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

Prepared for:

McCLELLAN
DEVELOPMENT AUTHORITY

Prepared by:

Matrix
ENVIRONMENTAL

283 Rucker Street, Bldg. 3165
Anniston, Alabama 36205
(256) 847-0780
Fax (256) 847-0905

July 2023

This page intentionally left blank.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

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 March 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 March 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 0.004 feet per foot (ft/ft) to 0.016 ft/ft, averaging 0.012 ft/ft Site-wide.

During the March 2023 monitoring event, volatile organic compounds cis-1,2-dichloroethene, trans-1,2-dichloroethene, 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) with the exception of trichloroethene which was above MCL but consistent with historical results.

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, cis-1,2-dichloroethene, trans-1,2-dichloroethene, and chlorobenzene concentrations were below MCLs. Trichloroethene was above the MCL but consistent with historical results. 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 (92 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 March 2023 groundwater monitoring event. The objectives of the March 2023 groundwater monitoring event and this GWMR include the following:

- Summarize data from previous monitoring events and present analytical results for the March 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 March 2023 sampling activities. Section 4.0 describes the results of the March 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, March 2023
Appendix B Chains-of-Custody, March 2023
Appendix C Data Validation Summary and Laboratory Report
Appendix D Statistical Evaluation of Metals Data, March 2023

This page intentionally left blank.

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 MARCH 2023 ACTIVITIES

During the March 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 March 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 March 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 March 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 March 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 March 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 March 2023 monitoring event. The Data Validation Summary (DVS) for

the March 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 MARCH 2023 GROUNDWATER SAMPLING

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

4.1 Groundwater Levels

On March 6, 2023, groundwater elevations were measured to the nearest hundredth of a foot using a Geotech 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 March 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 March 2023 monitoring event, presented in Table 4-2. The horizontal hydraulic gradients were low over the Site, ranging from 0.004 feet per foot (ft/ft) to 0.016 ft/ft. Site-wide horizontal hydraulic gradients averaged 0.012 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 March 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 March 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

Cis-1,2-dichloroethene, trans-1,2-dichloroethene, chlorobenzene, and trichloroethene were detected in well LF4-MW4 during the March 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 March 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 March 2023 monitoring event. Antimony, mercury, selenium, silver, and thallium were not detected during the March 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 March 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 March 2023 groundwater sampling event, cis-1,2-dichloroethene, trans-1,2-dichloroethene, chlorobenzene, and trichloroethene were detected. All VOCs detected are considered SSIs. Concentrations of cis-1,2-dichloroethene, trans-1,2-dichloroethene and chlorobenzene were below MCLs. Trichloroethene was above the MCL but consistent with historical results.

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 March 2023 Metals Groundwater Quality Data

Statistical analysis was performed for the March 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 March 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 (33.84) in well LF4-MW1; and cobalt (46.09), nickel (34.70), and zinc (126.96) 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 March Sampling Event

Table 5-1 presents a summary of the SSI occurrences for the March 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, cis-1,2-dichloroethene, trans-1,2-dichloroethene, and chlorobenzene were all below the groundwater protection standards or MCLs. Trichloroethene was above the MCL but consistent with historical results. The concentrations for metal SSI constituent cobalt (23 µg/L) in LF4-MW1 and (92 µg/L) in well LF4-MW2, were greater than the background concentration in LF4-MW5 (10.5 µg/L).

This page intentionally left blank.

6.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This section summarizes the activities performed and the results of the March 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 March 2023 monitoring event was performed under the Assessment Monitoring program. Groundwater samples were collected from five residuum monitoring wells at the Site on March 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 0.004 ft/ft to 0.016 ft/ft.

During the March 2023 monitoring event, four 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 March 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 (92 µg/L) in well LF4-MW2, were greater than the groundwater protection standard or background concentration (10.5 µg/L) and trichloroethene (9.7 µg/L) in well LF4-MW4 was greater than the MCL (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.

This page intentionally left blank.

7.0 REFERENCES

Alabama Department of Environmental Management (ADEM). 2016. Solid Waste Disposal Facility Permit for the McClellan Industrial Landfill, Permit No. 08-02. Issued January 5, 2016; effective from January 9, 2016 through January 8, 2021.

ADEM. 2011. *Alabama Groundwater Monitoring Reporting Guidance for Solid Waste Facilities*. March.

ADEM. 2014. *Department of Environmental Management Water Division – Water Supply Program Division 335-7*. November 25.

ADEM. 2016. *Alabama Department of Environmental Management Land Division Solid Waste Program Division 13, Revision*. April 8.

ADEM. 2017. *Alabama Risk-Based Corrective Action Guidance Manual*, *Revision 3.0*. February.

IT. 2002. *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*. March.

Matrix Environmental Services, LLC (MES). 2013. *Final Installation-Wide Sampling and Analysis Plan.* December.

MES. 2006. *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*. May.

McClellan Development Authority (MDA). 2008. *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.* November.

U.S. Environmental Protection Agency (EPA). 2009. *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities: Unified Guidance*, EPA 530/R09-007, Office of Resource Conservation and Recovery. March.

This page intentionally left blank.

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).

_____
Richard Lee Satkin
Alabama P.G. # 965

This page intentionally left blank

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	3/6/23	42.5	17.09	722.70
LF4-MW2	3/6/23	40.3	19.25	719.25
LF4-MW3	3/6/23	34.2	12.14	727.64
LF4-MW4	3/6/23	26.8	4.85	738.50
LF4-MW5	3/6/23	34.6	10.07	743.25

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

Table 4-2: Horizontal Hydraulic Gradients, March 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	743.25	LF4-MW1	722.70	north	1601	20.55	0.013
LF4-MW4	738.50	LF4-MW3	727.64	northwest	724	10.86	0.015
LF4-MW3	727.64	LF4-MW2	719.25	west	524	8.39	0.016
LF4-MW1	722.70	LF4-MW2	719.25	northeast	890	3.45	0.004
					Average Horizontal Gradient:		**0.012**

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

Table 4-3: Groundwater Field Parameters, March 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	3/6/23	19.3	218	5.4	64	0.14	26	5.4
LF4-MW2	3/6/23	18.0	446	0.9	114	0.29	30	5.7
LF4-MW3	3/6/23	18.3	154	4.3	270	0.10	16	4.9
LF4-MW4	3/6/23	17.2	769	6.7	-66	0.50	21	6.6
LF4-MW5	3/6/23	16.3	104	3.5	245	0.07	51	4.5

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

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	3/8/18	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
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-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

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	3/5/13	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	< 0.8
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-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

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	9/25/07	<1	<1	< 10	<1	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1
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-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	--

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	9/18/02	< 0.5	--	--	< 0.5	--	6.5	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	--
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

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	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
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-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

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	9/16/15	<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
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

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-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
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	0.093 J B (UB)	63	< 2.5	< 1	< 1	< 10	520

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	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-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
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

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	3/8/18	< 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-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
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

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	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-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
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

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	9/4/14	< 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 (HB)	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

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.

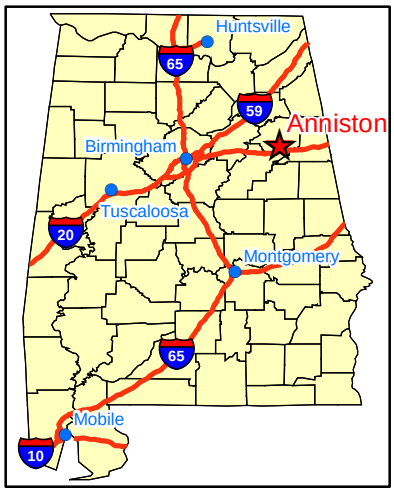
Table 5-1 - Summary of Statistically Significant Increases, March 2023
Sampling Event
Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Well Location	SSI Analyte	CUSUM	Sample Concentration	MCL	BKG Concentration	Units
LF4-MW1	cobalt	15.42	23	NA	10.5	µg/L
	nickel	33.84	18	100	--	µg/L
LF4-MW2	cobalt	46.09	92	NA	10.5	µg/L
	nickel	34.70	48	100	--	µg/L
	zinc	126.96	430	5000*	--	µg/L
LF4-MW4	cis-1,2-dichloroethene	--	32	70	--	µg/L
	trans-1,2-dichloroethene	--	1.9	100	--	µg/L
	chlorobenzene	--	0.75 J	100	--	µg/L
	trichloroethene	--	9.7	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

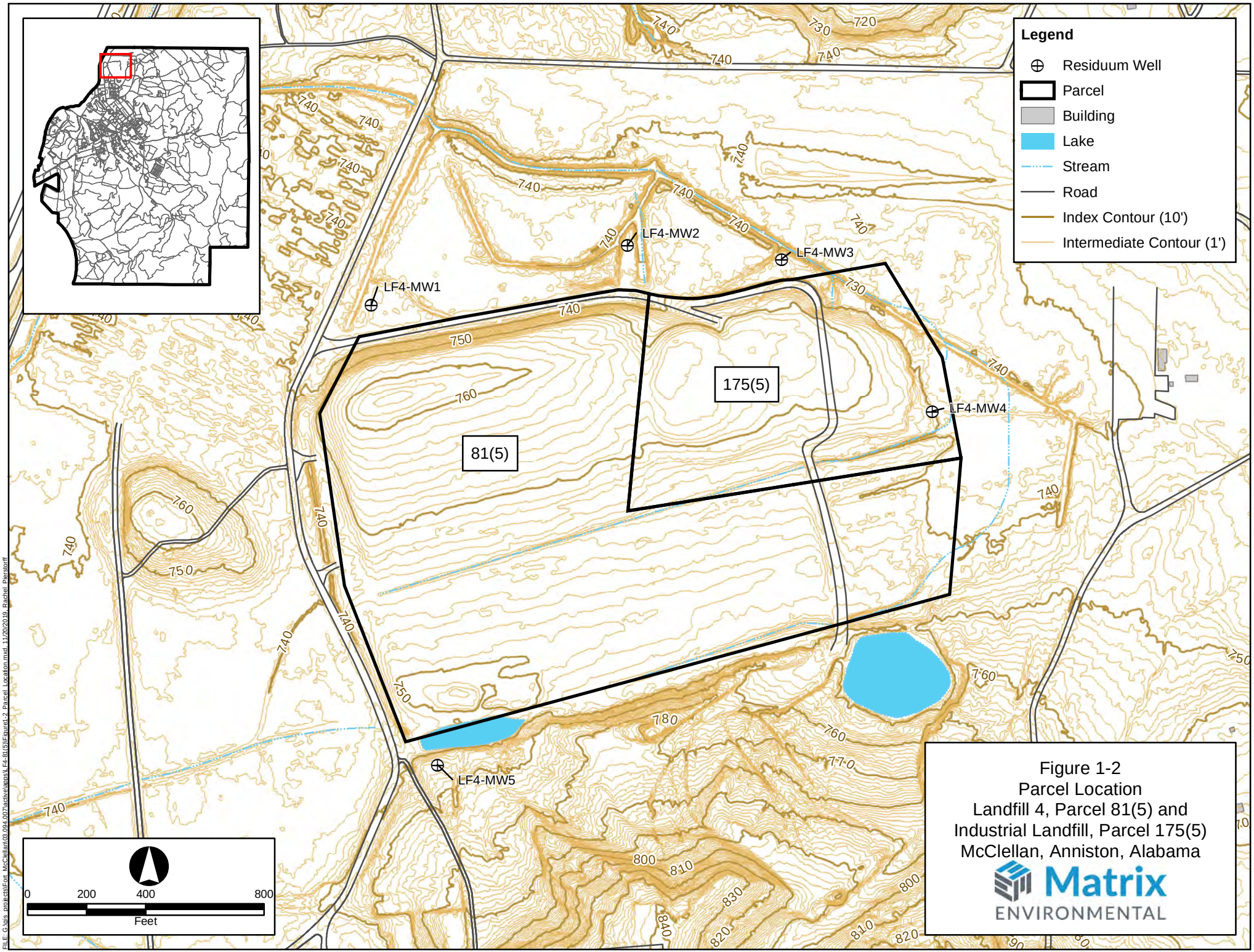
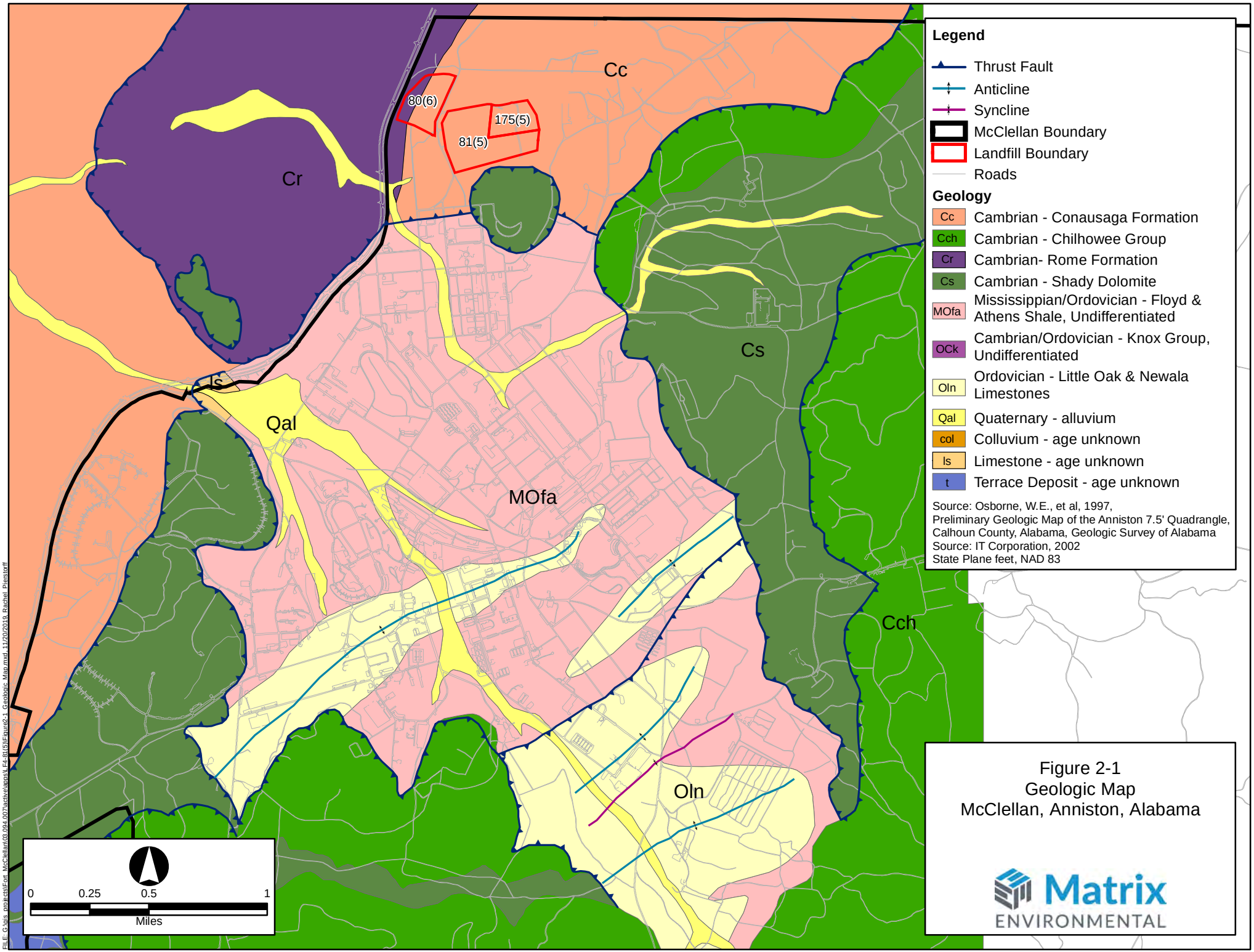
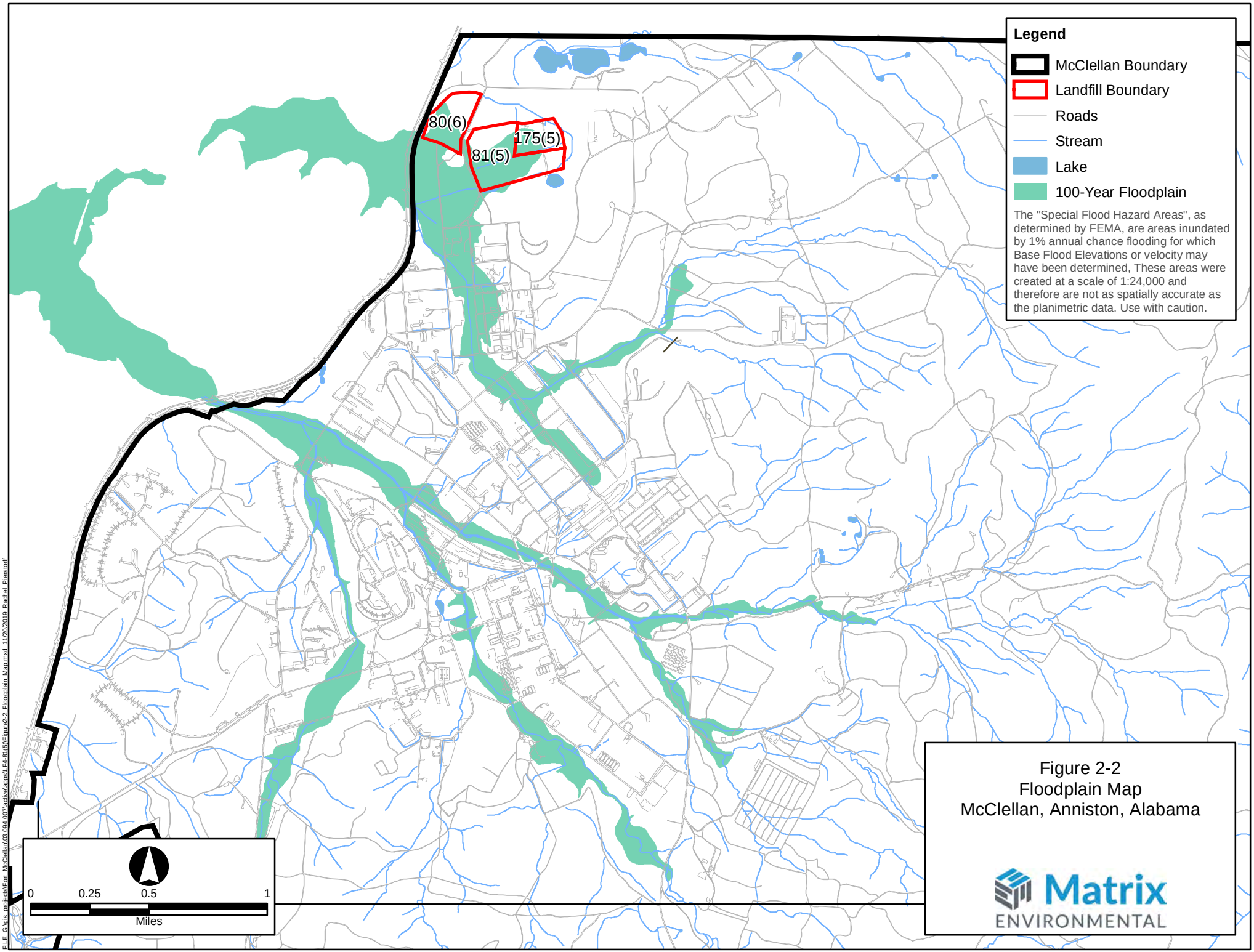


Figure 1-2
Parcel Location
Landfill 4, Parcel 81(5) and
Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

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


Cc
80(6)
175(5)
81(5)
Cr
Cs
ls
Qal
MOfa
Cch
Oln
Legend
Thrust Fault
Anticline
Syncline
McClellan Boundary
Landfill Boundary
Roads
Geology
Cc Cambrian - Conausaga Formation
Cch Cambrian - Chilhowee Group
Cr Cambrian- Rome Formation
Cs Cambrian - Shady Dolomite
MOfa Mississippian/Ordovician - Floyd & Athens Shale, Undifferentiated
OCk Cambrian/Ordovician - Knox Group, Undifferentiated
Oln Ordovician - Little Oak & Newala Limestones
Qal Quaternary - alluvium
col Colluvium - age unknown
ls Limestone - age unknown
t Terrace Deposit - age unknown
Source: Osborne, W.E., et al, 1997, Preliminary Geologic Map of the Anniston 7.5' Quadrangle, Calhoun County, Alabama, Geologic Survey of Alabama
Source: IT Corporation, 2002
State Plane feet, NAD 83
0 0.25 0.5 1
Miles
Figure 2-1
Geologic Map
McClellan, Anniston, Alabama
Matrix ENVIRONMENTAL
FILE: G:\gis_proj\EastsFort_McClellan\03.094.007\activeloppe\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

