GUAM ENVIRONMENTAL PROTECTION AGENCY • *AHENSIAN PRUTEKSIÓN LINA'LA' GUÅHAN*
LOURDES A. LEON GUERRERO • GOVERNOR OF GUAM | JOSHUA F. TENORIO • LIEUTENANT GOVERNOR OF GUAM
WALTER S. LEON GUERRERO • ADMINISTRATOR | MICHELLE C. R. LASTIMOZA • DEPUTY ADMINISTRATOR

SOLID WASTE FACILITY POST CLOSURE CARE PERMIT

Facility Number:
GEPA-21001

1. Name and Street Address of Facility:

Ordot Dump Closure Facility
Dero Road
Ordot-Chalan Pago, Guam 96913

2. Name and Mailing Address of Operator:

Guam Solid Waste Authority
542 North Marine Corps Drive
Tamuning, Guam 96913

3. Name and Mailing Address of Owner:

Guam Solid Waste Authority
542 North Marine Corps Drive
Tamuning, Guam 96913

4. Specifications: **a.** Operation**:** Closed Solid Waste Disposal Site
b. Permitted Area (in acres) Total: 60 Disposal: 45

The attached permit findings and conditions are integral parts of this permit and supersede the conditions of any previously issued solid waste facility permit.

5. Approval:

Approving Officer Signature
Walter S. Leon Guerrero
Administrator, Guam Environmental Protection Agency

6. Enforcement Agency Name and Address:
Guam Environmental Protection Agency
17-3304 Mariner Avenue
Tiyan Barrigada, Guam 96913

7. Permit Issued Date:

8. Permit Review Due Date: November 9, 2021 – December 27, 2021

9. Legal Description of Facility: The legal description of this facility is contained in the final closure plan and includes Assessor's Parcel Number(s). Lot #3434, Lot #3390-R2 located in Municipality of Ordot-Chalan Pago and Lot #39 Tract 198, Lot # 38 Tract 198, Lot # 37 Tract 198, and Lot # 450-5 located in Municipality of Asan.

10. Findings:

- **a.** This permit is consistent with the standards adopted by the Guam Environmental Protection Agency (Guam EPA).
- **b.** The closure and post-closure maintenance of the disposal site is consistent with the State Minimum Standards for Solid Waste Handling and Disposal as determined by Guam EPA.

11. Prohibitions: Disposal of solid waste at this site is prohibited.

12. The following documents describe and/or restrict the closure and post-closure maintenance of this site:

Volume 1 Post-Closure Care Plan and Permits	October 2021	Volume 4 Soil Vapor Extraction System	October 2021
Volume 2 Standard Procedures	October 2021	Volume 5 Monitoring Well Logs, Reports, and Post-Closure Care Cost Estimate	October 2021
Volume 3 Landfill Gas System	October 2021		

13. Self Monitoring: The owner/operator shall submit the results of all self-monitoring programs to the Guam EPA in accordance with the most recently approved post-closure care maintenance plan.

14. Enforcement Agency (EA) Conditions:

- **a.** The owner/operator shall comply with all applicable standards as specified in Section 23601(c) of Title 22, Division 4, Chapter 23, Article 1 – Solid Waste Management, in particular, Part B, Solid Waste Management Facilities, Section 23601 – Closure and Post-Closure Care of the Guam Administrative Rules and Regulations (GARR) for Guam EPA including all appropriate financial assurance requirements Title 22, Division 4, Chapter 23, Article 7.
- **b.** Additional information concerning the disposal site shall be furnished upon request within the time frame specified by Guam EPA.
- **c.** The owner/operator shall comply with the most recently approved Post Closure Care Plan.
- **d.** All proposed changes, including post-closure land uses, that would cause the design or maintenance of the disposal site to be modified shall be documented in revised closure and/or post-closure care plans and may be implemented only upon approval of the revised plan(s).
- **e.** The Guam EPA shall be notified of a change in ownership during closure or post-closure maintenance in accordance with PCCP GEPA-21001.

GUAM ENVIRONMENTAL PROTECTION AGENCY
1973
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ORDOT DUMP
POST CLOSURE CARE PERMIT
FACT SHEET

ORDOT DUMP

The starting date for the use of the site as a dump is not documented, but it is known that the Ordot Dump was in use during World War II. The dump was used as a disposal area by the Japanese during the Japanese occupation of Guam from December 8, 1941, to July 21, 1944. Following the liberation of Guam, the United States Navy continued to use the site as a disposal area. Ownership of the Ordot Dump was transferred from the United States Naval Government of Guam to the Government of Guam in 1950 under the Organic Act. Since then, the Government of Guam, specifically the Department of Public Works, has been operating the Ordot Dump as a municipal solid waste disposal facility.

Guam's Ordot Dump operated as an uncontrolled dump, during its entire operational period, which is unlined on its bottom and uncapped at the top, retains rainwater, and releases leachate after it has percolated through the dump and absorbs contaminants. This leachate, much of which is discharged into the Lonfit River through surrounding wetlands, presents a serious environmental and public health hazard. For more than 22 years (since 1987), the Government of Guam has been unable to bring its solid waste system into compliance with the Federal Clean Water Act, its solid waste regulations, and other environmental regulations of the U.S. Environmental Protection Agency.

The Dump is located approximately 2.5-miles south of Guam's capital, Hagatña, and about 1-mile west of Route 4, Dero Drive intersection. The area surrounding the Ordot Dump is a mixture of savanna and densely forested areas with individual residences on Dero Drive and associated residential secondary roads. The nearest current residences are approximately wooded areas with scattered residences. The nearest residences are approximately 150-feet from the Ordot Dump. The Ordot Dump is within the Lonfit River watershed situated on the north side of the river. It is located in a ravine or sloping topography that is a tributary to the Lonfit River riverine bottom. The closest physical limits of the dump to the river are its south perimeter, located approximately 275-feet to the south of the site.

The Ordot Dump occupies and borders the property of the Government of Guam on the northeast, east, south, and southwest boundary lines of the site. On the north, the property borders the Right-Of-Way for Dero Drive, and along with the west limits of the Ordot Dump property it borders public land in the form of a road easement and privately owned land.

The Ordot Dump waste footprint area, based on the 2004 limit of waste delineation performed by Duenas & Associates, Incorporated has been estimated to be 46.8 acres. The Ordot Dump is an unlined disposal facility and has few to no control systems to manage landfill gas, leachate, surface water, erosion, sedimentation, or vectors.

CONSENT DECREE NUMBER 02-00022

The Ordot Consent Decree of February 11, 2004, signed by the Government of Guam and the United States of America (U.S. Department of Justice and U.S. Environmental Protection Agency) mandates that Guam must open a new municipal solid waste landfill, close the Ordot Dump, and implement an Ordot Closure Plan, close the Ordot Dump, and open a new municipal solid waste landfill by September 2007.

In a Court Order dated March 17, 2008, U.S. District Court Chief Judge Frances M. Tydingco-Gatewood appointed Gershman, Brickner, and Bratton, Incorporated (GBB) to be the Receiver with full responsibility for bringing the Guam Solid Waste Management Division into compliance with February 11, 2004, Consent Decree for the violation of the Clean Water Act. As Receiver, GBB's objective is to work with Guam's government, the Solid Waste Management Division, solid waste companies, the people of Guam, and the U.S. military to establish a long-term, financially viable, and sustainable waste management system for Guam.

Chief Judge Frances M. Tydingco-Gatewood cited four reasons why the appointment of Receiver was necessary:

1. The government of Guam's noncompliance with the mandates of the Clean Water Act and the Consent Decree;
2. Lack of financial commitment toward funding Consent Decree projects that would bring the government into compliance with the Clean Water Act;
3. Lack of cooperation between Guam's legislative and executive branches; and
4. Lack of tangible progress in opening a new landfill.

On August 31, 2011, the Ordot Dump has officially closed and the subsequent opening of the Layon Municipal Solid Waste Landfill Cells 1 and 2 was on September 1, 2011. The Layon Municipal Solid Waste Landfill is a high-tech, environmentally sound, and highly controlled landfill for non-hazardous municipal solid waste. It was built with an engineered liner and leachate collection and removal system that protects human health and the environment. With a capacity above 15.8 million cubic yards, the Layon Municipal Solid Waste Landfill will service the island of Guam for more than thirty (30) years. The Layon Municipal Solid Waste Landfill is owned by the Guam Solid Waste Authority and operated by Green Group Holdings-Guam, Incorporated.

