		103	80 - 120
Zinc	100	102		ug/L		102	80 - 120

Lab Sample ID: 680-240065-1 MS
Matrix: Water
Analysis Batch: 797474

Client Sample ID: LF4-MW1
Prep Type: Total Recoverable
Prep Batch: 797270

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.34	U	50.0	59.3		ug/L		119	75 - 125
Arsenic	5.4		100	122		ug/L		117	75 - 125
Barium	47		100	165		ug/L		118	75 - 125
Beryllium	0.26	J	50.0	54.4		ug/L		108	75 - 125
Cadmium	0.15	J	50.0	57.8		ug/L		115	75 - 125
Chromium	1.2	U	100	120		ug/L		120	75 - 125
Cobalt	23		50.0	82.2		ug/L		119	75 - 125

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 680-240065-1 MS
Matrix: Water
Analysis Batch: 797474

Client Sample ID: LF4-MW1
Prep Type: Total Recoverable
Prep Batch: 797270

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Copper	2.7	J F1	100	129	F1	ug/L		127	75 - 125
Lead	1.1	J	500	577		ug/L		115	75 - 125
Nickel	15		100	131		ug/L		116	75 - 125
Selenium	0.99	U	100	114		ug/L		114	75 - 125
Silver	0.39	U	50.0	61.0		ug/L		122	75 - 125
Thallium	0.26	U	50.0	56.9		ug/L		114	75 - 125
Vanadium	0.63	U	100	117		ug/L		117	75 - 125
Zinc	31		100	147		ug/L		115	75 - 125

Lab Sample ID: 680-240065-1 MSD
Matrix: Water
Analysis Batch: 797474

Client Sample ID: LF4-MW1
Prep Type: Total Recoverable
Prep Batch: 797270

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	0.34	U	50.0	51.9		ug/L		104	75 - 125	13	20
Arsenic	5.4		100	111		ug/L		105	75 - 125	10	20
Barium	47		100	147		ug/L		100	75 - 125	11	20
Beryllium	0.26	J	50.0	51.7		ug/L		103	75 - 125	5	20
Cadmium	0.15	J	50.0	50.2		ug/L		100	75 - 125	14	20
Chromium	1.2	U	100	107		ug/L		107	75 - 125	11	20
Cobalt	23		50.0	74.5		ug/L		103	75 - 125	10	20
Copper	2.7	J F1	100	114		ug/L		111	75 - 125	13	20
Lead	1.1	J	500	519		ug/L		104	75 - 125	11	20
Nickel	15		100	117		ug/L		102	75 - 125	12	20
Selenium	0.99	U	100	105		ug/L		105	75 - 125	9	20
Silver	0.39	U	50.0	53.7		ug/L		107	75 - 125	13	20
Thallium	0.26	U	50.0	50.8		ug/L		102	75 - 125	11	20
Vanadium	0.63	U	100	105		ug/L		105	75 - 125	11	20
Zinc	31		100	131		ug/L		99	75 - 125	12	20

Lab Sample ID: MB 680-797272/1-A
Matrix: Water
Analysis Batch: 797474

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 797272

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.34	U	5.0	0.34	ug/L		09/11/23 05:31	09/11/23 23:32	1
Arsenic	0.86	U	3.0	0.86	ug/L		09/11/23 05:31	09/11/23 23:32	1
Barium	0.89	U	5.0	0.89	ug/L		09/11/23 05:31	09/11/23 23:32	1
Beryllium	0.20	U	0.50	0.20	ug/L		09/11/23 05:31	09/11/23 23:32	1
Cadmium	0.078	U	0.50	0.078	ug/L		09/11/23 05:31	09/11/23 23:32	1
Chromium	1.2	U	5.0	1.2	ug/L		09/11/23 05:31	09/11/23 23:32	1
Cobalt	0.22	U	0.50	0.22	ug/L		09/11/23 05:31	09/11/23 23:32	1
Copper	1.1	U	5.0	1.1	ug/L		09/11/23 05:31	09/11/23 23:32	1
Lead	0.21	U	2.5	0.21	ug/L		09/11/23 05:31	09/11/23 23:32	1
Nickel	1.31	J	5.0	0.42	ug/L		09/11/23 05:31	09/11/23 23:32	1
Selenium	0.99	U	2.5	0.99	ug/L		09/11/23 05:31	09/11/23 23:32	1
Silver	0.39	U	1.0	0.39	ug/L		09/11/23 05:31	09/11/23 23:32	1
Thallium	0.26	U	1.0	0.26	ug/L		09/11/23 05:31	09/11/23 23:32	1
Vanadium	0.63	U	10	0.63	ug/L		09/11/23 05:31	09/11/23 23:32	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 680-797272/1-A
Matrix: Water
Analysis Batch: 797474

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 797272

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	2.8	U	20	2.8	ug/L		09/11/23 05:31	09/11/23 23:32	1

Lab Sample ID: LCS 680-797272/2-A
Matrix: Water
Analysis Batch: 797474

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 797272

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	50.0	49.9		ug/L		100	80 - 120
Arsenic	100	103		ug/L		103	80 - 120
Barium	100	100		ug/L		100	80 - 120
Beryllium	50.0	50.7		ug/L		101	80 - 120
Cadmium	50.0	46.7		ug/L		93	80 - 120
Chromium	100	104		ug/L		104	80 - 120
Cobalt	50.0	53.1		ug/L		106	80 - 120
Copper	100	106		ug/L		106	80 - 120
Lead	500	495		ug/L		99	80 - 120
Nickel	100	97.9		ug/L		98	80 - 120
Selenium	100	100		ug/L		100	80 - 120
Silver	50.0	52.7		ug/L		105	80 - 120
Thallium	50.0	47.9		ug/L		96	80 - 120
Vanadium	100	102		ug/L		102	80 - 120
Zinc	100	102		ug/L		102	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 680-797380/1-A
Matrix: Water
Analysis Batch: 797609

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 797380

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		09/11/23 11:54	09/12/23 12:08	1

Lab Sample ID: LCS 680-797380/2-A
Matrix: Water
Analysis Batch: 797609

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 797380

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	2.50	2.65		ug/L		106	80 - 120

Lab Sample ID: 680-240065-1 MS
Matrix: Water
Analysis Batch: 797609

Client Sample ID: LF4-MW1
Prep Type: Total/NA
Prep Batch: 797380

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.080	U	1.00	1.03		ug/L		103	80 - 120

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 680-240065-1 MSD
Matrix: Water
Analysis Batch: 797609

Client Sample ID: LF4-MW1
Prep Type: Total/NA
Prep Batch: 797380

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.080	U	1.00	1.03		ug/L		103	80 - 120	0	20

Lab Sample ID: MB 680-797941/1-A
Matrix: Water
Analysis Batch: 798217

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 797941

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		09/14/23 11:19	09/15/23 13:55	1

Lab Sample ID: LCS 680-797941/2-A
Matrix: Water
Analysis Batch: 798217

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 797941

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	2.50	2.56		ug/L		102	80 - 120

GC/MS VOA

Analysis Batch: 797541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-240065-1	LF4-MW1	Total/NA	Water	8260D	
680-240065-2	LF4-MW2	Total/NA	Water	8260D	
680-240065-3	LF4-MW3	Total/NA	Water	8260D	
MB 680-797541/8	Method Blank	Total/NA	Water	8260D	
LCS 680-797541/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-797541/5	Lab Control Sample Dup	Total/NA	Water	8260D	
680-240065-1 MS	LF4-MW1	Total/NA	Water	8260D	
680-240065-1 MSD	LF4-MW1	Total/NA	Water	8260D	

Analysis Batch: 798109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-240065-4	LF4-MW4	Total/NA	Water	8260D	
680-240065-5	LF4-MW5	Total/NA	Water	8260D	
680-240065-6	DUP424	Total/NA	Water	8260D	
680-240065-7	TB614	Total/NA	Water	8260D	
MB 680-798109/7	Method Blank	Total/NA	Water	8260D	
LCS 680-798109/3	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-798109/4	Lab Control Sample Dup	Total/NA	Water	8260D	

Metals

Prep Batch: 797270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-240065-1	LF4-MW1	Total Recoverable	Water	3005A	
680-240065-2	LF4-MW2	Total Recoverable	Water	3005A	
680-240065-4	LF4-MW4	Total Recoverable	Water	3005A	
680-240065-5	LF4-MW5	Total Recoverable	Water	3005A	
680-240065-6	DUP424	Total Recoverable	Water	3005A	
MB 680-797270/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-797270/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-240065-1 MS	LF4-MW1	Total Recoverable	Water	3005A	
680-240065-1 MSD	LF4-MW1	Total Recoverable	Water	3005A	

Prep Batch: 797272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-240065-3	LF4-MW3	Total Recoverable	Water	3005A	
MB 680-797272/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-797272/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 797380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-240065-1	LF4-MW1	Total/NA	Water	7470A	
680-240065-2	LF4-MW2	Total/NA	Water	7470A	
680-240065-3	LF4-MW3	Total/NA	Water	7470A	
680-240065-4	LF4-MW4	Total/NA	Water	7470A	
680-240065-5	LF4-MW5	Total/NA	Water	7470A	
MB 680-797380/1-A	Method Blank	Total/NA	Water	7470A	
LCS 680-797380/2-A	Lab Control Sample	Total/NA	Water	7470A	
680-240065-1 MS	LF4-MW1	Total/NA	Water	7470A	
680-240065-1 MSD	LF4-MW1	Total/NA	Water	7470A	

Metals

Analysis Batch: 797474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-240065-1	LF4-MW1	Total Recoverable	Water	6020B	797270
680-240065-2	LF4-MW2	Total Recoverable	Water	6020B	797270
680-240065-3	LF4-MW3	Total Recoverable	Water	6020B	797272
680-240065-4	LF4-MW4	Total Recoverable	Water	6020B	797270
680-240065-5	LF4-MW5	Total Recoverable	Water	6020B	797270
680-240065-6	DUP424	Total Recoverable	Water	6020B	797270
MB 680-797270/1-A	Method Blank	Total Recoverable	Water	6020B	797270
MB 680-797272/1-A	Method Blank	Total Recoverable	Water	6020B	797272
LCS 680-797270/2-A	Lab Control Sample	Total Recoverable	Water	6020B	797270
LCS 680-797272/2-A	Lab Control Sample	Total Recoverable	Water	6020B	797272
680-240065-1 MS	LF4-MW1	Total Recoverable	Water	6020B	797270
680-240065-1 MSD	LF4-MW1	Total Recoverable	Water	6020B	797270

Analysis Batch: 797609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-240065-1	LF4-MW1	Total/NA	Water	7470A	797380
680-240065-2	LF4-MW2	Total/NA	Water	7470A	797380
680-240065-3	LF4-MW3	Total/NA	Water	7470A	797380
680-240065-4	LF4-MW4	Total/NA	Water	7470A	797380
680-240065-5	LF4-MW5	Total/NA	Water	7470A	797380
MB 680-797380/1-A	Method Blank	Total/NA	Water	7470A	797380
LCS 680-797380/2-A	Lab Control Sample	Total/NA	Water	7470A	797380
680-240065-1 MS	LF4-MW1	Total/NA	Water	7470A	797380
680-240065-1 MSD	LF4-MW1	Total/NA	Water	7470A	797380

Prep Batch: 797941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-240065-6	DUP424	Total/NA	Water	7470A	
MB 680-797941/1-A	Method Blank	Total/NA	Water	7470A	
LCS 680-797941/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 798217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-240065-6	DUP424	Total/NA	Water	7470A	797941
MB 680-797941/1-A	Method Blank	Total/NA	Water	7470A	797941
LCS 680-797941/2-A	Lab Control Sample	Total/NA	Water	7470A	797941

Lab Chronicle

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-240065-1

Client Sample ID: LF4-MW1

Lab Sample ID: 680-240065-1

Date Collected: 09/06/23 11:10

Matrix: Water

Date Received: 09/08/23 09:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	797541	09/12/23 19:29	P1C	EET SAV
	Instrument ID: CMSAJ									
Total Recoverable	Prep	3005A			25 mL	125 mL	797270	09/11/23 05:23	RR	EET SAV
Total Recoverable	Analysis	6020B		1			797474	09/11/23 15:32	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Prep	7470A			50 mL	50 mL	797380	09/11/23 11:54	DW	EET SAV
Total/NA	Analysis	7470A		1			797609	09/12/23 12:11	DW	EET SAV
	Instrument ID: QuickTrace2									

Client Sample ID: LF4-MW2

Lab Sample ID: 680-240065-2

Date Collected: 09/06/23 13:10

Matrix: Water

Date Received: 09/08/23 09:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	797541	09/12/23 19:51	P1C	EET SAV
	Instrument ID: CMSAJ									
Total Recoverable	Prep	3005A			25 mL	125 mL	797270	09/11/23 05:23	RR	EET SAV
Total Recoverable	Analysis	6020B		1			797474	09/11/23 16:29	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Prep	7470A			50 mL	50 mL	797380	09/11/23 11:54	DW	EET SAV
Total/NA	Analysis	7470A		1			797609	09/12/23 12:29	DW	EET SAV
	Instrument ID: QuickTrace2									

Client Sample ID: LF4-MW3

Lab Sample ID: 680-240065-3

Date Collected: 09/06/23 14:40

Matrix: Water

Date Received: 09/08/23 09:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	797541	09/12/23 20:13	P1C	EET SAV
	Instrument ID: CMSAJ									
Total Recoverable	Prep	3005A			25 mL	125 mL	797272	09/11/23 05:31	RR	EET SAV
Total Recoverable	Analysis	6020B		1			797474	09/12/23 00:00	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Prep	7470A			50 mL	50 mL	797380	09/11/23 11:54	DW	EET SAV
Total/NA	Analysis	7470A		1			797609	09/12/23 12:30	DW	EET SAV
	Instrument ID: QuickTrace2									

Client Sample ID: LF4-MW4

Lab Sample ID: 680-240065-4

Date Collected: 09/06/23 16:00

Matrix: Water

Date Received: 09/08/23 09:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	798109	09/15/23 16:17	RPG	EET SAV
	Instrument ID: CMSC									

Lab Chronicle

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-240065-1

Client Sample ID: LF4-MW4

Lab Sample ID: 680-240065-4

Date Collected: 09/06/23 16:00
Matrix: Water
Date Received: 09/08/23 09:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			25 mL	125 mL	797270	09/11/23 05:23	RR	EET SAV
Total Recoverable	Analysis	6020B		1			797474	09/11/23 16:37	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Prep	7470A			50 mL	50 mL	797380	09/11/23 11:54	DW	EET SAV
Total/NA	Analysis	7470A		1			797609	09/12/23 12:32	DW	EET SAV
	Instrument ID: QuickTrace2									

Client Sample ID: LF4-MW5

Lab Sample ID: 680-240065-5

Date Collected: 09/06/23 09:30
Matrix: Water
Date Received: 09/08/23 09:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	798109	09/15/23 16:55	RPG	EET SAV
	Instrument ID: CMSC									
Total Recoverable	Prep	3005A			25 mL	125 mL	797270	09/11/23 05:23	RR	EET SAV
Total Recoverable	Analysis	6020B		1			797474	09/11/23 16:41	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Prep	7470A			50 mL	50 mL	797380	09/11/23 11:54	DW	EET SAV
Total/NA	Analysis	7470A		1			797609	09/12/23 12:36	DW	EET SAV
	Instrument ID: QuickTrace2									

Client Sample ID: DUP424

Lab Sample ID: 680-240065-6

Date Collected: 09/06/23 00:00
Matrix: Water
Date Received: 09/08/23 09:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	798109	09/15/23 17:14	RPG	EET SAV
	Instrument ID: CMSC									
Total Recoverable	Prep	3005A			25 mL	125 mL	797270	09/11/23 05:23	RR	EET SAV
Total Recoverable	Analysis	6020B		1			797474	09/11/23 16:33	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Prep	7470A			50 mL	50 mL	797941	09/14/23 11:19	DW	EET SAV
Total/NA	Analysis	7470A		1			798217	09/15/23 14:17	DW	EET SAV
	Instrument ID: QuickTrace2									

Client Sample ID: TB614

Lab Sample ID: 680-240065-7

Date Collected: 09/07/23 08:37
Matrix: Water
Date Received: 09/08/23 09:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	798109	09/15/23 13:26	RPG	EET SAV
	Instrument ID: CMSC									

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Accreditation/Certification Summary

Client: Matrix Environmental Services, LLC
Job ID: 680-240065-1
Project/Site: Parcel 81(5), Landfill 4