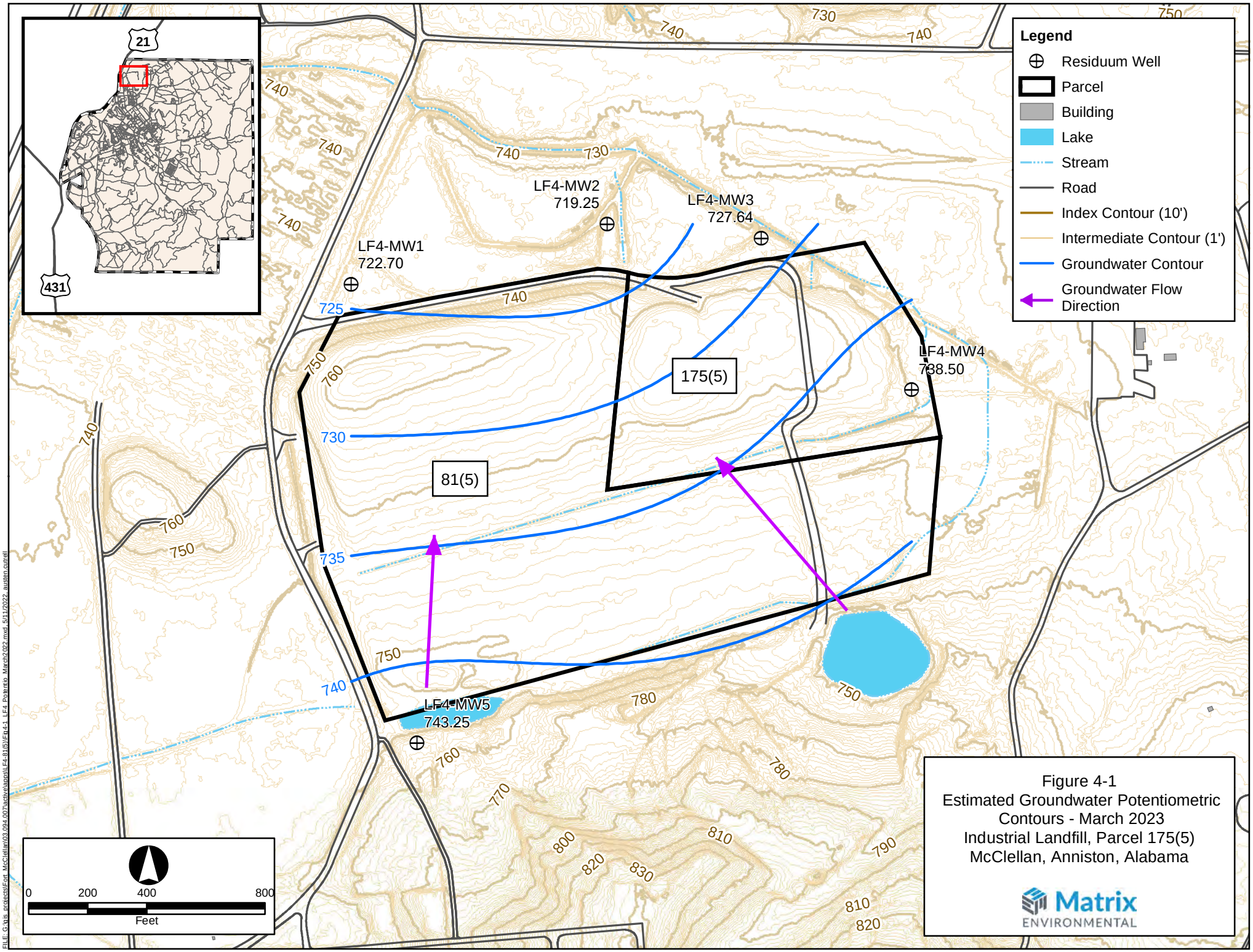


Figure 4-1
Estimated Groundwater Potentiometric Contours - March 2023
Industrial Landfill, Parcel 175(5)
McClellan, Anniston, Alabama

Matrix ENVIRONMENTAL

FILE: G:\gis projects\Fort McClellan\03.094.007\activeApps\LF4-81(5)\LF4-1 LF4 Potentio March2022.mxd, 5/11/2022, austen.cutrell

APPENDICES

Groundwater Monitoring Report, March 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) 17.09 feet	**Sample Method** Low Flow	**Sampler** David Abernathy	**Date** 3/6/2023
Well Depth (TOC) 42.5 feet		**Location (Site)** Landfill 4	**Begin Time** 11:00
Water Column Thickness 25.41 feet	**Equipment** Geotech Bladder Pump, Geotech Geocontrol Pro	**Laboratory** Eurofins/TestAmerica	**Sample Depth** 32'
		Sample Suite See COCs	
Casing Diameter 4 inches	**Temperature (°F)** 68°	**Meters** YSI Pro Plus, Geotech Water Level Mete, Micro TPW Turbidimeter	**Serial numbers**
Casing Volume 16.52 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Sunny	**Calibration** 3/6/2023	**Ferrous Iron (Fe II) (mg/L) (for MNA sampling)** Not Applicable
Well Elevation (TOC) 739.79 feet			
Groundwater Elevation 722.7 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
1105	0	18.8	222	6.6	93	0.14	36	4.7	Clear	Clear	None
1110	750	19.0	223	7.1	89	0.14	28	4.9	Clear	Clear	None
1115	750	19.2	223	7.8	77	0.15	28	5.1	Clear	Clear	None
1120	750	19.2	222	7.0	71	0.14	27	5.2	Clear	Clear	None
1125	750	19.2	222	6.5	66	0.14	27	5.2	Clear	Clear	None
1130	750	19.2	220	5.9	63	0.14	26	5.4	Clear	Clear	None
1135	750	19.3	219	5.5	63	0.14	25	5.4	Clear	Clear	None
1140	750	19.3	218	5.4	64	0.14	26	5.4	Clear	Clear	None
1145	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
40	5250	No	New Tubing Installed, Returned to Low-Flow

QA/QC Samples	Signature
N/A	

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) 19.25 feet	**Sample Method** Low Flow	**Sampler** David Abernathy	**Date** 3/6/2023
Well Depth (TOC) 40.25 feet		**Location (Site)** Landfill 4	**Begin Time** 12:15
Water Column Thickness 21 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)** 72°	**Meters** YSI Pro Plus Geotech Water Level Mete Micro TPW Turbidimeter	**Serial numbers**
Casing Volume 13.65 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Sunny	**Calibration** 3/6/2023	**Ferrous Iron (Fe II) (mg/L) (for MNA sampling)** Not Applicable
Well Elevation (TOC) 738.5 feet			
Groundwater Elevation 719.25 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
1220	0	19.1	450	0.5	72	0.29	34	5.4	Clear	Clear	None
1225	750	18.7	448	0.4	80	0.29	34	5.4	Clear	Clear	None
1230	750	18.5	447	0.3	86	0.29	29	5.5	Clear	Clear	None
1235	750	18.4	446	0.3	91	0.29	28	5.7	Clear	Clear	None
1240	750	18.1	446	0.3	93	0.29	25	5.7	Clear	Clear	None
1245	750	18.2	446	0.4	96	0.29	28	5.6	Clear	Clear	None
1250	750	18.4	446	0.4	100	0.29	30	5.6	Clear	Clear	None
1255	750	18.1	445	0.7	106	0.29	30	5.7	Clear	Clear	None
1300	750	18.2	445	0.8	109	0.29	30	5.7	Clear	Clear	None
1305	750	18.4	445	0.8	111	0.29	29	5.7	Clear	Clear	None
1310	750	18.0	446	0.9	114	0.29	30	5.7	Clear	Clear	None
1315	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
55	7500	No	Installed New Tubing, Returned to Low-Flow

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-MW03	
Project	**Project Number**
McClellan	22.094.23-07.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 12.14 feet	**Sample Method** Low Flow	**Sampler** David Abernathy	**Date** 3/6/2023
Well Depth (TOC) 34.2 feet		**Location (Site)** Landfill 4	**Begin Time** 13:50
Water Column Thickness 22.06 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)** 75°	**Meters** YSI Pro Plus Geotech Water Level Mete Micro TPW Turbidimeter	**Serial numbers**
Casing Volume 14.34 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Sunny	**Calibration** 3/6/2023	**Ferrous Iron (Fe II) (mg/L) (for MNA sampling)** Not Applicable
Well Elevation (TOC) 739.78			
Groundwater Elevation 727.64 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	18.6	155	6.0	266	0.10	23	4.6	Clear	Clear	None
1400	750	18.8	155	5.8	263	0.10	19	4.7	Clear	Clear	None
1405	750	19.1	155	5.4	259	0.10	18	4.7	Clear	Clear	None
1410	750	18.5	154	5.3	263	0.10	18	4.8	Clear	Clear	None
1415	750	18.4	154	5.2	267	0.10	17	4.9	Clear	Clear	None
1420	750	18.4	154	4.8	268	0.10	17	4.9	Clear	Clear	None
1425	750	18.4	155	4.5	269	0.10	16	4.9	Clear	Clear	None
1430	750	18.3	155	4.4	269	0.10	16	5.0	Clear	Clear	None
1435	750	18.3	154	4.3	270	0.10	16	4.9	Clear	Clear	None
1440	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
45	6000	No	New Tubing Installed, Returned to Low-Flow

QA/QC Samples MS/MSD

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) 4.85 feet	**Sample Method** Low Flow	**Sampler** David Abernathy	**Date** 3/6/2023
Well Depth (TOC) 26.8 feet		**Location (Site)** Landfill 4	**Begin Time** 15:15
Water Column Thickness 21.95 feet	**Equipment** Geotech Bladder Pump Geotech Geocontrol Pro	**Laboratory** Eurofins/TestAmerica	**Sample Depth** 20
		Sample Suite See COCs	
Casing Diameter 4 inches	**Temperature (°F)** 78°	**Meters** YSI Pro Plus Geotech Water Level Mete Micro TPW Turbidimeter	**Serial numbers**
Casing Volume 14.27 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Sunny	**Calibration** 3/6/2023	**Ferrous Iron (Fe II) (mg/L) (for MNA sampling)** Not Applicable
Well Elevation (TOC) 743.35 feet			
Groundwater Elevation 738.5 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	17.6	768	8.6	-41	0.50	5	6.5	Clear	Clear	None
1525	750	17.4	768	8.0	-51	0.50	9	6.5	Clear	Clear	None
1530	750	17.4	769	7.7	-61	0.50	13	6.6	Clear	Clear	None
1535	750	17.4	771	7.3	-67	0.50	17	6.6	Clear	Clear	None
1540	750	17.3	769	7.2	-68	0.50	19	6.6	Clear	Clear	None
1545	750	17.2	768	7.1	-66	0.50	20	6.6	Clear	Clear	None
1550	750	17.3	768	6.9	-66	0.50	21	6.6	Clear	Clear	None
1555	750	17.2	769	6.7	-66	0.50	21	6.6	Clear	Clear	None
1600	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
40	5250	No	Installed New Tubing, Returned to Low-Flow

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-MW05	
Project	**Project Number**
McClellan	22.094.23-07.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 10.07 feet	**Sample Method** Low Flow	**Sampler** David Abernathy	**Date** 3/6/2023
Well Depth (TOC) 34.6 feet		**Location (Site)** Landfill 4	**Begin Time** 09:30
Water Column Thickness 24.53 feet	**Equipment** Geotech Bladder Pump Geotech Geocontrol Pro	**Laboratory** Eurofins/TestAmerica	**Sample Depth** 25
		Sample Suite See COCs	
Casing Diameter 4 inches	**Temperature (°F)** 63°	**Meters** YSI Pro Plus Geotech Water Level Mete Micro TPW Turbidimeter	**Serial numbers**
Casing Volume 15.94 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Sunny	**Calibration** 3/6/2023	**Ferrous Iron (Fe II) (mg/L) (for MNA sampling)** Not Applicable
Well Elevation (TOC) 753.32 feet			
Groundwater Elevation 743.25 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
0935	0	16.5	105	4.2	316	0.07	46	3.2	Cloudy	White	None
0940	750	16.4	105	4.1	288	0.07	52	3.8	Cloudy	White	None
0945	750	16.4	104	4.1	264	0.07	55	4.3	Cloudy	White	None
0950	750	16.4	104	4.2	263	0.07	60	4.4	Cloudy	White	None
0955	750	16.3	105	3.9	254	0.07	60	4.4	Cloudy	White	None
1000	750	16.4	105	3.7	251	0.07	55	4.5	Cloudy	White	None
1005	750	16.4	104	3.6	249	0.07	52	4.5	Cloudy	White	None
1010	750	16.5	105	3.6	246	0.07	52	4.5	Cloudy	White	None
1015	750	16.3	104	3.5	245	0.07	51	4.5	Cloudy	White	None
1020	Collect Sample										

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

QA/QC Samples
Dup 411

Signature

APPENDIX B

Chains-of-Custody, March 2023

MATRIX ENVIRONMENTAL SERVICES CHAIN OF CUSTODY RECORD

COC Number 6809
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	
Parcel 81(5), Landfill 4	LF4-MW1	NS	MW	WQ	Grab	3/6/2023	11:45	X	X		
Parcel 81(5), Landfill 4	LF4-MW2	NS	MW	WQ	Grab	3/6/2023	13:15	X	X		
Parcel 81(5), Landfill 4	LF4-MW3	NS	MW	WQ	Grab	3/6/2023	14:40	X	X		
Parcel 81(5), Landfill 4	LF4-MW3	MS/MSD	MW	WQ	Grab	3/6/2023	14:40	X	X		
Parcel 81(5), Landfill 4	LF4-MW4	NS	MW	WQ	Grab	3/6/2023	16:00	X	X		
Parcel 81(5), Landfill 4	LF4-MW5	NS	MW	WQ	Grab	3/6/2023	10:20	X	X		
Parcel 81(5), Landfill 4	DUP411	FD	MW	WQ	Grab	3/6/2023	N/A	X	X		
Parcel 81(5), Landfill 4	TB608	TB	WQ	W	Grab	3/7/2023	8:06			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 3-7-2023 1100 Received by (Signature). FedEx

Relinquished by (Signature). Date/Time Received by (Signature): 03/08/23 10:00

4.1/4.1

680-231662 Chain of Custody

APPENDIX C

Data Valdation Summary, March 2023

Data Validation Summary

Laboratory Name:	TALSAV				
Project Name:	LF4				
SDG:	680-231662-1				
Reviewer Name:	B. Van Pelt				
Parameters:	MET, ORG, STD, VOC				
Method IDs:	SW6020B, SW7470A, SW8260D	Rejected Results?			0
Matrix:	Groundwater				
Attach copy of lab report showing sample IDs and corresponding lab IDs (Att 1)		**Yes**	**No**	**N/A**	**Comment**
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?				
3	Was the method blank free of contamination (i.e., less than the MDL or RL)?		X		
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 Continuous Calibration Blanks (CCBs) analyzed?		X		
12	Were CCBs within the control window?				
13	Did the CCB contamination affect the final results?				
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 (LCS) analyzed at a frequency of one per batch?	X			
2	Were LCSs spiked with appropriate list of target compounds?	X			
3	Were LCS percent recoveries within laboratory control limits?		X		1
4	Did the LCS percent recoveries affect the final results?		X		
5	If performed, was LCS Duplicate data provided?	X			1
6	Were the LCS/LCSD RPD values within laboratory control limits?			X	
Matrix Spikes					
1	Were MS/MSDs analyzed at a frequency of one per batch?	X			
	Sample used/methods: LF4-MW3				
2	Were MS/MSDs performed on a project sample selected by the laboratory?		X		
	Sample used/methods: LF4-MW3				
3	Were MS/MSDs spiked with appropriate list of target compounds?	X			
4	Were MS/MSD percent recoveries within laboratory control limits?		X		2
5	Did the MS/MSD percent recoveries affect the final results? If yes, narrate.		X		
6	Were the MS/MSD RPD values within laboratory control limits?			X	
7	Did the MS/MSD RPDs affect the final results?		X		

Data Validation Summary

Laboratory Name:	TALSAV				
Project Name:	LF4				
SDG:	680-231662-1				
Reviewer Name:	B. Van Pelt				
Parameters:	MET, ORG, STD, VOC				
Method IDs:	SW6020B, SW7470A, SW8260D	Rejected Results?			0
Matrix:	Groundwater				
Attach copy of lab report showing sample IDs and corresponding lab IDs (Att 1)		**Yes**	**No**	**N/A**	**Comment**
Field and Laboratory Duplicates					
1 Was a field duplicate submitted with this SDG?		X			
Field Duplicate ID:	LF4-MW5 (DUP411)				
2 Were the field sample RPD values less than review criteria? See Table C2		X			
3 Did the field duplicate RPD results affect the final results? If so, narrate.			X		
4 Was a laboratory method duplicate (MD) performed?			X		
MD ID:					
5 Did the field duplicate RPD results affect the final results?			X		
7 Did the MD results affect the final results?				X	
Other Laboratory QC Data					
1 Were internal standard data reported? (organics and inorganics by 6020)		X			
2 Were IS area counts and retention times within method required limits?		X			
3 If ICV/CCV was stated in the case narrative, did the ICV/CCV affect the project samples?			X		
4 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	LCS/LCSD batch 767173 had high recoveries for acetone, chloromethane, and vinyl actetate (LCS only). Analytes not detected in associated sample; Trip BLank - TB608. LCS/LCSD batch 767279 had high recoveries for bromomethane. Anaylte not detected in associated sample; DUP411. No quals.
2	LF4-MW3 MS/MSD had high recoveries for chloroethane. Not detected in the parent sample. No quals. Sodium recovery high in MSD, MS okay, no qual.
3	

Table C1 - Sample Index

Table C2 - Summary of Field Duplicate Relative Percent Differences

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

SiteName	Station	QCCode	Matrix	Sample Date	Lab	Delivery Group	LabSampleID	Method
LANDFILL 4	LF4-MW1	NS	WG	3/6/23	TALSAV	680-231662-1	680-231662-1	SW6020B
LANDFILL 4	LF4-MW1	NS	WG	3/6/23	TALSAV	680-231662-1	680-231662-1	SW7470A
LANDFILL 4	LF4-MW1	NS	WG	3/6/23	TALSAV	680-231662-1	680-231662-1	SW8260D
LANDFILL 4	LF4-MW2	NS	WG	3/6/23	TALSAV	680-231662-1	680-231662-2	SW6020B
LANDFILL 4	LF4-MW2	NS	WG	3/6/23	TALSAV	680-231662-1	680-231662-2	SW7470A
LANDFILL 4	LF4-MW2	NS	WG	3/6/23	TALSAV	680-231662-1	680-231662-2	SW8260D
LANDFILL 4	LF4-MW3	NS	WG	3/6/23	TALSAV	680-231662-1	680-231662-3	SW6020B
LANDFILL 4	LF4-MW3	NS	WG	3/6/23	TALSAV	680-231662-1	680-231662-3	SW7470A
LANDFILL 4	LF4-MW3	NS	WG	3/6/23	TALSAV	680-231662-1	680-231662-3	SW8260D
LANDFILL 4	LF4-MW3	MS	WG	3/6/23	TALSAV	680-231662-1	680-231662-3	SW6020B
LANDFILL 4	LF4-MW3	MS	WG	3/6/23	TALSAV	680-231662-1	680-231662-3	SW7470A
LANDFILL 4	LF4-MW3	MS	WG	3/6/23	TALSAV	680-231662-1	680-231662-3	SW8260D
LANDFILL 4	LF4-MW3	MSD	WG	3/6/23	TALSAV	680-231662-1	680-231662-3	SW6020B
LANDFILL 4	LF4-MW3	MSD	WG	3/6/23	TALSAV	680-231662-1	680-231662-3	SW7470A
LANDFILL 4	LF4-MW3	MSD	WG	3/6/23	TALSAV	680-231662-1	680-231662-3	SW8260D
LANDFILL 4	LF4-MW4	NS	WG	3/6/23	TALSAV	680-231662-1	680-231662-4	SW6020B
LANDFILL 4	LF4-MW4	NS	WG	3/6/23	TALSAV	680-231662-1	680-231662-4	SW7470A
LANDFILL 4	LF4-MW4	NS	WG	3/6/23	TALSAV	680-231662-1	680-231662-4	SW8260D
LANDFILL 4	LF4-MW5	NS	WG	3/6/23	TALSAV	680-231662-1	680-231662-5	SW6020B
LANDFILL 4	LF4-MW5	NS	WG	3/6/23	TALSAV	680-231662-1	680-231662-5	SW7470A
LANDFILL 4	LF4-MW5	NS	WG	3/6/23	TALSAV	680-231662-1	680-231662-5	SW8260D
LANDFILL 4	LF4-MW5	FD	WG	3/6/23	TALSAV	680-231662-1	680-231662-6	SW6020B
LANDFILL 4	LF4-MW5	FD	WG	3/6/23	TALSAV	680-231662-1	680-231662-6	SW7470A
LANDFILL 4	LF4-MW5	FD	WG	3/6/23	TALSAV	680-231662-1	680-231662-6	SW8260D
FIELD QC	TRIP BLANK	TB	W	3/6/23	TALSAV	680-231662-1	680-231662-7	SW8260D

Notes:
ID - Identification
QC - Quality Control
FD - Field duplicate
MS - Matrix spike
MSD - Matrix spike duplicate
NS - normal sample
TB - Trip blank
W - Water
WG - Ground water

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

Location	Parameter	NS Result	NS Flag	FD Result	FD Flag	RPD
LF4-MW5	Barium	19		21		10
LF4-MW5	Cobalt	4.2		4.2		0
LF4-MW5	Copper	2.1	J	2.5	J	17
LF4-MW5	Lead	3		3.2		6
LF4-MW5	Nickel	2.9	J	3	J	3
LF4-MW5	Vanadium	1.6	J	2.1	J	27
LF4-MW5	Zinc	6.1	J	6.8	J	11

Notes:
NS - Normal sample
FD - Field duplicate
RPD - Relative percent duplicate
J - Result is estimated. Detection is between the reporting limit and the method detection limit.

ATTACHMENT C1

Laboratory Data, March 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 3/16/2023 9:27:04 AM

JOB DESCRIPTION

Parcel 81(5), Landfill 4

JOB NUMBER

680-231662-1

Eurofins Savannah
5102 LaRoche Avenue
Savannah GA 31404

See page two for job notes and contact information.

Job Notes

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

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

Generated
3/16/2023 9:27:04 AM

Authorized for release by
Noel Savoie, Project Manager I
Noel.Savoie@et.eurofinsus.com
(850)254-0107

Definitions/Glossary

Client: Matrix Environmental Services, LLC
Job ID: 680-231662-1
Project/Site: Parcel 81(5), Landfill 4

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
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.