Under the Consent Decree, the Government of Guam was required to perform and complete a Supplemental Environmental Project (SEP), the approved SEP was the construction and operation of the Harmon Household Hazardous Waste Facility located at Harmon Industrial Park. The facility was permitted by Guam EPA on January 13, 2015.

CHRONOLOGY

The 1940s
Ordot Dump began as a dump with stormwater filtering through the waste and into the Lonfit River and discharging into the coral reef of Pago Bay.

1950
The government of Guam takes control of the Ordot Dump from the U.S. Military.

1990
U.S. EPA Administrative Order for Government of Guam to stop the leachate discharge into the Lonfit River.

2004
The government of Guam and the US Department of Justice and EPA agree to a Consent Decree. The government of Guam promised to build a new municipal solid waste landfill that meets all EPA requirements and close the Ordot Dump in less than four years. In exchange, the Federal Government promises not to impose heavy fines against the Government of Guam.

Government of Guam's Landfill Site Evaluation Team for the new landfill, composed exclusively of Government of Guam Officials considered several sites.

2005
The government of Guam selected Dandan for the site of the Layon Landfill.

2008
March 17
District Court of Guam cites the Government of Guam's failure to meet the timeline of the Consent Decree over the past four years. The Court appoints a Federal Receiver to implement the terms of the Consent Decree.

April
Guam Solid Waste Authority had one (1) working trash truck when the Receivership began. The trash collection was weeks behind schedule.

June 23
The Receiver releases a Request for Expression of Interest for Financing Construction and Operation of the Layon Landfill.

July 17
The Receiver bans cardboard, green waste, and construction debris from the Ordot Dump to extend the capacity of the Dump until the Layon Landfill is in use.

December 5
The Receiver solicited bids for the construction of the Layon Landfill.

2009
February 25
The contractor begins construction on the Layon Landfill Road and trash cells.

June 30
500,000 cubic yards of the earth have been excavated for the Layon Landfill construction.

August 6
USEPA Region IX and Guam EPA accepted the final design permit package from the Receiver for the Layon Landfill.

November 23
The Receiver receives the Solid Waste Facility Permit for the construction of the Layon Municipal Solid Waste Landfill issued by Guam EPA.

Receiver implemented Trash Carts for its residential collection service, making trash collection easier and more efficient for both customers and the solid waste workers.

2010
Receiver implemented cart-based curbside recycling allowing residential customers an easy way to recycle all papers, plastic bottles, and metal cans.

2011
April 15
Receiver signs contract with a third-party operator of the Layon Landfill.

May 20
Receiver signs contract with Brown and Caldwell for the Ordot Dump closure planning and design.

2011
June
Planning and design discussions for the environmental closure of the Ordot Dump begin with USEPA Region IX, Guam EPA

2012
January to December
Gas migration monitoring wells were installed and groundwater and gas sampling began at the Ordot Dump.

June through December
The Receiver meets with USEPA Region IX, Guam EPA, and USCOE on the closure plan and submits the wetland mitigation and restoration plan.

2013
January through July
The Receiver receives approval of the cover design from Guam EPA and submits Ordot Dump Closure Plan to USEPA Region IX and Guam EPA invitation for bid is also released for closure construction.

DRAFT

Technical Memorandum: RCRA-Compliant Groundwater Monitoring Program

Prepared for

Gershman, Brickner & Bratton, Inc.,
Receiver for the Guam Solid Waste Authority

October 2021

DRAFT

Technical Memorandum:
RCRA-Compliant Groundwater Monitoring Program

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Receiver for the Guam Solid Waste Authority

October 2021

Brown AND Caldwell

414 West Soledad Avenue, Suite 602
Hagatña, Guam 96910

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List of Abbreviations

AGMP	Assessment Groundwater Monitoring Program
BC	Brown and Caldwell
CSM	Conceptual Site Model
DEHP	bis(2-ethylhexyl) phthalate
DGMP	Detection Groundwater Monitoring Program
DVEDD	Data Validated Electronic Data Deliverable
Facility	Ordot Dump Post-Closure Facility
GARR	Guam Administrative Rules and Regulations
GWMP	Groundwater Monitoring Program
GWMS	Groundwater Monitoring System
GWPS	Groundwater Protection Standards
HQ	hazard quotient
MCL	Maximum Containment Limit
MDL	Method Detection Limit
PCCP	Post-Closure Care Plan
PFOS	perfluorooctanoic sulfonate
PVC	polyvinylchloride
RCRA	Resource Conservation and Recovery Act
RDL	reporting detection limit
RSL	regional screening levels
SAP	Sampling and Analysis Plan
SMCL	Secondary Maximum Containment Limit
SVOC	Semi-volatile Organic Compound
USEPA	United States Environmental Protection Agency
WQP	water quality parameters

Executive Summary

This Technical Memorandum provides a review and analysis of data to support a Resource Conservation and Recovery Act (RCRA) – compliant Groundwater Monitoring Program (GWMP) for the Ordot Dump Post-Closure Facility (Facility). The requirements for a GWMP are indicated in Guam Administrative Rules and Regulations (GARR) Title 22 Chapter 23 and 40 CFR 258.

The Facility is an unlined waste disposal facility (or dump) owned and operated by the Government of Guam and closed in accordance a Consent Decree between the Government of Guam and the United States Environmental Protection Agency (USEPA). Closure of the Facility included an engineered cover system, leachate collection and removal system and landfill gas collection and treatment. Closure construction was certified to be complete on March 1, 2016.

At the time of closure, the groundwater monitoring network included eight monitoring wells. Eight sampling events were conducted between late 2017 and mid-2019 to establish background groundwater quality. The analyte list included 259 constituents to address the requirements for assessment monitoring in GARR Title 22 Chapter 23 and 40 CFR 258. The list includes constituents in Appendix I and Appendix II of the regulations and additional constituents based on the Facility's history and to assess general water quality conditions, referred to as the Project Analyte List and includes specifically:

- **223 GARR Title 22 Chapter 23 (40 CFR 258) Appendix II Analytes:** There are 215 listed Appendix II analytes (which is inclusive of the 58 Appendix I analytes); polychlorinated biphenyls [PCBs] and Chlordane are each listed as one analyte, but these are reported by analytical laboratories as seven Aroclor mixtures and three isomers of Chlordane, respectively.
- **20 Ordot Specific Analytes:** Munitions (also referred to as explosives), radiological parameters (gross-alpha and -beta, radium 226 and 228, and uranium), and perchlorate (a solid rocket fuel propellant) were included because of past military activities on Guam; 1,4-dioxane was included because it is frequently found at Municipal Solid Waste Landfill Facilities; and hexavalent chromium was included because it is the more toxic form of chromium.
- **16 Water Quality Parameters (WQPs):** Alkalinity, aluminum, ammonia as N, calcium, chloride, iron, magnesium, manganese, molybdenum, nitrate+nitrite as N, phosphate as P, potassium, sodium, sulfate, total dissolved solids (TDS), and total suspended solids (TSS) were included to monitor general groundwater quality conditions related to potential landfill impacts.

An update to the Conceptual Site Model (BC, 2019) was undertaken in 2019 to supplement pre-closure investigations and to establish locations for post-closure groundwater monitoring wells. As a result, four new groundwater monitoring locations were identified. One location was a replacement for an existing groundwater monitoring well. The new wells were installed in late 2019 resulting in a post-closure groundwater monitoring system comprised of twelve wells (three upgradient and nine downgradient). The Conceptual Site Model (CSM) was updated in 2021 (BC, 2021) to reflect information gathered from the installation of the new wells.

Background groundwater quality was established using data from eight rounds of monitoring to assess whether there were any statistically significant concentrations of constituents in downgradient monitoring wells. During the initial assessment from the eight rounds of sampling, there were 28 detections above background. Background water quality will be reassessed after the completion of eight rounds of sampling at the new wells.

Interim Groundwater Protection Standards (GWPSs) were established for each Appendix II and Ordot-specific constituent detected above background in one or more downgradient monitoring wells. The Maximum Contaminant Level (MCL) was used to set the GWPS for these constituents. For constituents without an MCL, the GWPS was established at the health-based level from USEPA's Region 9 Tapwater Regional Screening Level (RSL) or the background concentration if background was greater than the RSL. There was a total of six detections above GWPSs: there was one or more detections of each of four constituents (antimony, arsenic, gross alpha, selenium) in four of the downgradient wells. A fifth constituent, bis(2-ehtylhexyl) phthalate (or DEHP), was detected above its GWPS in four downgradient wells during more than one sampling event. This constituent is a common laboratory contaminant, so additional future monitoring for DEHP will be conducted to assess its presence in the groundwater and evaluate the need for an Alternative GWPS in accordance with the requirements of GARR Title 22 §23506(h) and (i) (40 CFR 258.55(h and i)).