Laboratory: Eurofins Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Florida	NELAP	E87052	06-30-24

Method Summary

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-240065-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET SAV
6020B	Metals (ICP/MS)	SW846	EET SAV
7470A	Mercury (CVAA)	SW846	EET SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SAV
5030C	Purge and Trap	SW846	EET SAV
7470A	Preparation, Mercury	SW846	EET SAV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

MATRIX ENVIRONMENTAL SERVICES CHAIN OF CUSTODY RECORD

COC Number 68019843
Cooler ID 1 of 1
Page 1 of 1

Laboratory Eurofins
Lab Contact Noel Savoie and Beth Daughtry
MES Contact Betty Van Pelt
MES Phone 801-699-1246
Project Parcel 81(5), Landfill 4
Task # 22.094.23-07.1
Lab contract: 22.094.23-07.1.500

Samplers Signature

SWMU	Station ID	QC Code	Station Code	Matrix	Sample Method	Date Collected	Sample Time	Analysis: SW8260D - VOC 3 - 40 ml vials, HCl	Analysis: 6020A/7470A Metals (Total) 1 - 250 ml poly HNO3	Analysis: SW8260D - VOC 2 - 40 ml vials, HCl	Analysis:
Parcel 81(5), Landfill 4	LF4-MW1	NS	MW	Water	Grab	9/6/2023	11:10	X	X		
Parcel 81(5), Landfill 4	LF4-MW1	MS/MSD	MW	Water	Grab	9/6/2023	11:10	X	X		
Parcel 81(5), Landfill 4	LF4-MW2	NS	MW	Water	Grab	9/6/2023	13:10	X	X		
Parcel 81(5), Landfill 4	LF4-MW3	NS	MW	Water	Grab	9/6/2023	14:40	X	X		
Parcel 81(5), Landfill 4	LF4-MW4	NS	MW	Water	Grab	9/6/2023	16:00	X	X		
Parcel 81(5), Landfill 4	LF4-MW5	NS	MW	Water	Grab	9/6/2023	9:30	X	X		
Parcel 81(5), Landfill 4	DUP424	FD	MW	Water	Grab	9/6/2023	N/A	X	X		
Parcel 81(5), Landfill 4	TB614	TB	WQ	Water	Grab	9/7/2023	8:37			X	

NOTES:

QC Code: NS = Investigative Sample, FD = Field Duplicate, MS/MSD = Matrix Spike/Matrix Spike Duplicate, EB = Equipment Blank, TB = Trip Blank, WQ = Water Quality, WS = Source Water

Station Type = MW = Monitoring Well, BH = Bore Hole, SD = Sediment, SW = Surface Water, SS = Surface Soil, SU = Sump, WS = Waste Solid/Soil, WW = Waste Water

White Copy = Lab COC, Yellow COC = Field Copy, Pink COC = Data Mgmt

Double the number of bottles for MS/MSD

COMMENTS: See Task Order 22.094.23-07.1 500 for required list of VOCs and metals **Collect FEII in the field

Relinquished by (Signature): David Abernathy Date/Time: 9/7/2023 1030 Received by (Signature): FedEx 1030

Relinquished by (Signature): Date/Time: Received by (Signature): TA 9-8-23 959

1.9/2.0

680-240065 Chain of Custody

Login Sample Receipt Checklist

Client: Matrix Environmental Services, LLC

Job Number: 680-240065-1

Login Number: 240065

List Source: Eurofins Savannah

List Number: 1

Creator: Sims, Robert D

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX D

Statistical Evaluation of Metals Date September 2023

Attachment D1. Analyses and Percent Non-Detects
McClellan Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

	Antimony			Arsenic			Barium		
Well ID	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**
LF4-MW1	41	41	100%	48	36	75%	49	5	10%
LF4-MW2	41	39	95%	48	25	52%	48	0	0%
LF4-MW3	41	41	100%	48	34	71%	48	2	4%
LF4-MW4	41	37	90%	48	26	54%	48	0	0%
LF4-MW5	41	41	100%	48	41	85%	48	9	19%

	Beryllium			Cadmium			Chromium		
Well ID	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**
LF4-MW1	40	20	50%	47	36	77%	47	47	100%
LF4-MW2	40	16	40%	47	30	64%	47	24	51%
LF4-MW3	40	21	53%	47	37	79%	47	33	70%
LF4-MW4	40	35	88%	47	35	74%	47	32	68%
LF4-MW5	40	30	75%	47	45	96%	47	39	83%

	Cobalt			Copper			Lead		
Well ID	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**
LF4-MW1	40	0	0%	41	13	32%	48	14	29%
LF4-MW2	40	0	0%	41	10	24%	48	11	23%
LF4-MW3	40	13	33%	41	14	34%	48	16	33%
LF4-MW4	40	8	20%	41	24	59%	48	10	21%
LF4-MW5	40	6	15%	41	24	59%	48	20	42%

	Mercury			Nickel			Selenium		
Well ID	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**
LF4-MW1	48	48	100%	41	5	12%	48	48	100%
LF4-MW2	48	47	98%	41	3	7%	48	44	92%
LF4-MW3	48	48	100%	41	9	22%	48	47	98%
LF4-MW4	48	47	98%	41	13	32%	48	45	94%
LF4-MW5	48	48	100%	41	15	37%	48	48	100%

	Silver			Thallium			Vanadium		
Well ID	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**
LF4-MW1	40	40	100%	41	39	95%	41	36	88%
LF4-MW2	40	40	100%	41	39	95%	41	31	76%
LF4-MW3	40	40	100%	41	40	98%	41	33	80%
LF4-MW4	40	29	73%	41	37	90%	41	29	71%
LF4-MW5	40	40	100%	41	39	95%	41	31	76%

	Zinc		
Well ID	**Sample #**	**# of NDs**	**%NDs**
LF4-MW1	41	2	5%
LF4-MW2	41	2	5%
LF4-MW3	41	10	24%
LF4-MW4	41	12	29%
LF4-MW5	41	16	39%

Attachment D2. Calculations for CUSUM Control Charts
Butler Green Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Barium

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW1	3/13/06	-2.638	1.86	0.86	0.86
LF4-MW1	9/13/06	-3.180	0.37	-0.63	0.23
LF4-MW1	3/6/07	-3.219	0.26	-0.74	0.00
LF4-MW1	9/24/07	-3.439	-0.34	-1.34	0.00
LF4-MW1	3/26/08	-2.990	0.89	-0.11	0.00
LF4-MW1	9/16/08	-3.464	-0.41	-1.41	0.00
LF4-MW1	3/17/09	-3.551	-0.65	-1.65	0.00
LF4-MW1	9/17/09	-3.408	-0.26	-1.26	0.00
LF4-MW1	3/17/10	-3.427	-0.31	-1.31	0.00
LF4-MW1	9/21/10	-3.510	-0.54	-1.54	0.00
LF4-MW1	3/15/11	-3.197	0.32	-0.68	0.00
LF4-MW1	9/8/11	-3.242	0.20	-0.80	0.00
LF4-MW1	3/14/12	-3.053	0.72	-0.28	0.00
LF4-MW1	9/6/12	-3.066	0.68	-0.32	0.00
LF4-MW1	3/5/13	-3.043	0.75	-0.25	0.00
LF4-MW1	9/11/13	-3.321	-0.02	-1.02	0.00
LF4-MW1	3/5/14	-3.294	0.06	-0.94	0.00
LF4-MW1	9/4/14	-3.324	-0.03	-1.03	0.00
LF4-MW1	3/13/15	-3.135	0.49	-0.51	0.00
LF4-MW1	9/16/15	-3.163	0.42	-0.58	0.00
LF4-MW1	3/16/16	-3.154	0.44	-0.56	0.00
LF4-MW1	9/21/16	-3.202	0.31	-0.69	0.00
LF4-MW1	3/15/17	-3.090	0.62	-0.38	0.00
LF4-MW1	9/8/17	-3.124	0.52	-0.48	0.00
LF4-MW1	3/8/18	-3.110	0.56	-0.44	0.00
LF4-MW1	9/11/18	-3.058	0.71	-0.29	0.00
LF4-MW1	3/7/19	-3.058	0.71	-0.29	0.00
LF4-MW1	9/5/19	-3.124	0.53	-0.47	0.00
LF4-MW1	3/12/20	-3.079	0.65	-0.35	0.00
LF4-MW1	9/15/20	-3.079	0.65	-0.35	0.00
LF4-MW1	3/4/21	-3.016	0.82	-0.18	0.00
LF4-MW1	9/9/21	-2.900	1.14	0.14	0.14
LF4-MW1	3/2/22	-2.957	0.98	-0.02	0.12
LF4-MW1	8/31/22	-3.170	0.40	-0.60	0.00
LF4-MW1	3/6/23	-3.170	0.40	-0.60	0.00
LF4-MW1	9/6/23	-3.058	0.71	-0.29	0.00
Background					
LF4-MW1	MEAN	-3.315			
LF4-MW1	STDEV	0.364			

Barium

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW2	3/13/06	-3.673	-3.70	-4.70	0.00
LF4-MW2	9/13/06	-2.198	0.41	-0.59	0.00
LF4-MW2	3/6/07	-2.357	-0.03	-1.03	0.00
LF4-MW2	9/24/07	-2.501	-0.44	-1.44	0.00
LF4-MW2	3/26/08	-2.017	0.91	-0.09	0.00
LF4-MW2	9/16/08	-2.327	0.05	-0.95	0.00
LF4-MW2	3/17/09	-2.079	0.74	-0.26	0.00
LF4-MW2	9/17/09	-2.371	-0.07	-1.07	0.00
LF4-MW2	3/17/10	-2.410	-0.18	-1.18	0.00
LF4-MW2	9/21/10	-2.306	0.11	-0.89	0.00
LF4-MW2	3/15/11	-2.283	0.17	-0.83	0.00
LF4-MW2	9/8/11	-2.235	0.31	-0.69	0.00
LF4-MW2	3/14/12	-2.235	0.31	-0.69	0.00
LF4-MW2	9/6/12	-2.216	0.36	-0.64	0.00
LF4-MW2	3/5/13	-2.056	0.80	-0.20	0.00
LF4-MW2	9/11/13	-2.585	-0.67	-1.67	0.00
LF4-MW2	3/5/14	-2.765	-1.17	-2.17	0.00
LF4-MW2	9/4/14	-2.854	-1.42	-2.42	0.00
LF4-MW2	3/13/15	-2.609	-0.74	-1.74	0.00
LF4-MW2	9/16/15	-2.537	-0.54	-1.54	0.00
LF4-MW2	3/16/16	-2.834	-1.36	-2.36	0.00
LF4-MW2	9/21/16	-2.664	-0.89	-1.89	0.00
LF4-MW2	3/15/17	-2.711	-1.02	-2.02	0.00
LF4-MW2	9/8/17	-2.438	-0.26	-1.26	0.00
LF4-MW2	3/8/18	-2.564	-0.61	-1.61	0.00
LF4-MW2	9/11/18	-2.604	-0.72	-1.72	0.00
LF4-MW2	3/7/19	-2.830	-1.35	-2.35	0.00
LF4-MW2	9/5/19	-2.688	-0.96	-1.96	0.00
LF4-MW2	3/12/20	-2.765	-1.17	-2.17	0.00
LF4-MW2	9/15/20	-2.674	-0.92	-1.92	0.00
LF4-MW2	3/4/21	-2.781	-1.22	-2.22	0.00
LF4-MW2	9/9/21	-2.303	0.12	-0.88	0.00
LF4-MW2	3/2/22	-2.813	-1.30	-2.30	0.00
LF4-MW2	8/31/22	-2.617	-0.76	-1.76	0.00
LF4-MW2	3/6/23	-2.688	-0.96	-1.96	0.00
LF4-MW2	9/6/23	-2.343	0.00	-1.00	0.00
Background					
LF4-MW2	MEAN	-2.344			
LF4-MW2	STDEV	0.359			

Barium

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW3	3/13/06	-2.865	0.37	-0.63	0.00
LF4-MW3	9/14/06	-2.727	0.74	-0.26	0.00
LF4-MW3	3/6/07	-3.030	-0.08	-1.08	0.00
LF4-MW3	9/25/07	-2.818	0.49	-0.51	0.00
LF4-MW3	3/26/08	-2.662	0.92	-0.08	0.00
LF4-MW3	9/16/08	-2.958	0.11	-0.89	0.00
LF4-MW3	3/17/09	-2.928	0.19	-0.81	0.00
LF4-MW3	9/17/09	-2.573	1.16	0.16	0.16
LF4-MW3	3/17/10	-2.839	0.44	-0.56	0.00
LF4-MW3	9/21/10	-3.239	-0.65	-1.65	0.00
LF4-MW3	3/15/11	-2.671	0.90	-0.10	0.00
LF4-MW3	9/8/11	-2.863	0.37	-0.63	0.00
LF4-MW3	3/14/12	-2.800	0.54	-0.46	0.00
LF4-MW3	9/6/12	-2.830	0.46	-0.54	0.00
LF4-MW3	3/5/13	-2.581	1.14	0.14	0.14
LF4-MW3	9/11/13	-2.953	0.13	-0.87	0.00
LF4-MW3	3/5/14	-2.906	0.26	-0.74	0.00
LF4-MW3	9/4/14	-2.700	0.82	-0.18	0.00
LF4-MW3	3/13/15	-2.471	1.44	0.44	0.44
LF4-MW3	9/16/15	-2.325	1.84	0.84	1.28
LF4-MW3	3/16/16	-2.870	0.35	-0.65	0.63
LF4-MW3	9/21/16	-2.444	1.51	0.51	1.14
LF4-MW3	3/15/17	-2.808	0.52	-0.48	0.66
LF4-MW3	9/8/17	-2.825	0.47	-0.53	0.14
LF4-MW3	3/8/18	-2.846	0.42	-0.58	0.00
LF4-MW3	9/11/18	-2.865	0.37	-0.63	0.00
LF4-MW3	3/7/19	-2.688	0.85	-0.15	0.00
LF4-MW3	9/5/19	-2.617	1.04	0.04	0.04
LF4-MW3	3/12/20	-2.465	1.46	0.46	0.50
LF4-MW3	9/15/20	-3.170	-0.46	-1.46	0.00
LF4-MW3	3/4/21	-2.489	1.39	0.39	0.39
LF4-MW3	9/9/21	-2.813	0.51	-0.49	0.00
LF4-MW3	3/2/22	-2.813	0.51	-0.49	0.00
LF4-MW3	8/31/22	-2.957	0.12	-0.88	0.00
LF4-MW3	3/6/23	-2.919	0.22	-0.78	0.00
LF4-MW3	9/6/23	-3.194	-0.53	-1.53	0.00
Background					
LF4-MW3	MEAN	-3.000			
LF4-MW3	STDEV	0.367			

Barium

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW4	3/14/06	-1.931	-1.61	-2.61	0.00
LF4-MW4	9/14/06	-1.715	-0.52	-1.52	0.00
LF4-MW4	3/7/07	-2.129	-2.60	-3.60	0.00
LF4-MW4	9/25/07	-1.565	0.22	-0.78	0.00
LF4-MW4	3/26/08	-1.945	-1.68	-2.68	0.00
LF4-MW4	9/17/08	-1.645	-0.17	-1.17	0.00
LF4-MW4	3/17/09	-1.973	-1.82	-2.82	0.00
LF4-MW4	9/21/09	-2.163	-2.77	-3.77	0.00
LF4-MW4	3/17/10	-2.048	-2.19	-3.19	0.00
LF4-MW4	9/21/10	-1.732	-0.61	-1.61	0.00
LF4-MW4	3/15/11	-2.410	-4.01	-5.01	0.00
LF4-MW4	9/8/11	-1.778	-0.84	-1.84	0.00
LF4-MW4	3/14/12	-1.995	-1.93	-2.93	0.00
LF4-MW4	9/6/12	-2.163	-2.77	-3.77	0.00
LF4-MW4	3/5/13	-1.820	-1.05	-2.05	0.00
LF4-MW4	9/11/13	-1.604	0.03	-0.97	0.00
LF4-MW4	3/5/14	-1.749	-0.69	-1.69	0.00
LF4-MW4	9/4/14	-1.671	-0.31	-1.31	0.00
LF4-MW4	3/13/15	-2.189	-2.90	-3.90	0.00
LF4-MW4	9/16/15	-1.749	-0.69	-1.69	0.00
LF4-MW4	3/16/16	-1.682	-0.36	-1.36	0.00
LF4-MW4	9/21/16	-1.833	-1.12	-2.12	0.00
LF4-MW4	3/15/17	-2.064	-2.27	-3.27	0.00
LF4-MW4	9/8/17	-1.492	0.59	-0.41	0.00
LF4-MW4	3/8/18	-1.625	-0.07	-1.07	0.00
LF4-MW4	9/11/18	-1.833	-1.11	-2.11	0.00
LF4-MW4	3/7/19	-1.715	-0.52	-1.52	0.00
LF4-MW4	9/5/19	-1.833	-1.11	-2.11	0.00
LF4-MW4	3/12/20	-1.772	-0.81	-1.81	0.00
LF4-MW4	9/15/20	-2.303	-3.47	-4.47	0.00
LF4-MW4	3/4/21	-1.661	-0.25	-1.25	0.00
LF4-MW4	9/9/21	-1.109	2.51	1.51	1.51
LF4-MW4	3/2/22	-1.514	0.48	-0.52	0.99
LF4-MW4	8/31/22	-2.207	-2.99	-3.99	0.00
LF4-MW4	3/6/23	-2.040	-2.15	-3.15	0.00
LF4-MW4	9/6/23	-1.661	-0.25	-1.25	0.00
Background					
LF4-MW4	MEAN	-1.610			
LF4-MW4	STDEV	0.200			