Metals

Qualifier	Qualifier Description
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: 680-231662-1
Project/Site: Parcel 81(5), Landfill 4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-231662-1	LF4-MW1	Water	03/06/23 11:45	03/09/23 10:00
680-231662-2	LF4-MW2	Water	03/06/23 13:15	03/09/23 10:00
680-231662-3	LF4-MW3	Water	03/06/23 14:40	03/09/23 10:00
680-231662-4	LF4-MW4	Water	03/06/23 16:00	03/09/23 10:00
680-231662-5	LF4-MW5	Water	03/06/23 10:20	03/09/23 10:00
680-231662-6	DUP411	Water	03/06/23 00:00	03/09/23 10:00
680-231662-7	TB608	Water	03/06/23 08:06	03/09/23 10:00

Job ID: 680-231662-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-231662-1

Receipt
The samples were received on 3/9/2023 10:00 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 4.1°C

GC/MS VOA
Method 8260D: The matrix spike/matrix spike duplicate (MS/MSD) recoveries for analytical batch 680-766723 were outside advisory control limits for Chloroethane. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8260D: The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) for analytical batches 680-767173 and 680-767279 recovered outside control limits for several analytes. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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 duplicate (MSD) recoveries for analytical batch 680-767251 were outside advisory control limits for Sodium. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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: 680-231662-1

Client Sample ID: LF4-MW1
Date Collected: 03/06/23 11:45
Date Received: 03/09/23 10:00

Lab Sample ID: 680-231662-1
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	10	3.7	ug/L			03/09/23 19:32	1
Acrylonitrile	5.5	U	20	5.5	ug/L			03/09/23 19:32	1
Benzene	0.27	U	1.0	0.27	ug/L			03/09/23 19:32	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			03/09/23 19:32	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			03/09/23 19:32	1
Bromoform	0.59	U	1.0	0.59	ug/L			03/09/23 19:32	1
Bromomethane	3.7	U	5.0	3.7	ug/L			03/09/23 19:32	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			03/09/23 19:32	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			03/09/23 19:32	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			03/09/23 19:32	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			03/09/23 19:32	1
Chloroethane	4.6	U	5.0	4.6	ug/L			03/09/23 19:32	1
Chloroform	0.27	U	1.0	0.27	ug/L			03/09/23 19:32	1
Chloromethane	0.54	U	1.0	0.54	ug/L			03/09/23 19:32	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			03/09/23 19:32	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			03/09/23 19:32	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			03/09/23 19:32	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			03/09/23 19:32	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/23 19:32	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/23 19:32	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			03/09/23 19:32	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			03/09/23 19:32	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/09/23 19:32	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			03/09/23 19:32	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			03/09/23 19:32	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			03/09/23 19:32	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			03/09/23 19:32	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			03/09/23 19:32	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			03/09/23 19:32	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			03/09/23 19:32	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			03/09/23 19:32	1
2-Hexanone	3.2	U	10	3.2	ug/L			03/09/23 19:32	1
Iodomethane	3.9	U	10	3.9	ug/L			03/09/23 19:32	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			03/09/23 19:32	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			03/09/23 19:32	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			03/09/23 19:32	1
Styrene	0.27	U	1.0	0.27	ug/L			03/09/23 19:32	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			03/09/23 19:32	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			03/09/23 19:32	1
Tetrachloroethylene	0.35	U	0.50	0.35	ug/L			03/09/23 19:32	1
Toluene	0.25	U	1.0	0.25	ug/L			03/09/23 19:32	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			03/09/23 19:32	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			03/09/23 19:32	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			03/09/23 19:32	1
Trichlorofluoromethane	0.33	U	1.0	0.33	ug/L			03/09/23 19:32	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			03/09/23 19:32	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			03/09/23 19:32	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			03/09/23 19:32	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			03/09/23 19:32	1

Client Sample ID: LF4-MW1

Lab Sample ID: 680-231662-1

Date Collected: 03/06/23 11:45

Matrix: Water

Date Received: 03/09/23 10:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*103*		*70 - 130*		*03/09/23 19:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*60 - 124*		*03/09/23 19:32*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*03/09/23 19:32*	*1*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*		*03/09/23 19:32*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**96**	**J**	100	35	ug/L		03/10/23 06:26	03/10/23 17:22	1
Antimony	0.34	U	5.0	0.34	ug/L		03/10/23 06:26	03/10/23 17:22	1
Arsenic	**4.4**		3.0	0.86	ug/L		03/10/23 06:26	03/10/23 17:22	1
Barium	**42**		5.0	0.89	ug/L		03/10/23 06:26	03/10/23 17:22	1
Beryllium	0.20	U	0.50	0.20	ug/L		03/10/23 06:26	03/10/23 17:22	1
Cadmium	**0.085**	**J**	0.50	0.078	ug/L		03/10/23 06:26	03/10/23 17:22	1
Calcium	**3300**		500	140	ug/L		03/10/23 06:26	03/10/23 17:22	1
Chromium	1.2	U	5.0	1.2	ug/L		03/10/23 06:26	03/10/23 17:22	1
Cobalt	**23**		0.50	0.22	ug/L		03/10/23 06:26	03/10/23 17:22	1
Copper	1.1	U	5.0	1.1	ug/L		03/10/23 06:26	03/10/23 17:22	1
Iron	**16000**		100	12	ug/L		03/10/23 06:26	03/10/23 17:22	1
Lead	**0.49**	**J**	2.5	0.21	ug/L		03/10/23 06:26	03/10/23 17:22	1
Magnesium	**1700**		250	23	ug/L		03/10/23 06:26	03/10/23 17:22	1
Manganese	**1400**		5.0	2.2	ug/L		03/10/23 06:26	03/10/23 17:22	1
Nickel	**18**		5.0	0.42	ug/L		03/10/23 06:26	03/10/23 17:22	1
Potassium	**3300**		1000	44	ug/L		03/10/23 06:26	03/10/23 17:22	1
Selenium	0.99	U	2.5	0.99	ug/L		03/10/23 06:26	03/10/23 17:22	1
Silver	0.39	U	1.0	0.39	ug/L		03/10/23 06:26	03/10/23 17:22	1
Sodium	**10000**		500	200	ug/L		03/10/23 06:26	03/10/23 17:22	1
Thallium	0.26	U	1.0	0.26	ug/L		03/10/23 06:26	03/10/23 17:22	1
Vanadium	0.63	U	10	0.63	ug/L		03/10/23 06:26	03/10/23 17:22	1
Zinc	**33**		20	2.8	ug/L		03/10/23 06:26	03/10/23 17:22	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		03/09/23 16:03	03/10/23 13:01	1

Client Sample ID: LF4-MW2

Lab Sample ID: 680-231662-2

Date Collected: 03/06/23 13:15

Matrix: Water

Date Received: 03/09/23 10:00

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			03/09/23 19:13	1
Acrylonitrile	5.5	U	20	5.5	ug/L			03/09/23 19:13	1
Benzene	0.27	U	1.0	0.27	ug/L			03/09/23 19:13	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			03/09/23 19:13	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			03/09/23 19:13	1
Bromoform	0.59	U	1.0	0.59	ug/L			03/09/23 19:13	1
Bromomethane	3.7	U	5.0	3.7	ug/L			03/09/23 19:13	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			03/09/23 19:13	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			03/09/23 19:13	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			03/09/23 19:13	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			03/09/23 19:13	1

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

Job ID: 680-231662-1

Client Sample ID: LF4-MW2
Date Collected: 03/06/23 13:15
Date Received: 03/09/23 10:00

Lab Sample ID: 680-231662-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	4.6	U	5.0	4.6	ug/L			03/09/23 19:13	1
Chloroform	0.27	U	1.0	0.27	ug/L			03/09/23 19:13	1
Chloromethane	0.54	U	1.0	0.54	ug/L			03/09/23 19:13	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			03/09/23 19:13	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			03/09/23 19:13	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			03/09/23 19:13	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			03/09/23 19:13	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/23 19:13	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/23 19:13	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			03/09/23 19:13	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			03/09/23 19:13	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/09/23 19:13	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			03/09/23 19:13	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			03/09/23 19:13	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			03/09/23 19:13	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			03/09/23 19:13	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			03/09/23 19:13	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			03/09/23 19:13	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			03/09/23 19:13	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			03/09/23 19:13	1
2-Hexanone	3.2	U	10	3.2	ug/L			03/09/23 19:13	1
Iodomethane	3.9	U	10	3.9	ug/L			03/09/23 19:13	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			03/09/23 19:13	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			03/09/23 19:13	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			03/09/23 19:13	1
Styrene	0.27	U	1.0	0.27	ug/L			03/09/23 19:13	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			03/09/23 19:13	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			03/09/23 19:13	1
Tetrachloroethylene	0.35	U	0.50	0.35	ug/L			03/09/23 19:13	1
Toluene	0.25	U	1.0	0.25	ug/L			03/09/23 19:13	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			03/09/23 19:13	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			03/09/23 19:13	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			03/09/23 19:13	1
Trichlorofluoromethane	0.33	U	1.0	0.33	ug/L			03/09/23 19:13	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			03/09/23 19:13	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			03/09/23 19:13	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			03/09/23 19:13	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			03/09/23 19:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*70 - 130*		*03/09/23 19:13*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*60 - 124*		*03/09/23 19:13*	*1*
Dibromofluoromethane (Surr)	*98*		*70 - 130*		*03/09/23 19:13*	*1*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*		*03/09/23 19:13*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**100**		100	35	ug/L		03/10/23 06:26	03/10/23 17:26	1
Antimony	0.34	U	5.0	0.34	ug/L		03/10/23 06:26	03/10/23 17:26	1
Arsenic	**2.1**	**J**	3.0	0.86	ug/L		03/10/23 06:26	03/10/23 17:26	1

Client Sample ID: LF4-MW2

Lab Sample ID: 680-231662-2

Date Collected: 03/06/23 13:15

Matrix: Water

Date Received: 03/09/23 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**68**		5.0	0.89	ug/L		03/10/23 06:26	03/10/23 17:26	1
Beryllium	**0.28**	**J**	0.50	0.20	ug/L		03/10/23 06:26	03/10/23 17:26	1
Cadmium	**0.34**	**J**	0.50	0.078	ug/L		03/10/23 06:26	03/10/23 17:26	1
Calcium	**38000**		500	140	ug/L		03/10/23 06:26	03/10/23 17:26	1
Chromium	**1.6**	**J**	5.0	1.2	ug/L		03/10/23 06:26	03/10/23 17:26	1
Cobalt	**92**		0.50	0.22	ug/L		03/10/23 06:26	03/10/23 17:26	1
Copper	**6.4**		5.0	1.1	ug/L		03/10/23 06:26	03/10/23 17:26	1
Iron	**22000**		100	12	ug/L		03/10/23 06:26	03/10/23 17:26	1
Lead	**4.6**		2.5	0.21	ug/L		03/10/23 06:26	03/10/23 17:26	1
Magnesium	**13000**		250	23	ug/L		03/10/23 06:26	03/10/23 17:26	1
Manganese	**1400**		5.0	2.2	ug/L		03/10/23 06:26	03/10/23 17:26	1
Nickel	**48**		5.0	0.42	ug/L		03/10/23 06:26	03/10/23 17:26	1
Potassium	**740**	**J**	1000	44	ug/L		03/10/23 06:26	03/10/23 17:26	1
Selenium	0.99	U	2.5	0.99	ug/L		03/10/23 06:26	03/10/23 17:26	1
Silver	0.39	U	1.0	0.39	ug/L		03/10/23 06:26	03/10/23 17:26	1
Sodium	**6900**		500	200	ug/L		03/10/23 06:26	03/10/23 17:26	1
Thallium	0.26	U	1.0	0.26	ug/L		03/10/23 06:26	03/10/23 17:26	1
Vanadium	0.63	U	10	0.63	ug/L		03/10/23 06:26	03/10/23 17:26	1
Zinc	**430**		20	2.8	ug/L		03/10/23 06:26	03/10/23 17:26	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		03/09/23 16:03	03/10/23 13:02	1

Client Sample ID: LF4-MW3

Lab Sample ID: 680-231662-3

Date Collected: 03/06/23 14:40

Matrix: Water

Date Received: 03/09/23 10:00

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			03/09/23 19:51	1
Acrylonitrile	5.5	U	20	5.5	ug/L			03/09/23 19:51	1
Benzene	0.27	U	1.0	0.27	ug/L			03/09/23 19:51	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			03/09/23 19:51	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			03/09/23 19:51	1
Bromoform	0.59	U	1.0	0.59	ug/L			03/09/23 19:51	1
Bromomethane	3.7	U	5.0	3.7	ug/L			03/09/23 19:51	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			03/09/23 19:51	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			03/09/23 19:51	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			03/09/23 19:51	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			03/09/23 19:51	1
Chloroethane	4.6	U F1	5.0	4.6	ug/L			03/09/23 19:51	1
Chloroform	0.27	U	1.0	0.27	ug/L			03/09/23 19:51	1
Chloromethane	0.54	U	1.0	0.54	ug/L			03/09/23 19:51	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			03/09/23 19:51	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			03/09/23 19:51	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			03/09/23 19:51	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			03/09/23 19:51	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/23 19:51	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/23 19:51	1

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

Job ID: 680-231662-1

Client Sample ID: LF4-MW3
Date Collected: 03/06/23 14:40
Date Received: 03/09/23 10:00

Lab Sample ID: 680-231662-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			03/09/23 19:51	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			03/09/23 19:51	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/09/23 19:51	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			03/09/23 19:51	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			03/09/23 19:51	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			03/09/23 19:51	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			03/09/23 19:51	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			03/09/23 19:51	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			03/09/23 19:51	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			03/09/23 19:51	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			03/09/23 19:51	1
2-Hexanone	3.2	U	10	3.2	ug/L			03/09/23 19:51	1
Iodomethane	3.9	U	10	3.9	ug/L			03/09/23 19:51	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			03/09/23 19:51	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			03/09/23 19:51	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			03/09/23 19:51	1
Styrene	0.27	U	1.0	0.27	ug/L			03/09/23 19:51	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			03/09/23 19:51	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			03/09/23 19:51	1
Tetrachloroethylene	0.35	U	0.50	0.35	ug/L			03/09/23 19:51	1
Toluene	0.25	U	1.0	0.25	ug/L			03/09/23 19:51	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			03/09/23 19:51	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			03/09/23 19:51	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			03/09/23 19:51	1
Trichlorofluoromethane	0.33	U	1.0	0.33	ug/L			03/09/23 19:51	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			03/09/23 19:51	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			03/09/23 19:51	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			03/09/23 19:51	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			03/09/23 19:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*70 - 130*		*03/09/23 19:51*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*60 - 124*		*03/09/23 19:51*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*03/09/23 19:51*	*1*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*		*03/09/23 19:51*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**180**		100	35	ug/L		03/10/23 06:26	03/10/23 17:02	1
Antimony	0.34	U	5.0	0.34	ug/L		03/10/23 06:26	03/10/23 17:02	1
Arsenic	0.86	U	3.0	0.86	ug/L		03/10/23 06:26	03/10/23 17:02	1
Barium	**54**		5.0	0.89	ug/L		03/10/23 06:26	03/10/23 17:02	1
Beryllium	**0.25**	**J**	0.50	0.20	ug/L		03/10/23 06:26	03/10/23 17:02	1
Cadmium	0.078	U	0.50	0.078	ug/L		03/10/23 06:26	03/10/23 17:02	1
Calcium	**3100**		500	140	ug/L		03/10/23 06:26	03/10/23 17:02	1
Chromium	1.2	U	5.0	1.2	ug/L		03/10/23 06:26	03/10/23 17:02	1
Cobalt	**2.1**		0.50	0.22	ug/L		03/10/23 06:26	03/10/23 17:02	1
Copper	**1.2**	**J**	5.0	1.1	ug/L		03/10/23 06:26	03/10/23 17:02	1
Iron	**120**		100	12	ug/L		03/10/23 06:26	03/10/23 17:02	1
Lead	**1.2**	**J**	2.5	0.21	ug/L		03/10/23 06:26	03/10/23 17:02	1

Client: Matrix Environmental Services, LLC
Job ID: 680-231662-1
Project/Site: Parcel 81(5), Landfill 4

Client Sample ID: LF4-MW3

Lab Sample ID: 680-231662-3
Date Collected: 03/06/23 14:40
Matrix: Water
Date Received: 03/09/23 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	**1600**		250	23	ug/L		03/10/23 06:26	03/10/23 17:02	1
Manganese	**78**		5.0	2.2	ug/L		03/10/23 06:26	03/10/23 17:02	1
Nickel	**2.7**	**J**	5.0	0.42	ug/L		03/10/23 06:26	03/10/23 17:02	1
Potassium	**780**	**J**	1000	44	ug/L		03/10/23 06:26	03/10/23 17:02	1
Selenium	0.99	U	2.5	0.99	ug/L		03/10/23 06:26	03/10/23 17:02	1
Silver	0.39	U	1.0	0.39	ug/L		03/10/23 06:26	03/10/23 17:02	1
Sodium	**8800**	**F1**	500	200	ug/L		03/10/23 06:26	03/10/23 17:02	1
Thallium	0.26	U	1.0	0.26	ug/L		03/10/23 06:26	03/10/23 17:02	1
Vanadium	0.63	U	10	0.63	ug/L		03/10/23 06:26	03/10/23 17:02	1
Zinc	**7.4**	**J**	20	2.8	ug/L		03/10/23 06:26	03/10/23 17:02	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		03/09/23 16:03	03/10/23 13:04	1

Client Sample ID: LF4-MW4

Lab Sample ID: 680-231662-4
Date Collected: 03/06/23 16:00
Matrix: Water
Date Received: 03/09/23 10:00

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			03/09/23 18:35	1
Acrylonitrile	5.5	U	20	5.5	ug/L			03/09/23 18:35	1
Benzene	0.27	U	1.0	0.27	ug/L			03/09/23 18:35	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			03/09/23 18:35	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			03/09/23 18:35	1
Bromoform	0.59	U	1.0	0.59	ug/L			03/09/23 18:35	1
Bromomethane	3.7	U	5.0	3.7	ug/L			03/09/23 18:35	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			03/09/23 18:35	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			03/09/23 18:35	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			03/09/23 18:35	1
Chlorobenzene	**0.75**	**J**	1.0	0.15	ug/L			03/09/23 18:35	1
Chloroethane	4.6	U	5.0	4.6	ug/L			03/09/23 18:35	1
Chloroform	0.27	U	1.0	0.27	ug/L			03/09/23 18:35	1
Chloromethane	0.54	U	1.0	0.54	ug/L			03/09/23 18:35	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			03/09/23 18:35	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			03/09/23 18:35	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			03/09/23 18:35	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			03/09/23 18:35	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/23 18:35	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/23 18:35	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			03/09/23 18:35	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			03/09/23 18:35	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/09/23 18:35	1
cis-1,2-Dichloroethene	**32**		1.0	0.25	ug/L			03/09/23 18:35	1
trans-1,2-Dichloroethene	**1.9**		1.0	0.34	ug/L			03/09/23 18:35	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			03/09/23 18:35	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			03/09/23 18:35	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			03/09/23 18:35	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			03/09/23 18:35	1

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

Job ID: 680-231662-1

Client Sample ID: LF4-MW4
Date Collected: 03/06/23 16:00
Date Received: 03/09/23 10:00

Lab Sample ID: 680-231662-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			03/09/23 18:35	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			03/09/23 18:35	1
2-Hexanone	3.2	U	10	3.2	ug/L			03/09/23 18:35	1
Iodomethane	3.9	U	10	3.9	ug/L			03/09/23 18:35	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			03/09/23 18:35	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			03/09/23 18:35	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			03/09/23 18:35	1
Styrene	0.27	U	1.0	0.27	ug/L			03/09/23 18:35	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			03/09/23 18:35	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			03/09/23 18:35	1
Tetrachloroethylene	0.35	U	0.50	0.35	ug/L			03/09/23 18:35	1
Toluene	0.25	U	1.0	0.25	ug/L			03/09/23 18:35	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			03/09/23 18:35	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			03/09/23 18:35	1
Trichloroethene	**9.7**		1.0	0.20	ug/L			03/09/23 18:35	1
Trichlorofluoromethane	0.33	U	1.0	0.33	ug/L			03/09/23 18:35	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			03/09/23 18:35	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			03/09/23 18:35	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			03/09/23 18:35	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			03/09/23 18:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*70 - 130*		*03/09/23 18:35*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*60 - 124*		*03/09/23 18:35*	*1*
Dibromofluoromethane (Surr)	*98*		*70 - 130*		*03/09/23 18:35*	*1*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*		*03/09/23 18:35*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	35	U	100	35	ug/L		03/10/23 06:26	03/10/23 17:30	1
Antimony	0.34	U	5.0	0.34	ug/L		03/10/23 06:26	03/10/23 17:30	1
Arsenic	**3.9**		3.0	0.86	ug/L		03/10/23 06:26	03/10/23 17:30	1
Barium	**130**		5.0	0.89	ug/L		03/10/23 06:26	03/10/23 17:30	1
Beryllium	0.20	U	0.50	0.20	ug/L		03/10/23 06:26	03/10/23 17:30	1
Cadmium	0.078	U	0.50	0.078	ug/L		03/10/23 06:26	03/10/23 17:30	1
Calcium	**76000**		500	140	ug/L		03/10/23 06:26	03/10/23 17:30	1
Chromium	1.2	U	5.0	1.2	ug/L		03/10/23 06:26	03/10/23 17:30	1
Cobalt	**3.2**		0.50	0.22	ug/L		03/10/23 06:26	03/10/23 17:30	1
Copper	1.1	U	5.0	1.1	ug/L		03/10/23 06:26	03/10/23 17:30	1
Iron	**5500**		100	12	ug/L		03/10/23 06:26	03/10/23 17:30	1
Lead	**1.6**	**J**	2.5	0.21	ug/L		03/10/23 06:26	03/10/23 17:30	1
Magnesium	**33000**		250	23	ug/L		03/10/23 06:26	03/10/23 17:30	1
Manganese	**2500**		5.0	2.2	ug/L		03/10/23 06:26	03/10/23 17:30	1
Nickel	**1.5**	**J**	5.0	0.42	ug/L		03/10/23 06:26	03/10/23 17:30	1
Potassium	**990**	**J**	1000	44	ug/L		03/10/23 06:26	03/10/23 17:30	1
Selenium	0.99	U	2.5	0.99	ug/L		03/10/23 06:26	03/10/23 17:30	1
Silver	0.39	U	1.0	0.39	ug/L		03/10/23 06:26	03/10/23 17:30	1
Sodium	**25000**		500	200	ug/L		03/10/23 06:26	03/10/23 17:30	1
Thallium	0.26	U	1.0	0.26	ug/L		03/10/23 06:26	03/10/23 17:30	1
Vanadium	**2.4**	**J**	10	0.63	ug/L		03/10/23 06:26	03/10/23 17:30	1

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

Job ID: 680-231662-1

Client Sample ID: LF4-MW4

Lab Sample ID: 680-231662-4

Date Collected: 03/06/23 16:00

Matrix: Water

Date Received: 03/09/23 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	2.8	U	20	2.8	ug/L		03/10/23 06:26	03/10/23 17:30	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		03/09/23 16:03	03/10/23 13:12	1