Based on the results of the analyses presented in this Technical Memorandum (limited to the statistical analysis and background calculations from the initial eight events and data collected from all thirteen completed events) and the requirements of GARR Title 22 Chapter 23 (40 CFR 258), it is recommended that assessment monitoring continue for all groundwater monitoring wells. At the completion of eight rounds of monitoring at the new wells subsequent to their installation in late 2019, this Technical Memorandum must be updated to incorporate the results into the background water quality for the Facility and re-evaluate the Interim GWPSs.

The recommendations resulting from this evaluation formed the basis for the Facility's Sampling and Analysis Plan (SAP). The SAP will need to be updated consistent with the recommendations in the updated GWMP Technical Memorandum.

Section 1

Introduction and Objectives

Under the direction of the Receiver – Gershman, Brickner & Bratton, Brown and Caldwell (BC) was authorized to develop plans and conduct design studies in support of the closure of the Ordot Dump Post-Closure Facility (Facility)[1] under the Consent Decree (U.S. District Court of Guam, Civil Case No. 02-00022, Document Number 55). In addition to the Consent Decree Order, Title 10, Chapter 51, Article 1 Solid Waste Management, 51101(4), of the Guam Code Annotated mandated that the Facility be closed. Closure activities were completed on March 1, 2016.

The United States Environmental Protection Agency (USEPA) affirmed in comments dated September 22, 2017, filed with the Court, that the Receiver must develop a Resource Conservation and Recovery Act (RCRA)-compliant Groundwater Monitoring Program (GWMP) as specified in 40 CFR 258 (GARR Title 22 Chapter 23). The GWMP must include validated data for background wells for the full eight rounds of sampling consistent with USEPA guidance, adequate statistical analyses to determine background concentrations and exceedances of background concentrations in downgradient monitoring wells, establishment of Groundwater Protection Standards (GWPSs), determination of any exceedance of a GWPS in downgradient monitoring wells, and supporting rationale and backup documentation for the established groundwater monitoring well network.

On December 21, 2019, USEPA issued comments and direction on the GWMP, including that the Receiver develop and submit a RCRA "Compliant Groundwater Monitoring Program Technical Memorandum" (GWMP TM) for review and technical acceptance that addresses the previously listed requirements in the GWMP. This GWMP TM addresses that requirement and replaces all prior submittals relating to the RCRA-compliant GWMP. The GWMP TM, along with a stand-alone Sampling and Analysis Plan (SAP) and an updated CSM (BC, 2021), will complete the needs for a RCRA- compliant GWMP.

1.1 Facility Location and Description

The Facility is located approximately 2.5 miles south of Guam's capital, Hagatña and approximately 1 mile west of the intersection of Route 4 and Dero Road in the Village of Ordot, Chalan Pago-Ordot, Guam, as shown on Figure 1-1. The area surrounding the Facility is comprised of grassland and tropical ravine forest characterized by dense brush and interspersed with residential development. A commercial composting operation is located to the north of the Facility across Dero Road. The Facility is bordered by the Lonfit River to the south and a surface drainage channel to the west. The surface drainage channel receives run-off from the Facility and from areas north of the Facility including the commercial composting operation.

1.2 Purpose and Objectives

The purpose of the GWMP TM is to establish a RCRA-compliant GWMP for the Facility that meets the requirements of Title 40 CFR 258.51 through 258.55 for municipal solid waste landfills. The corresponding regulations to be enforced for the compliant GWMP are Guam Administrative Rules and Regulations (GARR) Title 22, Division 4, Chapter 23, Article 5, § 23502 through 23506 (GARR Title 22 §§23502- 23506). The GWMP TM will be incorporated as an appendix to the Post-Closure Care Plan (PCCP).

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[1] See Post-Closure Care Plan for definition.

The objectives of the GWMP TM with associated Sections in this document include:

1. Establish the Groundwater Monitoring System (GWMS), i.e., well network, in accordance with GARR Title 22 §23502 (40 CFR 258.51) (Section 2).
2. Establish a Project Analyte List for constituents to sample (Section 3).
3. Establish background concentrations in accordance with GARR Title 22 §23504 (40 CFR 258.53) and provide statistical analysis to compare groundwater downgradient to background concentrations in accordance with the aforementioned requirements (Section 4).
4. For detected constituents, establish GWPSs in accordance with GARR Title 22 §23506 (40 CFR 258.55 (d)(4) and 258.55(h)) (Section 5).
5. For detected constituents above background, compare downgradient concentrations to GWPS in accordance with GARR Title 22 §23506 (40 CFR 258.55 (g)) (Section 6).

Based on the above objectives, the GWMP TM proposes a post-closure GWMP in compliance with GARR Title 22 §§23502-23506 (40 CFR 258.51-258.55) to incorporate in the PCCP (Section 7). In addition, the GWMP TM documents the land use restrictions and institutional controls (Section 5) that further support the GWPS as conservatively health protective.

Section 2

Groundwater Monitoring System (GWMS)

A CSM was prepared to evaluate and document the hydrogeologic conditions of the site and components of the Facility, which includes four wells installed pre-closure (MW-1B, MW-1C, MW-2A, and MW-5A) and six replacement wells installed post-closure (MW-6, MW-9, MW-10, MW-11, MW-12, and MW-13). The original CSM (BC, 2019) identified the need for four additional groundwater monitoring wells to be installed: one upgradient (MW-14), one replacement downgradient well (MW-11R), and two downgradient wells (MW-15 and MW-16). Monitoring well locations are shown on Figure 2-1.

MW-11R was installed as a replacement for MW-11 because MW-11 had insufficient water volume to sample. MW-11 will be retained for observational purposes and not as part of the routine GWMP. The CSM concluded that upgradient well MW-1B is not a suitable background well because the well screen spans two geologic units. MW-1B will be retained but is not part of the GWMS.

The CSM was updated (BC, 2021) to incorporate the hydrogeological and well-construction data for the four new monitoring wells. With the addition of the four new wells, the existing GWMS consists of 12 monitoring wells; three upgradient wells (MW-1C, MW-2A, and MW-14) and nine downgradient wells (MW-5A, MW-6, MW- 9, MW-10, MW-11R, MW-12, MW-13, MW-15, and MW-16) locations of which are shown in Figure 2-1 and summarized in Table 2-1.

The above GWMS established in the updated CSM provides a RCRA-compliant GWMS in accordance with GARR Title 22 §23502 (40 CFR 258.51) which requires enough wells, installed at appropriate locations (upgradient and downgradient) and depths, to yield groundwater samples from the uppermost aquifer. Samples collected from these wells should represent the quality of: (a) background groundwater that has not been affected by leakage from the landfill (i.e., collected from upgradient wells); and (b) groundwater passing relevant points of compliance (i.e., collected from downgradient wells).

Section 3

Project Analyte List and Data Summary

Of the monitoring wells in the established GWMS, groundwater samples were collected from MW-1C, MW-2A, MW-5A, MW-6, MW-9, MW-10, MW-12, and MW-13 during eight events between 2017 and 2019: November and December 2017; January/February, March, and October 2018; and January, March, and May/June 2019. The eight rounds were conducted to be consistent with the minimum required to establish background (USEPA, 2009b).

There is a total of 259 project analytes, hereafter referred to as the Project Analyte List (see Attachment A):

- A total of 223 GARR Title 22 Chapter 23 (40 CFR 258) Appendix II analytes. There are 215 Appendix II analytes, but PCBs are listed only once although is analyzed and reported as seven PCB mixtures (Aroclor-1016, --1221, -1232, - 1242, 1248, -1254, and -1260) and Chlordane is listed once but is analyzed and reported as three isomers (alpha-, beta-, and gamma-Chlordane). The Appendix II analytes include all 59 Appendix I analytes required for routine Detection or Assessment monitoring programs (see Section 7).
- 20 Ordot Specific Analytes: munitions, radiological parameters, 1,4-dioxane, hexavalent chromium and perchlorate.
- 16 water quality parameters (WQPs) incorporated as indicators of leachate impacts to groundwater.