Attachment D2. Calculations for CUSUM Control Charts
Butler Green Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Barium

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW5	3/14/06	-3.892	0.21	-0.79	0.00
LF4-MW5	9/14/06	-3.873	0.27	-0.73	0.00
LF4-MW5	3/7/07	-4.234	-0.73	-1.73	0.00
LF4-MW5	9/24/07	-3.887	0.23	-0.77	0.00
LF4-MW5	3/26/08	-4.406	-1.20	-2.20	0.00
LF4-MW5	9/16/08	-4.538	-1.56	-2.56	0.00
LF4-MW5	3/18/09	-4.335	-1.00	-2.00	0.00
LF4-MW5	9/17/09	-4.685	-1.97	-2.97	0.00
LF4-MW5	3/17/10	-4.298	-0.90	-1.90	0.00
LF4-MW5	9/21/10	-4.382	-1.13	-2.13	0.00
LF4-MW5	3/15/11	-3.544	1.17	0.17	0.17
LF4-MW5	9/8/11	-4.063	-0.26	-1.26	0.00
LF4-MW5	3/14/12	-4.382	-1.13	-2.13	0.00
LF4-MW5	9/6/12	-4.501	-1.46	-2.46	0.00
LF4-MW5	3/5/13	-4.423	-1.25	-2.25	0.00
LF4-MW5	9/11/13	-5.298	-3.65	-4.65	0.00
LF4-MW5	3/5/14	-4.457	-1.34	-2.34	0.00
LF4-MW5	9/4/14	-4.595	-1.72	-2.72	0.00
LF4-MW5	3/13/15	-4.305	-0.92	-1.92	0.00
LF4-MW5	9/16/15	-4.528	-1.54	-2.54	0.00
LF4-MW5	3/16/16	-4.123	-0.42	-1.42	0.00
LF4-MW5	9/21/16	-4.220	-0.69	-1.69	0.00
LF4-MW5	3/15/17	-4.213	-0.67	-1.67	0.00
LF4-MW5	9/8/17	-4.440	-1.29	-2.29	0.00
LF4-MW5	3/8/18	-4.051	-0.22	-1.22	0.00
LF4-MW5	9/11/18	-4.510	-1.48	-2.48	0.00
LF4-MW5	3/7/19	-3.772	0.54	-0.46	0.00
LF4-MW5	9/5/19	-4.343	-1.03	-2.03	0.00
LF4-MW5	3/12/20	-4.017	-0.13	-1.13	0.00
LF4-MW5	9/15/20	-4.135	-0.45	-1.45	0.00
LF4-MW5	3/4/21	-3.863	0.29	-0.71	0.00
LF4-MW5	9/9/21	-4.269	-0.82	-1.82	0.00
LF4-MW5	3/2/22	-3.912	0.16	-0.84	0.00
LF4-MW5	8/31/22	-4.423	-1.25	-2.25	0.00
LF4-MW5	3/6/23	-3.963	0.02	-0.98	0.00
LF4-MW5	9/6/23	-4.423	-1.25	-2.25	0.00
Background					
LF4-MW5	MEAN	-3.970			
LF4-MW5	STDEV	0.364			

Beryllium

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW1	3/13/06	-6.425	-1.53	-2.53	0.00
LF4-MW1	9/13/06	-6.786	-1.91	-2.91	0.00
LF4-MW1	3/6/07	-5.298	-0.33	-1.33	0.00
LF4-MW1	9/24/07	-5.298	-0.33	-1.33	0.00
LF4-MW1	3/26/08	-5.298	-0.33	-1.33	0.00
LF4-MW1	9/16/08	-5.298	-0.33	-1.33	0.00
LF4-MW1	3/17/09	-5.298	-0.33	-1.33	0.00
LF4-MW1	9/17/09	-5.298	-0.33	-1.33	0.00
LF4-MW1	3/17/10	-2.996	2.12	1.12	1.12
LF4-MW1	9/21/10	-5.298	-0.33	-1.33	0.00
LF4-MW1	3/15/11	-5.298	-0.33	-1.33	0.00
LF4-MW1	9/8/11	-5.298	-0.33	-1.33	0.00
LF4-MW1	3/14/12	-5.298	-0.33	-1.33	0.00
LF4-MW1	9/6/12	-5.298	-0.33	-1.33	0.00
LF4-MW1	3/5/13	-5.298	-0.33	-1.33	0.00
LF4-MW1	9/11/13	-5.298	-0.33	-1.33	0.00
LF4-MW1	3/5/14	-8.167	-3.38	-4.38	0.00
LF4-MW1	9/4/14	-7.847	-3.04	-4.04	0.00
LF4-MW1	3/13/15	-8.149	-3.36	-4.36	0.00
LF4-MW1	9/16/15	-7.607	-2.79	-3.79	0.00
LF4-MW1	3/16/16	-8.199	-3.41	-4.41	0.00
LF4-MW1	9/21/16	-7.754	-2.94	-3.94	0.00
LF4-MW1	3/15/17	-8.195	-3.41	-4.41	0.00
LF4-MW1	9/8/17	-8.404	-3.63	-4.63	0.00
LF4-MW1	3/8/18	-8.483	-3.72	-4.72	0.00
LF4-MW1	9/11/18	-8.568	-3.81	-4.81	0.00
LF4-MW1	3/7/19	-8.680	-3.93	-4.93	0.00
LF4-MW1	9/5/19	-7.987	-3.19	-4.19	0.00
LF4-MW1	3/12/20	-8.217	-3.43	-4.43	0.00
LF4-MW1	9/15/20	-8.112	-3.32	-4.32	0.00
LF4-MW1	3/4/21	-7.663	-2.84	-3.84	0.00
LF4-MW1	9/9/21	-8.680	-3.93	-4.93	0.00
LF4-MW1	3/2/22	-7.902	-3.10	-4.10	0.00
LF4-MW1	8/31/22	-8.146	-3.36	-4.36	0.00
LF4-MW1	3/6/23	-8.294	-3.52	-4.52	0.00
LF4-MW1	9/6/23	-8.255	-3.47	-4.47	0.00
Background					
LF4-MW1	MEAN	-4.989			
LF4-MW1	STDEV	0.940			

Beryllium

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW2	3/13/06	-5.298	0.56	-0.44	0.00
LF4-MW2	9/13/06	-6.041	-0.58	-1.58	0.00
LF4-MW2	3/6/07	-5.298	0.56	-0.44	0.00
LF4-MW2	9/24/07	-5.298	0.56	-0.44	0.00
LF4-MW2	3/26/08	-5.298	0.56	-0.44	0.00
LF4-MW2	9/16/08	-5.298	0.56	-0.44	0.00
LF4-MW2	3/17/09	-6.849	-1.83	-2.83	0.00
LF4-MW2	9/17/09	-5.298	0.56	-0.44	0.00
LF4-MW2	3/17/10	-6.205	-0.84	-1.84	0.00
LF4-MW2	9/21/10	-5.298	0.56	-0.44	0.00
LF4-MW2	3/15/11	-5.298	0.56	-0.44	0.00
LF4-MW2	9/8/11	-5.298	0.56	-0.44	0.00
LF4-MW2	3/14/12	-5.298	0.56	-0.44	0.00
LF4-MW2	9/6/12	-5.298	0.56	-0.44	0.00
LF4-MW2	3/5/13	-5.298	0.56	-0.44	0.00
LF4-MW2	9/11/13	-5.298	0.56	-0.44	0.00
LF4-MW2	3/5/14	-7.131	-2.27	-3.27	0.00
LF4-MW2	9/4/14	-9.115	-5.33	-6.33	0.00
LF4-MW2	3/13/15	-7.252	-2.45	-3.45	0.00
LF4-MW2	9/16/15	-8.818	-4.87	-5.87	0.00
LF4-MW2	3/16/16	-7.972	-3.57	-4.57	0.00
LF4-MW2	9/21/16	-8.874	-4.96	-5.96	0.00
LF4-MW2	3/15/17	-9.036	-5.21	-6.21	0.00
LF4-MW2	9/8/17	-9.071	-5.26	-6.26	0.00
LF4-MW2	3/8/18	-7.520	-2.87	-3.87	0.00
LF4-MW2	9/11/18	-8.805	-4.85	-5.85	0.00
LF4-MW2	3/7/19	-6.645	-1.52	-2.52	0.00
LF4-MW2	9/5/19	-8.335	-4.13	-5.13	0.00
LF4-MW2	3/12/20	-7.131	-2.27	-3.27	0.00
LF4-MW2	9/15/20	-7.775	-3.26	-4.26	0.00
LF4-MW2	3/4/21	-8.294	-4.06	-5.06	0.00
LF4-MW2	9/9/21	-8.079	-3.73	-4.73	0.00
LF4-MW2	3/2/22	-7.601	-2.99	-3.99	0.00
LF4-MW2	8/31/22	-8.335	-4.13	-5.13	0.00
LF4-MW2	3/6/23	-8.181	-3.89	-4.89	0.00
LF4-MW2	9/6/23	-7.849	-3.38	-4.38	0.00
Background					
LF4-MW2	MEAN	-5.663			
LF4-MW2	STDEV	0.648			

Cobalt

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW1	3/13/06	-4.029	0.50	-0.50	0.00
LF4-MW1	9/13/06	-4.734	-0.87	-1.87	0.00
LF4-MW1	3/6/07	-4.784	-0.97	-1.97	0.00
LF4-MW1	9/24/07	-4.641	-0.69	-1.69	0.00
LF4-MW1	3/26/08	-3.554	1.42	0.42	0.42
LF4-MW1	9/16/08	-4.547	-0.51	-1.51	0.00
LF4-MW1	3/17/09	-3.917	0.72	-0.28	0.00
LF4-MW1	9/17/09	-4.220	0.13	-0.87	0.00
LF4-MW1	3/17/10	-4.374	-0.17	-1.17	0.00
LF4-MW1	9/21/10	-3.830	0.89	-0.11	0.00
LF4-MW1	3/15/11	-3.623	1.29	0.29	0.29
LF4-MW1	9/8/11	-3.445	1.63	0.63	0.92
LF4-MW1	3/14/12	-3.417	1.69	0.69	1.61
LF4-MW1	9/6/12	-3.302	1.91	0.91	2.52
LF4-MW1	3/5/13	-3.411	1.70	0.70	3.22
LF4-MW1	9/11/13	-3.812	0.92	-0.08	3.14
LF4-MW1	3/5/14	-3.634	1.27	0.27	3.41
LF4-MW1	9/4/14	-3.717	1.11	0.11	3.51
LF4-MW1	3/13/15	-3.393	1.73	0.73	4.25
LF4-MW1	9/16/15	-3.689	1.16	0.16	4.41
LF4-MW1	3/16/16	-3.231	2.05	1.05	5.46
LF4-MW1	9/21/16	-3.493	1.54	0.54	6.00
LF4-MW1	3/15/17	-3.390	1.74	0.74	6.74
LF4-MW1	9/8/17	-3.278	1.96	0.96	7.70
LF4-MW1	3/8/18	-3.579	1.37	0.37	8.07
LF4-MW1	9/11/18	-3.411	1.70	0.70	8.77
LF4-MW1	3/7/19	-3.270	1.97	0.97	9.74
LF4-MW1	9/5/19	-3.381	1.76	0.76	10.50
LF4-MW1	3/12/20	-3.352	1.81	0.81	11.31
LF4-MW1	9/15/20	-3.270	1.97	0.97	12.29
LF4-MW1	3/4/21	-3.352	1.81	0.81	13.10
LF4-MW1	9/9/21	-3.297	1.92	0.92	14.02
LF4-MW1	3/2/22	-3.381	1.76	0.76	14.78
LF4-MW1	8/31/22	-3.442	1.64	0.64	15.42
LF4-MW1	3/6/23	-3.772	1.00	0.00	15.42
LF4-MW1	9/6/23	-3.772	1.00	0.00	15.42
Background					
LF4-MW1	MEAN	-4.286			
LF4-MW1	STDEV	0.515			

Attachment D2. Calculations for CUSUM Control Charts
Butler Green Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Cobalt

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW2	3/13/06	-5.053	-1.17	-2.17	0.00
LF4-MW2	9/13/06	-4.200	0.12	-0.88	0.00
LF4-MW2	3/6/07	-4.227	0.08	-0.92	0.00
LF4-MW2	9/24/07	-4.366	-0.13	-1.13	0.00
LF4-MW2	3/26/08	-4.626	-0.53	-1.53	0.00
LF4-MW2	9/16/08	-3.942	0.50	-0.50	0.00
LF4-MW2	3/17/09	-2.339	2.92	1.92	1.92
LF4-MW2	9/17/09	-2.180	3.16	2.16	4.08
LF4-MW2	3/17/10	-2.442	2.77	1.77	5.85
LF4-MW2	9/21/10	-3.464	1.23	0.23	6.08
LF4-MW2	3/15/11	-3.751	0.79	-0.21	5.87
LF4-MW2	9/8/11	-3.705	0.86	-0.14	5.73
LF4-MW2	3/14/12	-3.917	0.54	-0.46	5.28
LF4-MW2	9/6/12	-3.979	0.45	-0.55	4.73
LF4-MW2	3/5/13	-1.952	3.51	2.51	7.23
LF4-MW2	9/11/13	-2.216	3.11	2.11	9.34
LF4-MW2	3/5/14	-1.743	3.82	2.82	12.16
LF4-MW2	9/4/14	-2.401	2.83	1.83	13.99
LF4-MW2	3/13/15	-1.973	3.47	2.47	16.46
LF4-MW2	9/16/15	-2.584	2.55	1.55	18.01
LF4-MW2	3/16/16	-2.377	2.86	1.86	19.88
LF4-MW2	9/21/16	-2.389	2.85	1.85	21.73
LF4-MW2	3/15/17	-2.888	2.09	1.09	22.82
LF4-MW2	9/8/17	-2.970	1.97	0.97	23.79
LF4-MW2	3/8/18	-2.079	3.31	2.31	26.10
LF4-MW2	9/11/18	-2.303	2.98	1.98	28.08
LF4-MW2	3/7/19	-1.833	3.68	2.68	30.77
LF4-MW2	9/5/19	-2.120	3.25	2.25	33.02
LF4-MW2	3/12/20	-2.303	2.98	1.98	34.99
LF4-MW2	9/15/20	-2.040	3.37	2.37	37.37
LF4-MW2	3/4/21	-2.733	2.33	1.33	38.70
LF4-MW2	9/9/21	-2.313	2.96	1.96	40.66
LF4-MW2	3/2/22	-2.645	2.46	1.46	42.12
LF4-MW2	8/31/22	-2.207	3.12	2.12	44.24
LF4-MW2	3/6/23	-2.386	2.85	1.85	46.09
LF4-MW2	9/6/23	-1.966	3.48	2.48	48.58
Background					
LF4-MW2	MEAN	-4.277			
LF4-MW2	STDEV	0.663			