Client Sample ID: LF4-MW5

Lab Sample ID: 680-231662-5

Date Collected: 03/06/23 10:20

Matrix: Water

Date Received: 03/09/23 10:00

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			03/09/23 18:54	1
Acrylonitrile	5.5	U	20	5.5	ug/L			03/09/23 18:54	1
Benzene	0.27	U	1.0	0.27	ug/L			03/09/23 18:54	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			03/09/23 18:54	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			03/09/23 18:54	1
Bromoform	0.59	U	1.0	0.59	ug/L			03/09/23 18:54	1
Bromomethane	3.7	U	5.0	3.7	ug/L			03/09/23 18:54	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			03/09/23 18:54	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			03/09/23 18:54	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			03/09/23 18:54	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			03/09/23 18:54	1
Chloroethane	4.6	U	5.0	4.6	ug/L			03/09/23 18:54	1
Chloroform	0.27	U	1.0	0.27	ug/L			03/09/23 18:54	1
Chloromethane	0.54	U	1.0	0.54	ug/L			03/09/23 18:54	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			03/09/23 18:54	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			03/09/23 18:54	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			03/09/23 18:54	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			03/09/23 18:54	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/23 18:54	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/23 18:54	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			03/09/23 18:54	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			03/09/23 18:54	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/09/23 18:54	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			03/09/23 18:54	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			03/09/23 18:54	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			03/09/23 18:54	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			03/09/23 18:54	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			03/09/23 18:54	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			03/09/23 18:54	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			03/09/23 18:54	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			03/09/23 18:54	1
2-Hexanone	3.2	U	10	3.2	ug/L			03/09/23 18:54	1
Iodomethane	3.9	U	10	3.9	ug/L			03/09/23 18:54	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			03/09/23 18:54	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			03/09/23 18:54	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			03/09/23 18:54	1
Styrene	0.27	U	1.0	0.27	ug/L			03/09/23 18:54	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			03/09/23 18:54	1

Client Sample ID: LF4-MW5
Lab Sample ID: 680-231662-5

Date Collected: 03/06/23 10:20
Matrix: Water

Date Received: 03/09/23 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			03/09/23 18:54	1
Tetrachloroethylene	0.35	U	0.50	0.35	ug/L			03/09/23 18:54	1
Toluene	0.25	U	1.0	0.25	ug/L			03/09/23 18:54	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			03/09/23 18:54	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			03/09/23 18:54	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			03/09/23 18:54	1
Trichlorofluoromethane	0.33	U	1.0	0.33	ug/L			03/09/23 18:54	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			03/09/23 18:54	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			03/09/23 18:54	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			03/09/23 18:54	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			03/09/23 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*70 - 130*		*03/09/23 18:54*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*60 - 124*		*03/09/23 18:54*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*03/09/23 18:54*	*1*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*		*03/09/23 18:54*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**500**		100	35	ug/L		03/10/23 06:26	03/10/23 17:42	1
Antimony	0.34	U	5.0	0.34	ug/L		03/10/23 06:26	03/10/23 17:42	1
Arsenic	0.86	U	3.0	0.86	ug/L		03/10/23 06:26	03/10/23 17:42	1
Barium	**19**		5.0	0.89	ug/L		03/10/23 06:26	03/10/23 17:42	1
Beryllium	**0.22**	**J**	0.50	0.20	ug/L		03/10/23 06:26	03/10/23 17:42	1
Cadmium	0.078	U	0.50	0.078	ug/L		03/10/23 06:26	03/10/23 17:42	1
Calcium	**970**		500	140	ug/L		03/10/23 06:26	03/10/23 17:42	1
Chromium	1.2	U	5.0	1.2	ug/L		03/10/23 06:26	03/10/23 17:42	1
Cobalt	**4.2**		0.50	0.22	ug/L		03/10/23 06:26	03/10/23 17:42	1
Copper	**2.1**	**J**	5.0	1.1	ug/L		03/10/23 06:26	03/10/23 17:42	1
Iron	**500**		100	12	ug/L		03/10/23 06:26	03/10/23 17:42	1
Lead	**3.0**		2.5	0.21	ug/L		03/10/23 06:26	03/10/23 17:42	1
Magnesium	**900**		250	23	ug/L		03/10/23 06:26	03/10/23 17:42	1
Manganese	**120**		5.0	2.2	ug/L		03/10/23 06:26	03/10/23 17:42	1
Nickel	**2.9**	**J**	5.0	0.42	ug/L		03/10/23 06:26	03/10/23 17:42	1
Potassium	**900**	**J**	1000	44	ug/L		03/10/23 06:26	03/10/23 17:42	1
Selenium	0.99	U	2.5	0.99	ug/L		03/10/23 06:26	03/10/23 17:42	1
Silver	0.39	U	1.0	0.39	ug/L		03/10/23 06:26	03/10/23 17:42	1
Sodium	**1800**		500	200	ug/L		03/10/23 06:26	03/10/23 17:42	1
Thallium	0.26	U	1.0	0.26	ug/L		03/10/23 06:26	03/10/23 17:42	1
Vanadium	**1.6**	**J**	10	0.63	ug/L		03/10/23 06:26	03/10/23 17:42	1
Zinc	**6.1**	**J**	20	2.8	ug/L		03/10/23 06:26	03/10/23 17:42	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		03/09/23 16:03	03/10/23 13:13	1

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

Job ID: 680-231662-1

Client Sample ID: DUP411
Date Collected: 03/06/23 00:00
Date Received: 03/09/23 10:00

Lab Sample ID: 680-231662-6
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	10	3.7	ug/L			03/13/23 16:27	1
Acrylonitrile	5.5	U	20	5.5	ug/L			03/13/23 16:27	1
Benzene	0.27	U	1.0	0.27	ug/L			03/13/23 16:27	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			03/13/23 16:27	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			03/13/23 16:27	1
Bromoform	0.59	U	1.0	0.59	ug/L			03/13/23 16:27	1
Bromomethane	3.7	U *+	5.0	3.7	ug/L			03/13/23 16:27	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			03/13/23 16:27	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			03/13/23 16:27	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			03/13/23 16:27	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			03/13/23 16:27	1
Chloroethane	4.6	U	5.0	4.6	ug/L			03/13/23 16:27	1
Chloroform	0.27	U	1.0	0.27	ug/L			03/13/23 16:27	1
Chloromethane	0.54	U	1.0	0.54	ug/L			03/13/23 16:27	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			03/13/23 16:27	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			03/13/23 16:27	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			03/13/23 16:27	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			03/13/23 16:27	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/13/23 16:27	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/13/23 16:27	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			03/13/23 16:27	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			03/13/23 16:27	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/13/23 16:27	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			03/13/23 16:27	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			03/13/23 16:27	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			03/13/23 16:27	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			03/13/23 16:27	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			03/13/23 16:27	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			03/13/23 16:27	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			03/13/23 16:27	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			03/13/23 16:27	1
2-Hexanone	3.2	U	10	3.2	ug/L			03/13/23 16:27	1
Iodomethane	3.9	U	10	3.9	ug/L			03/13/23 16:27	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			03/13/23 16:27	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			03/13/23 16:27	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			03/13/23 16:27	1
Styrene	0.27	U	1.0	0.27	ug/L			03/13/23 16:27	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			03/13/23 16:27	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			03/13/23 16:27	1
Tetrachloroethylene	0.35	U	0.50	0.35	ug/L			03/13/23 16:27	1
Toluene	0.25	U	1.0	0.25	ug/L			03/13/23 16:27	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			03/13/23 16:27	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			03/13/23 16:27	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			03/13/23 16:27	1
Trichlorofluoromethane	0.33	U	1.0	0.33	ug/L			03/13/23 16:27	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			03/13/23 16:27	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			03/13/23 16:27	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			03/13/23 16:27	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			03/13/23 16:27	1

Client Sample ID: DUP411

Lab Sample ID: 680-231662-6

Date Collected: 03/06/23 00:00

Matrix: Water

Date Received: 03/09/23 10:00

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*90*		*70 - 130*		*03/13/23 16:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*60 - 124*		*03/13/23 16:27*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*03/13/23 16:27*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*03/13/23 16:27*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**710**		100	35	ug/L		03/10/23 06:26	03/10/23 17:46	1
Antimony	0.34	U	5.0	0.34	ug/L		03/10/23 06:26	03/10/23 17:46	1
Arsenic	0.86	U	3.0	0.86	ug/L		03/10/23 06:26	03/10/23 17:46	1
Barium	**21**		5.0	0.89	ug/L		03/10/23 06:26	03/10/23 17:46	1
Beryllium	0.20	U	0.50	0.20	ug/L		03/10/23 06:26	03/10/23 17:46	1
Cadmium	**0.11**	**J**	0.50	0.078	ug/L		03/10/23 06:26	03/10/23 17:46	1
Calcium	**1000**		500	140	ug/L		03/10/23 06:26	03/10/23 17:46	1
Chromium	1.2	U	5.0	1.2	ug/L		03/10/23 06:26	03/10/23 17:46	1
Cobalt	**4.2**		0.50	0.22	ug/L		03/10/23 06:26	03/10/23 17:46	1
Copper	**2.5**	**J**	5.0	1.1	ug/L		03/10/23 06:26	03/10/23 17:46	1
Iron	**730**		100	12	ug/L		03/10/23 06:26	03/10/23 17:46	1
Lead	**3.2**		2.5	0.21	ug/L		03/10/23 06:26	03/10/23 17:46	1
Magnesium	**920**		250	23	ug/L		03/10/23 06:26	03/10/23 17:46	1
Manganese	**120**		5.0	2.2	ug/L		03/10/23 06:26	03/10/23 17:46	1
Nickel	**3.0**	**J**	5.0	0.42	ug/L		03/10/23 06:26	03/10/23 17:46	1
Potassium	**920**	**J**	1000	44	ug/L		03/10/23 06:26	03/10/23 17:46	1
Selenium	0.99	U	2.5	0.99	ug/L		03/10/23 06:26	03/10/23 17:46	1
Silver	0.39	U	1.0	0.39	ug/L		03/10/23 06:26	03/10/23 17:46	1
Sodium	**1800**		500	200	ug/L		03/10/23 06:26	03/10/23 17:46	1
Thallium	0.26	U	1.0	0.26	ug/L		03/10/23 06:26	03/10/23 17:46	1
Vanadium	**2.1**	**J**	10	0.63	ug/L		03/10/23 06:26	03/10/23 17:46	1
Zinc	**6.8**	**J**	20	2.8	ug/L		03/10/23 06:26	03/10/23 17:46	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		03/09/23 16:03	03/10/23 13:15	1

Client Sample ID: TB608

Lab Sample ID: 680-231662-7

Date Collected: 03/06/23 08:06

Matrix: Water

Date Received: 03/09/23 10:00

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			03/12/23 18:13	1
Acrylonitrile	5.5	U	20	5.5	ug/L			03/12/23 18:13	1
Benzene	0.27	U	1.0	0.27	ug/L			03/12/23 18:13	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			03/12/23 18:13	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			03/12/23 18:13	1
Bromoform	0.59	U	1.0	0.59	ug/L			03/12/23 18:13	1
Bromomethane	3.7	U *-	5.0	3.7	ug/L			03/12/23 18:13	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			03/12/23 18:13	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			03/12/23 18:13	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			03/12/23 18:13	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			03/12/23 18:13	1

Client Sample ID: TB608
Date Collected: 03/06/23 08:06
Date Received: 03/09/23 10:00

Lab Sample ID: 680-231662-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	4.6	U *-	5.0	4.6	ug/L			03/12/23 18:13	1
Chloroform	0.27	U	1.0	0.27	ug/L			03/12/23 18:13	1
Chloromethane	0.54	U *+ *-	1.0	0.54	ug/L			03/12/23 18:13	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			03/12/23 18:13	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			03/12/23 18:13	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			03/12/23 18:13	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			03/12/23 18:13	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/12/23 18:13	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/12/23 18:13	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			03/12/23 18:13	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			03/12/23 18:13	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/12/23 18:13	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			03/12/23 18:13	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			03/12/23 18:13	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			03/12/23 18:13	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			03/12/23 18:13	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			03/12/23 18:13	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			03/12/23 18:13	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			03/12/23 18:13	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			03/12/23 18:13	1
2-Hexanone	3.2	U	10	3.2	ug/L			03/12/23 18:13	1
Iodomethane	3.9	U	10	3.9	ug/L			03/12/23 18:13	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			03/12/23 18:13	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			03/12/23 18:13	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			03/12/23 18:13	1
Styrene	0.27	U	1.0	0.27	ug/L			03/12/23 18:13	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			03/12/23 18:13	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			03/12/23 18:13	1
Tetrachloroethylene	0.35	U	0.50	0.35	ug/L			03/12/23 18:13	1
Toluene	0.25	U	1.0	0.25	ug/L			03/12/23 18:13	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			03/12/23 18:13	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			03/12/23 18:13	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			03/12/23 18:13	1
Trichlorofluoromethane	0.33	U *-	1.0	0.33	ug/L			03/12/23 18:13	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			03/12/23 18:13	1
Vinyl acetate	0.69	U *+	2.0	0.69	ug/L			03/12/23 18:13	1
Vinyl chloride	0.40	U *-	1.0	0.40	ug/L			03/12/23 18:13	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			03/12/23 18:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*70 - 130*		*03/12/23 18:13*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*60 - 124*		*03/12/23 18:13*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*03/12/23 18:13*	*1*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*		*03/12/23 18:13*	*1*

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

Job ID: 680-231662-1

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

Lab Sample ID: MB 680-766723/9
Matrix: Water
Analysis Batch: 766723

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			03/09/23 13:32	1
Acrylonitrile	5.5	U	20	5.5	ug/L			03/09/23 13:32	1
Benzene	0.27	U	1.0	0.27	ug/L			03/09/23 13:32	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			03/09/23 13:32	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			03/09/23 13:32	1
Bromoform	0.59	U	1.0	0.59	ug/L			03/09/23 13:32	1
Bromomethane	3.7	U	5.0	3.7	ug/L			03/09/23 13:32	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			03/09/23 13:32	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			03/09/23 13:32	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			03/09/23 13:32	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			03/09/23 13:32	1
Chloroethane	4.6	U	5.0	4.6	ug/L			03/09/23 13:32	1
Chloroform	0.27	U	1.0	0.27	ug/L			03/09/23 13:32	1
Chloromethane	0.54	U	1.0	0.54	ug/L			03/09/23 13:32	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			03/09/23 13:32	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			03/09/23 13:32	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			03/09/23 13:32	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			03/09/23 13:32	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/23 13:32	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/09/23 13:32	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			03/09/23 13:32	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			03/09/23 13:32	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/09/23 13:32	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			03/09/23 13:32	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			03/09/23 13:32	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			03/09/23 13:32	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			03/09/23 13:32	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			03/09/23 13:32	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			03/09/23 13:32	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			03/09/23 13:32	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			03/09/23 13:32	1
2-Hexanone	3.2	U	10	3.2	ug/L			03/09/23 13:32	1
Iodomethane	3.9	U	10	3.9	ug/L			03/09/23 13:32	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			03/09/23 13:32	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			03/09/23 13:32	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			03/09/23 13:32	1
Styrene	0.27	U	1.0	0.27	ug/L			03/09/23 13:32	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			03/09/23 13:32	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			03/09/23 13:32	1
Tetrachloroethylene	0.35	U	0.50	0.35	ug/L			03/09/23 13:32	1
Toluene	0.25	U	1.0	0.25	ug/L			03/09/23 13:32	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			03/09/23 13:32	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			03/09/23 13:32	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			03/09/23 13:32	1
Trichlorofluoromethane	0.33	U	1.0	0.33	ug/L			03/09/23 13:32	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			03/09/23 13:32	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			03/09/23 13:32	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			03/09/23 13:32	1

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

Lab Sample ID: MB 680-766723/9
Matrix: Water
Analysis Batch: 766723

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			03/09/23 13:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*70 - 130*		*03/09/23 13:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*60 - 124*		*03/09/23 13:32*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*03/09/23 13:32*	*1*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*		*03/09/23 13:32*	*1*

Lab Sample ID: LCS 680-766723/5
Matrix: Water
Analysis Batch: 766723

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	212		ug/L		85	67 - 120
Acrylonitrile	500	448		ug/L		90	70 - 130
Benzene	50.0	52.3		ug/L		105	70 - 130
Bromochloromethane	50.0	52.3		ug/L		105	70 - 130
Bromodichloromethane	50.0	51.3		ug/L		103	70 - 130
Bromoform	50.0	45.9		ug/L		92	69 - 129
Bromomethane	50.0	66.7		ug/L		133	28 - 192
2-Butanone (MEK)	250	184		ug/L		73	69 - 120
Carbon disulfide	50.0	50.5		ug/L		101	70 - 130
Carbon tetrachloride	50.0	52.4		ug/L		105	70 - 130
Chlorobenzene	50.0	50.8		ug/L		102	70 - 130
Chloroethane	50.0	79.7		ug/L		159	31 - 213
Chloroform	50.0	52.5		ug/L		105	70 - 130
Chloromethane	50.0	45.4		ug/L		91	59 - 127
Dibromochloromethane	50.0	49.1		ug/L		98	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	40.1		ug/L		80	70 - 130
1,2-Dibromoethane	50.0	50.6		ug/L		101	70 - 130
Dibromomethane	50.0	50.2		ug/L		100	70 - 130
1,2-Dichlorobenzene	50.0	50.3		ug/L		101	70 - 130
1,4-Dichlorobenzene	50.0	50.6		ug/L		101	70 - 130
trans-1,4-Dichloro-2-butene	50.0	44.1		ug/L		88	67 - 120
1,1-Dichloroethane	50.0	54.4		ug/L		109	70 - 130
1,2-Dichloroethane	50.0	52.5		ug/L		105	70 - 130
cis-1,2-Dichloroethene	50.0	53.5		ug/L		107	70 - 130
trans-1,2-Dichloroethene	50.0	52.1		ug/L		104	70 - 130
1,1-Dichloroethene	50.0	49.4		ug/L		99	70 - 130
1,2-Dichloropropane	50.0	54.0		ug/L		108	70 - 130
1,3-Dichloropropane	50.0	50.8		ug/L		102	70 - 130
cis-1,3-Dichloropropene	50.0	53.5		ug/L		107	70 - 130
trans-1,3-Dichloropropene	50.0	51.3		ug/L		103	70 - 130
Ethylbenzene	50.0	51.7		ug/L		103	70 - 130
2-Hexanone	250	232		ug/L		93	70 - 130
Iodomethane	50.0	55.8		ug/L		112	52 - 129
Methylene Chloride	50.0	52.5		ug/L		105	70 - 130
4-Methyl-2-pentanone (MIBK)	250	228		ug/L		91	68 - 120

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

Lab Sample ID: LCS 680-766723/5
Matrix: Water
Analysis Batch: 766723

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	44.8		ug/L		90	70 - 130
Styrene	50.0	53.1		ug/L		106	70 - 130
1,1,1,2-Tetrachloroethane	50.0	50.8		ug/L		102	70 - 130
1,1,2,2-Tetrachloroethane	50.0	42.9		ug/L		86	70 - 130
Tetrachloroethylene	50.0	52.5		ug/L		105	70 - 130
Toluene	50.0	54.6		ug/L		109	70 - 130
1,1,1-Trichloroethane	50.0	50.9		ug/L		102	70 - 130
1,1,2-Trichloroethane	50.0	49.0		ug/L		98	70 - 130
Trichloroethene	50.0	51.6		ug/L		103	70 - 130
Trichlorofluoromethane	50.0	40.7		ug/L		81	63 - 142
1,2,3-Trichloropropane	50.0	45.3		ug/L		91	70 - 130
Vinyl acetate	100	87.8		ug/L		88	67 - 135
Vinyl chloride	50.0	52.1		ug/L		104	66 - 129
Xylenes, Total	100	104		ug/L		104	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*108*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*104*		*60 - 124*
Dibromofluoromethane (Surr)	*106*		*70 - 130*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 680-766723/6
Matrix: Water
Analysis Batch: 766723

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	214		ug/L		86	67 - 120	1	30
Acrylonitrile	500	457		ug/L		91	70 - 130	2	30
Benzene	50.0	53.6		ug/L		107	70 - 130	3	30
Bromochloromethane	50.0	53.0		ug/L		106	70 - 130	1	30
Bromodichloromethane	50.0	51.5		ug/L		103	70 - 130	0	30
Bromoform	50.0	46.0		ug/L		92	69 - 129	0	30
Bromomethane	50.0	66.1		ug/L		132	28 - 192	1	30
2-Butanone (MEK)	250	190		ug/L		76	69 - 120	3	30
Carbon disulfide	50.0	50.8		ug/L		102	70 - 130	1	30
Carbon tetrachloride	50.0	52.1		ug/L		104	70 - 130	0	30
Chlorobenzene	50.0	51.7		ug/L		103	70 - 130	2	30
Chloroethane	50.0	78.2		ug/L		156	31 - 213	2	30
Chloroform	50.0	52.5		ug/L		105	70 - 130	0	30
Chloromethane	50.0	45.2		ug/L		90	59 - 127	0	30
Dibromochloromethane	50.0	50.3		ug/L		101	70 - 130	3	30
1,2-Dibromo-3-Chloropropane	50.0	41.5		ug/L		83	70 - 130	3	30
1,2-Dibromoethane	50.0	52.2		ug/L		104	70 - 130	3	30
Dibromomethane	50.0	50.3		ug/L		101	70 - 130	0	30
1,2-Dichlorobenzene	50.0	49.6		ug/L		99	70 - 130	2	30
1,4-Dichlorobenzene	50.0	50.0		ug/L		100	70 - 130	1	30
trans-1,4-Dichloro-2-butene	50.0	44.7		ug/L		89	67 - 120	1	30
1,1-Dichloroethane	50.0	55.2		ug/L		110	70 - 130	1	30

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

Lab Sample ID: LCSD 680-766723/6
Matrix: Water
Analysis Batch: 766723

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	53.2		ug/L		106	70 - 130	1	50
cis-1,2-Dichloroethene	50.0	53.7		ug/L		107	70 - 130	0	30
trans-1,2-Dichloroethene	50.0	52.7		ug/L		105	70 - 130	1	30
1,1-Dichloroethene	50.0	49.3		ug/L		99	70 - 130	0	20
1,2-Dichloropropane	50.0	54.6		ug/L		109	70 - 130	1	20
1,3-Dichloropropane	50.0	51.9		ug/L		104	70 - 130	2	20
cis-1,3-Dichloropropene	50.0	53.9		ug/L		108	70 - 130	1	20
trans-1,3-Dichloropropene	50.0	52.8		ug/L		106	70 - 130	3	30
Ethylbenzene	50.0	52.1		ug/L		104	70 - 130	1	20
2-Hexanone	250	238		ug/L		95	70 - 130	3	20
Iodomethane	50.0	56.2		ug/L		112	52 - 129	1	30
Methylene Chloride	50.0	51.8		ug/L		104	70 - 130	1	30
4-Methyl-2-pentanone (MIBK)	250	234		ug/L		94	68 - 120	3	30
Methyl tert-butyl ether	50.0	46.2		ug/L		92	70 - 130	3	30
Styrene	50.0	53.1		ug/L		106	70 - 130	0	30
1,1,1,2-Tetrachloroethane	50.0	51.6		ug/L		103	70 - 130	2	30
1,1,2,2-Tetrachloroethane	50.0	43.3		ug/L		87	70 - 130	1	30
Tetrachloroethylene	50.0	52.2		ug/L		104	70 - 130	0	30
Toluene	50.0	55.3		ug/L		111	70 - 130	1	30
1,1,1-Trichloroethane	50.0	51.8		ug/L		104	70 - 130	2	30
1,1,2-Trichloroethane	50.0	49.5		ug/L		99	70 - 130	1	30
Trichloroethene	50.0	52.3		ug/L		105	70 - 130	1	30
Trichlorofluoromethane	50.0	39.8		ug/L		80	63 - 142	2	30
1,2,3-Trichloropropane	50.0	45.4		ug/L		91	70 - 130	0	30
Vinyl acetate	100	93.0		ug/L		93	67 - 135	6	30
Vinyl chloride	50.0	51.4		ug/L		103	66 - 129	1	30
Xylenes, Total	100	103		ug/L		103	70 - 130	0	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*109*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*105*		*60 - 124*
Dibromofluoromethane (Surr)	*110*		*70 - 130*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 680-231662-3 MS
Matrix: Water
Analysis Batch: 766723