Groundwater samples collected from the downgradient wells (MW-5A, MW-6, MW-9, MW-10, MW-12, and MW-13 and the upgradient well MW-1C were analyzed for the full Project Analyte List. Samples were not collected during six of the eight events from the upgradient well MW-2A because of an insufficient volume of water for sampling.

The new groundwater monitoring wells (MW-11R, MW-14, MW-15, and MW-16) were installed in November and December 2019 and initial sampling for the full Project Analyte List was performed in December 2019. Seven additional sampling events will be needed to provide a minimum of eight sampling events for these wells. Upon completion of the eighth sampling event, the data will be evaluated, and this GWMP TM, and by extension the GWMP, will be updated to reflect any necessary changes within 90 days of the final sampling event.

The results of groundwater samples collected from MW-1C, MW-2A, MW-5A, MW-6, MW-9, MW-10, MW-12, and MW-13 were validated using USEPA's Region 9 Tier 3 data validation procedures (USEPA, 2001), and the validation is documented in the Data Usability Summary Reports (see Attachment B). The project database (Data Validated Electronic Data Deliverable [DVEDD]) has been developed with all historical data, including the validated data from these eight groundwater monitoring events. The DVEDD will be incorporated as an electronic copy enclosed with the PCCP (Excel File EPA-NSEDD-20190910). The results from MW-11R, MW-14, MW-15, and MW-16 for the completed eight events will be validated and incorporated into a future update of this GWMP TM.

Attachment C provides a tabulation of analytical results of Project Analyte List constituents that were detected. There are 259 constituents on the Project Analyte List. Of these, 202 were not detected during the initial eight sampling events, and after thirteen events, new detections were observed and are listed on Table 3-1 presented by analyte, well, and event.

RCRA Subtitle D Solid Waste Disposal Facility Criteria Manual (USEPA, 1993) and GARR Title 22 §23505 (40 CFR 258.54) provide for confirmation to substantiate that a sample result was not representative of groundwater quality in an affected well(s). This is accomplished by resampling whereby one or more additional independent samples are obtained.

The resultant detected constituents from the Project Analyte List are included in Table 3-1.

Section 4

Background Concentrations

4.1 Basis for Background Concentrations

Background concentrations must be established for detected Appendix II constituents to determine if there are statistically significant concentrations above background in downgradient monitoring wells, in accordance with GARR Title 22 §23506 (40 CFR 258.55) (See Section 4.2). For this analysis, background concentrations are established for all detected constituents from the Project Analyte List, including for the single unconfirmed detected constituents and Water Quality Parameters. Organic compounds have been detected historically in MW-1C but not MW-2A. Background for organics are assumed conservatively as the laboratory reporting limits (RL). For inorganics, the results from MW-1C and MW-2A are commingled to determine background from the initial eight sampling events. Where non-detect, background for inorganics is the RL.

Background concentrations are summarized in Attachment C which additionally provides results by well with background shaded gray, percentage of non-detects, and inter-well prediction limits. The inter-well prediction limit is the background concentration above which for downgradient wells would constitute a statistically significant increase above background.

4.2 Statistical Analysis of the Data from Initial 8 Events

In accordance with GARR Title 22 §23504 (40 CFR 258.53), downgradient monitoring well data must be statistically analyzed for each well to determine if concentrations of detected constituents exceed statistically derived background values. This statistical analysis includes all detected constituents from the Project Analyte List, including for the single unconfirmed detected constituents and WQPs.

The statistical analysis was performed consistent with the procedures provided in Statistical Analysis of Ground Water Monitoring Data at RCRA Facilities (USEPA, 2009b). Statistical software by Sanitas™ (Version 9.6) was used. Data from the eight monitoring events (November 2017, December 2017, January/February 2018, March 2018, October 2018, January 2019, March 2019, and May/June 2019) were first subjected to an outlier analysis to identify and appropriately remove extreme results to improve reliability of an estimate.

Tukey's Outlier Screening and Dixon's Test for Outliers procedures for identifying outliers were employed automatically in Sanitas™ as recommended in the guidance.

The initial analysis determined 39 outliers by well including 26 non-detected results and 13 with detections. Outliers in the database were identified and managed as follows. Fourteen of the outliers were from datasets that were all non-detect and each outlier was identified due to the differences in detection limits. Six outliers were identified in datasets that were 87.5 percent non-detect (either one detection or estimated value in those datasets). The outlier identified was a non-detect data point and as indicated above was due to a difference in limits.

One outlier was from a dataset that was 12.5 percent non-detect and it was the only non-detect identified in that dataset (Uranium at MW-10 from November 2017). Since it is a low outlier, it was retained. Another outlier was from a dataset that was 50 percent non-detect, and is a non-detect and a low outlier, so it was retained. Four outliers were identified as detected results but were non-detects and the database was adjusted to correct the values.

The non-detected results were retained, but the 13 other outliers (see Table 4-1) were excluded.

After exclusion of the outliers, upgradient to downgradient statistical comparisons were conducted using the inter-well prediction limits method specified in the guidance. The two existing background wells established by the updated CSM are MW-1C (inorganics only) and MW-2A. Since only two data points were available for MW-2A, the upgradient data were pooled together to provide a higher statistical power. To compare the downgradient data to the upgradient data, prediction limits were run for parameters which had detections during the eight events to evaluate the upgradient data with respect to the downgradient sample results. The prediction limit analysis determined by the statistical analysis is summarized in Attachment E.

Several general water quality parameters (i.e., chloride, sulfate, sulfide, total dissolved solids, total phosphate, total phosphorous and total suspended solids) were detected above background. These constituents may either have SMCLs that are based on non-health factors such as taste and odor, or do not have SMCLs or RSLs. These constituents do not pose a human health risk for continued detections above background well or the SMCL.

Tables C.1 through C.9 in Attachment C show all the constituents detected during the eight sampling events and detections above background. Tables C.1 through C.9 also include Events 9, 10, 11, 12, and 13, including data from new wells MW-11R, MW-14, MW-15, and MW-16. Event 9 through 13 were not included in the statistical analysis or background calculations.

Once all eight events from MW-11R, MW-14, MW-15, and MW-16 are completed, statistical analysis of the data and updates to background calculations will be performed and incorporated into a future update of this GWMP TM. Due to inconsistency in minimum detectable concentrations for Radium 226 and Radium 228 methods, Events 5 through 12 are not included in Attachment C Tables C.1 and C.9 and will not be used for further statistical analysis and background calculations.

Section 5

Groundwater Protection Standards

5.1 Basis for Groundwater Protection Standards

Groundwater Protection Standards (GWPS) must be established for each Appendix II constituent (GARR Title 22 Chapter 23; 40 CFR 258) detected in one or more downgradient groundwater monitoring wells in accordance with GARR Title 22 §23506 (40 CFR 258.55 (d)(4) and 258.55(h)). For this analysis, the GWPS include all detected Appendix II constituents (see Attachment A) including for the single unconfirmed detected constituents and Ordot Specific Analytes detected above background more than one time at a monitoring well (see Table 5-1). Attachment D provides the proposed GWPS for each constituent along with descriptive statistics, MDLs, frequency of detection values, and noted where there are detections above background and the GWPS. The basis for the proposed GWPS is as follows.

If a primary Maximum Contaminant Level (MCL) has been promulgated under the Safe Drinking Water Act, the MCL serves as the GWPS. If the State MCL is lower than the federal MCL, the State MCL applies. SMCLs are based on non-health- based factors such as taste and odor and therefore, 40 CFR 258 requirements do not apply.

If a primary MCL has not been codified, the GWPS were determined as follows:

- The background concentration for the constituent established from wells in accordance with GARR Title 22 §23502(a)(1) (40 CFR 258.51(a)(1)); or
- Appropriate health-based levels, in this case, identified by Region 9 as the USEPA Tapwater regional screening levels (RSLs; November 2019 https://www.epa.gov/risk/regional-screening-levels-rsls-generic- tables):
  - For constituents with both cancer and non-cancer human health effects, the lower of the cancer or noncancer value;
  - For noncarcinogens, the noncancer RSLs (in this case set by USEPA Region 9);
  - Cancer values set at an excess lifetime cancer risk of one in ten thousand ($1x10^{-4}$)); or
  - Noncancer values set at a Hazard Quotient (HQ) of 1.