Cobalt

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW3	3/13/06	-4.605	-0.50	-1.50	0.00
LF4-MW3	9/14/06	-4.269	2.75	1.75	1.75
LF4-MW3	3/6/07	-4.605	-0.50	-1.50	0.25
LF4-MW3	9/25/07	-4.905	-3.40	-4.40	0.00
LF4-MW3	3/26/08	-4.605	-0.50	-1.50	0.00
LF4-MW3	9/16/08	-4.605	-0.50	-1.50	0.00
LF4-MW3	3/17/09	-4.605	-0.50	-1.50	0.00
LF4-MW3	9/17/09	-4.605	-0.50	-1.50	0.00
LF4-MW3	3/17/10	-4.605	-0.50	-1.50	0.00
LF4-MW3	9/21/10	-5.687	-10.95	-11.95	0.00
LF4-MW3	3/15/11	-5.836	-12.39	-13.39	0.00
LF4-MW3	9/8/11	-5.900	-13.01	-14.01	0.00
LF4-MW3	3/14/12	-4.605	-0.50	-1.50	0.00
LF4-MW3	9/6/12	-4.605	-0.50	-1.50	0.00
LF4-MW3	3/5/13	-4.605	-0.50	-1.50	0.00
LF4-MW3	9/11/13	-4.628	-0.72	-1.72	0.00
LF4-MW3	3/5/14	-6.342	-17.28	-18.28	0.00
LF4-MW3	9/4/14	-5.514	-9.28	-10.28	0.00
LF4-MW3	3/13/15	-6.432	-18.14	-19.14	0.00
LF4-MW3	9/16/15	-4.034	5.02	4.02	4.02
LF4-MW3	3/16/16	-6.509	-18.89	-19.89	0.00
LF4-MW3	9/21/16	-6.888	-22.55	-23.55	0.00
LF4-MW3	3/15/17	-6.502	-18.83	-19.83	0.00
LF4-MW3	9/8/17	-6.287	-16.75	-17.75	0.00
LF4-MW3	3/8/18	-6.586	-19.63	-20.63	0.00
LF4-MW3	9/11/18	-5.051	-4.81	-5.81	0.00
LF4-MW3	3/7/19	-6.645	-20.21	-21.21	0.00
LF4-MW3	9/5/19	-7.435	-27.84	-28.84	0.00
LF4-MW3	3/12/20	-6.502	-18.83	-19.83	0.00
LF4-MW3	9/15/20	-6.812	-21.82	-22.82	0.00
LF4-MW3	3/4/21	-6.032	-14.28	-15.28	0.00
LF4-MW3	9/9/21	-5.067	-4.96	-5.96	0.00
LF4-MW3	3/2/22	-5.684	-10.92	-11.92	0.00
LF4-MW3	8/31/22	-4.510	0.42	-0.58	0.00
LF4-MW3	3/6/23	-6.166	-15.58	-16.58	0.00
LF4-MW3	9/6/23	-4.678	-1.20	-2.20	0.00
Background					
LF4-MW3	MEAN	-4.553			
LF4-MW3	STDEV	0.104			

Cobalt

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW4	3/14/06	-4.605	0.50	-0.50	0.00
LF4-MW4	9/14/06	-4.605	0.50	-0.50	0.00
LF4-MW4	3/7/07	-4.605	0.50	-0.50	0.00
LF4-MW4	9/25/07	-5.440	-3.31	-4.31	0.00
LF4-MW4	3/26/08	-4.969	-1.16	-2.16	0.00
LF4-MW4	9/17/08	-5.444	-3.33	-4.33	0.00
LF4-MW4	3/17/09	-5.242	-2.40	-3.40	0.00
LF4-MW4	9/21/09	-4.605	0.50	-0.50	0.00
LF4-MW4	3/17/10	-5.941	-5.59	-6.59	0.00
LF4-MW4	9/21/10	-5.406	-3.15	-4.15	0.00
LF4-MW4	3/15/11	-5.802	-4.96	-5.96	0.00
LF4-MW4	9/8/11	-5.461	-3.40	-4.40	0.00
LF4-MW4	3/14/12	-5.542	-3.77	-4.77	0.00
LF4-MW4	9/6/12	-4.605	0.50	-0.50	0.00
LF4-MW4	3/5/13	-5.857	-5.21	-6.21	0.00
LF4-MW4	9/11/13	-5.064	-1.59	-2.59	0.00
LF4-MW4	3/5/14	-5.793	-4.92	-5.92	0.00
LF4-MW4	9/4/14	-5.711	-4.54	-5.54	0.00
LF4-MW4	3/13/15	-5.233	-2.36	-3.36	0.00
LF4-MW4	9/16/15	-5.410	-3.17	-4.17	0.00
LF4-MW4	3/16/16	-6.161	-6.60	-7.60	0.00
LF4-MW4	9/21/16	-5.468	-3.44	-4.44	0.00
LF4-MW4	3/15/17	-4.949	-1.07	-2.07	0.00
LF4-MW4	9/8/17	-4.787	-0.33	-1.33	0.00
LF4-MW4	3/8/18	-5.911	-5.45	-6.45	0.00
LF4-MW4	9/11/18	-5.449	-3.35	-4.35	0.00
LF4-MW4	3/7/19	-6.266	-7.07	-8.07	0.00
LF4-MW4	9/5/19	-5.521	-3.68	-4.68	0.00
LF4-MW4	3/12/20	-6.119	-6.40	-7.40	0.00
LF4-MW4	9/15/20	-5.684	-4.42	-5.42	0.00
LF4-MW4	3/4/21	-5.714	-4.56	-5.56	0.00
LF4-MW4	9/9/21	-5.497	-3.57	-4.57	0.00
LF4-MW4	3/2/22	-6.215	-6.84	-7.84	0.00
LF4-MW4	8/31/22	-4.841	-0.58	-1.58	0.00
LF4-MW4	3/6/23	-5.745	-4.70	-5.70	0.00
LF4-MW4	9/6/23	-5.547	-3.79	-4.79	0.00
Background					
LF4-MW4	MEAN	-4.715			
LF4-MW4	STDEV	0.219			

Cobalt

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW5	3/14/06	-4.949	-2.04	-3.04	0.00
LF4-MW5	9/14/06	-5.048	-2.78	-3.78	0.00
LF4-MW5	3/7/07	-4.605	0.50	-0.50	0.00
LF4-MW5	9/24/07	-5.461	-5.83	-6.83	0.00
LF4-MW5	3/26/08	-5.956	-9.49	-10.49	0.00
LF4-MW5	9/16/08	-5.705	-7.63	-8.63	0.00
LF4-MW5	3/18/09	-5.840	-8.63	-9.63	0.00
LF4-MW5	9/17/09	-5.442	-5.69	-6.69	0.00
LF4-MW5	3/17/10	-5.077	-2.99	-3.99	0.00
LF4-MW5	9/21/10	-4.556	0.86	-0.14	0.00
LF4-MW5	3/15/11	-5.826	-8.53	-9.53	0.00
LF4-MW5	9/8/11	-4.925	-1.87	-2.87	0.00
LF4-MW5	3/14/12	-5.754	-7.99	-8.99	0.00
LF4-MW5	9/6/12	-6.058	-10.24	-11.24	0.00
LF4-MW5	3/5/13	-5.893	-9.02	-10.02	0.00
LF4-MW5	9/11/13	-4.605	0.50	-0.50	0.00
LF4-MW5	3/5/14	-5.516	-6.24	-7.24	0.00
LF4-MW5	9/4/14	-5.732	-7.83	-8.83	0.00
LF4-MW5	3/13/15	-5.760	-8.04	-9.04	0.00
LF4-MW5	9/16/15	-6.071	-10.33	-11.33	0.00
LF4-MW5	3/16/16	-5.431	-5.60	-6.60	0.00
LF4-MW5	9/21/16	-5.027	-2.62	-3.62	0.00
LF4-MW5	3/15/17	-5.926	-9.26	-10.26	0.00
LF4-MW5	9/8/17	-5.793	-8.28	-9.28	0.00
LF4-MW5	3/8/18	-5.499	-6.11	-7.11	0.00
LF4-MW5	9/11/18	-5.915	-9.18	-10.18	0.00
LF4-MW5	3/7/19	-5.499	-6.11	-7.11	0.00
LF4-MW5	9/5/19	-5.006	-2.46	-3.46	0.00
LF4-MW5	3/12/20	-5.627	-7.06	-8.06	0.00
LF4-MW5	9/15/20	-5.655	-7.26	-8.26	0.00
LF4-MW5	3/4/21	-5.426	-5.57	-6.57	0.00
LF4-MW5	9/9/21	-5.497	-6.09	-7.09	0.00
LF4-MW5	3/2/22	-5.221	-4.05	-5.05	0.00
LF4-MW5	8/31/22	-5.547	-6.46	-7.46	0.00
LF4-MW5	3/6/23	-5.473	-5.91	-6.91	0.00
LF4-MW5	9/6/23	-5.360	-5.08	-6.08	0.00
Background					
LF4-MW5	MEAN	-4.673			
LF4-MW5	STDEV	0.135			

Attachment D2. Calculations for CUSUM Control Charts
Butler Green Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Copper

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW1	3/13/06	-4.193	1.14	0.14	0.14
LF4-MW1	9/13/06	-4.595	0.43	-0.57	0.00
LF4-MW1	3/6/07	-4.637	0.35	-0.65	0.00
LF4-MW1	9/24/07	-5.003	-0.29	-1.29	0.00
LF4-MW1	3/26/08	-4.699	0.24	-0.76	0.00
LF4-MW1	9/16/08	-5.048	-0.37	-1.37	0.00
LF4-MW1	3/17/09	-5.373	-0.95	-1.95	0.00
LF4-MW1	9/17/09	-5.375	-0.95	-1.95	0.00
LF4-MW1	3/17/10	-5.352	-0.91	-1.91	0.00
LF4-MW1	9/21/10	-6.156	-2.33	-3.33	0.00
LF4-MW1	3/15/11	-4.029	1.43	0.43	0.43
LF4-MW1	9/8/11	-4.605	0.41	-0.59	0.00
LF4-MW1	3/14/12	-4.605	0.41	-0.59	0.00
LF4-MW1	9/6/12	-4.605	0.41	-0.59	0.00
LF4-MW1	3/5/13	-4.605	0.41	-0.59	0.00
LF4-MW1	9/11/13	-5.773	-1.66	-2.66	0.00
LF4-MW1	3/5/14	-5.900	-1.88	-2.88	0.00
LF4-MW1	9/4/14	-5.911	-1.90	-2.90	0.00
LF4-MW1	3/13/15	-6.536	-3.00	-4.00	0.00
LF4-MW1	9/16/15	-5.325	-0.86	-1.86	0.00
LF4-MW1	3/16/16	-6.331	-2.64	-3.64	0.00
LF4-MW1	9/21/16	-6.138	-2.30	-3.30	0.00
LF4-MW1	3/15/17	-6.638	-3.18	-4.18	0.00
LF4-MW1	9/8/17	-6.623	-3.16	-4.16	0.00
LF4-MW1	3/8/18	-6.106	-2.24	-3.24	0.00
LF4-MW1	9/11/18	-4.605	0.41	-0.59	0.00
LF4-MW1	3/7/19	-6.377	-2.72	-3.72	0.00
LF4-MW1	9/5/19	-6.075	-2.19	-3.19	0.00
LF4-MW1	3/12/20	-5.952	-1.97	-2.97	0.00
LF4-MW1	9/15/20	-5.991	-2.04	-3.04	0.00
LF4-MW1	3/4/21	-5.599	-1.35	-2.35	0.00
LF4-MW1	9/9/21	-6.266	-2.53	-3.53	0.00
LF4-MW1	3/2/22	-6.166	-2.35	-3.35	0.00
LF4-MW1	8/31/22	-6.725	-3.34	-4.34	0.00
LF4-MW1	3/6/23	-5.991	-2.04	-3.04	0.00
LF4-MW1	9/6/23	-5.915	-1.91	-2.91	0.00
Background					
LF4-MW1	MEAN	-4.836			
LF4-MW1	STDEV	0.566			

Copper

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW2	3/13/06	-4.538	0.00	-1.00	0.00
LF4-MW2	9/13/06	-4.129	0.37	-0.63	0.00
LF4-MW2	3/6/07	-4.663	-0.11	-1.11	0.00
LF4-MW2	9/24/07	-5.956	-1.29	-2.29	0.00
LF4-MW2	3/26/08	-5.302	-0.69	-1.69	0.00
LF4-MW2	9/16/08	-5.473	-0.85	-1.85	0.00
LF4-MW2	3/17/09	-5.684	-1.04	-2.04	0.00
LF4-MW2	9/17/09	-5.644	-1.00	-2.00	0.00
LF4-MW2	3/17/10	-3.717	0.75	-0.25	0.00
LF4-MW2	9/21/10	-6.215	-1.52	-2.52	0.00
LF4-MW2	3/15/11	-4.605	-0.06	-1.06	0.00
LF4-MW2	9/8/11	-4.605	-0.06	-1.06	0.00
LF4-MW2	3/14/12	-4.605	-0.06	-1.06	0.00
LF4-MW2	9/6/12	-5.341	-0.73	-1.73	0.00
LF4-MW2	3/5/13	-4.440	0.09	-0.91	0.00
LF4-MW2	9/11/13	-4.605	-0.06	-1.06	0.00
LF4-MW2	3/5/14	-3.751	0.72	-0.28	0.00
LF4-MW2	9/4/14	-6.287	-1.59	-2.59	0.00
LF4-MW2	3/13/15	-4.193	0.31	-0.69	0.00
LF4-MW2	9/16/15	-6.024	-1.35	-2.35	0.00
LF4-MW2	3/16/16	-4.566	-0.02	-1.02	0.00
LF4-MW2	9/21/16	-5.976	-1.31	-2.31	0.00
LF4-MW2	3/15/17	-6.071	-1.39	-2.39	0.00
LF4-MW2	9/8/17	-6.161	-1.47	-2.47	0.00
LF4-MW2	3/8/18	-4.519	0.02	-0.98	0.00
LF4-MW2	9/11/18	-6.075	-1.40	-2.40	0.00
LF4-MW2	3/7/19	-3.612	0.84	-0.16	0.00
LF4-MW2	9/5/19	-5.426	-0.81	-1.81	0.00
LF4-MW2	3/12/20	-3.963	0.52	-0.48	0.00
LF4-MW2	9/15/20	-5.279	-0.67	-1.67	0.00
LF4-MW2	3/4/21	-4.976	-0.40	-1.40	0.00
LF4-MW2	9/9/21	-4.667	-0.12	-1.12	0.00
LF4-MW2	3/2/22	-4.605	-0.06	-1.06	0.00
LF4-MW2	8/31/22	-5.339	-0.73	-1.73	0.00
LF4-MW2	3/6/23	-5.051	-0.47	-1.47	0.00
LF4-MW2	9/6/23	-4.791	-0.23	-1.23	0.00
Background					
LF4-MW2	MEAN	-4.539			
LF4-MW2	STDEV	1.100			

Copper

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW3	3/13/06	-5.039	0.53	-0.47	0.00
LF4-MW3	9/14/06	-4.959	0.60	-0.40	0.00
LF4-MW3	3/6/07	-6.215	-0.49	-1.49	0.00
LF4-MW3	9/25/07	-6.215	-0.49	-1.49	0.00
LF4-MW3	3/26/08	-6.008	-0.31	-1.31	0.00
LF4-MW3	9/16/08	-5.594	0.05	-0.95	0.00
LF4-MW3	3/17/09	-6.119	-0.41	-1.41	0.00
LF4-MW3	9/17/09	-6.215	-0.49	-1.49	0.00
LF4-MW3	3/17/10	-6.200	-0.48	-1.48	0.00
LF4-MW3	9/21/10	-6.215	-0.49	-1.49	0.00
LF4-MW3	3/15/11	-5.104	0.47	-0.53	0.00
LF4-MW3	9/8/11	-4.605	0.91	-0.09	0.00
LF4-MW3	3/14/12	-5.735	-0.08	-1.08	0.00
LF4-MW3	9/6/12	-5.793	-0.13	-1.13	0.00
LF4-MW3	3/5/13	-5.666	-0.02	-1.02	0.00
LF4-MW3	9/11/13	-4.605	0.91	-0.09	0.00
LF4-MW3	3/5/14	-6.354	-0.62	-1.62	0.00
LF4-MW3	9/4/14	-6.395	-0.65	-1.65	0.00
LF4-MW3	3/13/15	-6.250	-0.53	-1.53	0.00
LF4-MW3	9/16/15	-6.812	-1.01	-2.01	0.00
LF4-MW3	3/16/16	-6.261	-0.53	-1.53	0.00
LF4-MW3	9/21/16	-6.092	-0.39	-1.39	0.00
LF4-MW3	3/15/17	-6.645	-0.87	-1.87	0.00
LF4-MW3	9/8/17	-5.696	-0.04	-1.04	0.00
LF4-MW3	3/8/18	-6.450	-0.70	-1.70	0.00
LF4-MW3	9/11/18	-4.605	0.91	-0.09	0.00
LF4-MW3	3/7/19	-5.991	-0.30	-1.30	0.00
LF4-MW3	9/5/19	-5.991	-0.30	-1.30	0.00
LF4-MW3	3/12/20	-5.497	0.13	-0.87	0.00
LF4-MW3	9/15/20	-6.377	-0.64	-1.64	0.00
LF4-MW3	3/4/21	-6.032	-0.34	-1.34	0.00
LF4-MW3	9/9/21	-5.991	-0.30	-1.30	0.00
LF4-MW3	3/2/22	-6.215	-0.49	-1.49	0.00
LF4-MW3	8/31/22	-6.949	-1.13	-2.13	0.00
LF4-MW3	3/6/23	-6.725	-0.94	-1.94	0.00
LF4-MW3	9/6/23	-5.878	-0.20	-1.20	0.00
Background					
LF4-MW3	MEAN	-5.647			
LF4-MW3	STDEV	1.150			