Client Sample ID: LF4-MW3 MS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	3.7	U	250	215		ug/L		86	67 - 120
Acrylonitrile	5.5	U	500	464		ug/L		93	70 - 130
Benzene	0.27	U	50.0	54.9		ug/L		110	70 - 130
Bromochloromethane	0.34	U	50.0	49.5		ug/L		99	70 - 130
Bromodichloromethane	0.25	U	50.0	51.6		ug/L		103	70 - 130
Bromoform	0.59	U	50.0	47.7		ug/L		95	69 - 129
Bromomethane	3.7	U	50.0	82.1		ug/L		164	28 - 192
2-Butanone (MEK)	6.4	U	250	224		ug/L		90	69 - 120
Carbon disulfide	0.43	U	50.0	51.6		ug/L		103	70 - 130

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

Job ID: 680-231662-1

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

Lab Sample ID: 680-231662-3 MS
Matrix: Water
Analysis Batch: 766723

Client Sample ID: LF4-MW3 MS
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	50.0	55.4		ug/L		111	70 - 130
Chlorobenzene	0.15	U	50.0	53.7		ug/L		107	70 - 130
Chloroethane	4.6	U F1	50.0	139	F1	ug/L		277	31 - 213
Chloroform	0.27	U	50.0	51.5		ug/L		103	70 - 130
Chloromethane	0.54	U	50.0	46.0		ug/L		92	59 - 127
Dibromochloromethane	0.39	U	50.0	49.8		ug/L		100	70 - 130
1,2-Dibromo-3-Chloropropane	1.8	U	50.0	42.1		ug/L		84	70 - 130
1,2-Dibromoethane	0.33	U	50.0	51.7		ug/L		103	70 - 130
Dibromomethane	0.34	U	50.0	49.8		ug/L		100	70 - 130
1,2-Dichlorobenzene	0.31	U	50.0	51.4		ug/L		103	70 - 130
1,4-Dichlorobenzene	0.31	U	50.0	52.4		ug/L		105	70 - 130
trans-1,4-Dichloro-2-butene	1.3	U	50.0	43.3		ug/L		87	67 - 120
1,1-Dichloroethane	0.33	U	50.0	54.1		ug/L		108	70 - 130
1,2-Dichloroethane	0.25	U	50.0	53.1		ug/L		106	70 - 130
cis-1,2-Dichloroethene	0.25	U	50.0	52.3		ug/L		105	70 - 130
trans-1,2-Dichloroethene	0.34	U	50.0	52.5		ug/L		105	70 - 130
1,1-Dichloroethene	0.33	U	50.0	51.5		ug/L		103	70 - 130
1,2-Dichloropropane	0.22	U	50.0	55.4		ug/L		111	70 - 130
1,3-Dichloropropane	0.36	U	50.0	52.1		ug/L		104	70 - 130
cis-1,3-Dichloropropene	0.26	U	50.0	53.4		ug/L		107	70 - 130
trans-1,3-Dichloropropene	0.23	U	50.0	51.0		ug/L		102	70 - 130
Ethylbenzene	0.20	U	50.0	55.0		ug/L		110	70 - 130
2-Hexanone	3.2	U	250	251		ug/L		100	70 - 130
Iodomethane	3.9	U	50.0	49.2		ug/L		98	52 - 129
Methylene Chloride	3.2	U	50.0	49.8		ug/L		100	70 - 130
4-Methyl-2-pentanone (MIBK)	2.7	U	250	257		ug/L		103	68 - 120
Methyl tert-butyl ether	0.81	U	50.0	48.6		ug/L		97	70 - 130
Styrene	0.27	U	50.0	54.2		ug/L		108	70 - 130
1,1,1,2-Tetrachloroethane	0.36	U	50.0	54.5		ug/L		109	70 - 130
1,1,2,2-Tetrachloroethane	0.40	U	50.0	45.1		ug/L		90	70 - 130
Tetrachloroethylene	0.35	U	50.0	54.8		ug/L		110	70 - 130
Toluene	0.25	U	50.0	55.5		ug/L		111	70 - 130
1,1,1-Trichloroethane	0.21	U	50.0	53.6		ug/L		107	70 - 130
1,1,2-Trichloroethane	0.32	U	50.0	50.9		ug/L		102	70 - 130
Trichloroethene	0.20	U	50.0	54.8		ug/L		110	70 - 130
Trichlorofluoromethane	0.33	U	50.0	54.3		ug/L		109	63 - 142
1,2,3-Trichloropropane	0.48	U	50.0	47.8		ug/L		96	70 - 130
Vinyl acetate	0.69	U	100	92.8		ug/L		93	67 - 135
Vinyl chloride	0.40	U	50.0	52.3		ug/L		105	66 - 129
Xylenes, Total	0.23	U	100	107		ug/L		107	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*111*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*105*		*60 - 124*
Dibromofluoromethane (Surr)	*106*		*70 - 130*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*

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

Lab Sample ID: 680-231662-3 MSD
Matrix: Water
Analysis Batch: 766723

Client Sample ID: LF4-MW3 MSD
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	250	190		ug/L		76	67 - 120	12	30
Acrylonitrile	5.5	U	500	420		ug/L		84	70 - 130	10	30
Benzene	0.27	U	50.0	53.0		ug/L		106	70 - 130	4	30
Bromochloromethane	0.34	U	50.0	48.7		ug/L		97	70 - 130	2	30
Bromodichloromethane	0.25	U	50.0	50.6		ug/L		101	70 - 130	2	30
Bromoform	0.59	U	50.0	45.8		ug/L		92	69 - 129	4	30
Bromomethane	3.7	U	50.0	84.4		ug/L		169	28 - 192	3	30
2-Butanone (MEK)	6.4	U	250	195		ug/L		78	69 - 120	14	30
Carbon disulfide	0.43	U	50.0	50.7		ug/L		101	70 - 130	2	30
Carbon tetrachloride	0.30	U	50.0	54.3		ug/L		109	70 - 130	2	30
Chlorobenzene	0.15	U	50.0	51.6		ug/L		103	70 - 130	4	30
Chloroethane	4.6	U F1	50.0	111	F1	ug/L		221	31 - 213	22	30
Chloroform	0.27	U	50.0	50.0		ug/L		100	70 - 130	3	30
Chloromethane	0.54	U	50.0	45.8		ug/L		92	59 - 127	0	30
Dibromochloromethane	0.39	U	50.0	48.5		ug/L		97	70 - 130	3	30
1,2-Dibromo-3-Chloropropane	1.8	U	50.0	40.4		ug/L		81	70 - 130	4	30
1,2-Dibromoethane	0.33	U	50.0	50.8		ug/L		102	70 - 130	2	30
Dibromomethane	0.34	U	50.0	47.8		ug/L		96	70 - 130	4	30
1,2-Dichlorobenzene	0.31	U	50.0	50.2		ug/L		100	70 - 130	2	30
1,4-Dichlorobenzene	0.31	U	50.0	51.0		ug/L		102	70 - 130	3	30
trans-1,4-Dichloro-2-butene	1.3	U	50.0	40.2		ug/L		80	67 - 120	7	30
1,1-Dichloroethane	0.33	U	50.0	53.2		ug/L		106	70 - 130	2	30
1,2-Dichloroethane	0.25	U	50.0	50.8		ug/L		102	70 - 130	4	50
cis-1,2-Dichloroethene	0.25	U	50.0	51.2		ug/L		102	70 - 130	2	30
trans-1,2-Dichloroethene	0.34	U	50.0	51.5		ug/L		103	70 - 130	2	30
1,1-Dichloroethene	0.33	U	50.0	49.7		ug/L		99	70 - 130	4	20
1,2-Dichloropropane	0.22	U	50.0	54.9		ug/L		110	70 - 130	1	20
1,3-Dichloropropane	0.36	U	50.0	51.0		ug/L		102	70 - 130	2	20
cis-1,3-Dichloropropene	0.26	U	50.0	52.1		ug/L		104	70 - 130	3	20
trans-1,3-Dichloropropene	0.23	U	50.0	50.0		ug/L		100	70 - 130	2	30
Ethylbenzene	0.20	U	50.0	52.5		ug/L		105	70 - 130	5	20
2-Hexanone	3.2	U	250	232		ug/L		93	70 - 130	8	20
Iodomethane	3.9	U	50.0	51.9		ug/L		104	52 - 129	5	30
Methylene Chloride	3.2	U	50.0	48.9		ug/L		98	70 - 130	2	30
4-Methyl-2-pentanone (MIBK)	2.7	U	250	238		ug/L		95	68 - 120	7	30
Methyl tert-butyl ether	0.81	U	50.0	47.0		ug/L		94	70 - 130	3	30
Styrene	0.27	U	50.0	51.9		ug/L		104	70 - 130	4	30
1,1,1,2-Tetrachloroethane	0.36	U	50.0	52.3		ug/L		105	70 - 130	4	30
1,1,2,2-Tetrachloroethane	0.40	U	50.0	43.3		ug/L		87	70 - 130	4	30
Tetrachloroethylene	0.35	U	50.0	53.7		ug/L		107	70 - 130	2	30
Toluene	0.25	U	50.0	53.9		ug/L		108	70 - 130	3	30
1,1,1-Trichloroethane	0.21	U	50.0	52.3		ug/L		105	70 - 130	2	30
1,1,2-Trichloroethane	0.32	U	50.0	49.6		ug/L		99	70 - 130	3	30
Trichloroethene	0.20	U	50.0	53.4		ug/L		107	70 - 130	3	30
Trichlorofluoromethane	0.33	U	50.0	52.5		ug/L		105	63 - 142	3	30
1,2,3-Trichloropropane	0.48	U	50.0	45.4		ug/L		91	70 - 130	5	30
Vinyl acetate	0.69	U	100	86.1		ug/L		86	67 - 135	7	30
Vinyl chloride	0.40	U	50.0	51.7		ug/L		103	66 - 129	1	30

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

Lab Sample ID: 680-231662-3 MSD
Matrix: Water
Analysis Batch: 766723

Client Sample ID: LF4-MW3 MSD
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	102		ug/L		102	70 - 130	4	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*108*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*101*		*60 - 124*
Dibromofluoromethane (Surr)	*101*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LB 680-766762/1-A
Matrix: Water
Analysis Batch: 767173

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

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	74	U	200	74	ug/L			03/12/23 21:02	20
Acrylonitrile	110	U	400	110	ug/L			03/12/23 21:02	20
Benzene	5.4	U	20	5.4	ug/L			03/12/23 21:02	20
Bromochloromethane	6.8	U	20	6.8	ug/L			03/12/23 21:02	20
Bromodichloromethane	5.0	U	20	5.0	ug/L			03/12/23 21:02	20
Bromoform	12	U	20	12	ug/L			03/12/23 21:02	20
Bromomethane	74	U	100	74	ug/L			03/12/23 21:02	20
2-Butanone (MEK)	130	U	200	130	ug/L			03/12/23 21:02	20
Carbon disulfide	8.6	U	40	8.6	ug/L			03/12/23 21:02	20
Carbon tetrachloride	6.0	U	20	6.0	ug/L			03/12/23 21:02	20
Chlorobenzene	3.0	U	20	3.0	ug/L			03/12/23 21:02	20
Chloroethane	92	U	100	92	ug/L			03/12/23 21:02	20
Chloroform	5.4	U	20	5.4	ug/L			03/12/23 21:02	20
Chloromethane	11	U	20	11	ug/L			03/12/23 21:02	20
Dibromochloromethane	7.8	U	20	7.8	ug/L			03/12/23 21:02	20
1,2-Dibromo-3-Chloropropane	36	U	100	36	ug/L			03/12/23 21:02	20
1,2-Dibromoethane	6.6	U	20	6.6	ug/L			03/12/23 21:02	20
Dibromomethane	6.8	U	20	6.8	ug/L			03/12/23 21:02	20
1,2-Dichlorobenzene	6.2	U	20	6.2	ug/L			03/12/23 21:02	20
1,4-Dichlorobenzene	6.2	U	20	6.2	ug/L			03/12/23 21:02	20
trans-1,4-Dichloro-2-butene	25	U	40	25	ug/L			03/12/23 21:02	20
1,1-Dichloroethane	6.6	U	20	6.6	ug/L			03/12/23 21:02	20
1,2-Dichloroethane	5.0	U	20	5.0	ug/L			03/12/23 21:02	20
cis-1,2-Dichloroethene	5.0	U	20	5.0	ug/L			03/12/23 21:02	20
trans-1,2-Dichloroethene	6.8	U	20	6.8	ug/L			03/12/23 21:02	20
1,1-Dichloroethene	6.6	U	20	6.6	ug/L			03/12/23 21:02	20
1,2-Dichloropropane	4.4	U	20	4.4	ug/L			03/12/23 21:02	20
1,3-Dichloropropane	7.2	U	20	7.2	ug/L			03/12/23 21:02	20
cis-1,3-Dichloropropene	5.2	U	20	5.2	ug/L			03/12/23 21:02	20
trans-1,3-Dichloropropene	4.6	U	20	4.6	ug/L			03/12/23 21:02	20
Ethylbenzene	4.0	U	20	4.0	ug/L			03/12/23 21:02	20
2-Hexanone	64	U	200	64	ug/L			03/12/23 21:02	20
Iodomethane	78	U	200	78	ug/L			03/12/23 21:02	20
Methylene Chloride	64	U	100	64	ug/L			03/12/23 21:02	20
4-Methyl-2-pentanone (MIBK)	54	U	200	54	ug/L			03/12/23 21:02	20

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

Lab Sample ID: LB 680-766762/1-A
Matrix: Water
Analysis Batch: 767173

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

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	16	U	100	16	ug/L			03/12/23 21:02	20
Styrene	5.4	U	20	5.4	ug/L			03/12/23 21:02	20
1,1,1,2-Tetrachloroethane	7.2	U	20	7.2	ug/L			03/12/23 21:02	20
1,1,2,2-Tetrachloroethane	8.0	U	20	8.0	ug/L			03/12/23 21:02	20
Tetrachloroethylene	7.0	U	10	7.0	ug/L			03/12/23 21:02	20
Toluene	5.0	U	20	5.0	ug/L			03/12/23 21:02	20
1,1,1-Trichloroethane	4.2	U	20	4.2	ug/L			03/12/23 21:02	20
1,1,2-Trichloroethane	6.4	U	20	6.4	ug/L			03/12/23 21:02	20
Trichloroethene	4.0	U	20	4.0	ug/L			03/12/23 21:02	20
Trichlorofluoromethane	6.6	U	20	6.6	ug/L			03/12/23 21:02	20
1,2,3-Trichloropropane	9.6	U	20	9.6	ug/L			03/12/23 21:02	20
Vinyl acetate	14	U	40	14	ug/L			03/12/23 21:02	20
Vinyl chloride	8.0	U	20	8.0	ug/L			03/12/23 21:02	20
Xylenes, Total	4.6	U	20	4.6	ug/L			03/12/23 21:02	20

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*70 - 130*		*03/12/23 21:02*	*20*
1,2-Dichloroethane-d4 (Surr)	*89*		*60 - 124*		*03/12/23 21:02*	*20*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*03/12/23 21:02*	*20*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*		*03/12/23 21:02*	*20*

Lab Sample ID: MB 680-767173/8
Matrix: Water
Analysis Batch: 767173

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			03/12/23 17:34	1
Acrylonitrile	5.5	U	20	5.5	ug/L			03/12/23 17:34	1
Benzene	0.27	U	1.0	0.27	ug/L			03/12/23 17:34	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			03/12/23 17:34	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			03/12/23 17:34	1
Bromoform	0.59	U	1.0	0.59	ug/L			03/12/23 17:34	1
Bromomethane	3.7	U	5.0	3.7	ug/L			03/12/23 17:34	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			03/12/23 17:34	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			03/12/23 17:34	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			03/12/23 17:34	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			03/12/23 17:34	1
Chloroethane	4.6	U	5.0	4.6	ug/L			03/12/23 17:34	1
Chloroform	0.27	U	1.0	0.27	ug/L			03/12/23 17:34	1
Chloromethane	0.54	U	1.0	0.54	ug/L			03/12/23 17:34	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			03/12/23 17:34	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			03/12/23 17:34	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			03/12/23 17:34	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			03/12/23 17:34	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/12/23 17:34	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/12/23 17:34	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			03/12/23 17:34	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			03/12/23 17:34	1

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

Lab Sample ID: MB 680-767173/8
Matrix: Water
Analysis Batch: 767173

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/12/23 17:34	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			03/12/23 17:34	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			03/12/23 17:34	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			03/12/23 17:34	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			03/12/23 17:34	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			03/12/23 17:34	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			03/12/23 17:34	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			03/12/23 17:34	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			03/12/23 17:34	1
2-Hexanone	3.2	U	10	3.2	ug/L			03/12/23 17:34	1
Iodomethane	3.9	U	10	3.9	ug/L			03/12/23 17:34	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			03/12/23 17:34	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			03/12/23 17:34	1
Methyl tert-butyl ether	0.81	U	5.0	0.81	ug/L			03/12/23 17:34	1
Styrene	0.27	U	1.0	0.27	ug/L			03/12/23 17:34	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			03/12/23 17:34	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			03/12/23 17:34	1
Tetrachloroethylene	0.35	U	0.50	0.35	ug/L			03/12/23 17:34	1
Toluene	0.25	U	1.0	0.25	ug/L			03/12/23 17:34	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			03/12/23 17:34	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			03/12/23 17:34	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			03/12/23 17:34	1
Trichlorofluoromethane	0.33	U	1.0	0.33	ug/L			03/12/23 17:34	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			03/12/23 17:34	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			03/12/23 17:34	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			03/12/23 17:34	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			03/12/23 17:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*70 - 130*		*03/12/23 17:34*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*60 - 124*		*03/12/23 17:34*	*1*
Dibromofluoromethane (Surr)	*94*		*70 - 130*		*03/12/23 17:34*	*1*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*		*03/12/23 17:34*	*1*

Lab Sample ID: LCS 680-767173/4
Matrix: Water
Analysis Batch: 767173

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	309	*+	ug/L		124	67 - 120
Acrylonitrile	500	578		ug/L		116	70 - 130
Benzene	50.0	50.7		ug/L		101	70 - 130
Bromochloromethane	50.0	54.9		ug/L		110	70 - 130
Bromodichloromethane	50.0	51.5		ug/L		103	70 - 130
Bromoform	50.0	53.7		ug/L		107	69 - 129
Bromomethane	50.0	79.1		ug/L		158	28 - 192
2-Butanone (MEK)	250	292		ug/L		117	69 - 120
Carbon disulfide	50.0	52.2		ug/L		104	70 - 130

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

Lab Sample ID: LCS 680-767173/4
Matrix: Water
Analysis Batch: 767173

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Carbon tetrachloride	50.0	52.2		ug/L		104	70 - 130
Chlorobenzene	50.0	51.3		ug/L		103	70 - 130
Chloroethane	50.0	105		ug/L		210	31 - 213
Chloroform	50.0	53.7		ug/L		107	70 - 130
Chloromethane	50.0	66.0	*+	ug/L		132	59 - 127
Dibromochloromethane	50.0	53.0		ug/L		106	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	56.2		ug/L		112	70 - 130
1,2-Dibromoethane	50.0	54.8		ug/L		110	70 - 130
Dibromomethane	50.0	52.2		ug/L		104	70 - 130
1,2-Dichlorobenzene	50.0	52.0		ug/L		104	70 - 130
1,4-Dichlorobenzene	50.0	50.3		ug/L		101	70 - 130
trans-1,4-Dichloro-2-butene	50.0	48.6		ug/L		97	67 - 120
1,1-Dichloroethane	50.0	54.6		ug/L		109	70 - 130
1,2-Dichloroethane	50.0	51.6		ug/L		103	70 - 130
cis-1,2-Dichloroethene	50.0	55.3		ug/L		111	70 - 130
trans-1,2-Dichloroethene	50.0	55.4		ug/L		111	70 - 130
1,1-Dichloroethene	50.0	53.8		ug/L		108	70 - 130
1,2-Dichloropropane	50.0	52.3		ug/L		105	70 - 130
1,3-Dichloropropane	50.0	52.3		ug/L		105	70 - 130
cis-1,3-Dichloropropene	50.0	54.7		ug/L		109	70 - 130
trans-1,3-Dichloropropene	50.0	54.1		ug/L		108	70 - 130
Ethylbenzene	50.0	52.1		ug/L		104	70 - 130
2-Hexanone	250	298		ug/L		119	70 - 130
Iodomethane	50.0	58.7		ug/L		117	52 - 129
Methylene Chloride	50.0	51.9		ug/L		104	70 - 130
4-Methyl-2-pentanone (MIBK)	250	283		ug/L		113	68 - 120
Methyl tert-butyl ether	50.0	57.0		ug/L		114	70 - 130
Styrene	50.0	54.9		ug/L		110	70 - 130
1,1,1,2-Tetrachloroethane	50.0	51.2		ug/L		102	70 - 130
1,1,2,2-Tetrachloroethane	50.0	51.7		ug/L		103	70 - 130
Tetrachloroethylene	50.0	51.1		ug/L		102	70 - 130
Toluene	50.0	52.9		ug/L		106	70 - 130
1,1,1-Trichloroethane	50.0	52.5		ug/L		105	70 - 130
1,1,2-Trichloroethane	50.0	52.0		ug/L		104	70 - 130
Trichloroethene	50.0	51.5		ug/L		103	70 - 130
Trichlorofluoromethane	50.0	54.6		ug/L		109	63 - 142
1,2,3-Trichloropropane	50.0	52.5		ug/L		105	70 - 130
Vinyl acetate	100	139	*+	ug/L		139	67 - 135
Vinyl chloride	50.0	56.1		ug/L		112	66 - 129
Xylenes, Total	100	102		ug/L		102	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*104*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*97*		*60 - 124*
Dibromofluoromethane (Surr)	*103*		*70 - 130*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*