GARR Title 22 §23506(i)(4) (40 CFR 258.55(i)(4)) further states that for systemic toxicants, the level represents a concentration to which the human population (including sensitive subgroups) could be exposed on a daily basis that is likely to be without appreciable risk of deleterious effects during a lifetime. For purposes of this subpart, systemic toxicants include toxic chemicals that cause effects other than cancer or mutation. The RSL at an HQ of 1 addresses this criterion unless there is potential additivity with constituents that are based on toxicity to the same target organ. This is the reason that screening evaluations may sometimes use a target HQ of 0.1. To address this concern, the toxicity basis was reviewed for detected noncarcinogens that were detected at least once at a concentration above one-tenth of the noncancer RSL (corresponding to exceeding an HQ of 0.1). This concern applies to vanadium. A review of the basis and background of these RSLs reveals the following:

Vanadium: The vanadium RSL is also from a provisional value (USEPA, 2009a). The p-RfD is based on kidney effects in rats. USEPA described the confidence as low.

Since the effects of vanadium are not additive, it is not necessary to adjust the GWPSs to account for cumulative organ effects by selecting RSLs based on HQs of 0.1. Thus, for noncarcinogenic endpoints, HQs of 1 were used to establish the GWPS.

5.2 Land Use Restrictions and Institutional Controls

The proposed GWPS are further supported as conservatively health-protective because use restrictions and institutional controls are and will be in place for the land downgradient of the Facility. The land downgradient is owned by the Government of Guam, and there is no complete pathway for groundwater ingestion, nor is a complete pathway possible in the future due to the site restrictions proposed in the property deed and well drilling and water use development limits imposed by the Government of Guam.

5.2.1 Land Use Restrictions

The land hydrogeologically downgradient of the Facility, which is bounded by the Lonfit River (the Lonfit River coincides with the southern boundary), is owned by the Government of Guam and is a property asset assigned to the GSWA. There exists no complete pathway for groundwater ingestion, nor is a complete pathway possible in the future due to the notation of deed restrictions required in the Land Registration and property consolidation by the Government of Guam to provide a property title and deed for the GSWA property asset. The deed restrictions will include a prohibition of any water resource development within the property boundaries of the Facility.

In accordance with GARR Title 22 §23601and §23602 (40 CFR 258.60 and 40 CFR 258.61), the property deed, which must be recorded and included in the Facility's Operating Record, will contain a notation on the deed that must in perpetuity notify any potential purchaser of the property that:

(i) The land has been used as a landfill facility; and

(ii) Post-closure use of the property shall not disturb the integrity of the final cover, liner(s), or any other components of the containment system, or the function of the monitoring systems unless necessary to comply with the requirements.

5.2.2 Institutional Controls

The exploration, development, or use of water resources on Guam is precluded without the express written authority of the Guam EPA and GSWA. Any subsurface investigatory drilling for any purpose, water well drilling or otherwise, is restricted by obtaining a well drilling permit per GARR Title 22 Division 2 Chapter 7, §7105 and an operating permit per §S7106. Further, obtaining these permits is restricted to licensed well drillers in §7104. Guam EPA must approve and issue any such licensing and permits.

The Receiver expects that the deed notation with above restrictions will be in place in 2022.

Section 6

Evaluation of Monitoring Data

The next step required for the GWMP is to evaluate the monitoring data for downgradient wells that exhibit statistically significant concentrations above background to determine if there are statistically significant exceedances of the GWPS. The following exceedances are statically significant from the statistical analysis on the initial eight events.

The analytes listed below had one or more exceedance of the respective GWPS (Table 6-1).

- **Antimony** was detected in one of thirteen sampling rounds at 8.5 µg/L (Event 1 MW-6) exceeding the GWPS (MCL-based) of 6 µg/L. A trend plot has been included on Attachment F.
- **Arsenic** was detected in five of thirteen sampling rounds at a maximum concentration of 16 µg/L (Event 10 MW-15 and Event 13 MW-14) exceeding the GWPS (MCL-based) of 10 µg/L. There have been five downgradient well exceedance (Event 2 MW-12, Event 10, 11, 12, and 13 MW-15), and there have been two upgradient well exceedances at MW-14. A trend plot has been included on Attachment F.
- **Gross Alpha** was detected in one of thirteen sampling rounds at 50.3 pCi/L (Event 10 MW-11R) exceeding the GWPS of 15 pCi/L. A trend plot has been included on Attachment F.
- **Selenium** background is higher than the MCL of 50 micrograms per liter (ug/L), so the GWPS is background (86 ug/L). One sampling round (Event 4 MW-5A) exceeded the background GWPS. A trend plot has been included on Attachment F.
- **Bis(2-ethylhexyl) phthalate (DEHP)** was detected in six of thirteen sampling rounds at a maximum concentration of 23 ug/L (Event 7 MW-5A) exceeding the GWPS of 6 µg/L. Monitoring wells include MW-5A, MW-6, MW-9, MW-10, MW-11R, MW-12, MW-13, and MW-15. The initial DEHP method RL for Events 1 through 4 was below the GWPS; however, due to a method change, the RL increased to 10 ug/L. The laboratory confirmed the RL can be reported to 6 ug/L with increased sample volume. Sampling procedures were updated, and Event 12 confirmed RLs at or below the GWPS. DEHP is a common laboratory contaminant and is used in plastics such as polyvinylchloride (PVC) (Wisconsin Dept. of Natural Resources, 2019). Additional assessment monitoring is recommended for DEHP, including communication with the laboratory regarding lower MDLs which has already occurred and reducing potential laboratory contamination to assess if this constituent is present in groundwater. A trend plot has been included on Attachment F.
- **Radium-226 and -228** were detected in eight of thirteen sampling rounds exceeding the combined GWPS of 5 pCi/L. After method investigation for Method 901.1 analyzed in Events 5 through 12, Methods 903.0 and 904.0 that were analyzed in Event 1 through 4 were reinstated at Event 13. Radium-226 and -228 monitoring data for all wells are below GWPS. Method 901.1 Events 5 through 12 Radium-226 and -228 monitoring data for all wells will not be used in future statistical and background calculation due to method inconsistency of reporting limits. No trend plot is included due to Events 1 through 4 and 13 being below the GWPS.

WQPs are potential indicators of leachate impacts and several regularly exceeded background in downgradient monitoring wells. Secondary MCLs based on non-health-based criteria were not exceeded except for total dissolved solids (SMCL- 500 mg/L) in MW-5A, MW-6 and MW-13 in the initial 8 rounds of sampling. Inorganic constituents such as ammonia and nitrate-nitrite were sporadically detected above background but well below applicable MCLs or RSLs. The metals aluminum and iron were not detected above background concentrations which are significantly less than the applicable RSLs.

In conclusion, based on the data evaluated for existing downgradient wells, no Project Analyte List or Appendix II constituents were detected at statistically significant levels above the GWPS. Therefore, no further actions to assess corrective measures are required until all 8 rounds of sampling have been completed for new wells.

Section 7

Post-Closure Care Plan Groundwater Assessment Monitoring Program

The proposed PCCP groundwater monitoring program is an Assessment Groundwater Monitoring Program (AGMP) based on the interim results documented in this GWMP TM for existing monitoring wells and as required by GARR Title 22 § 23506 (40 CFR 258.55). A summary of the AGMP including timeframes for submittals is provided on Table 7-1.

7.1 Interim AGMP for New Monitoring Wells

Four new monitoring wells have been constructed as recommended in the updated CSM (BC, 2019). Initial sampling for the new wells was performed in December 2019. Seven additional quarterly sampling events for the Project Analyte List will be conducted to provide a minimum of eight sampling events for the new wells. The data will be evaluated consistent with this GWMP TM and the SAP. The evaluation process will include:

1. Validation of the data, and updates to the project database and the Data Usability Summary in Attachment B,
2. Perform statistical analyses to update background concentrations,
3. Conduct statistical analysis of downgradient constituents detected with respect to background concentrations to determine if any downgradient constituents show statistically significant concentrations above background concentrations,
4. Update the GWPSs for all confirmed Appendix II constituents detected and Ordot Specific Analytes in downgradient monitoring wells (Section 7.4 outlines the process to establish an alternative GWPS),
5. Determine if Appendix II constituents and Ordot Specific Analytes that are above background exceed the GWPS at statistically significant levels,
6. If constituents on the Appendix II list exceed the GWPS at statistically significant levels, notify Guam EPA and appropriate local officials of each exceedance within 14 days, and implement the provisions of GARR Title 22 § 23506(g) (40 CFR 258.55(g)) (see Section 7.3 below, Exceedance of GWPSs),
7. Update the AGMP to reflect Appendix II constituents and Ordot Specific Analytes determined to be above background as described above, and
8. Revise this GWMP TM for all wells and submit to Guam EPA within 90 days of the last sampling event.