Lead

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW1	3/13/06	-5.298	0.21	-0.79	0.00
LF4-MW1	9/13/06	-5.857	-0.33	-1.33	0.00
LF4-MW1	3/6/07	-5.345	0.17	-0.83	0.00
LF4-MW1	9/24/07	-5.661	-0.14	-1.14	0.00
LF4-MW1	3/26/08	-4.935	0.56	-0.44	0.00
LF4-MW1	9/16/08	-5.298	0.21	-0.79	0.00
LF4-MW1	3/17/09	-5.298	0.21	-0.79	0.00
LF4-MW1	9/17/09	-5.684	-0.16	-1.16	0.00
LF4-MW1	3/17/10	-5.238	0.27	-0.73	0.00
LF4-MW1	9/21/10	-5.809	-0.28	-1.28	0.00
LF4-MW1	3/15/11	-5.298	0.21	-0.79	0.00
LF4-MW1	9/8/11	-5.754	-0.23	-1.23	0.00
LF4-MW1	3/14/12	-5.751	-0.22	-1.22	0.00
LF4-MW1	9/6/12	-5.298	0.21	-0.79	0.00
LF4-MW1	3/5/13	-5.726	-0.20	-1.20	0.00
LF4-MW1	9/11/13	-4.912	0.59	-0.41	0.00
LF4-MW1	3/5/14	-8.408	-2.80	-3.80	0.00
LF4-MW1	9/4/14	-7.881	-2.29	-3.29	0.00
LF4-MW1	3/13/15	-8.174	-2.57	-3.57	0.00
LF4-MW1	9/16/15	-5.581	-0.06	-1.06	0.00
LF4-MW1	3/16/16	-7.891	-2.30	-3.30	0.00
LF4-MW1	9/21/16	-7.233	-1.66	-2.66	0.00
LF4-MW1	3/15/17	-7.659	-2.07	-3.07	0.00
LF4-MW1	9/8/17	-7.907	-2.31	-3.31	0.00
LF4-MW1	3/8/18	-6.395	-0.85	-1.85	0.00
LF4-MW1	9/11/18	-5.298	0.21	-0.79	0.00
LF4-MW1	3/7/19	-6.377	-0.83	-1.83	0.00
LF4-MW1	9/5/19	-6.502	-0.95	-1.95	0.00
LF4-MW1	3/12/20	-6.438	-0.89	-1.89	0.00
LF4-MW1	9/15/20	-6.348	-0.80	-1.80	0.00
LF4-MW1	3/4/21	-5.952	-0.42	-1.42	0.00
LF4-MW1	9/9/21	-6.908	-1.34	-2.34	0.00
LF4-MW1	3/2/22	-5.809	-0.28	-1.28	0.00
LF4-MW1	8/31/22	-6.970	-1.40	-2.40	0.00
LF4-MW1	3/6/23	-7.621	-2.03	-3.03	0.00
LF4-MW1	9/6/23	-6.812	-1.25	-2.25	0.00
Background					
LF4-MW1	MEAN	-5.518			
LF4-MW1	STDEV	1.034			

Attachment D2. Calculations for CUSUM Control Charts
Butler Green Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Lead

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW2	3/13/06	-4.595	0.39	-0.61	0.00
LF4-MW2	9/13/06	-4.415	0.54	-0.46	0.00
LF4-MW2	3/6/07	-4.855	0.16	-0.84	0.00
LF4-MW2	9/24/07	-5.415	-0.32	-1.32	0.00
LF4-MW2	3/26/08	-4.928	0.10	-0.90	0.00
LF4-MW2	9/16/08	-5.296	-0.22	-1.22	0.00
LF4-MW2	3/17/09	-5.298	-0.22	-1.22	0.00
LF4-MW2	9/17/09	-5.298	-0.22	-1.22	0.00
LF4-MW2	3/17/10	-4.678	0.32	-0.68	0.00
LF4-MW2	9/21/10	-5.809	-0.66	-1.66	0.00
LF4-MW2	3/15/11	-5.298	-0.22	-1.22	0.00
LF4-MW2	9/8/11	-5.298	-0.22	-1.22	0.00
LF4-MW2	3/14/12	-5.298	-0.22	-1.22	0.00
LF4-MW2	9/6/12	-5.298	-0.22	-1.22	0.00
LF4-MW2	3/5/13	-5.589	-0.47	-1.47	0.00
LF4-MW2	9/11/13	-5.447	-0.35	-1.35	0.00
LF4-MW2	3/5/14	-6.119	-0.93	-1.93	0.00
LF4-MW2	9/4/14	-6.921	-1.62	-2.62	0.00
LF4-MW2	3/13/15	-6.175	-0.98	-1.98	0.00
LF4-MW2	9/16/15	-6.266	-1.05	-2.05	0.00
LF4-MW2	3/16/16	-5.482	-0.38	-1.38	0.00
LF4-MW2	9/21/16	-6.320	-1.10	-2.10	0.00
LF4-MW2	3/15/17	-6.101	-0.91	-1.91	0.00
LF4-MW2	9/8/17	-6.250	-1.04	-2.04	0.00
LF4-MW2	3/8/18	-5.544	-0.43	-1.43	0.00
LF4-MW2	9/11/18	-5.298	-0.22	-1.22	0.00
LF4-MW2	3/7/19	-5.360	-0.27	-1.27	0.00
LF4-MW2	9/5/19	-6.119	-0.93	-1.93	0.00
LF4-MW2	3/12/20	-4.135	0.78	-0.22	0.00
LF4-MW2	9/15/20	-5.083	-0.03	-1.03	0.00
LF4-MW2	3/4/21	-4.906	0.12	-0.88	0.00
LF4-MW2	9/9/21	-5.221	-0.15	-1.15	0.00
LF4-MW2	3/2/22	-4.991	0.05	-0.95	0.00
LF4-MW2	8/31/22	-5.319	-0.24	-1.24	0.00
LF4-MW2	3/6/23	-5.382	-0.29	-1.29	0.00
LF4-MW2	9/6/23	-4.135	0.78	-0.22	0.00
Background					
LF4-MW2	MEAN	-5.045			
LF4-MW2	STDEV	1.159			

Lead

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW3	3/13/06	-5.216	0.40	-0.60	0.00
LF4-MW3	9/14/06	-5.806	-0.32	-1.32	0.00
LF4-MW3	3/6/07	-6.041	-0.61	-1.61	0.00
LF4-MW3	9/25/07	-5.298	0.30	-0.70	0.00
LF4-MW3	3/26/08	-5.341	0.25	-0.75	0.00
LF4-MW3	9/16/08	-5.298	0.30	-0.70	0.00
LF4-MW3	3/17/09	-5.298	0.30	-0.70	0.00
LF4-MW3	9/17/09	-3.537	2.46	1.46	1.46
LF4-MW3	3/17/10	-5.298	0.30	-0.70	0.76
LF4-MW3	9/21/10	-5.298	0.30	-0.70	0.06
LF4-MW3	3/15/11	-5.298	0.30	-0.70	0.00
LF4-MW3	9/8/11	-5.298	0.30	-0.70	0.00
LF4-MW3	3/14/12	-5.298	0.30	-0.70	0.00
LF4-MW3	9/6/12	-5.298	0.30	-0.70	0.00
LF4-MW3	3/5/13	-5.404	0.17	-0.83	0.00
LF4-MW3	9/11/13	-5.767	-0.28	-1.28	0.00
LF4-MW3	3/5/14	-6.210	-0.82	-1.82	0.00
LF4-MW3	9/4/14	-6.210	-0.82	-1.82	0.00
LF4-MW3	3/13/15	-5.444	0.12	-0.88	0.00
LF4-MW3	9/16/15	-6.482	-1.15	-2.15	0.00
LF4-MW3	3/16/16	-6.028	-0.60	-1.60	0.00
LF4-MW3	9/21/16	-5.757	-0.26	-1.26	0.00
LF4-MW3	3/15/17	-5.793	-0.31	-1.31	0.00
LF4-MW3	9/8/17	-6.975	-1.76	-2.76	0.00
LF4-MW3	3/8/18	-5.840	-0.36	-1.36	0.00
LF4-MW3	9/11/18	-5.298	0.30	-0.70	0.00
LF4-MW3	3/7/19	-5.497	0.06	-0.94	0.00
LF4-MW3	9/5/19	-6.502	-1.18	-2.18	0.00
LF4-MW3	3/12/20	-4.722	1.01	0.01	0.01
LF4-MW3	9/15/20	-6.215	-0.83	-1.83	0.00
LF4-MW3	3/4/21	-5.150	0.48	-0.52	0.00
LF4-MW3	9/9/21	-5.655	-0.14	-1.14	0.00
LF4-MW3	3/2/22	-4.991	0.68	-0.32	0.00
LF4-MW3	8/31/22	-6.320	-0.95	-1.95	0.00
LF4-MW3	3/6/23	-6.725	-1.45	-2.45	0.00
LF4-MW3	9/6/23	-6.119	-0.71	-1.71	0.00
Background					
LF4-MW3	MEAN	-5.542			
LF4-MW3	STDEV	0.816			

Lead

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW4	3/14/06	-4.457	1.08	0.08	0.08
LF4-MW4	9/14/06	-3.558	2.12	1.12	1.21
LF4-MW4	3/7/07	-5.298	0.11	-0.89	0.31
LF4-MW4	9/25/07	-5.298	0.11	-0.89	0.00
LF4-MW4	3/26/08	-5.298	0.11	-0.89	0.00
LF4-MW4	9/17/08	-5.181	0.24	-0.76	0.00
LF4-MW4	3/17/09	-5.310	0.09	-0.91	0.00
LF4-MW4	9/21/09	-5.298	0.11	-0.89	0.00
LF4-MW4	3/17/10	-5.708	-0.37	-1.37	0.00
LF4-MW4	9/21/10	-5.632	-0.28	-1.28	0.00
LF4-MW4	3/15/11	-5.638	-0.28	-1.28	0.00
LF4-MW4	9/8/11	-5.602	-0.24	-1.24	0.00
LF4-MW4	3/14/12	-5.298	0.11	-0.89	0.00
LF4-MW4	9/6/12	-5.298	0.11	-0.89	0.00
LF4-MW4	3/5/13	-5.298	0.11	-0.89	0.00
LF4-MW4	9/11/13	-5.339	0.06	-0.94	0.00
LF4-MW4	3/5/14	-6.898	-1.74	-2.74	0.00
LF4-MW4	9/4/14	-5.499	-0.12	-1.12	0.00
LF4-MW4	3/13/15	-7.417	-2.34	-3.34	0.00
LF4-MW4	9/16/15	-4.519	1.01	0.01	0.01
LF4-MW4	3/16/16	-7.807	-2.80	-3.80	0.00
LF4-MW4	9/21/16	-5.745	-0.41	-1.41	0.00
LF4-MW4	3/15/17	-7.249	-2.15	-3.15	0.00
LF4-MW4	9/8/17	-4.731	0.77	-0.23	0.00
LF4-MW4	3/8/18	-7.511	-2.45	-3.45	0.00
LF4-MW4	9/11/18	-4.934	0.53	-0.47	0.00
LF4-MW4	3/7/19	-6.725	-1.54	-2.54	0.00
LF4-MW4	9/5/19	-5.259	0.15	-0.85	0.00
LF4-MW4	3/12/20	-5.714	-0.37	-1.37	0.00
LF4-MW4	9/15/20	-5.259	0.15	-0.85	0.00
LF4-MW4	3/4/21	-6.812	-1.64	-2.64	0.00
LF4-MW4	9/9/21	-3.730	1.92	0.92	0.92
LF4-MW4	3/2/22	-2.564	3.27	2.27	3.20
LF4-MW4	8/31/22	-5.915	-0.60	-1.60	1.59
LF4-MW4	3/6/23	-6.438	-1.21	-2.21	0.00
LF4-MW4	9/6/23	-7.195	-2.09	-3.09	0.00
Background					
LF4-MW4	MEAN	-5.392			
LF4-MW4	STDEV	0.864			

Lead

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW5	3/14/06	-5.401	0.29	-0.71	0.00
LF4-MW5	9/14/06	-4.538	1.36	0.36	0.36
LF4-MW5	3/7/07	-5.745	-0.13	-1.13	0.00
LF4-MW5	9/24/07	-5.298	0.42	-0.58	0.00
LF4-MW5	3/26/08	-5.298	0.42	-0.58	0.00
LF4-MW5	9/16/08	-5.298	0.42	-0.58	0.00
LF4-MW5	3/18/09	-5.298	0.42	-0.58	0.00
LF4-MW5	9/17/09	-5.298	0.42	-0.58	0.00
LF4-MW5	3/17/10	-5.298	0.42	-0.58	0.00
LF4-MW5	9/16/10	-5.440	0.24	-0.76	0.00
LF4-MW5	3/15/11	-4.695	1.17	0.17	0.17
LF4-MW5	9/8/11	-5.298	0.42	-0.58	0.00
LF4-MW5	3/14/12	-5.298	0.42	-0.58	0.00
LF4-MW5	9/6/12	-5.298	0.42	-0.58	0.00
LF4-MW5	3/5/13	-5.298	0.42	-0.58	0.00
LF4-MW5	9/11/13	-5.298	0.42	-0.58	0.00
LF4-MW5	3/5/14	-6.966	-1.65	-2.65	0.00
LF4-MW5	9/4/14	-7.357	-2.13	-3.13	0.00
LF4-MW5	3/13/15	-6.988	-1.67	-2.67	0.00
LF4-MW5	9/16/15	-7.419	-2.21	-3.21	0.00
LF4-MW5	3/16/16	-6.084	-0.55	-1.55	0.00
LF4-MW5	9/21/16	-7.343	-2.11	-3.11	0.00
LF4-MW5	3/15/17	-6.693	-1.31	-2.31	0.00
LF4-MW5	9/8/17	-7.243	-1.99	-2.99	0.00
LF4-MW5	3/8/18	-5.751	-0.14	-1.14	0.00
LF4-MW5	9/11/18	-5.298	0.42	-0.58	0.00
LF4-MW5	3/7/19	-6.075	-0.54	-1.54	0.00
LF4-MW5	9/5/19	-6.685	-1.30	-2.30	0.00
LF4-MW5	3/12/20	-6.502	-1.07	-2.07	0.00
LF4-MW5	9/15/20	-5.809	-0.21	-1.21	0.00
LF4-MW5	3/4/21	-5.655	-0.02	-1.02	0.00
LF4-MW5	9/9/21	-6.685	-1.30	-2.30	0.00
LF4-MW5	3/2/22	-5.592	0.06	-0.94	0.00
LF4-MW5	8/31/22	-6.075	-0.54	-1.54	0.00
LF4-MW5	3/6/23	-5.809	-0.21	-1.21	0.00
LF4-MW5	9/6/23	-6.215	-0.72	-1.72	0.00
Background					
LF4-MW2	MEAN	-5.637			
LF4-MW2	STDEV	0.807			

Attachment D2. Calculations for CUSUM Control Charts
Butler Green Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Nickel