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

Lab Sample ID: LCSD 680-767173/5
Matrix: Water
Analysis Batch: 767173

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	326	*+	ug/L		130	67 - 120	5	30
Acrylonitrile	500	595		ug/L		119	70 - 130	3	30
Benzene	50.0	50.6		ug/L		101	70 - 130	0	30
Bromochloromethane	50.0	53.0		ug/L		106	70 - 130	4	30
Bromodichloromethane	50.0	52.2		ug/L		104	70 - 130	1	30
Bromoform	50.0	54.1		ug/L		108	69 - 129	1	30
Bromomethane	50.0	77.1		ug/L		154	28 - 192	3	30
2-Butanone (MEK)	250	291		ug/L		116	69 - 120	0	30
Carbon disulfide	50.0	51.3		ug/L		103	70 - 130	2	30
Carbon tetrachloride	50.0	51.4		ug/L		103	70 - 130	2	30
Chlorobenzene	50.0	51.5		ug/L		103	70 - 130	0	30
Chloroethane	50.0	105		ug/L		210	31 - 213	0	30
Chloroform	50.0	49.9		ug/L		100	70 - 130	7	30
Chloromethane	50.0	65.0	*+	ug/L		130	59 - 127	2	30
Dibromochloromethane	50.0	53.1		ug/L		106	70 - 130	0	30
1,2-Dibromo-3-Chloropropane	50.0	57.4		ug/L		115	70 - 130	2	30
1,2-Dibromoethane	50.0	54.7		ug/L		109	70 - 130	0	30
Dibromomethane	50.0	52.1		ug/L		104	70 - 130	0	30
1,2-Dichlorobenzene	50.0	51.4		ug/L		103	70 - 130	1	30
1,4-Dichlorobenzene	50.0	49.3		ug/L		99	70 - 130	2	30
trans-1,4-Dichloro-2-butene	50.0	50.2		ug/L		100	67 - 120	3	30
1,1-Dichloroethane	50.0	54.6		ug/L		109	70 - 130	0	30
1,2-Dichloroethane	50.0	52.3		ug/L		105	70 - 130	1	50
cis-1,2-Dichloroethene	50.0	54.2		ug/L		108	70 - 130	2	30
trans-1,2-Dichloroethene	50.0	55.1		ug/L		110	70 - 130	0	30
1,1-Dichloroethene	50.0	53.5		ug/L		107	70 - 130	1	20
1,2-Dichloropropane	50.0	52.7		ug/L		105	70 - 130	1	20
1,3-Dichloropropane	50.0	53.1		ug/L		106	70 - 130	2	20
cis-1,3-Dichloropropene	50.0	54.5		ug/L		109	70 - 130	0	20
trans-1,3-Dichloropropene	50.0	54.8		ug/L		110	70 - 130	1	30
Ethylbenzene	50.0	51.6		ug/L		103	70 - 130	1	20
2-Hexanone	250	301		ug/L		120	70 - 130	1	20
Iodomethane	50.0	58.2		ug/L		116	52 - 129	1	30
Methylene Chloride	50.0	52.3		ug/L		105	70 - 130	1	30
4-Methyl-2-pentanone (MIBK)	250	289		ug/L		116	68 - 120	2	30
Methyl tert-butyl ether	50.0	57.7		ug/L		115	70 - 130	1	30
Styrene	50.0	54.3		ug/L		109	70 - 130	1	30
1,1,1,2-Tetrachloroethane	50.0	51.3		ug/L		103	70 - 130	0	30
1,1,2,2-Tetrachloroethane	50.0	52.4		ug/L		105	70 - 130	1	30
Tetrachloroethylene	50.0	50.8		ug/L		102	70 - 130	1	30
Toluene	50.0	53.0		ug/L		106	70 - 130	0	30
1,1,1-Trichloroethane	50.0	49.9		ug/L		100	70 - 130	5	30
1,1,2-Trichloroethane	50.0	52.3		ug/L		105	70 - 130	1	30
Trichloroethene	50.0	52.0		ug/L		104	70 - 130	1	30
Trichlorofluoromethane	50.0	53.9		ug/L		108	63 - 142	1	30
1,2,3-Trichloropropane	50.0	53.0		ug/L		106	70 - 130	1	30
Vinyl acetate	100	134		ug/L		134	67 - 135	3	30
Vinyl chloride	50.0	54.4		ug/L		109	66 - 129	3	30

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

Lab Sample ID: LCSD 680-767173/5
Matrix: Water
Analysis Batch: 767173

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
Xylenes, Total			100	102		ug/L		102	70 - 130	0	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*104*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*98*		*60 - 124*
Dibromofluoromethane (Surr)	*101*		*70 - 130*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: MB 680-767279/9
Matrix: Water
Analysis Batch: 767279

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			03/13/23 13:42	1
Acrylonitrile	5.5	U	20	5.5	ug/L			03/13/23 13:42	1
Benzene	0.27	U	1.0	0.27	ug/L			03/13/23 13:42	1
Bromochloromethane	0.34	U	1.0	0.34	ug/L			03/13/23 13:42	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			03/13/23 13:42	1
Bromoform	0.59	U	1.0	0.59	ug/L			03/13/23 13:42	1
Bromomethane	3.7	U	5.0	3.7	ug/L			03/13/23 13:42	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			03/13/23 13:42	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			03/13/23 13:42	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			03/13/23 13:42	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			03/13/23 13:42	1
Chloroethane	4.6	U	5.0	4.6	ug/L			03/13/23 13:42	1
Chloroform	0.27	U	1.0	0.27	ug/L			03/13/23 13:42	1
Chloromethane	0.54	U	1.0	0.54	ug/L			03/13/23 13:42	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			03/13/23 13:42	1
1,2-Dibromo-3-Chloropropane	1.8	U	5.0	1.8	ug/L			03/13/23 13:42	1
1,2-Dibromoethane	0.33	U	1.0	0.33	ug/L			03/13/23 13:42	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			03/13/23 13:42	1
1,2-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/13/23 13:42	1
1,4-Dichlorobenzene	0.31	U	1.0	0.31	ug/L			03/13/23 13:42	1
trans-1,4-Dichloro-2-butene	1.3	U	2.0	1.3	ug/L			03/13/23 13:42	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			03/13/23 13:42	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			03/13/23 13:42	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			03/13/23 13:42	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			03/13/23 13:42	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			03/13/23 13:42	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			03/13/23 13:42	1
1,3-Dichloropropane	0.36	U	1.0	0.36	ug/L			03/13/23 13:42	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			03/13/23 13:42	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			03/13/23 13:42	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			03/13/23 13:42	1
2-Hexanone	3.2	U	10	3.2	ug/L			03/13/23 13:42	1
Iodomethane	3.9	U	10	3.9	ug/L			03/13/23 13:42	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			03/13/23 13:42	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			03/13/23 13:42	1

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

Lab Sample ID: MB 680-767279/9
Matrix: Water
Analysis Batch: 767279

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			03/13/23 13:42	1
Styrene	0.27	U	1.0	0.27	ug/L			03/13/23 13:42	1
1,1,1,2-Tetrachloroethane	0.36	U	1.0	0.36	ug/L			03/13/23 13:42	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			03/13/23 13:42	1
Tetrachloroethylene	0.35	U	0.50	0.35	ug/L			03/13/23 13:42	1
Toluene	0.25	U	1.0	0.25	ug/L			03/13/23 13:42	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			03/13/23 13:42	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			03/13/23 13:42	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			03/13/23 13:42	1
Trichlorofluoromethane	0.33	U	1.0	0.33	ug/L			03/13/23 13:42	1
1,2,3-Trichloropropane	0.48	U	1.0	0.48	ug/L			03/13/23 13:42	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			03/13/23 13:42	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			03/13/23 13:42	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			03/13/23 13:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*90*		*70 - 130*		*03/13/23 13:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*60 - 124*		*03/13/23 13:42*	*1*
Dibromofluoromethane (Surr)	*105*		*70 - 130*		*03/13/23 13:42*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*03/13/23 13:42*	*1*

Lab Sample ID: LCS 680-767279/5
Matrix: Water
Analysis Batch: 767279

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	219		ug/L		88	67 - 120
Acrylonitrile	500	455		ug/L		91	70 - 130
Benzene	50.0	51.2		ug/L		102	70 - 130
Bromochloromethane	50.0	50.3		ug/L		101	70 - 130
Bromodichloromethane	50.0	53.7		ug/L		107	70 - 130
Bromoform	50.0	46.6		ug/L		93	69 - 129
Bromomethane	50.0	101	*+	ug/L		202	28 - 192
2-Butanone (MEK)	250	212		ug/L		85	69 - 120
Carbon disulfide	50.0	56.3		ug/L		113	70 - 130
Carbon tetrachloride	50.0	55.8		ug/L		112	70 - 130
Chlorobenzene	50.0	49.3		ug/L		99	70 - 130
Chloroethane	50.0	89.9		ug/L		180	31 - 213
Chloroform	50.0	55.9		ug/L		112	70 - 130
Chloromethane	50.0	39.9		ug/L		80	59 - 127
Dibromochloromethane	50.0	49.1		ug/L		98	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	40.2		ug/L		80	70 - 130
1,2-Dibromoethane	50.0	45.1		ug/L		90	70 - 130
Dibromomethane	50.0	49.5		ug/L		99	70 - 130
1,2-Dichlorobenzene	50.0	50.2		ug/L		100	70 - 130
1,4-Dichlorobenzene	50.0	50.2		ug/L		100	70 - 130
trans-1,4-Dichloro-2-butene	50.0	48.1		ug/L		96	67 - 120
1,1-Dichloroethane	50.0	54.0		ug/L		108	70 - 130

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

Lab Sample ID: LCS 680-767279/5
Matrix: Water
Analysis Batch: 767279

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	58.0		ug/L		116	70 - 130
cis-1,2-Dichloroethene	50.0	53.0		ug/L		106	70 - 130
trans-1,2-Dichloroethene	50.0	56.8		ug/L		114	70 - 130
1,1-Dichloroethene	50.0	56.2		ug/L		112	70 - 130
1,2-Dichloropropane	50.0	48.9		ug/L		98	70 - 130
1,3-Dichloropropane	50.0	47.5		ug/L		95	70 - 130
cis-1,3-Dichloropropene	50.0	52.0		ug/L		104	70 - 130
trans-1,3-Dichloropropene	50.0	49.7		ug/L		99	70 - 130
Ethylbenzene	50.0	55.3		ug/L		111	70 - 130
2-Hexanone	250	204		ug/L		82	70 - 130
Iodomethane	50.0	62.4		ug/L		125	52 - 129
Methylene Chloride	50.0	53.9		ug/L		108	70 - 130
4-Methyl-2-pentanone (MIBK)	250	203		ug/L		81	68 - 120
Methyl tert-butyl ether	50.0	50.0		ug/L		100	70 - 130
Styrene	50.0	51.3		ug/L		103	70 - 130
1,1,1,2-Tetrachloroethane	50.0	48.9		ug/L		98	70 - 130
1,1,2,2-Tetrachloroethane	50.0	44.3		ug/L		89	70 - 130
Tetrachloroethylene	50.0	45.1		ug/L		90	70 - 130
Toluene	50.0	47.3		ug/L		95	70 - 130
1,1,1-Trichloroethane	50.0	56.6		ug/L		113	70 - 130
1,1,2-Trichloroethane	50.0	47.4		ug/L		95	70 - 130
Trichloroethene	50.0	49.6		ug/L		99	70 - 130
Trichlorofluoromethane	50.0	55.2		ug/L		110	63 - 142
1,2,3-Trichloropropane	50.0	44.5		ug/L		89	70 - 130
Vinyl acetate	100	116		ug/L		116	67 - 135
Vinyl chloride	50.0	49.5		ug/L		99	66 - 129
Xylenes, Total	100	109		ug/L		109	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*95*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*117*		*60 - 124*
Dibromofluoromethane (Surr)	*105*		*70 - 130*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 680-767279/6
Matrix: Water
Analysis Batch: 767279

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	212		ug/L		85	67 - 120	3	30
Acrylonitrile	500	477		ug/L		95	70 - 130	5	30
Benzene	50.0	51.7		ug/L		103	70 - 130	1	30
Bromochloromethane	50.0	51.4		ug/L		103	70 - 130	2	30
Bromodichloromethane	50.0	54.8		ug/L		110	70 - 130	2	30
Bromoform	50.0	47.3		ug/L		95	69 - 129	2	30
Bromomethane	50.0	98.1	*+	ug/L		196	28 - 192	3	30
2-Butanone (MEK)	250	219		ug/L		88	69 - 120	3	30
Carbon disulfide	50.0	56.6		ug/L		113	70 - 130	0	30

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

Lab Sample ID: LCSD 680-767279/6
Matrix: Water
Analysis Batch: 767279

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	55.2		ug/L		110	70 - 130	1	30
Chlorobenzene			50.0	47.9		ug/L		96	70 - 130	3	30
Chloroethane			50.0	90.6		ug/L		181	31 - 213	1	30
Chloroform			50.0	56.4		ug/L		113	70 - 130	1	30
Chloromethane			50.0	40.6		ug/L		81	59 - 127	2	30
Dibromochloromethane			50.0	50.8		ug/L		102	70 - 130	3	30
1,2-Dibromo-3-Chloropropane			50.0	41.7		ug/L		83	70 - 130	4	30
1,2-Dibromoethane			50.0	46.4		ug/L		93	70 - 130	3	30
Dibromomethane			50.0	51.9		ug/L		104	70 - 130	5	30
1,2-Dichlorobenzene			50.0	50.0		ug/L		100	70 - 130	0	30
1,4-Dichlorobenzene			50.0	49.9		ug/L		100	70 - 130	1	30
trans-1,4-Dichloro-2-butene			50.0	50.1		ug/L		100	67 - 120	4	30
1,1-Dichloroethane			50.0	54.4		ug/L		109	70 - 130	1	30
1,2-Dichloroethane			50.0	58.5		ug/L		117	70 - 130	1	50
cis-1,2-Dichloroethene			50.0	54.0		ug/L		108	70 - 130	2	30
trans-1,2-Dichloroethene			50.0	56.9		ug/L		114	70 - 130	0	30
1,1-Dichloroethene			50.0	45.9		ug/L		92	70 - 130	20	20
1,2-Dichloropropane			50.0	50.1		ug/L		100	70 - 130	3	20
1,3-Dichloropropane			50.0	48.2		ug/L		96	70 - 130	1	20
cis-1,3-Dichloropropene			50.0	53.1		ug/L		106	70 - 130	2	20
trans-1,3-Dichloropropene			50.0	50.9		ug/L		102	70 - 130	2	30
Ethylbenzene			50.0	54.6		ug/L		109	70 - 130	1	20
2-Hexanone			250	217		ug/L		87	70 - 130	6	20
Iodomethane			50.0	62.0		ug/L		124	52 - 129	1	30
Methylene Chloride			50.0	55.4		ug/L		111	70 - 130	3	30
4-Methyl-2-pentanone (MIBK)			250	215		ug/L		86	68 - 120	6	30
Methyl tert-butyl ether			50.0	50.9		ug/L		102	70 - 130	2	30
Styrene			50.0	50.9		ug/L		102	70 - 130	1	30
1,1,1,2-Tetrachloroethane			50.0	47.3		ug/L		95	70 - 130	3	30
1,1,2,2-Tetrachloroethane			50.0	44.5		ug/L		89	70 - 130	1	30
Tetrachloroethylene			50.0	44.8		ug/L		90	70 - 130	1	30
Toluene			50.0	47.4		ug/L		95	70 - 130	0	30
1,1,1-Trichloroethane			50.0	56.9		ug/L		114	70 - 130	1	30
1,1,2-Trichloroethane			50.0	49.1		ug/L		98	70 - 130	3	30
Trichloroethene			50.0	50.1		ug/L		100	70 - 130	1	30
Trichlorofluoromethane			50.0	55.0		ug/L		110	63 - 142	0	30
1,2,3-Trichloropropane			50.0	43.7		ug/L		87	70 - 130	2	30
Vinyl acetate			100	114		ug/L		114	67 - 135	2	30
Vinyl chloride			50.0	50.2		ug/L		100	66 - 129	1	30
Xylenes, Total			100	109		ug/L		109	70 - 130	0	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*96*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*119*		*60 - 124*
Dibromofluoromethane (Surr)	*105*		*70 - 130*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 680-766953/1-A
Matrix: Water
Analysis Batch: 767251

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 766953

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	35	U	100	35	ug/L		03/10/23 06:26	03/10/23 16:53	1
Antimony	0.34	U	5.0	0.34	ug/L		03/10/23 06:26	03/10/23 16:53	1
Arsenic	0.86	U	3.0	0.86	ug/L		03/10/23 06:26	03/10/23 16:53	1
Barium	0.89	U	5.0	0.89	ug/L		03/10/23 06:26	03/10/23 16:53	1
Beryllium	0.20	U	0.50	0.20	ug/L		03/10/23 06:26	03/10/23 16:53	1
Cadmium	0.078	U	0.50	0.078	ug/L		03/10/23 06:26	03/10/23 16:53	1
Calcium	140	U	500	140	ug/L		03/10/23 06:26	03/10/23 16:53	1
Chromium	1.2	U	5.0	1.2	ug/L		03/10/23 06:26	03/10/23 16:53	1
Cobalt	0.22	U	0.50	0.22	ug/L		03/10/23 06:26	03/10/23 16:53	1
Copper	1.1	U	5.0	1.1	ug/L		03/10/23 06:26	03/10/23 16:53	1
Iron	12	U	100	12	ug/L		03/10/23 06:26	03/10/23 16:53	1
Lead	0.21	U	2.5	0.21	ug/L		03/10/23 06:26	03/10/23 16:53	1
Magnesium	23	U	250	23	ug/L		03/10/23 06:26	03/10/23 16:53	1
Manganese	2.2	U	5.0	2.2	ug/L		03/10/23 06:26	03/10/23 16:53	1
Nickel	0.42	U	5.0	0.42	ug/L		03/10/23 06:26	03/10/23 16:53	1
Potassium	44	U	1000	44	ug/L		03/10/23 06:26	03/10/23 16:53	1
Selenium	0.99	U	2.5	0.99	ug/L		03/10/23 06:26	03/10/23 16:53	1
Silver	0.39	U	1.0	0.39	ug/L		03/10/23 06:26	03/10/23 16:53	1
Sodium	200	U	500	200	ug/L		03/10/23 06:26	03/10/23 16:53	1
Thallium	0.26	U	1.0	0.26	ug/L		03/10/23 06:26	03/10/23 16:53	1
Vanadium	0.63	U	10	0.63	ug/L		03/10/23 06:26	03/10/23 16:53	1
Zinc	2.8	U	20	2.8	ug/L		03/10/23 06:26	03/10/23 16:53	1

Lab Sample ID: LCS 680-766953/2-A
Matrix: Water
Analysis Batch: 767251

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 766953

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	5000	4980		ug/L		100	80 - 120
Antimony	50.0	50.3		ug/L		101	80 - 120
Arsenic	100	102		ug/L		102	80 - 120
Barium	100	98.9		ug/L		99	80 - 120
Beryllium	50.0	51.0		ug/L		102	80 - 120
Cadmium	50.0	50.2		ug/L		100	80 - 120
Calcium	5000	5210		ug/L		104	80 - 120
Chromium	100	103		ug/L		103	80 - 120
Cobalt	50.0	51.1		ug/L		102	80 - 120
Copper	100	105		ug/L		105	80 - 120
Iron	5000	5140		ug/L		103	80 - 120
Lead	505	502		ug/L		99	80 - 120
Magnesium	5010	4920		ug/L		98	80 - 120
Manganese	400	410		ug/L		102	80 - 120
Nickel	100	103		ug/L		103	80 - 120
Potassium	6970	6950		ug/L		100	80 - 120
Selenium	100	106		ug/L		106	80 - 120
Silver	50.0	49.3		ug/L		99	80 - 120
Sodium	5050	5170		ug/L		103	80 - 120
Thallium	50.0	48.8		ug/L		98	80 - 120
Vanadium	100	101		ug/L		101	80 - 120

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

Lab Sample ID: LCS 680-766953/2-A
Matrix: Water
Analysis Batch: 767251

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 766953

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Zinc			100	101		ug/L		101	80 - 120		

Lab Sample ID: 680-231662-3 MS
Matrix: Water
Analysis Batch: 767251

Client Sample ID: LF4-MW3 MS
Prep Type: Total Recoverable
Prep Batch: 766953

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Aluminum	180		5000	5280		ug/L		102	75 - 125		
Antimony	0.34	U	50.0	51.2		ug/L		102	75 - 125		
Arsenic	0.86	U	100	105		ug/L		105	75 - 125		
Barium	54		100	157		ug/L		103	75 - 125		
Beryllium	0.25	J	50.0	52.0		ug/L		104	75 - 125		
Cadmium	0.078	U	50.0	51.1		ug/L		102	75 - 125		
Calcium	3100		5000	8710		ug/L		112	75 - 125		
Chromium	1.2	U	100	106		ug/L		106	75 - 125		
Cobalt	2.1		50.0	54.7		ug/L		105	75 - 125		
Copper	1.2	J	100	112		ug/L		111	75 - 125		
Iron	120		5000	5660		ug/L		111	75 - 125		
Lead	1.2	J	505	520		ug/L		103	75 - 125		
Magnesium	1600		5010	6640		ug/L		100	75 - 125		
Manganese	78		400	501		ug/L		106	75 - 125		
Nickel	2.7	J	100	106		ug/L		103	75 - 125		
Potassium	780	J	6970	7930		ug/L		103	75 - 125		
Selenium	0.99	U	100	112		ug/L		112	75 - 125		
Silver	0.39	U	50.0	51.0		ug/L		102	75 - 125		
Sodium	8800	F1	5050	14100		ug/L		104	75 - 125		
Thallium	0.26	U	50.0	50.6		ug/L		101	75 - 125		
Vanadium	0.63	U	100	104		ug/L		104	75 - 125		
Zinc	7.4	J	100	114		ug/L		107	75 - 125		