Figure 7-1 illustrates the process for reviewing groundwater monitoring results during the Interim AGMP, for both existing and new wells. The monitoring wells subject to the Interim AGMP for new monitoring wells are MW-11R, MW-14, MW-15, and MW-16.

Upon completion of the Interim AGMP for new wells, add the new wells to the AGMP for Existing Monitoring Wells (see Section 7.2).

7.2 AGMP for Existing Monitoring Wells

In accordance with GARR Title 22 § 23506(f) (40 CFR 258.55(f)), if detected Appendix II constituents are found at a statistically significant level above background values but are below the GWPS, assessment monitoring must continue. Only if all Appendix II constituents are demonstrated to be at or below background for two consecutive sampling events will the AGMP revert to a Detection Groundwater Monitoring Program (DGMP) under GARR Title 22 § 23505 (40 CFR 258.54).

The minimum requirements of the AGMP for all existing wells are:

1. Semi-annual monitoring of GARR Title 22 Chapter 23 and 40 CFR 258 Appendix I constituents, detected Appendix II constituents, Ordot Specific Analytes detected above background more than one time at a monitoring well and all WQPs on the Project Analyte List (field parameters- pH, specific conductance, turbidity and laboratory sample parameters chloride, sulfate, and total dissolved solids), and
2. Annual monitoring of all constituents on the Project Analyte List (Attachment A).

Figure 7-2 illustrates the process for reviewing groundwater monitoring results during the AGMP. If Appendix II constituents and Ordot Specific Analytes not previously detected are detected from the annual monitoring event, determination shall be made if there is a statistically significant increase above background and the GWPS.

Resampling may be conducted to confirm the presence of newly detected Appendix II constituent(s) and Ordot Specific Analytes in groundwater. If confirmed, the detected constituent(s) will be added to the semi-annual monitoring.

Proposed revisions to the AGMP allowed under GARR Title 22 § 23506 (40 CFR 258.55) to reduce the frequency of monitoring or to remove constituents from the monitoring program must be submitted to Guam EPA for approval.

USEPA or Guam EPA may promulgate regulations and/or issue guidance and policy for emergent chemicals, such as perfluorooctanoic sulfonate (PFOS), and these should be incorporated, as appropriate, into the GWMP and documented in updates to the SAP.

7.3 Exceedance of GWPSs

The regulatory process in the event of one or more Appendix II constituents (GARR Title 22 Chapter 23 and 40 CFR 258) or Ordot Specific Analytes on the Project Analyte List are confirmed at a statistically significant level above the GWPS is summarized in Figure 7.3.

If the exceedance is for a newly detected constituent statistically above background that does not have a GWPS, an alternative GWPS above the concentration detected may be applicable in accordance with §23506(i). If potentially applicable, demonstration is required to be submitted to GEPA for approval (See Section 5.1). If approved, the monitoring program reverts to the routine Assessment Groundwater Monitoring Program (AGMP) (Figure 7-1).

If the demonstration under §23506(i) of an alternative GWPS is not applicable, or is disproved, implementation of a remedy is required pursuant to §23509, until such time that determination is made that compliance cannot be practically achieved, in accordance with §23509(c), or that remediation is complete in accordance with §23509(e). Alternatively, remediation is not necessary if the owner or operator is able to demonstrate to the satisfaction of the GEPA that the requirements of §23508(e)(2) are met, specifically:

The constituent(s) is present in ground water that:

> (i) Is not currently or reasonably expected to be a source of drinking water; and
>
> (ii) Is not hydraulically connected with waters to which the hazardous constituents are migrating or are likely to migrate in a concentration(s) that would exceed the ground-water protection standards established under §23506(h or i) (§258.55(h) or (i))

The applicable corrective measure remedy assessed and selected is the 40 CFR RCRA compliant final closure as documented in the Closure Certification Report (GHD, Inc., 2016), and monitored and maintained in accordance with the Post-Closure Care Plan. In accordance with §23509(e), remediation is complete if demonstrated that concentrations of Appendix II constituents and Ordot Specific Analytes on the Project Analyte List have not exceeded the ground-water protection standard(s) for a period of three consecutive years using the statistical procedures and performance standards of §23504(g) and (h).

7.3.1 Pertinent Regulations Applicable to Exceedance of GWPSs

§23508(e) (40 CFR 258.57(e)):

(e) The Director of an approved State may determine that remediation of a release of an appendix II constituent from a MSWLF unit is not necessary if the owner or operator demonstrates to the satisfaction of the Director of the approved State that:

(1) The ground-water is additionally contaminated by substances that have originated from a source other than a MSWLF unit and those substances are present in concentrations such that cleanup of the release from the MSWLF unit would provide no significant reduction in risk to actual or potential receptors; or

(2) The constituent(s) is present in ground water that:

(i) Is not currently or reasonably expected to be a source of drinking water; and

(ii) Is not hydraulically connected with waters to which the hazardous constituents are migrating or are likely to migrate in a concentration(s) that would exceed the ground-water protection standards established under §23506(h or i) (§258.55(h) or (i)); or

(3) *Remediation of the release(s) is technically impracticable; or*

(4) *Remediation results in unacceptable cross-media impacts.*

§23509(c) (40 CFR 258.58(c)):

If the owner or operator determines that compliance with requirements under §23508(b) (§258.57(b)) cannot be practically achieved with any currently available methods, the owner or operator must:

> *(1) Obtain certification of a qualified ground-water scientist or approval by the Director of an approved State that compliance with requirements under §23508(b) (§258.57(b)) cannot be practically achieved with any currently available methods;*
>
> *(2) Implement alternate measures to control exposure of humans or the environment to residual contamination, as necessary to protect human health and the environment; and*
>
> *(3) Implement alternate measures for control of the sources of contamination, or for removal or decontamination of equipment, units, devices, or structures that are:*
>
> *(i) Technically practicable; and(ii) Consistent with the overall objective of the remedy.*
>
> *(4) Notify the State Director within 14 days that a report justifying the alternative measures prior to implementing the alternative measures has been placed in the operating record.*

§23509(e) (40 CFR 258.58(e)):

> *(e) Remedies selected pursuant to §23508 (§258.57) shall be considered complete when:*

> *(1) The owner or operator complies with the ground-water protection standards established under §23506(h or i) (§§258.55(h) or (i)) at all points within the plume of contamination that lie beyond the ground-water monitoring well system established under §23502(a) (§258.51(a)).*
>
> *(2) Compliance with the ground-water protection standards established under §23506(h or i) (§§258.55(h) or (i)) has been achieved by demonstrating that concentrations of appendix II constituents have not exceeded the ground-water protection standard(s) for a period of three consecutive years using the statistical procedures and performance standards in §23504(g) and (h) (§258.53(g) and (h)).*

7.4 Alternative GWPSs

In lieu of the GARR Title 22 §23506(g) (40 CFR 258.55(g)) process for exceedance of GWPSs, an alternative GWPS may be proposed by constituent where an MCL has not been promulgated, only if meeting the requirements of GARR Title 22 §23506(h) and (i) (40 CFR 258.55(h and i)) and submitted to Guam EPA for approval.

GARR Title 22 §23506(h and i) (40 CFR 258.55(h and i))

(h) The owner or operator must establish a ground-water protection standard for each Appendix II constituent detected in the ground-water. The ground-water protection standard shall be:

(1) For constituents for which a maximum contaminant level (MCL) has been promulgated under section 1412 of the Safe Drinking Water Act (codified) under 40 CFR part 141, the MCL for that constituent;

(2) For constituents for which MCLs have not been promulgated, the background concentration for the constituent established from wells in accordance with §258.51(a)(1); or

(3) For constituents for which the background level is higher than the MCL identified under paragraph (h)(1) of this section or health-based levels identified under §258.55(i)(1), the background concentration.