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW1	3/13/06	-4.605	-0.59	-1.59	0.00
LF4-MW1	9/13/06	-4.351	0.46	-0.54	0.00
LF4-MW1	3/6/07	-4.605	-0.59	-1.59	0.00
LF4-MW1	9/24/07	-4.585	-0.51	-1.51	0.00
LF4-MW1	3/26/08	-4.117	1.42	0.42	0.42
LF4-MW1	9/16/08	-4.595	-0.55	-1.55	0.00
LF4-MW1	3/17/09	-4.398	0.26	-0.74	0.00
LF4-MW1	9/17/09	-4.510	-0.20	-1.20	0.00
LF4-MW1	3/17/10	-4.994	-2.19	-3.19	0.00
LF4-MW1	9/21/10	-4.283	0.74	-0.26	0.00
LF4-MW1	3/15/11	-3.958	2.07	1.07	1.07
LF4-MW1	9/8/11	-3.958	2.07	1.07	2.15
LF4-MW1	3/14/12	-3.887	2.36	1.36	3.51
LF4-MW1	9/6/12	-3.673	3.24	2.24	5.75
LF4-MW1	3/5/13	-3.768	2.85	1.85	7.61
LF4-MW1	9/11/13	-4.173	1.19	0.19	7.80
LF4-MW1	3/5/14	-4.034	1.76	0.76	8.56
LF4-MW1	9/4/14	-4.220	1.00	0.00	8.55
LF4-MW1	3/13/15	-3.942	2.14	1.14	9.69
LF4-MW1	9/16/15	-4.110	1.45	0.45	10.14
LF4-MW1	3/16/16	-3.812	2.67	1.67	11.81
LF4-MW1	9/21/16	-4.001	1.90	0.90	12.70
LF4-MW1	3/15/17	-3.826	2.62	1.62	14.32
LF4-MW1	9/8/17	-3.777	2.82	1.82	16.14
LF4-MW1	3/8/18	-4.001	1.90	0.90	17.04
LF4-MW1	9/11/18	-3.772	2.84	1.84	18.87
LF4-MW1	3/7/19	-3.772	2.84	1.84	20.71
LF4-MW1	9/5/19	-3.863	2.46	1.46	22.17
LF4-MW1	3/12/20	-3.817	2.65	1.65	23.83
LF4-MW1	9/15/20	-3.772	2.84	1.84	25.66
LF4-MW1	3/4/21	-3.772	2.84	1.84	27.50
LF4-MW1	9/9/21	-3.772	2.84	1.84	29.34
LF4-MW1	3/2/22	-3.772	2.84	1.84	31.18
LF4-MW1	8/31/22	-3.772	2.84	1.84	33.02
LF4-MW1	3/6/23	-4.017	1.83	0.83	33.84
LF4-MW1	9/6/23	-4.200	1.08	0.08	33.92
Background					
LF4-MW1	MEAN	-4.462			
LF4-MW1	STDEV	0.243			

Nickel

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW2	3/13/06	-4.605	-0.82	-1.82	0.00
LF4-MW2	9/13/06	-3.979	0.46	-0.54	0.00
LF4-MW2	3/6/07	-4.528	-0.66	-1.66	0.00
LF4-MW2	9/24/07	-4.528	-0.66	-1.66	0.00
LF4-MW2	3/26/08	-4.628	-0.86	-1.86	0.00
LF4-MW2	9/16/08	-4.213	-0.02	-1.02	0.00
LF4-MW2	3/17/09	-2.684	3.11	2.11	2.11
LF4-MW2	9/17/09	-2.658	3.16	2.16	4.27
LF4-MW2	3/17/10	-2.736	3.00	2.00	6.26
LF4-MW2	9/21/10	-3.887	0.65	-0.35	5.91
LF4-MW2	3/15/11	-4.227	-0.04	-1.04	4.87
LF4-MW2	9/8/11	-4.200	0.01	-0.99	3.88
LF4-MW2	3/14/12	-4.457	-0.51	-1.51	2.37
LF4-MW2	9/6/12	-4.173	0.07	-0.93	1.44
LF4-MW2	3/5/13	-2.484	3.51	2.51	3.95
LF4-MW2	9/11/13	-2.787	2.90	1.90	5.85
LF4-MW2	3/5/14	-2.313	3.86	2.86	8.71
LF4-MW2	9/4/14	-3.119	2.22	1.22	9.93
LF4-MW2	3/13/15	-2.585	3.31	2.31	12.24
LF4-MW2	9/16/15	-3.192	2.07	1.07	13.31
LF4-MW2	3/16/16	-2.922	2.62	1.62	14.93
LF4-MW2	9/21/16	-3.014	2.43	1.43	16.36
LF4-MW2	3/15/17	-3.594	1.25	0.25	16.61
LF4-MW2	9/8/17	-3.677	1.08	0.08	16.69
LF4-MW2	3/8/18	-2.736	3.00	2.00	18.69
LF4-MW2	9/11/18	-2.937	2.59	1.59	20.27
LF4-MW2	3/7/19	-2.343	3.80	2.80	23.08
LF4-MW2	9/5/19	-2.765	2.94	1.94	25.02
LF4-MW2	3/12/20	-2.830	2.81	1.81	26.83
LF4-MW2	9/15/20	-2.733	3.01	2.01	28.83
LF4-MW2	3/4/21	-3.411	1.62	0.62	29.45
LF4-MW2	9/9/21	-2.996	2.47	1.47	30.92
LF4-MW2	3/2/22	-3.244	1.96	0.96	31.89
LF4-MW2	8/31/22	-3.016	2.43	1.43	33.32
LF4-MW2	3/6/23	-3.037	2.39	1.39	34.70
LF4-MW2	9/6/23	-2.765	2.94	1.94	36.64
Background					
LF4-MW2	MEAN	-4.206			
LF4-MW2	STDEV	0.490			

Nickel

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW3	3/13/06	-4.605	0.45	-0.55	0.00
LF4-MW3	9/14/06	-4.173	1.14	0.14	0.14
LF4-MW3	3/6/07	-4.605	0.45	-0.55	0.00
LF4-MW3	9/25/07	-4.989	-0.17	-1.17	0.00
LF4-MW3	3/26/08	-5.093	-0.34	-1.34	0.00
LF4-MW3	9/16/08	-5.537	-1.06	-2.06	0.00
LF4-MW3	3/17/09	-5.658	-1.25	-2.25	0.00
LF4-MW3	9/17/09	-4.981	-0.16	-1.16	0.00
LF4-MW3	3/17/10	-4.605	0.45	-0.55	0.00
LF4-MW3	9/21/10	-5.929	-1.69	-2.69	0.00
LF4-MW3	3/15/11	-5.555	-1.08	-2.08	0.00
LF4-MW3	9/8/11	-5.658	-1.25	-2.25	0.00
LF4-MW3	3/14/12	-5.675	-1.28	-2.28	0.00
LF4-MW3	9/6/12	-5.621	-1.19	-2.19	0.00
LF4-MW3	3/5/13	-5.431	-0.88	-1.88	0.00
LF4-MW3	9/11/13	-4.605	0.45	-0.55	0.00
LF4-MW3	3/5/14	-5.860	-1.58	-2.58	0.00
LF4-MW3	9/4/14	-5.684	-1.29	-2.29	0.00
LF4-MW3	3/13/15	-5.693	-1.31	-2.31	0.00
LF4-MW3	9/16/15	-5.116	-0.38	-1.38	0.00
LF4-MW3	3/16/16	-5.836	-1.54	-2.54	0.00
LF4-MW3	9/21/16	-5.539	-1.06	-2.06	0.00
LF4-MW3	3/15/17	-5.802	-1.48	-2.48	0.00
LF4-MW3	9/8/17	-5.675	-1.28	-2.28	0.00
LF4-MW3	3/8/18	-5.864	-1.58	-2.58	0.00
LF4-MW3	9/11/18	-5.360	-0.77	-1.77	0.00
LF4-MW3	3/7/19	-5.714	-1.34	-2.34	0.00
LF4-MW3	9/5/19	-5.655	-1.25	-2.25	0.00
LF4-MW3	3/12/20	-5.404	-0.84	-1.84	0.00
LF4-MW3	9/15/20	-5.915	-1.67	-2.67	0.00
LF4-MW3	3/4/21	-5.185	-0.49	-1.49	0.00
LF4-MW3	9/9/21	-5.878	-1.61	-2.61	0.00
LF4-MW3	3/2/22	-5.599	-1.16	-2.16	0.00
LF4-MW3	8/31/22	-5.809	-1.49	-2.49	0.00
LF4-MW3	3/6/23	-5.915	-1.66	-2.66	0.00
LF4-MW3	9/6/23	-5.878	-1.61	-2.61	0.00
Background					
LF4-MW3	MEAN	-4.882			
LF4-MW3	STDEV	0.620			

Nickel

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW4	3/14/06	-4.605	0.45	-0.55	0.00
LF4-MW4	9/14/06	-4.605	0.45	-0.55	0.00
LF4-MW4	3/7/07	-5.267	-0.62	-1.62	0.00
LF4-MW4	9/25/07	-5.468	-0.94	-1.94	0.00
LF4-MW4	3/26/08	-5.300	-0.67	-1.67	0.00
LF4-MW4	9/17/08	-5.428	-0.88	-1.88	0.00
LF4-MW4	3/17/09	-5.428	-0.88	-1.88	0.00
LF4-MW4	9/21/09	-5.867	-1.59	-2.59	0.00
LF4-MW4	3/17/10	-5.384	-0.81	-1.81	0.00
LF4-MW4	9/21/10	-5.539	-1.06	-2.06	0.00
LF4-MW4	3/15/11	-4.605	0.45	-0.55	0.00
LF4-MW4	9/8/11	-5.594	-1.15	-2.15	0.00
LF4-MW4	3/14/12	-4.605	0.45	-0.55	0.00
LF4-MW4	9/6/12	-4.605	0.45	-0.55	0.00
LF4-MW4	3/5/13	-4.605	0.45	-0.55	0.00
LF4-MW4	9/11/13	-4.751	0.21	-0.79	0.00
LF4-MW4	3/5/14	-5.964	-1.74	-2.74	0.00
LF4-MW4	9/4/14	-5.591	-1.14	-2.14	0.00
LF4-MW4	3/13/15	-6.161	-2.06	-3.06	0.00
LF4-MW4	9/16/15	-5.438	-0.90	-1.90	0.00
LF4-MW4	3/16/16	-6.119	-2.00	-3.00	0.00
LF4-MW4	9/21/16	-5.757	-1.41	-2.41	0.00
LF4-MW4	3/15/17	-6.079	-1.93	-2.93	0.00
LF4-MW4	9/8/17	-5.619	-1.19	-2.19	0.00
LF4-MW4	3/8/18	-6.522	-2.65	-3.65	0.00
LF4-MW4	9/11/18	-5.339	-0.74	-1.74	0.00
LF4-MW4	3/7/19	-5.991	-1.79	-2.79	0.00
LF4-MW4	9/5/19	-5.684	-1.29	-2.29	0.00
LF4-MW4	3/12/20	-6.119	-1.99	-2.99	0.00
LF4-MW4	9/15/20	-5.952	-1.73	-2.73	0.00
LF4-MW4	3/4/21	-6.032	-1.85	-2.85	0.00
LF4-MW4	9/9/21	-5.776	-1.44	-2.44	0.00
LF4-MW4	3/2/22	-6.320	-2.32	-3.32	0.00
LF4-MW4	8/31/22	-5.547	-1.07	-2.07	0.00
LF4-MW4	3/6/23	-6.502	-2.61	-3.61	0.00
LF4-MW4	9/6/23	-5.745	-1.39	-2.39	0.00
Background					
LF4-MW4	MEAN	-4.882			
LF4-MW4	STDEV	0.620			

Attachment D2. Calculations for CUSUM Control Charts
Butler Green Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Nickel

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW5	3/14/06	-4.605	0.45	-0.55	0.00
LF4-MW5	9/14/06	-4.605	0.45	-0.55	0.00
LF4-MW5	3/7/07	-4.605	0.45	-0.55	0.00
LF4-MW5	9/24/07	-5.741	-1.39	-2.39	0.00
LF4-MW5	3/26/08	-5.896	-1.64	-2.64	0.00
LF4-MW5	9/16/08	-5.960	-1.74	-2.74	0.00
LF4-MW5	3/18/09	-4.605	0.45	-0.55	0.00
LF4-MW5	9/17/09	-4.605	0.45	-0.55	0.00
LF4-MW5	3/17/10	-5.754	-1.41	-2.41	0.00
LF4-MW5	9/16/10	-5.526	-1.04	-2.04	0.00
LF4-MW5	3/15/11	-5.265	-0.62	-1.62	0.00
LF4-MW5	9/8/11	-5.764	-1.42	-2.42	0.00
LF4-MW5	3/14/12	-4.605	0.45	-0.55	0.00
LF4-MW5	9/6/12	-4.605	0.45	-0.55	0.00
LF4-MW5	3/5/13	-4.605	0.45	-0.55	0.00
LF4-MW5	9/11/13	-4.605	0.45	-0.55	0.00
LF4-MW5	3/5/14	-6.049	-1.88	-2.88	0.00
LF4-MW5	9/4/14	-6.432	-2.50	-3.50	0.00
LF4-MW5	3/13/15	-6.271	-2.24	-3.24	0.00
LF4-MW5	9/16/15	-6.529	-2.66	-3.66	0.00
LF4-MW5	3/16/16	-5.941	-1.71	-2.71	0.00
LF4-MW5	9/21/16	-5.714	-1.34	-2.34	0.00
LF4-MW5	3/15/17	-6.180	-2.09	-3.09	0.00
LF4-MW5	9/8/17	-6.529	-2.66	-3.66	0.00
LF4-MW5	3/8/18	-5.889	-1.62	-2.62	0.00
LF4-MW5	9/11/18	-5.547	-1.07	-2.07	0.00
LF4-MW5	3/7/19	-5.547	-1.07	-2.07	0.00
LF4-MW5	9/5/19	-5.776	-1.44	-2.44	0.00
LF4-MW5	3/12/20	-6.032	-1.85	-2.85	0.00
LF4-MW5	9/15/20	-5.952	-1.73	-2.73	0.00
LF4-MW5	3/4/21	-5.240	-0.58	-1.58	0.00
LF4-MW5	9/9/21	-5.991	-1.79	-2.79	0.00
LF4-MW5	3/2/22	-5.521	-1.03	-2.03	0.00
LF4-MW5	8/31/22	-6.119	-2.00	-3.00	0.00
LF4-MW5	3/6/23	-5.843	-1.55	-2.55	0.00
LF4-MW5	9/6/23	-5.991	-1.79	-2.79	0.00
Background					
LF4-MW5	MEAN	-4.882			
LF4-MW5	STDEV	0.620			

Zinc

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW1	3/13/06	-2.488	1.28	0.28	0.28
LF4-MW1	9/13/06	-3.493	2.24	1.24	1.52
LF4-MW1	3/6/07	-3.231	2.66	1.66	3.19
LF4-MW1	9/24/07	-2.996	3.04	2.04	5.23
LF4-MW1	3/26/08	-3.177	2.75	1.75	6.98
LF4-MW1	9/16/08	-3.734	1.85	0.85	7.83
LF4-MW1	3/17/09	-3.355	2.46	1.46	9.30
LF4-MW1	9/17/09	-3.464	2.29	1.29	10.58
LF4-MW1	3/17/10	-4.335	0.88	-0.12	10.47
LF4-MW1	9/21/10	-3.189	2.73	1.73	12.20
LF4-MW1	3/15/11	-2.720	3.49	2.49	14.69
LF4-MW1	9/8/11	-2.955	3.11	2.11	16.80
LF4-MW1	3/14/12	-2.941	3.13	2.13	18.93
LF4-MW1	9/6/12	-2.884	3.22	2.22	21.15
LF4-MW1	3/5/13	-2.766	3.41	2.41	23.56
LF4-MW1	9/11/13	-3.242	2.65	1.65	25.21
LF4-MW1	3/5/14	-3.140	2.81	1.81	27.02
LF4-MW1	9/4/14	-3.237	2.65	1.65	28.68
LF4-MW1	3/13/15	-2.822	3.32	2.32	31.00
LF4-MW1	9/16/15	-3.206	2.70	1.70	32.70
LF4-MW1	3/16/16	-2.805	3.35	2.35	35.05
LF4-MW1	9/21/16	-3.058	2.94	1.94	37.00
LF4-MW1	3/15/17	-2.886	3.22	2.22	39.22
LF4-MW1	9/8/17	-2.799	3.36	2.36	41.58
LF4-MW1	3/8/18	-2.990	3.05	2.05	43.63
LF4-MW1	9/11/18	-2.617	3.65	2.65	46.28
LF4-MW1	3/7/19	-2.847	3.28	2.28	48.57
LF4-MW1	9/5/19	-1.897	4.82	3.82	52.38
LF4-MW1	3/12/20	-2.865	3.25	2.25	54.64
LF4-MW1	9/15/20	-2.501	3.84	2.84	57.48
LF4-MW1	3/4/21	-2.453	3.92	2.92	60.40
LF4-MW1	9/9/21	-2.313	4.14	3.14	63.54
LF4-MW1	3/2/22	-1.966	4.70	3.70	67.25
LF4-MW1	8/31/22	-2.996	3.04	2.04	69.29
LF4-MW1	3/6/23	-3.411	2.37	1.37	70.66
LF4-MW1	9/6/23	-3.474	2.27	1.27	71.93
Background					
LF4-MW1	MEAN	-3.278			
LF4-MW1	STDEV	0.616			