Lab Sample ID: 680-231662-3 MSD
Matrix: Water
Analysis Batch: 767251

Client Sample ID: LF4-MW3 MSD
Prep Type: Total Recoverable
Prep Batch: 766953

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aluminum	180		5000	5970		ug/L		116	75 - 125	12	20
Antimony	0.34	U	50.0	57.0		ug/L		114	75 - 125	11	20
Arsenic	0.86	U	100	116		ug/L		116	75 - 125	10	20
Barium	54		100	175		ug/L		121	75 - 125	11	20
Beryllium	0.25	J	50.0	58.5		ug/L		117	75 - 125	12	20
Cadmium	0.078	U	50.0	56.1		ug/L		112	75 - 125	9	20
Calcium	3100		5000	9210		ug/L		122	75 - 125	6	20
Chromium	1.2	U	100	120		ug/L		120	75 - 125	13	20
Cobalt	2.1		50.0	61.2		ug/L		118	75 - 125	11	20
Copper	1.2	J	100	124		ug/L		123	75 - 125	10	20
Iron	120		5000	5850		ug/L		115	75 - 125	3	20
Lead	1.2	J	505	592		ug/L		117	75 - 125	13	20
Magnesium	1600		5010	7520		ug/L		118	75 - 125	12	20
Manganese	78		400	564		ug/L		121	75 - 125	12	20

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

Lab Sample ID: 680-231662-3 MSD — **Client Sample ID: LF4-MW3 MSD**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 767251 — **Prep Batch: 766953**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nickel	2.7	J	100	120		ug/L		117	75 - 125	13	20
Potassium	780	J	6970	8880		ug/L		116	75 - 125	11	20
Selenium	0.99	U	100	118		ug/L		118	75 - 125	6	20
Silver	0.39	U	50.0	57.1		ug/L		114	75 - 125	11	20
Sodium	8800	F1	5050	16000	F1	ug/L		142	75 - 125	13	20
Thallium	0.26	U	50.0	57.6		ug/L		115	75 - 125	13	20
Vanadium	0.63	U	100	119		ug/L		119	75 - 125	14	20
Zinc	7.4	J	100	125		ug/L		118	75 - 125	9	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 680-766891/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 767098 — **Prep Batch: 766891**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		03/09/23 16:03	03/10/23 12:58	1

Lab Sample ID: LCS 680-766891/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 767098 — **Prep Batch: 766891**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	2.50	2.49		ug/L		99	80 - 120

Lab Sample ID: 680-231662-3 MS — **Client Sample ID: LF4-MW3 MS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 767098 — **Prep Batch: 766891**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.080	U	1.00	0.979		ug/L		98	80 - 120

Lab Sample ID: 680-231662-3 MSD — **Client Sample ID: LF4-MW3 MSD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 767098 — **Prep Batch: 766891**

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	0.976		ug/L		98	80 - 120	0	20

GC/MS VOA

Analysis Batch: 766723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-231662-1	LF4-MW1	Total/NA	Water	8260D	
680-231662-2	LF4-MW2	Total/NA	Water	8260D	
680-231662-3	LF4-MW3	Total/NA	Water	8260D	
680-231662-4	LF4-MW4	Total/NA	Water	8260D	
680-231662-5	LF4-MW5	Total/NA	Water	8260D	
MB 680-766723/9	Method Blank	Total/NA	Water	8260D	
LCS 680-766723/5	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-766723/6	Lab Control Sample Dup	Total/NA	Water	8260D	
680-231662-3 MS	LF4-MW3 MS	Total/NA	Water	8260D	
680-231662-3 MSD	LF4-MW3 MSD	Total/NA	Water	8260D	

Leach Batch: 766762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 680-766762/1-A	Method Blank	Total/NA	Water	1311	

Analysis Batch: 767173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-231662-7	TB608	Total/NA	Water	8260D	
LB 680-766762/1-A	Method Blank	Total/NA	Water	8260D	766762
MB 680-767173/8	Method Blank	Total/NA	Water	8260D	
LCS 680-767173/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-767173/5	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 767279

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-231662-6	DUP411	Total/NA	Water	8260D	
MB 680-767279/9	Method Blank	Total/NA	Water	8260D	
LCS 680-767279/5	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-767279/6	Lab Control Sample Dup	Total/NA	Water	8260D	

Metals

Prep Batch: 766891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-231662-1	LF4-MW1	Total/NA	Water	7470A	
680-231662-2	LF4-MW2	Total/NA	Water	7470A	
680-231662-3	LF4-MW3	Total/NA	Water	7470A	
680-231662-4	LF4-MW4	Total/NA	Water	7470A	
680-231662-5	LF4-MW5	Total/NA	Water	7470A	
680-231662-6	DUP411	Total/NA	Water	7470A	
MB 680-766891/1-A	Method Blank	Total/NA	Water	7470A	
LCS 680-766891/2-A	Lab Control Sample	Total/NA	Water	7470A	
680-231662-3 MS	LF4-MW3 MS	Total/NA	Water	7470A	
680-231662-3 MSD	LF4-MW3 MSD	Total/NA	Water	7470A	

Prep Batch: 766953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-231662-1	LF4-MW1	Total Recoverable	Water	3005A	
680-231662-2	LF4-MW2	Total Recoverable	Water	3005A	
680-231662-3	LF4-MW3	Total Recoverable	Water	3005A	
680-231662-4	LF4-MW4	Total Recoverable	Water	3005A	

Metals (Continued)

Prep Batch: 766953 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-231662-5	LF4-MW5	Total Recoverable	Water	3005A	
680-231662-6	DUP411	Total Recoverable	Water	3005A	
MB 680-766953/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-766953/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-231662-3 MS	LF4-MW3 MS	Total Recoverable	Water	3005A	
680-231662-3 MSD	LF4-MW3 MSD	Total Recoverable	Water	3005A	

Analysis Batch: 767098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-231662-1	LF4-MW1	Total/NA	Water	7470A	766891
680-231662-2	LF4-MW2	Total/NA	Water	7470A	766891
680-231662-3	LF4-MW3	Total/NA	Water	7470A	766891
680-231662-4	LF4-MW4	Total/NA	Water	7470A	766891
680-231662-5	LF4-MW5	Total/NA	Water	7470A	766891
680-231662-6	DUP411	Total/NA	Water	7470A	766891
MB 680-766891/1-A	Method Blank	Total/NA	Water	7470A	766891
LCS 680-766891/2-A	Lab Control Sample	Total/NA	Water	7470A	766891
680-231662-3 MS	LF4-MW3 MS	Total/NA	Water	7470A	766891
680-231662-3 MSD	LF4-MW3 MSD	Total/NA	Water	7470A	766891

Analysis Batch: 767251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-231662-1	LF4-MW1	Total Recoverable	Water	6020B	766953
680-231662-2	LF4-MW2	Total Recoverable	Water	6020B	766953
680-231662-3	LF4-MW3	Total Recoverable	Water	6020B	766953
680-231662-4	LF4-MW4	Total Recoverable	Water	6020B	766953
680-231662-5	LF4-MW5	Total Recoverable	Water	6020B	766953
680-231662-6	DUP411	Total Recoverable	Water	6020B	766953
MB 680-766953/1-A	Method Blank	Total Recoverable	Water	6020B	766953
LCS 680-766953/2-A	Lab Control Sample	Total Recoverable	Water	6020B	766953
680-231662-3 MS	LF4-MW3 MS	Total Recoverable	Water	6020B	766953
680-231662-3 MSD	LF4-MW3 MSD	Total Recoverable	Water	6020B	766953

Lab Chronicle

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

Job ID: 680-231662-1

Client Sample ID: LF4-MW1

Lab Sample ID: 680-231662-1

Date Collected: 03/06/23 11:45
Matrix: Water
Date Received: 03/09/23 10:00

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	766723	03/09/23 19:32	Y1S	EET SAV
	Instrument ID: CMSC									
Total Recoverable	Prep	3005A			25 mL	125 mL	766953	03/10/23 06:26	RR	EET SAV
Total Recoverable	Analysis	6020B		1			767251	03/10/23 17:22	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Prep	7470A			50 mL	50 mL	766891	03/09/23 16:03	JKL	EET SAV
Total/NA	Analysis	7470A		1			767098	03/10/23 13:01	JKL	EET SAV
	Instrument ID: QuickTrace2									

Client Sample ID: LF4-MW2

Lab Sample ID: 680-231662-2

Date Collected: 03/06/23 13:15
Matrix: Water
Date Received: 03/09/23 10:00

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	766723	03/09/23 19:13	Y1S	EET SAV
	Instrument ID: CMSC									
Total Recoverable	Prep	3005A			25 mL	125 mL	766953	03/10/23 06:26	RR	EET SAV
Total Recoverable	Analysis	6020B		1			767251	03/10/23 17:26	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Prep	7470A			50 mL	50 mL	766891	03/09/23 16:03	JKL	EET SAV
Total/NA	Analysis	7470A		1			767098	03/10/23 13:02	JKL	EET SAV
	Instrument ID: QuickTrace2									

Client Sample ID: LF4-MW3

Lab Sample ID: 680-231662-3

Date Collected: 03/06/23 14:40
Matrix: Water
Date Received: 03/09/23 10:00

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	766723	03/09/23 19:51	Y1S	EET SAV
	Instrument ID: CMSC									
Total Recoverable	Prep	3005A			25 mL	125 mL	766953	03/10/23 06:26	RR	EET SAV
Total Recoverable	Analysis	6020B		1			767251	03/10/23 17:02	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Prep	7470A			50 mL	50 mL	766891	03/09/23 16:03	JKL	EET SAV
Total/NA	Analysis	7470A		1			767098	03/10/23 13:04	JKL	EET SAV
	Instrument ID: QuickTrace2									

Client Sample ID: LF4-MW4

Lab Sample ID: 680-231662-4

Date Collected: 03/06/23 16:00
Matrix: Water
Date Received: 03/09/23 10:00

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	766723	03/09/23 18:35	Y1S	EET SAV
	Instrument ID: CMSC									

Lab Chronicle

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

Job ID: 680-231662-1

Client Sample ID: LF4-MW4

Lab Sample ID: 680-231662-4

Date Collected: 03/06/23 16:00
Matrix: Water
Date Received: 03/09/23 10:00

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	766953	03/10/23 06:26	RR	EET SAV
Total Recoverable	Analysis	6020B		1			767251	03/10/23 17:30	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Prep	7470A			50 mL	50 mL	766891	03/09/23 16:03	JKL	EET SAV
Total/NA	Analysis	7470A		1			767098	03/10/23 13:12	JKL	EET SAV
	Instrument ID: QuickTrace2									

Client Sample ID: LF4-MW5

Lab Sample ID: 680-231662-5

Date Collected: 03/06/23 10:20
Matrix: Water
Date Received: 03/09/23 10:00

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	766723	03/09/23 18:54	Y1S	EET SAV
	Instrument ID: CMSC									
Total Recoverable	Prep	3005A			25 mL	125 mL	766953	03/10/23 06:26	RR	EET SAV
Total Recoverable	Analysis	6020B		1			767251	03/10/23 17:42	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Prep	7470A			50 mL	50 mL	766891	03/09/23 16:03	JKL	EET SAV
Total/NA	Analysis	7470A		1			767098	03/10/23 13:13	JKL	EET SAV
	Instrument ID: QuickTrace2									

Client Sample ID: DUP411

Lab Sample ID: 680-231662-6

Date Collected: 03/06/23 00:00
Matrix: Water
Date Received: 03/09/23 10:00

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	767279	03/13/23 16:27	SMP	EET SAV
	Instrument ID: CMSU									
Total Recoverable	Prep	3005A			25 mL	125 mL	766953	03/10/23 06:26	RR	EET SAV
Total Recoverable	Analysis	6020B		1			767251	03/10/23 17:46	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Prep	7470A			50 mL	50 mL	766891	03/09/23 16:03	JKL	EET SAV
Total/NA	Analysis	7470A		1			767098	03/10/23 13:15	JKL	EET SAV
	Instrument ID: QuickTrace2									

Client Sample ID: TB608

Lab Sample ID: 680-231662-7

Date Collected: 03/06/23 08:06
Matrix: Water
Date Received: 03/09/23 10:00

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	767173	03/12/23 18:13	UI	EET SAV
	Instrument ID: CMSB									

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: 680-231662-1
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	06-30-23

Method Summary

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

Job ID: 680-231662-1

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 6809
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	
Parcel 81(5), Landfill 4	LF4-MW1	NS	MW	WQ	Grab	3/6/2023	11:45	X	X		
Parcel 81(5), Landfill 4	LF4-MW2	NS	MW	WQ	Grab	3/6/2023	13:15	X	X		
Parcel 81(5), Landfill 4	LF4-MW3	NS	MW	WQ	Grab	3/6/2023	14:40	X	X		
Parcel 81(5), Landfill 4	LF4-MW3	MS/MSD	MW	WQ	Grab	3/6/2023	14:40	X	X		
Parcel 81(5), Landfill 4	LF4-MW4	NS	MW	WQ	Grab	3/6/2023	16:00	X	X		
Parcel 81(5), Landfill 4	LF4-MW5	NS	MW	WQ	Grab	3/6/2023	10:20	X	X		
Parcel 81(5), Landfill 4	DUP411	FD	MW	WQ	Grab	3/6/2023	N/A	X	X		
Parcel 81(5), Landfill 4	TB608	TB	WQ	W	Grab	3/7/2023	8:06			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 3-7-2023 1100 Received by (Signature). FedEx

Relinquished by (Signature). Date/Time Received by (Signature): 03/08/23 10:00

4.1/4.1

680-231662 Chain of Custody

Login Sample Receipt Checklist

Client: Matrix Environmental Services, LLC

Job Number: 680-231662-1

Login Number: 231662

List Source: Eurofins Savannah

List Number: 1

Creator: Padayao, Abigail

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.	True	
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").	True	
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 March 2022

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	40	40	100%	47	36	77%	48	5	10%
LF4-MW2	40	38	95%	47	25	53%	47	0	0%
LF4-MW3	40	40	100%	47	33	70%	47	2	4%
LF4-MW4	40	36	90%	47	26	55%	47	0	0%
LF4-MW5	40	40	100%	47	41	87%	47	9	19%

	Beryllium			Cadmium			Chromium		
Well ID	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**
LF4-MW1	39	20	51%	46	36	78%	46	46	100%
LF4-MW2	39	16	41%	46	30	65%	46	24	52%
LF4-MW3	39	21	54%	46	37	80%	46	32	70%
LF4-MW4	39	34	87%	46	34	74%	46	31	67%
LF4-MW5	39	29	74%	46	44	96%	46	38	83%

	Cobalt			Copper			Lead		
Well ID	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**
LF4-MW1	39	0	0%	40	13	33%	47	14	30%
LF4-MW2	39	0	0%	40	10	25%	47	11	23%
LF4-MW3	39	13	33%	40	14	35%	47	16	34%
LF4-MW4	39	8	21%	40	23	58%	47	10	21%
LF4-MW5	39	6	15%	40	24	60%	47	20	43%

	Mercury			Nickel			Selenium		
Well ID	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**
LF4-MW1	47	47	100%	40	5	13%	47	47	100%
LF4-MW2	47	46	98%	40	3	8%	47	43	91%
LF4-MW3	47	47	100%	40	9	23%	47	46	98%
LF4-MW4	47	46	98%	40	13	33%	47	44	94%
LF4-MW5	47	47	100%	40	15	38%	47	47	100%

	Silver			Thallium			Vanadium		
Well ID	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**	**Sample #**	**# of NDs**	**%NDs**
LF4-MW1	39	39	100%	40	38	95%	40	35	88%
LF4-MW2	39	39	100%	40	38	95%	40	30	75%
LF4-MW3	39	39	100%	40	39	98%	40	32	80%
LF4-MW4	39	38	97%	40	36	90%	40	28	70%
LF4-MW5	39	39	100%	40	38	95%	40	31	78%

	Zinc		
Well ID	**Sample #**	**# of NDs**	**%NDs**
LF4-MW1	40	2	5%
LF4-MW2	40	2	5%
LF4-MW3	40	10	25%
LF4-MW4	40	12	30%
LF4-MW5	40	16	40%

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
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
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
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
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
Background					
LF4-MW5	MEAN	-3.970			
LF4-MW5	STDEV	0.364			

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
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
Background					
LF4-MW1	MEAN	-4.286			
LF4-MW1	STDEV	0.515			

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
Background					
LF4-MW2	MEAN	-4.277			
LF4-MW2	STDEV	0.663			

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-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
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
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
Background					
LF4-MW5	MEAN	-4.673			
LF4-MW5	STDEV	0.135			

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
Background					
LF4-MW1	MEAN	-4.836			
LF4-MW1	STDEV	0.566			

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-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
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
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
Background					
LF4-MW1	MEAN	-5.518			
LF4-MW1	STDEV	1.034			

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
Background					
LF4-MW2	MEAN	-5.045			
LF4-MW2	STDEV	1.159			

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-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
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
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
Background					
LF4-MW2	MEAN	-5.637			
LF4-MW2	STDEV	0.807			

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
Background					
LF4-MW1	MEAN	-4.462			
LF4-MW1	STDEV	0.243			

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-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
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
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
Background					
LF4-MW4	MEAN	-4.882			
LF4-MW4	STDEV	0.620			

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
Background					
LF4-MW5	MEAN	-4.882			
LF4-MW5	STDEV	0.620			

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-MW1	3/13/06	-2.488	1.28	0.28	0.28
LF4-MW1	9/13/06	-3.493	-0.35	-1.35	0.00
LF4-MW1	3/6/07	-3.231	0.08	-0.92	0.00
LF4-MW1	9/24/07	-2.996	0.46	-0.54	0.00
LF4-MW1	3/26/08	-3.177	0.16	-0.84	0.00
LF4-MW1	9/16/08	-3.734	-0.74	-1.74	0.00
LF4-MW1	3/17/09	-3.355	-0.12	-1.12	0.00
LF4-MW1	9/17/09	-3.464	-0.30	-1.30	0.00
LF4-MW1	3/17/10	-4.335	-1.71	-2.71	0.00
LF4-MW1	9/21/10	-3.189	0.14	-0.86	0.00
LF4-MW1	3/15/11	-2.720	0.91	-0.09	0.00
LF4-MW1	9/8/11	-2.955	0.53	-0.47	0.00
LF4-MW1	3/14/12	-2.941	0.55	-0.45	0.00
LF4-MW1	9/6/12	-2.884	0.64	-0.36	0.00
LF4-MW1	3/5/13	-2.766	0.83	-0.17	0.00
LF4-MW1	9/11/13	-3.242	0.06	-0.94	0.00
LF4-MW1	3/5/14	-3.140	0.23	-0.77	0.00
LF4-MW1	9/4/14	-3.237	0.07	-0.93	0.00
LF4-MW1	3/13/15	-2.822	0.74	-0.26	0.00
LF4-MW1	9/16/15	-3.206	0.12	-0.88	0.00
LF4-MW1	3/16/16	-2.805	0.77	-0.23	0.00
LF4-MW1	9/21/16	-3.058	0.36	-0.64	0.00
LF4-MW1	3/15/17	-2.886	0.64	-0.36	0.00
LF4-MW1	9/8/17	-2.799	0.78	-0.22	0.00
LF4-MW1	3/8/18	-2.990	0.47	-0.53	0.00
LF4-MW1	9/11/18	-2.617	1.07	0.07	0.07
LF4-MW1	3/7/19	-2.847	0.70	-0.30	0.00
LF4-MW1	9/5/19	-1.897	2.24	1.24	1.24
LF4-MW1	3/12/20	-2.865	0.67	-0.33	0.91
LF4-MW1	9/15/20	-2.501	1.26	0.26	1.17
LF4-MW1	3/4/21	-2.453	1.34	0.34	1.51
LF4-MW1	9/9/21	-2.313	1.57	0.57	2.08
LF4-MW1	3/2/22	-1.966	2.13	1.13	3.21
LF4-MW1	8/31/22	-2.996	0.46	-0.54	2.67
LF4-MW1	3/6/23	-3.411	-0.22	-1.22	1.45
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
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
Background					
LF4-MW3	MEAN	-3.629			
LF4-MW3	STDEV	1.096			

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	0.48	-0.52	0.00
LF4-MW4	3/7/07	-4.623	-1.17	-2.17	0.00
LF4-MW4	9/25/07	-4.269	-0.79	-1.79	0.00
LF4-MW4	3/26/08	-4.946	-1.52	-2.52	0.00
LF4-MW4	9/17/08	-4.029	-0.52	-1.52	0.00
LF4-MW4	3/17/09	-3.948	-0.44	-1.44	0.00
LF4-MW4	9/21/09	-4.941	-1.51	-2.51	0.00
LF4-MW4	3/17/10	-4.991	-1.57	-2.57	0.00
LF4-MW4	9/21/10	-4.351	-0.87	-1.87	0.00
LF4-MW4	3/15/11	-4.366	-0.89	-1.89	0.00
LF4-MW4	9/8/11	-4.585	-1.13	-2.13	0.00
LF4-MW4	3/14/12	-2.996	0.59	-0.41	0.00
LF4-MW4	9/6/12	-2.996	0.59	-0.41	0.00
LF4-MW4	3/5/13	-4.366	-0.89	-1.89	0.00
LF4-MW4	9/11/13	-4.440	-0.97	-1.97	0.00
LF4-MW4	3/5/14	-4.605	-1.15	-2.15	0.00
LF4-MW4	9/4/14	-4.605	-1.15	-2.15	0.00
LF4-MW4	3/13/15	-4.605	-1.15	-2.15	0.00
LF4-MW4	9/16/15	-4.057	-0.56	-1.56	0.00
LF4-MW4	3/16/16	-4.605	-1.15	-2.15	0.00
LF4-MW4	9/21/16	-4.069	-0.57	-1.57	0.00
LF4-MW4	3/15/17	-4.605	-1.15	-2.15	0.00
LF4-MW4	9/8/17	-3.423	0.13	-0.87	0.00
LF4-MW4	3/8/18	-4.605	-1.15	-2.15	0.00
LF4-MW4	9/11/18	-3.079	0.50	-0.50	0.00
LF4-MW4	3/7/19	-2.880	0.72	-0.28	0.00
LF4-MW4	9/5/19	-2.386	1.25	0.25	0.25
LF4-MW4	3/12/20	-4.422	-0.95	-1.95	0.00
LF4-MW4	9/15/20	-3.612	-0.07	-1.07	0.00
LF4-MW4	3/4/21	-4.605	-1.15	-2.15	0.00
LF4-MW4	9/9/21	-3.474	0.08	-0.92	0.00
LF4-MW4	3/2/22	-4.510	-1.05	-2.05	0.00
LF4-MW4	8/31/22	-3.474	0.08	-0.92	0.00
LF4-MW4	3/6/23	-4.605	-1.15	-2.15	0.00
Background					
LF4-MW4	MEAN	-3.761			
LF4-MW4	STDEV	0.723			