(i) The Director of an approved State may establish an alternative ground-water protection standard for constituents for which MCLs have not been established. These ground-water protection standards shall be appropriate health-based levels that satisfy the following criteria:

(1) The level is derived in a manner consistent with Agency guidelines for assessing the health risks of environmental pollutants (51 FR 33992, 34006, 34014, 34028, Sept. 24, 1986);

(2) The level is based on scientifically valid studies conducted in accordance with the Toxic Substances Control Act Good Laboratory Practice Standards (40 CFR Part 792) or equivalent;

(3) For carcinogens, the level represents a concentration associated with an excess lifetime cancer risk level (due to continuous lifetime exposure) with the 1 × 10^{-4} to 1 × 10^{-6} range; and

(4) For systemic toxicants, the level represents a concentration to which the human population

(including sensitive subgroups) could be exposed to on a daily basis that is likely to be without appreciable risk of deleterious effects during a lifetime. For purposes of this subpart, systemic toxicants include toxic chemicals that cause effects other than cancer or mutation.

(ii) [Reserved]

(j) In establishing ground-water protection standards under paragraph (i) of this section, the Director of an approved State may consider the following:

(1) Multiple contaminants in the ground water;

(2) Exposure threats to sensitive environmental receptors; and

(3) Other site-specific exposure or potential exposure to ground water.

7.5 Summary of Groundwater Monitoring Program

Table 7-1 provides a tabulated summary of the proposed GWMP to be incorporated into the PCCP.

Section 8

References

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Tables

TABLE 2-1
MONITORING WELLS
ORDOT DUMP POST-CLOSURE FACILITY
ORDOT-CHALAN PAGO, GUAM

Well	Unit
Upgradient (Background) Monitoring Wells	
MW-1C	Upper bedrock
MW-2A	Upper bedrock
MW-14 (new)	Upper bedrock
Downgradient Monitoring Wells	
MW-5A	Alluvium
MW-6	Alluvium
MW-9	Upper bedrock
MW-10	Upper bedrock
MW-11R (new replacement)	Upper bedrock
MW-12	Upper bedrock
MW-13	Upper bedrock
MW-15 (new)	Upper bedrock
MW-16 (new)	Alluvium/Saprolite

TABLE 3-1
DOWNGRADIENT MONITORING WELL DETECTIONS
ORDOT DUMP POST-CLOSURE FACILITY
ORDOT-CHALAN PAGO, GUAM

Category of Project Analyte	Detected Constituent	Location	Event Name*
Ordot Specific Parameter	1,4-Dioxane	MW-5A	5, 8, 9, 10, 11
		MW-6	9, 10
		MW-9	10, 11
		MW-11R	10, 11, 12, 13
		MW-12	8, 9, 10, 11, 13
		MW-15	10, 11, 12
		MW-16	10, 12
Appendix II	2,3,7,8-TCDD	MW-5A	6, 10
		MW-9	**6**
		MW-10	**9**
		MW-13	**6**
Appendix II	2,4-D	MW-9	**9**
Appendix II	2,6-Dinitrotoluene	MW-15	**12**
Ordot Specific Parameter	2-Amino-4,6-dinitrotoluene	MW-11R	**13**
Appendix II	2-Methylnaphthalene	MW-13	**5**
Appendix II	3-Methylphenol/4-Methylphenol (m,p-cresol)	MW-11R	**10**
Appendix II	4,4'-DDD	MW-13	**5**
Appendix II	Acenaphthene	MW-9	1, 5, 11
Appendix II	Acenaphthylene	MW-13	**5**
Appendix I	Acetone	MW-11R	**10**
		MW-15	10, 12
		MW-16	**10**
Appendix II	Aldrin	MW-9	**5**
		MW-16	**12**
Appendix II	alpha Endosulfan (Endosulfan I)	MW-5A	**5**
Appendix II	Anthracene	MW-9	**5**
		MW-11R	**13**
		MW-13	**5**
Appendix I	Antimony	MW-6	**1**
		MW-15	**10**
Appendix I	Arsenic	MW-5A	**2**
		MW-6	**2**
		MW-9	7, 11, 13
		MW-10	7, 11, 13
		MW-11R	10, 11, 12, 13
		MW-12	**2**
		MW-15	10, 11, 12, 13
		MW-16	11, 12, 13

TABLE 3-1
DOWNGRADIENT MONITORING WELL DETECTIONS
ORDOT DUMP POST-CLOSURE FACILITY
ORDOT-CHALAN PAGO, GUAM

Category of Project Analyte	Detected Constituent	Location	Event Name*
Appendix I	Barium	MW-5A	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
		MW-6	1, 2, 3, 5, 6, 7, 9, 10, 11
		MW-9	2, 5, 10
		MW-10	5, 7, 8, 9, 10, 11, 13
		MW-11R	10, 11, 12, 13
		MW-12	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13
		MW-13	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13
		MW-15	10, 11, 12, 13
		MW-16	10, 11, 12, 13
Appendix II	Benzo(a)anthracene	MW-6	**11**
		MW-9	5, 11
		MW-12	**11**
		MW-13	5, 11
		MW-15	**12**
		MW-16	**11**
Appendix II	Benzo(a)pyrene	MW-6	**11**
		MW-12	**7**
		MW-13	**5**
		MW-15	11, 12
		MW-16	11, 12
Appendix II	Benzo(b)fluoranthene	MW-6	7, 11
		MW-9	**5**
		MW-12	**7**
		MW-13	**5**
		MW-15	11, 12
Appendix II	Benzo(k)fluoranthene	MW-9	**5**
		MW-13	**5**
		MW-15	**12**
Appendix II	Benzyl alcohol	MW-9	**1**
Appendix II	Benzyl butyl phthalate	MW-5A	**5**
Appendix II	BHC, alpha	MW-5A	**9**
		MW-6	**9**
		MW-13	**5**
Appendix II	BHC, beta	MW-5A	**9**
		MW-6	**9**
Appendix II	BHC, delta	MW-5A	5, 9
		MW-6	**9**
Appendix II	BHC, gamma (Lindane)	MW-5A	**9**
		MW-6	**9**

TABLE 3-1
DOWNGRADIENT MONITORING WELL DETECTIONS
ORDOT DUMP POST-CLOSURE FACILITY
ORDOT-CHALAN PAGO, GUAM

Category of Project Analyte	Detected Constituent	Location	Event Name*
Appendix II	bis(2-Chloroethoxy)methane	MW-6	**6**
Appendix II	bis(2-Ethylhexyl)phthalate	MW-5A	7, 9, 11
		MW-6	7, 9
		MW-9	5, 9
		MW-10	7, 11
		MW-11R	**11**
		MW-12	5, 6, 11
		MW-13	5, 11
		MW-15	**10**
Appendix I	Cadmium	MW-13	**1**
Appendix I	Chlorobenzene	MW-9	**1**
		MW-11R	11, 13
Appendix I	Chromium	MW-5A	1, 3, 4, 5, 10
		MW-6	1, 5, 10
		MW-9	1, 4, 2
		MW-10	1, 2, 3, 5, 6, 7, 8, 9, 10
		MW-12	1, 5
		MW-13	4, 10
		MW-15	11, 13
		MW-16	11, 13
Ordot Specific Parameter	Chromium, Hexavalent	MW-6	**1**
		MW-9	2, 3, 11
		MW-10	1, 2, 3, 5, 7, 8, 9, 10, 11, 13
		MW-15	**12**
Appendix II	Chrysene	MW-13	**5**
Appendix I	Cobalt	MW-5A	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
		MW-6	2, 3, 5, 6, 7, 9, 10, 11
		MW-9	**8**
		MW-10	5, 8
		MW-11R	10, 11, 12, 13
		MW-12	5, 8
		MW-13	**2**
		MW-15	10, 11
		MW-16	10, 11, 12, 13