Zinc

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW2	3/13/06	-2.915	-0.16	-1.16	0.00
LF4-MW2	9/13/06	-2.343	1.59	0.59	0.59
LF4-MW2	3/6/07	-3.338	-1.46	-2.46	0.00
LF4-MW2	9/24/07	-2.996	-0.41	-1.41	0.00
LF4-MW2	3/26/08	-4.069	-3.70	-4.70	0.00
LF4-MW2	9/16/08	-3.487	-1.91	-2.91	0.00
LF4-MW2	3/17/09	-0.691	6.66	5.66	5.66
LF4-MW2	9/17/09	-0.498	7.26	6.26	11.92
LF4-MW2	3/17/10	-0.120	8.41	7.41	19.33
LF4-MW2	9/21/10	-2.254	1.87	0.87	20.20
LF4-MW2	3/15/11	-2.655	0.64	-0.36	19.84
LF4-MW2	9/8/11	-2.608	0.78	-0.22	19.62
LF4-MW2	3/14/12	-2.902	-0.12	-1.12	18.50
LF4-MW2	9/6/12	-2.774	0.27	-0.73	17.77
LF4-MW2	3/5/13	-0.311	7.83	6.83	24.60
LF4-MW2	9/11/13	-0.892	6.05	5.05	29.65
LF4-MW2	3/5/14	0.020	8.84	7.84	37.49
LF4-MW2	9/4/14	-1.168	5.20	4.20	41.69
LF4-MW2	3/13/15	-0.191	8.20	7.20	48.89
LF4-MW2	9/16/15	-1.269	4.89	3.89	52.78
LF4-MW2	3/16/16	-0.835	6.22	5.22	58.00
LF4-MW2	9/21/16	-0.944	5.89	4.89	62.88
LF4-MW2	3/15/17	-1.743	3.44	2.44	65.32
LF4-MW2	9/8/17	-1.715	3.52	2.52	67.84
LF4-MW2	3/8/18	-0.312	7.82	6.82	74.67
LF4-MW2	9/11/18	-0.942	5.89	4.89	79.56
LF4-MW2	3/7/19	0.182	9.34	8.34	87.90
LF4-MW2	9/5/19	-0.654	6.78	5.78	93.68
LF4-MW2	3/12/20	-0.616	6.89	5.89	99.57
LF4-MW2	9/15/20	-0.777	6.40	5.40	104.97
LF4-MW2	3/4/21	-1.561	3.99	2.99	107.96
LF4-MW2	9/9/21	-1.022	5.65	4.65	112.61
LF4-MW2	3/2/22	-1.171	5.19	4.19	116.80
LF4-MW2	8/31/22	-0.916	5.97	4.97	121.77
LF4-MW2	3/6/23	-0.844	6.19	5.19	126.96
LF4-MW2	9/6/23	-0.734	6.53	5.53	132.49
Background					
LF4-MW2	MEAN	-2.863			
LF4-MW2	STDEV	0.326			

Zinc

Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW3	3/13/06	-3.858	-0.21	-1.21	0.00
LF4-MW3	9/14/06	-3.685	-0.05	-1.05	0.00
LF4-MW3	3/6/07	-3.642	-0.01	-1.01	0.00
LF4-MW3	9/25/07	-4.160	-0.48	-1.48	0.00
LF4-MW3	3/26/08	-4.141	-0.47	-1.47	0.00
LF4-MW3	9/16/08	-4.820	-1.09	-2.09	0.00
LF4-MW3	3/17/09	-4.200	-0.52	-1.52	0.00
LF4-MW3	9/17/09	-3.627	0.00	-1.00	0.00
LF4-MW3	3/17/10	-4.892	-1.15	-2.15	0.00
LF4-MW3	9/21/10	-5.124	-1.36	-2.36	0.00
LF4-MW3	3/15/11	-3.882	-0.23	-1.23	0.00
LF4-MW3	9/8/11	-4.595	-0.88	-1.88	0.00
LF4-MW3	3/14/12	-4.220	-0.54	-1.54	0.00
LF4-MW3	9/6/12	-4.069	-0.40	-1.40	0.00
LF4-MW3	3/5/13	-4.098	-0.43	-1.43	0.00
LF4-MW3	9/11/13	-2.996	0.58	-0.42	0.00
LF4-MW3	3/5/14	-4.605	-0.89	-1.89	0.00
LF4-MW3	9/4/14	-4.605	-0.89	-1.89	0.00
LF4-MW3	3/13/15	-4.206	-0.53	-1.53	0.00
LF4-MW3	9/16/15	-4.605	-0.89	-1.89	0.00
LF4-MW3	3/16/16	-4.605	-0.89	-1.89	0.00
LF4-MW3	9/21/16	-4.492	-0.79	-1.79	0.00
LF4-MW3	3/15/17	-4.566	-0.85	-1.85	0.00
LF4-MW3	9/8/17	-4.017	-0.35	-1.35	0.00
LF4-MW3	3/8/18	-4.255	-0.57	-1.57	0.00
LF4-MW3	9/11/18	-4.200	-0.52	-1.52	0.00
LF4-MW3	3/7/19	-4.135	-0.46	-1.46	0.00
LF4-MW3	9/5/19	-3.194	0.40	-0.60	0.00
LF4-MW3	3/12/20	-3.963	-0.30	-1.30	0.00
LF4-MW3	9/15/20	-2.937	0.63	-0.37	0.00
LF4-MW3	3/4/21	-3.124	0.46	-0.54	0.00
LF4-MW3	9/9/21	-4.605	-0.89	-1.89	0.00
LF4-MW3	3/2/22	-4.510	-0.80	-1.80	0.00
LF4-MW3	8/31/22	-4.605	-0.89	-1.89	0.00
LF4-MW3	3/6/23	-4.906	-1.16	-2.16	0.00
LF4-MW3	9/6/23	-5.203	-1.44	-2.44	0.00
Background					
LF4-MW3	MEAN	-3.629			
LF4-MW3	STDEV	1.096			

Attachment D2. Calculations for CUSUM Control Charts
Butler Green Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

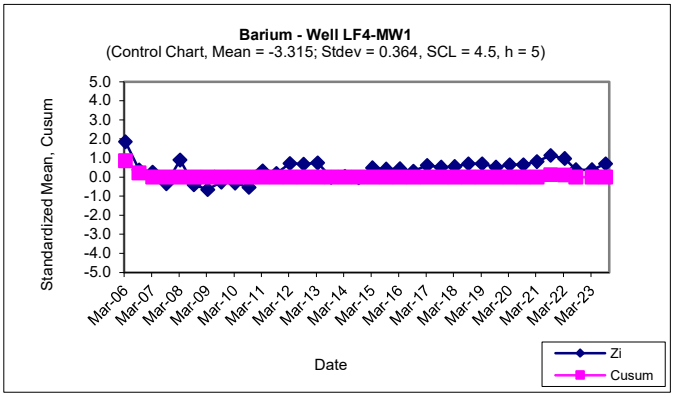
Zinc

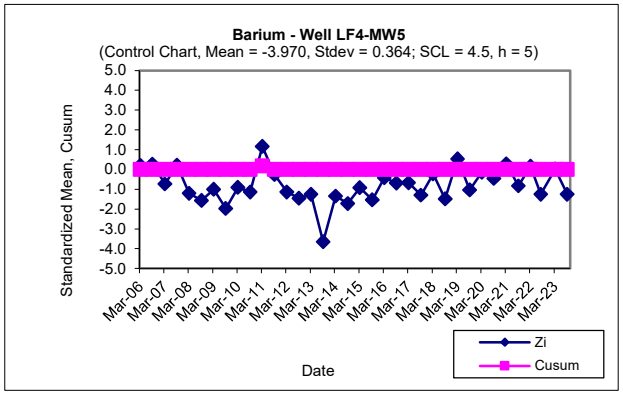
Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW4	3/14/06	-3.669	0.13	-0.87	0.00
LF4-MW4	9/14/06	-3.101	0.91	-0.09	0.00
LF4-MW4	3/7/07	-4.623	-1.19	-2.19	0.00
LF4-MW4	9/25/07	-4.269	-0.70	-1.70	0.00
LF4-MW4	3/26/08	-4.946	-1.64	-2.64	0.00
LF4-MW4	9/17/08	-4.029	-0.37	-1.37	0.00
LF4-MW4	3/17/09	-3.948	-0.26	-1.26	0.00
LF4-MW4	9/21/09	-4.941	-1.63	-2.63	0.00
LF4-MW4	3/17/10	-4.991	-1.70	-2.70	0.00
LF4-MW4	9/21/10	-4.351	-0.82	-1.82	0.00
LF4-MW4	3/15/11	-4.366	-0.84	-1.84	0.00
LF4-MW4	9/8/11	-4.585	-1.14	-2.14	0.00
LF4-MW4	3/14/12	-2.996	1.06	0.06	0.06
LF4-MW4	9/6/12	-2.996	1.06	0.06	0.11
LF4-MW4	3/5/13	-4.366	-0.84	-1.84	0.00
LF4-MW4	9/11/13	-4.440	-0.94	-1.94	0.00
LF4-MW4	3/5/14	-4.605	-1.17	-2.17	0.00
LF4-MW4	9/4/14	-4.605	-1.17	-2.17	0.00
LF4-MW4	3/13/15	-4.605	-1.17	-2.17	0.00
LF4-MW4	9/16/15	-4.057	-0.41	-1.41	0.00
LF4-MW4	3/16/16	-4.605	-1.17	-2.17	0.00
LF4-MW4	9/21/16	-4.069	-0.43	-1.43	0.00
LF4-MW4	3/15/17	-4.605	-1.17	-2.17	0.00
LF4-MW4	9/8/17	-3.423	0.47	-0.53	0.00
LF4-MW4	3/8/18	-4.605	-1.17	-2.17	0.00
LF4-MW4	9/11/18	-3.079	0.94	-0.06	0.00
LF4-MW4	3/7/19	-2.880	1.22	0.22	0.22
LF4-MW4	9/5/19	-2.386	1.90	0.90	1.12
LF4-MW4	3/12/20	-4.422	-0.91	-1.91	0.00
LF4-MW4	9/15/20	-3.612	0.21	-0.79	0.00
LF4-MW4	3/4/21	-4.605	-1.17	-2.17	0.00
LF4-MW4	9/9/21	-3.474	0.40	-0.60	0.00
LF4-MW4	3/2/22	-4.510	-1.04	-2.04	0.00
LF4-MW4	8/31/22	-3.474	0.40	-0.60	0.00
LF4-MW4	3/6/23	-4.605	-1.17	-2.17	0.00
LF4-MW4	9/6/23	-4.991	-1.70	-2.70	0.00
Background					
LF4-MW4	MEAN	-3.761			
LF4-MW4	STDEV	0.723			

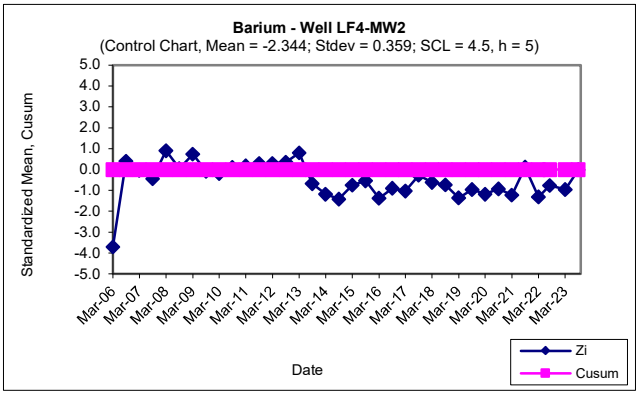
Zinc

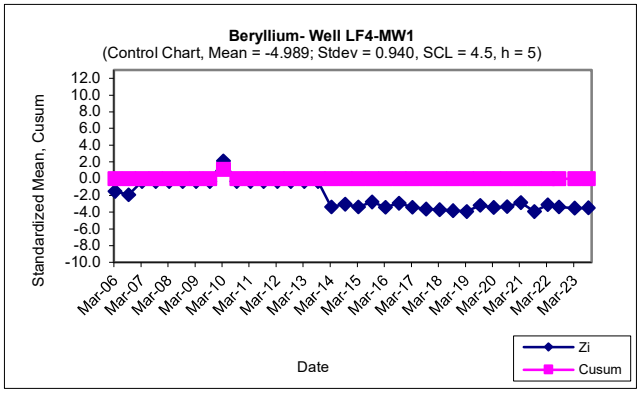
Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW5	3/14/06	-4.358	-0.88	-1.88	0.00
LF4-MW5	9/14/06	-3.868	-0.35	-1.35	0.00
LF4-MW5	3/7/07	-3.974	-0.47	-1.47	0.00
LF4-MW5	9/24/07	-2.996	0.59	-0.41	0.00
LF4-MW5	3/26/08	-5.028	-1.61	-2.61	0.00
LF4-MW5	9/16/08	-5.067	-1.65	-2.65	0.00
LF4-MW5	3/18/09	-4.753	-1.31	-2.31	0.00
LF4-MW5	9/17/09	-5.176	-1.77	-2.77	0.00
LF4-MW5	3/17/10	-2.996	0.59	-0.41	0.00
LF4-MW5	9/16/10	-4.683	-1.23	-2.23	0.00
LF4-MW5	3/15/11	-4.200	-0.71	-1.71	0.00
LF4-MW5	9/8/11	-2.996	0.59	-0.41	0.00
LF4-MW5	3/14/12	-4.465	-1.00	-2.00	0.00
LF4-MW5	9/6/12	-2.996	0.59	-0.41	0.00
LF4-MW5	3/5/13	-4.510	-1.05	-2.05	0.00
LF4-MW5	9/11/13	-2.996	0.59	-0.41	0.00
LF4-MW5	3/5/14	-4.605	-1.15	-2.15	0.00
LF4-MW5	9/4/14	-4.605	-1.15	-2.15	0.00
LF4-MW5	3/13/15	-4.605	-1.15	-2.15	0.00
LF4-MW5	9/16/15	-4.605	-1.15	-2.15	0.00
LF4-MW5	3/16/16	-4.457	-0.99	-1.99	0.00
LF4-MW5	9/21/16	-4.605	-1.15	-2.15	0.00
LF4-MW5	3/15/17	-4.605	-1.15	-2.15	0.00
LF4-MW5	9/8/17	-4.605	-1.15	-2.15	0.00
LF4-MW5	3/8/18	-2.818	0.79	-0.21	0.00
LF4-MW5	9/11/18	-2.120	1.54	0.54	0.54
LF4-MW5	3/7/19	-3.863	-0.35	-1.35	0.00
LF4-MW5	9/5/19	-4.510	-1.05	-2.05	0.00
LF4-MW5	3/12/20	-4.343	-0.87	-1.87	0.00
LF4-MW5	9/15/20	0.000	3.84	2.84	2.84
LF4-MW5	3/4/21	-3.576	-0.03	-1.03	1.80
LF4-MW5	9/9/21	-3.612	-0.07	-1.07	0.73
LF4-MW5	3/2/22	-5.521	-2.14	-3.14	0.00
LF4-MW5	8/31/22	-5.521	-2.14	-3.14	0.00
LF4-MW5	3/6/23	-5.099	-1.69	-2.69	0.00
LF4-MW5	9/6/23	-5.298	-1.90	-2.90	0.00
Background					
LF4-MW2	MEAN	-3.544			
LF4-MW2	STDEV	0.923			

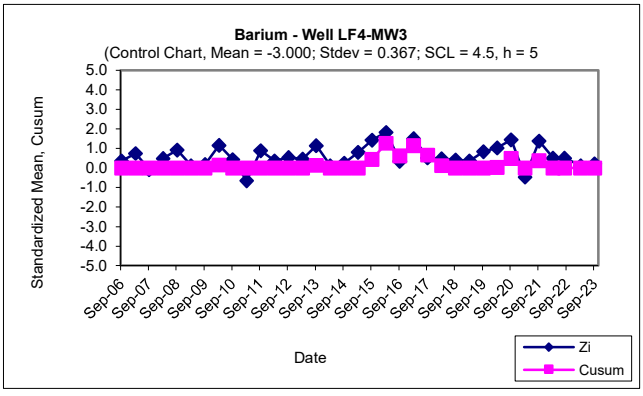
Attachment D3. Control Charts
Butler Green Industrial Landfill, Parcel 175(5), McClellan, Anniston, Alabama