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

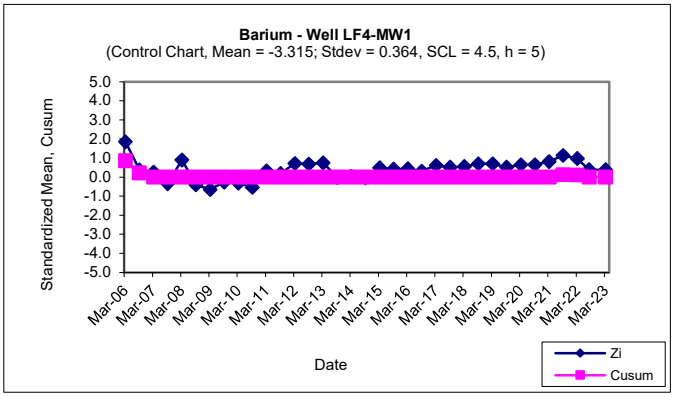
Zinc

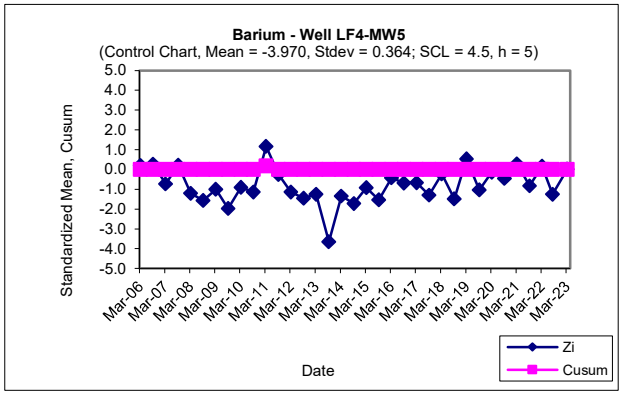
Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW5	3/14/06	-4.358	-0.88	-1.88	0.00
LF4-MW5	9/14/06	-3.868	-0.35	-1.35	0.00
LF4-MW5	3/7/07	-3.974	-0.47	-1.47	0.00
LF4-MW5	9/24/07	-2.996	0.59	-0.41	0.00
LF4-MW5	3/26/08	-5.028	-1.61	-2.61	0.00
LF4-MW5	9/16/08	-5.067	-1.65	-2.65	0.00
LF4-MW5	3/18/09	-4.753	-1.31	-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
Background					
LF4-MW2	MEAN	-3.544			
LF4-MW2	STDEV	0.923			

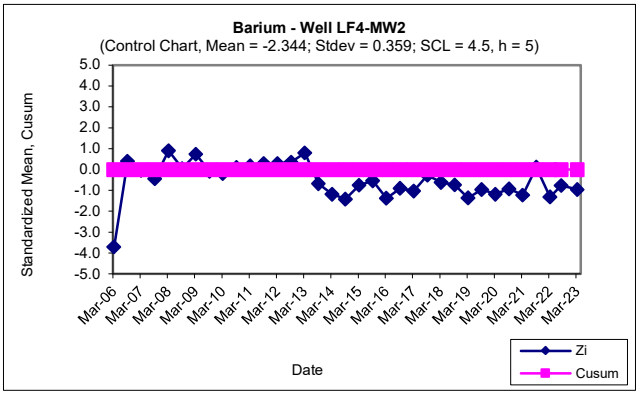
Beryllium

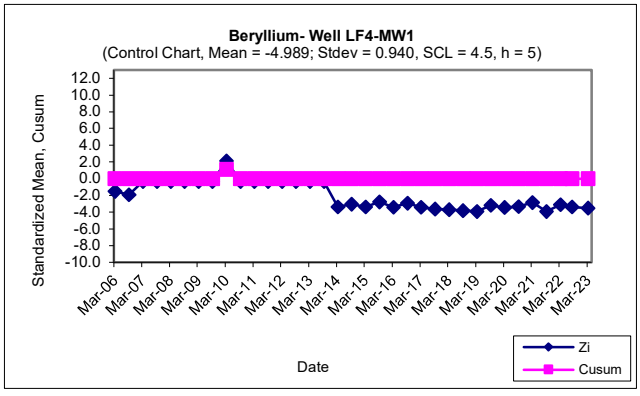
Well ID	Date	Ln Conc	Zi	Zi - k	Cusum
LF4-MW1	3/13/06	-6.425	-1.53	-2.53	0.00
LF4-MW1	9/13/06	-6.786	-1.91	-2.91	0.00
LF4-MW1	3/6/07	-5.298	-0.33	-1.33	0.00
LF4-MW1	9/24/07	-5.298	-0.33	-1.33	0.00
LF4-MW1	3/26/08	-5.298	-0.33	-1.33	0.00
LF4-MW1	9/16/08	-5.298	-0.33	-1.33	0.00
LF4-MW1	3/17/09	-5.298	-0.33	-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
Background					
LF4-MW1	MEAN	-4.989			
LF4-MW1	STDEV	0.940			

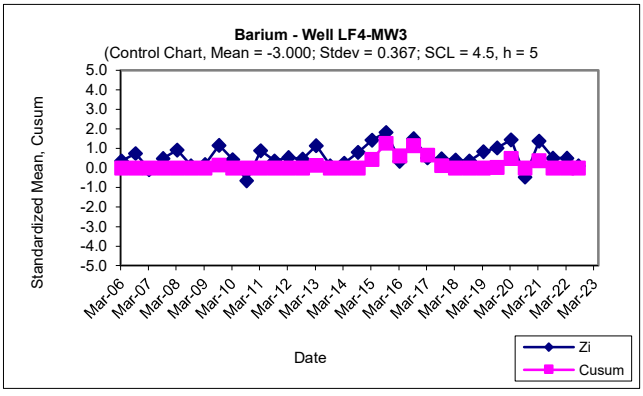
Attachment D3. Control Charts
Butler Green Industrial Landfill, Parcel 175(5), McClellan, Anniston, Alabama

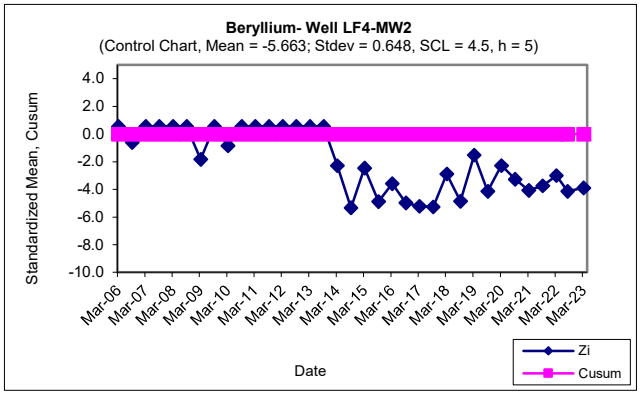


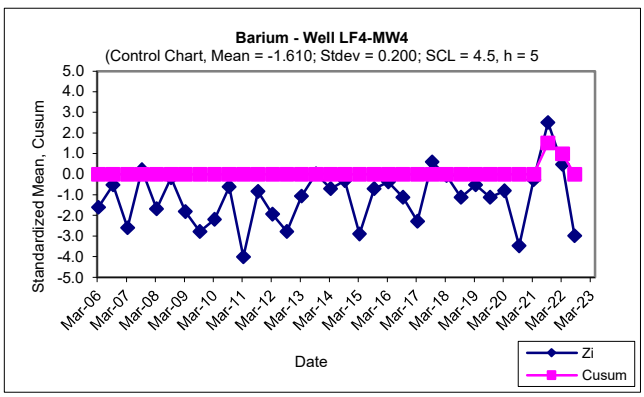


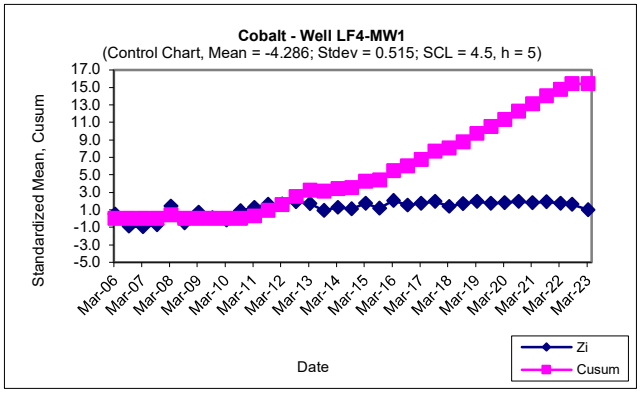




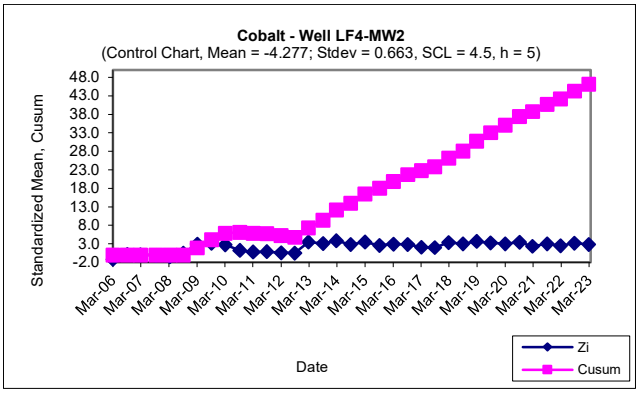


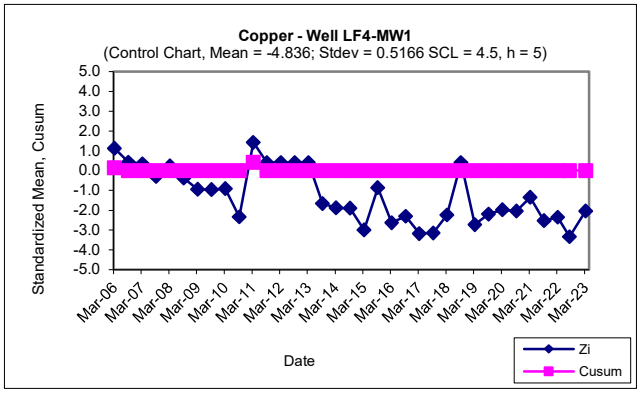


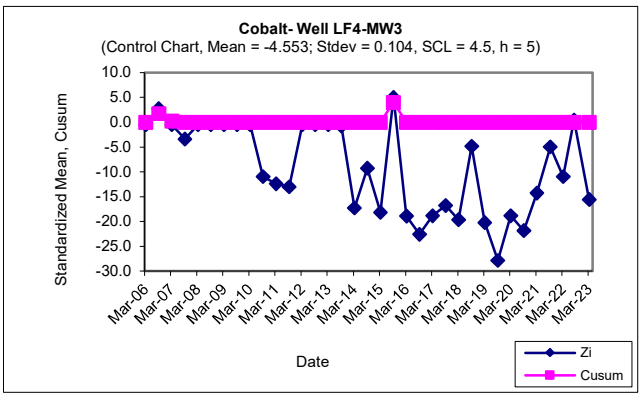


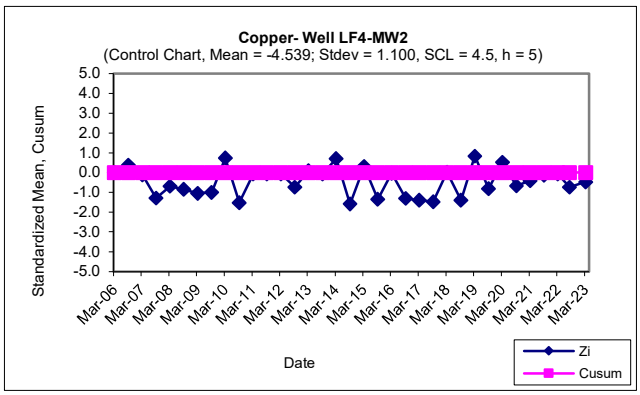


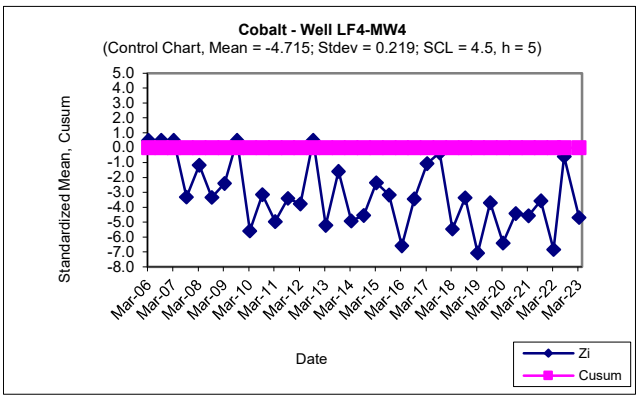
Attachment D3. Control Charts
Butler Green Industrial Landfill, Parcel 175(5), McClellan, Anniston, Alabama

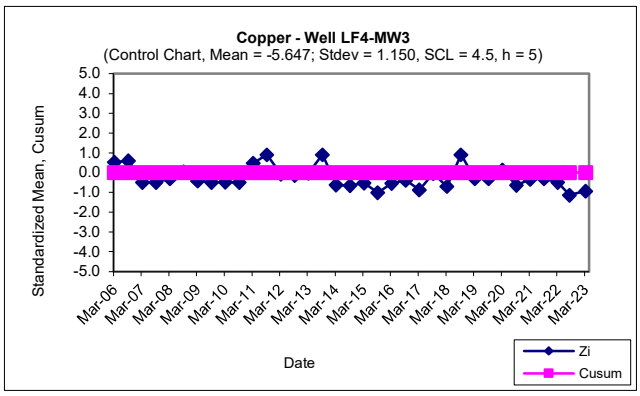


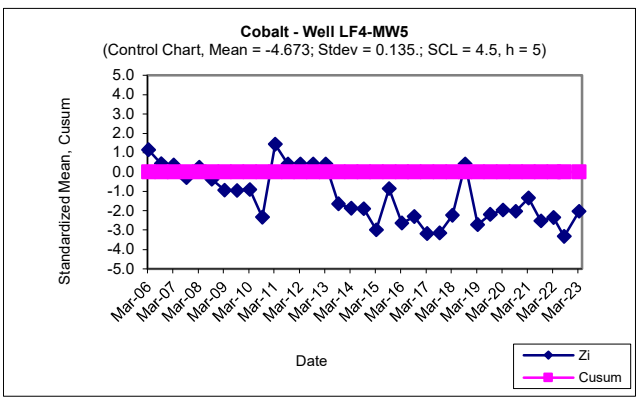


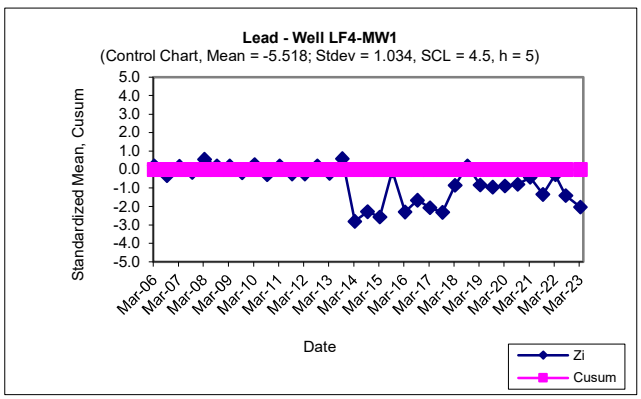




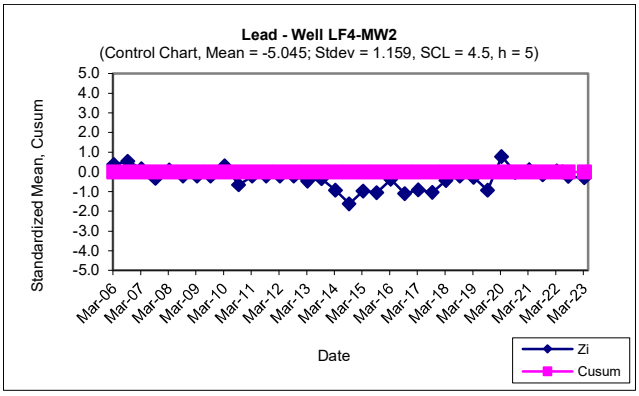


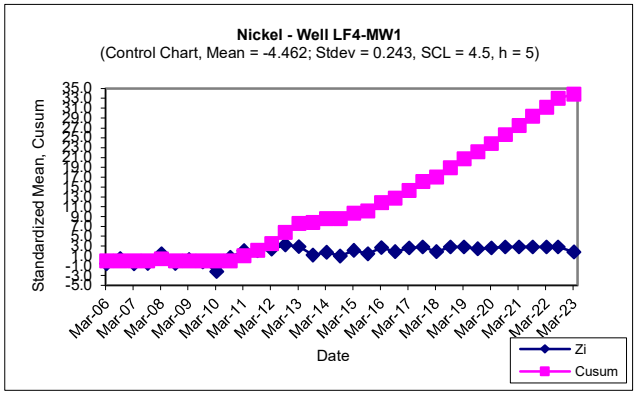


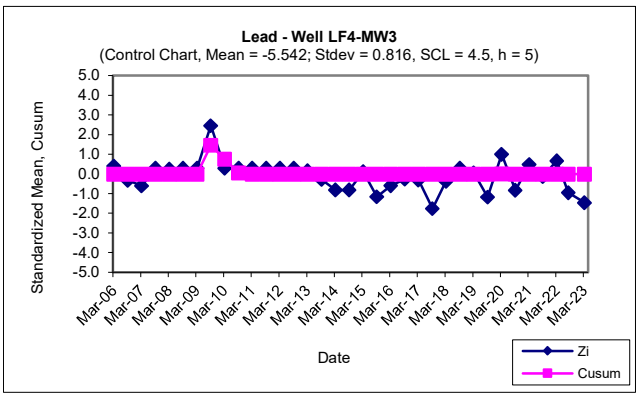


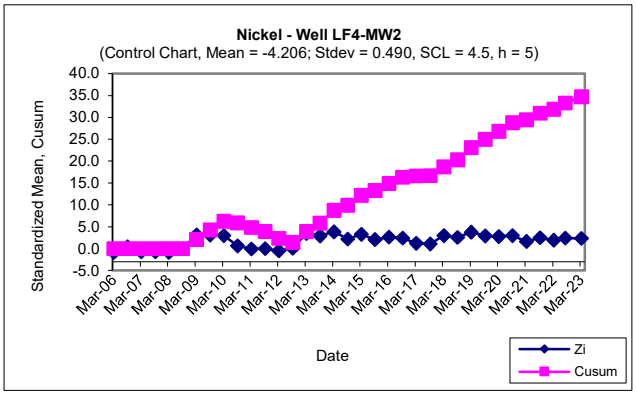


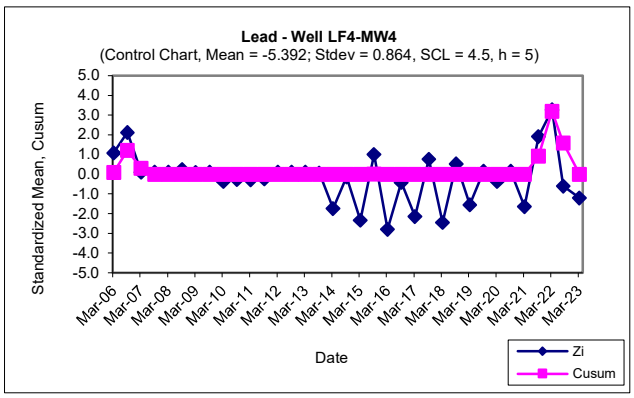
Attachment D3. Control Charts
Butler Green Industrial Landfill, Parcel 175(5), McClellan, Anniston, Alabama

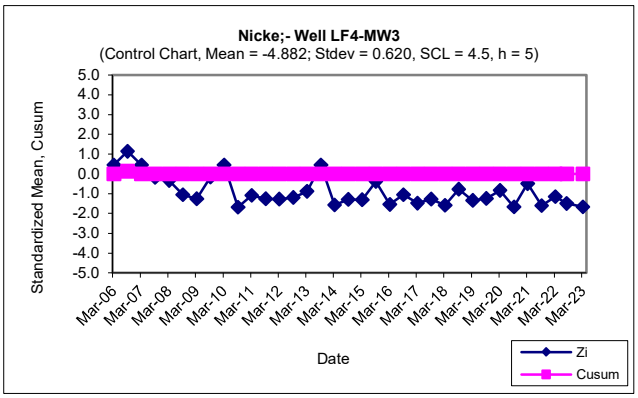


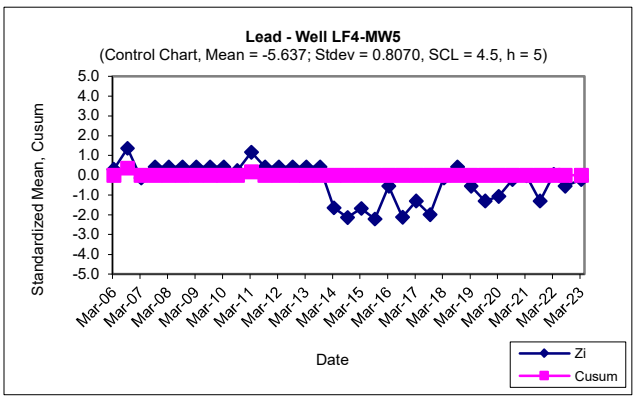


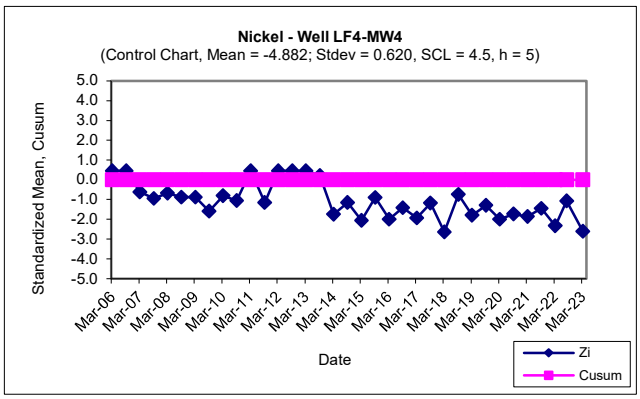












Attachment D3. Control Charts
Butler Green Industrial Landfill, Parcel 175(5), McClellan, Anniston, Alabama