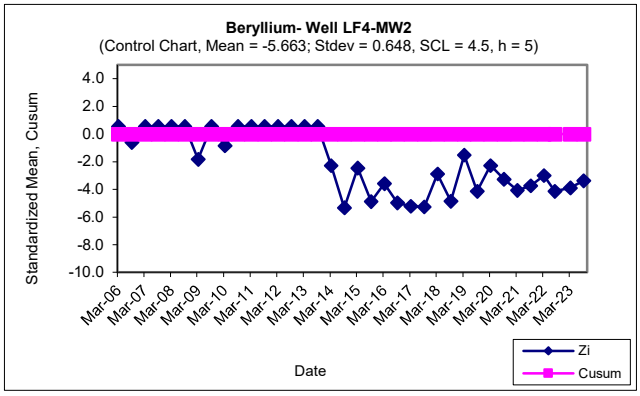


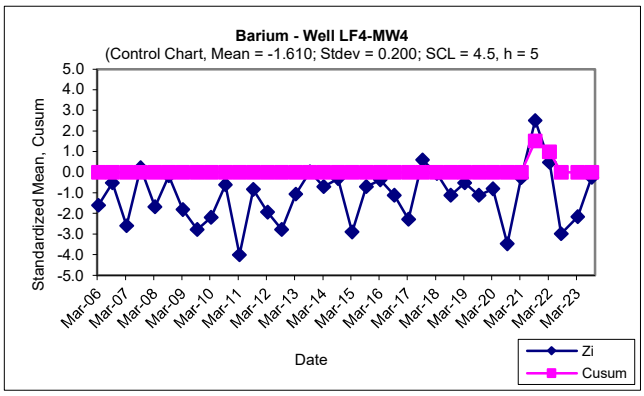


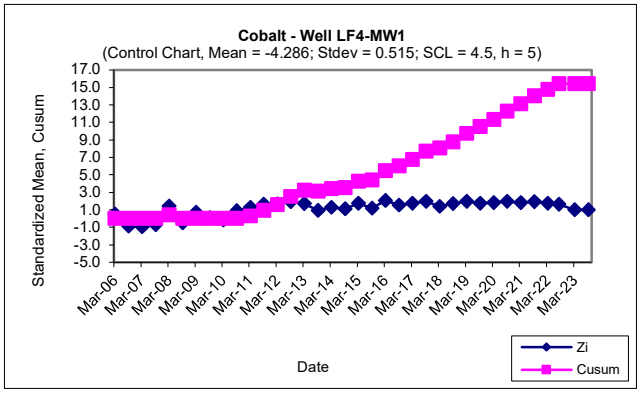




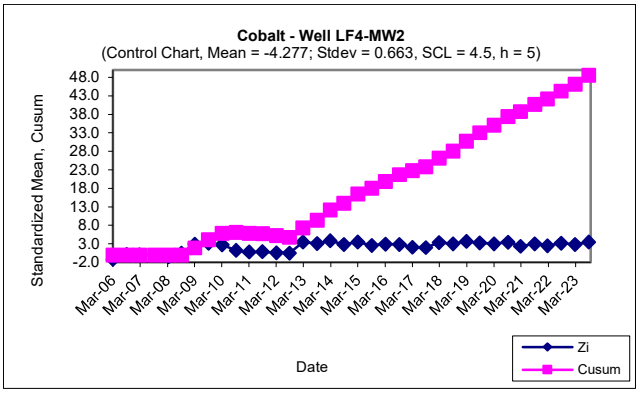


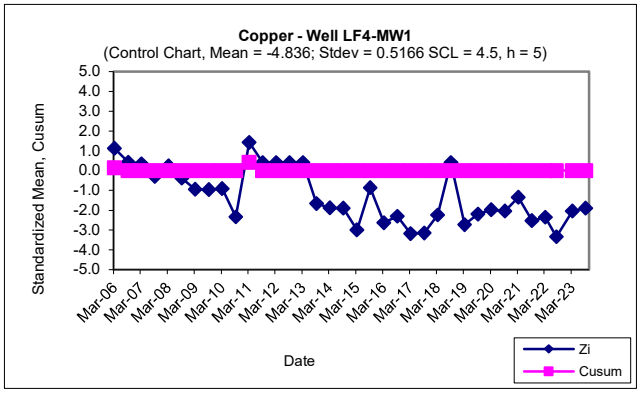


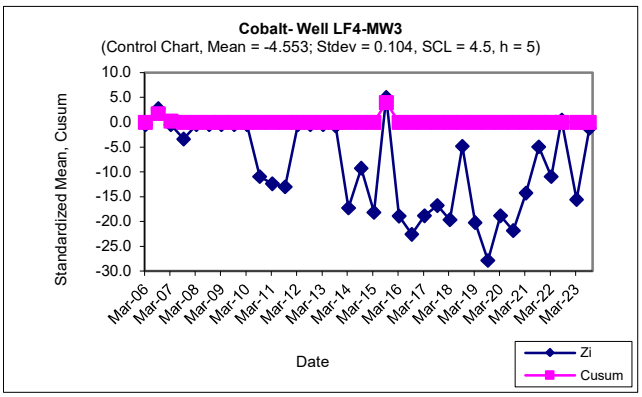


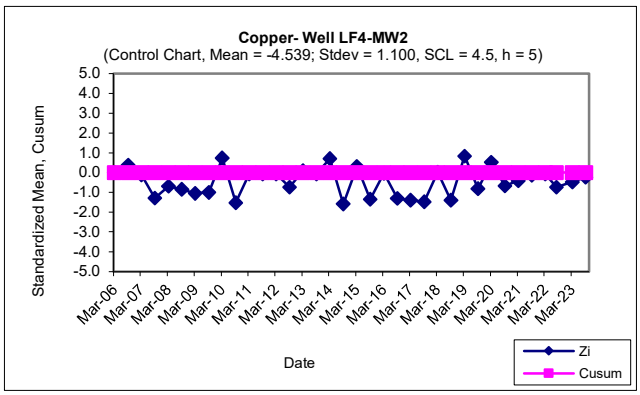


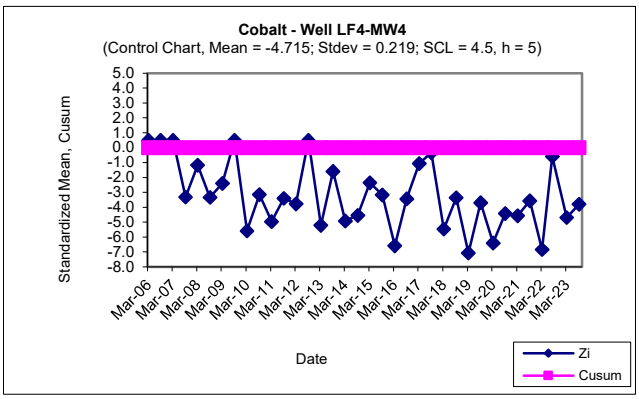
Attachment D3. Control Charts
Butler Green Industrial Landfill, Parcel 175(5), McClellan, Anniston, Alabama

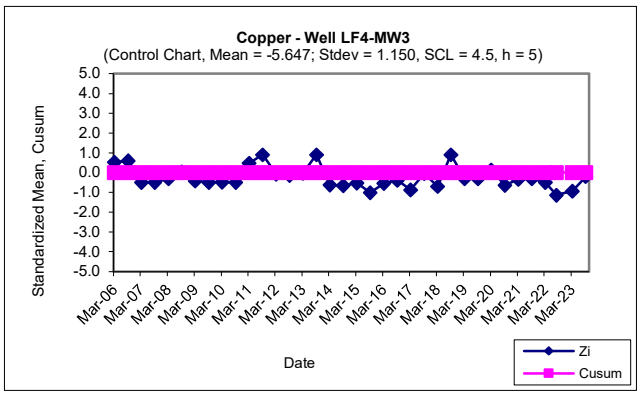


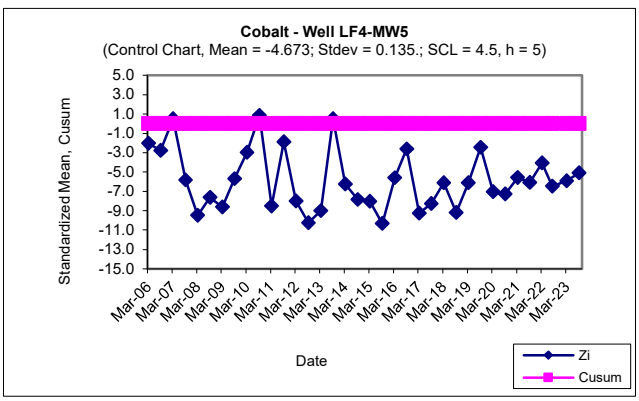


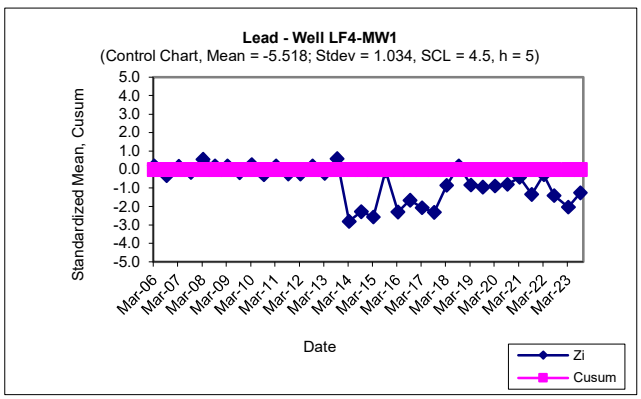












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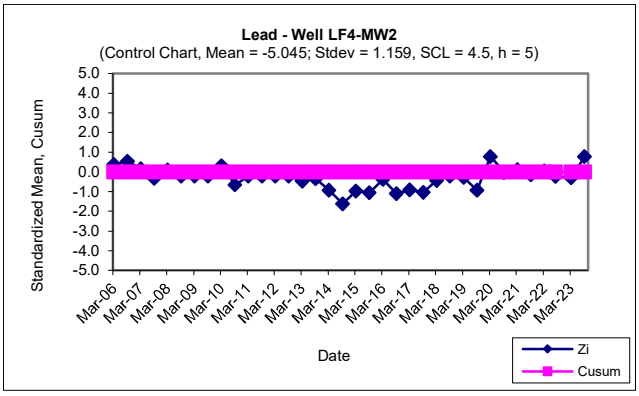

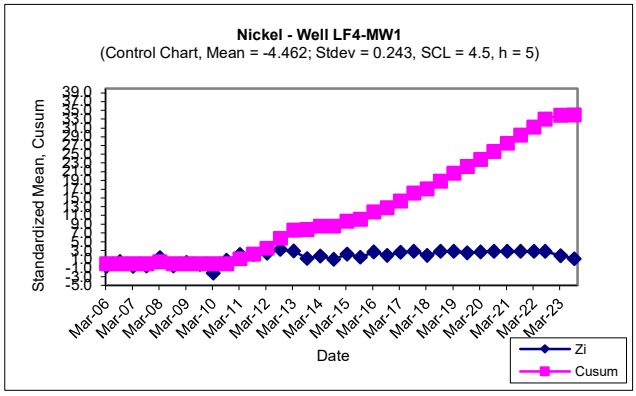

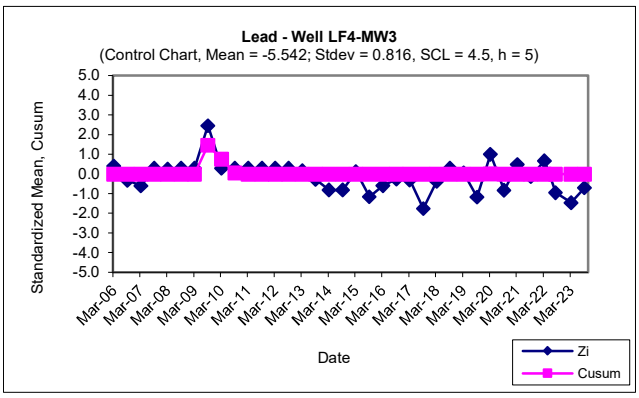

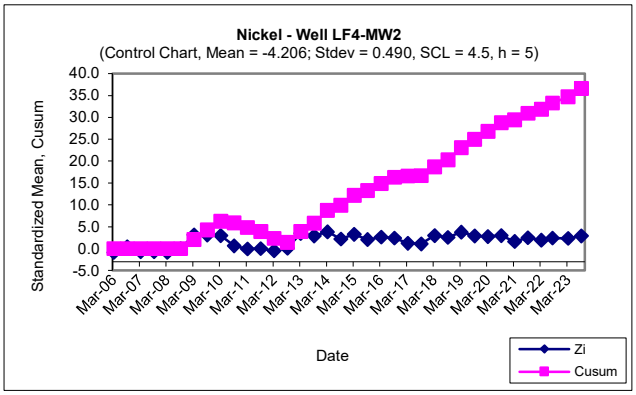

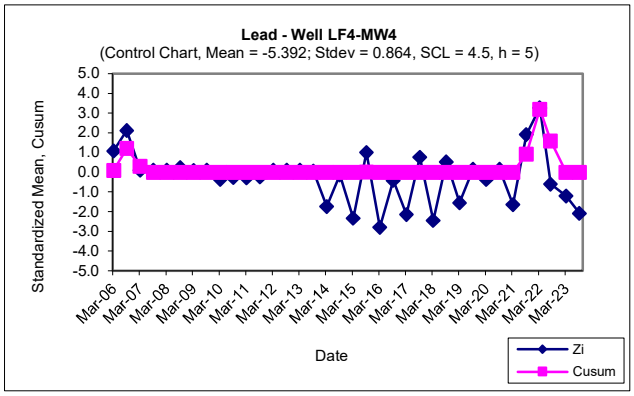

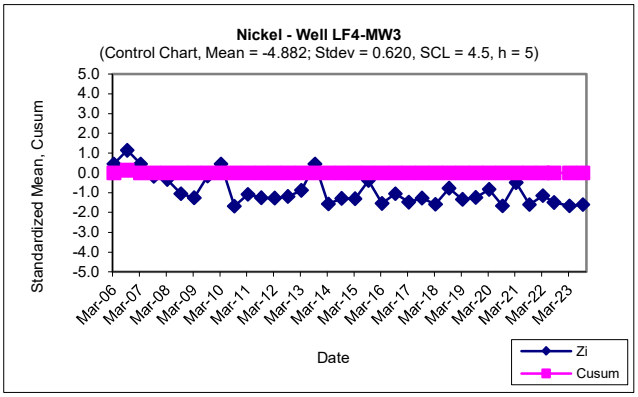

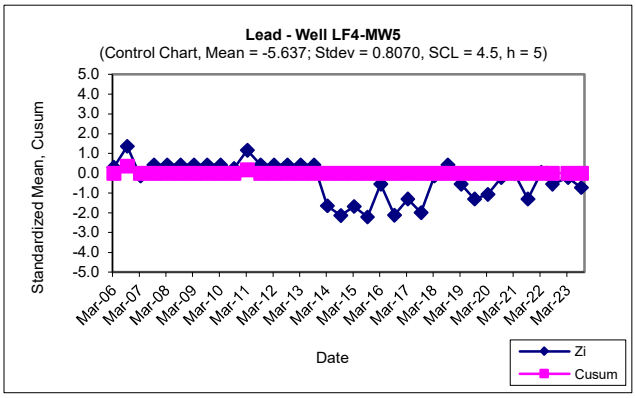

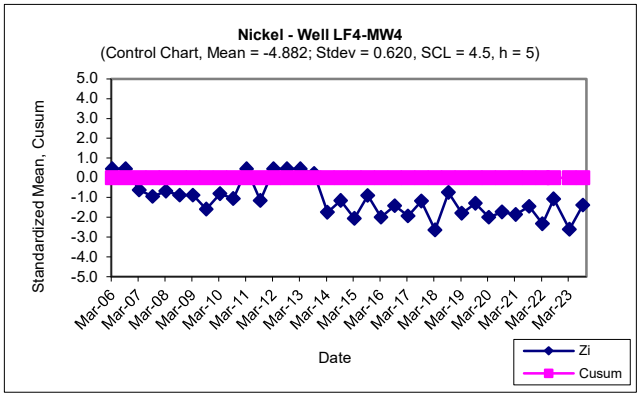

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