TABLE 3-1
DOWNGRADIENT MONITORING WELL DETECTIONS
ORDOT DUMP POST-CLOSURE FACILITY
ORDOT-CHALAN PAGO, GUAM

Category of Project Analyte	Detected Constituent	Location	Event Name*
Appendix I	Copper	MW-5A	2, 5, 7, 8, 9, 11
		MW-6	2, 5, 11
		MW-9	1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 13
		MW-10	1, 2, 3, 5, 8, 10
		MW-12	**2**
		MW-13	1, 2, 4, 10, 11
		MW-15	10, 11, 12, 13
		MW-16	**13**
Appendix II	Cyanide	MW-5A	**1**
		MW-6	**5**
Appendix II	Dibenz(a,h)anthracene	MW-6	**11**
		MW-9	**7**
		MW-12	**11**
		MW-13	**5**
		MW-15	**11**
Appendix II	Diethyl phthalate	MW-6	**11**
		MW-9	5, 11
		MW-11R	11, 12
		MW-12	8, 11
		MW-13	**5**
Appendix II	Dimethyl phthalate	MW-9	**8**
Appendix II	Dinoseb	MW-5A	**9**
		MW-12	**9**
Appendix II	Endrin aldehyde	MW-10	**5**
Appendix II	Fluoranthene	MW-6	**11**
		MW-12	**7**
		MW-13	**5**
Ordot Specific Parameter	Gross Alpha	MW-9	**4**
		MW-10	5, 9
		MW-11R	**10**
Ordot Specific Parameter	Gross Beta	MW-5A	1, 2, 3, 4, 5, 9, 10, 11
		MW-6	**11**
		MW-9	1, 3, 5, 6, 7, 8, 9, 10, 11, 13
		MW-10	1, 5, 6, 7, 11, 13
		MW-11R	10, 11, 12, 13
		MW-12	1, 2, 3, 5, 6, 7, 8, 10, 11, 13
		MW-13	2, 6
		MW-15	10, 11, 12
		MW-16	10, 11
Appendix II	Heptachlor epoxide	MW-11R	**12**
Ordot Specific Parameter	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	MW-12	**6**

TABLE 3-1
DOWNGRADIENT MONITORING WELL DETECTIONS
ORDOT DUMP POST-CLOSURE FACILITY
ORDOT-CHALAN PAGO, GUAM

Category of Project Analyte	Detected Constituent	Location	Event Name*
Appendix II	Indeno(1,2,3-c,d)pyrene	MW-6	7, 11
		MW-9	5, 7
		MW-12	**7**
		MW-13	**5**
		MW-15	**11**
Appendix I	Lead	MW-6	**5**
		MW-12	**5**
		MW-16	**13**
Appendix II	Mercury	MW-5A	**8**
		MW-10	**1**
		MW-13	**5**
		MW-15	**10**
		MW-16	**10**
Appendix II	Methyl methanesulfonate	MW-13	**7**
Appendix II	Naphthalene	MW-5A	**3**
		MW-9	**1**
		MW-12	**9**
Appendix I	Nickel	MW-5A	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
		MW-6	1, 2, 3, 5, 6, 7, 9, 10, 11
		MW-9	1, 2, 3, 4, 5, 6, 7, 8, 10, 13
		MW-10	1, 2, 3, 5, 6, 7, 8, 9, 10, 11
		MW-11R	10, 11, 12, 13
		MW-12	1, 3, 5, 6, 7, 8, 9, 10, 11, 13
		MW-13	**4**
		MW-15	10, 11, 12, 13
		MW-16	10, 11, 12, 13
Ordot Specific Parameter	o-Nitrotoluene	MW-10	**7**
		MW-15	**10**
Ordot Specific Parameter	Perchlorate	MW-5A	9, 11
		MW-9	9, 11
		MW-10	1, 2, 3, 5, 6, 7, 9, 10, 11
Appendix II	Phenanthrene	MW-13	5, 11
Appendix II	Pyrene	MW-9	**5**
		MW-11R	**13**
		MW-13	**5**
Ordot Specific Parameter	Radium-226	MW-5A	5, 6
		MW-6	1, 2, 5, 9
		MW-9	**5**
		MW-11R	**10**
		MW-13	**6**
		MW-16	**12**

TABLE 3-1
DOWNGRADIENT MONITORING WELL DETECTIONS
ORDOT DUMP POST-CLOSURE FACILITY
ORDOT-CHALAN PAGO, GUAM

Category of Project Analyte	Detected Constituent	Location	Event Name*
Ordot Specific Parameter	Radium-228	MW-5A	**11**
		MW-6	**3**
		MW-9	**4**
		MW-10	7, 11
		MW-12	**3**
		MW-13	**11**
Appendix I	Selenium	MW-5A	1, 2, 3, 4
		MW-6	2, 3
		MW-9	1, 3, 4
		MW-10	2, 6
		MW-12	2, 3
		MW-13	**2**
		MW-15	**10**
		MW-16	**10**
Appendix II	Sulfide	MW-6	**5**
		MW-9	**5**
		MW-15	10, 11, 12
Appendix II	Tin	MW-5A	1, 2, 3, 4
		MW-6	2, 3
		MW-9	1, 3, 4, 2
		MW-10	1, 3, 2
		MW-12	1, 2, 3, 4
		MW-13	1, 2, 3, 4
Appendix I	Toluene	MW-13	1, 10
Ordot Specific Parameter	Uranium	MW-5A	2, 3, 4, 6, 8
		MW-6	2, 3, 5, 6, 9, 11
		MW-9	2, 3, 4
		MW-10	2, 3, 5, 6, 8, 9, 10, 11, 13
		MW-11R	**10**
		MW-13	**2**
		MW-15	10, 11, 12, 13
Appendix I	Vanadium	MW-5A	2, 3, 4, 5, 11
		MW-6	5, 6
		MW-9	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13
		MW-10	1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 13
		MW-12	**5**
		MW-13	2, 4, 5, 6, 7, 11
		MW-15	10, 11, 12, 13
		MW-16	**13**
Appendix I	Xylenes, total	MW-10	**13**
		MW-15	**12**

TABLE 3-1
DOWNGRADIENT MONITORING WELL DETECTIONS
ORDOT DUMP POST-CLOSURE FACILITY
ORDOT-CHALAN PAGO, GUAM

Category of Project Analyte	Detected Constituent	Location	Event Name*
Appendix I	Zinc	MW-5A	**2**
		MW-6	**5**
		MW-9	2, 7, 9
		MW-10	**5**
		MW-13	**2**
		MW-15	**11**

Footnotes:

***Bold** type indicates that analyte was detected during only one event.

TABLE 4-1
GROUNDWATER MONITORING DATA – EXCLUDED OUTLIERS
ORDOT DUMP POST-CLOSURE FACILITY
ORDOT-CHALAN PAGO, GUAM

Well	Parameter	Sample Date[1]	Sample Result
MW-1B	Barium	12/18/17	270 µg/L
	Cobalt	12/18/17	95 µg/L
	Vanadium	2/4/18	31 µg/L
		12/18/17	400 µg/L
	Zinc	12/18/17	310 µg/L
MW-1C	Ammonia	10/30/18	6.5 mg/L
MW-6	Aluminum	11/13/18	7,900 µg/L
	Iron	11/13/18	6,400 µg/L
	Nickel	11/13/18	13 µg/L
MW-9	Anthracene	11/7/18	0.0094 µg/L
MW-12	Aluminum	11/12/18	880 µg/L
MW-13	Copper	12/19/17	14 µg/L
	Total Dissolved Solids	6/3/19	620 mg/L

Footnotes and Abbreviations:

[1] Outliers included are from the initial 8 Sampling Events only

mg/L – milligrams per liter

µg/L – micrograms per liter

TABLE 5-1
GROUNDWATER PROTECTION STANDARDS
ORDOT DUMP POST-CLOSURE FACILITY
ORDOT-CHALAN PAGO, GUAM

Analytical Parameter (Contaminants of Concern)[1]	Units	MCL	RSL (ELCR 1E-04, HQ=1)		Laboratory Reporting Limit (RL)	Background	Basis for GWPS[3]	Interim GWPS[2]	
1,4-Dioxane	µg/L		46		1.0	1.0	RSL	46	
2,3,7,8-TCDD	pg/L	30	12		10	0.1165	MCL	30	
2,4-D	µg/L	70	170	HQ	10	10	MCL	70	
2-Amino-4,6-dinitritoluene	µg/L		1.9	HQ	0.11	0.11	RSL	1.9	
2-Methylnaphthalene	µg/L		36	HQ	0.2	0.2	RSL	36	
3-Methylphenol/4-Methylphenol	µg/L		930	HQ	20	20	RSL	930	
4,4'-DDD	µg/L		3.2		0.02	0.02	RSL	3.2	
Acenaphthene	µg/L		530	HQ	0.2	0.2	RSL	530	
Acenaphthylene	µg/L		530	HQ, a	0.2	0.2	RSL	530	
Acetone	µg/L		14000	HQ	10	10	RSL	14000	
Aldrin	µg/L		0.092	b	0.02	0.02	RSL	0.092	
alpha Endosulfan (Endosulfan I)	µg/L		100	HQ	0.02	0.02	RSL	100	
Anthracene	µg/L		1800	HQ	0.2	0.2	RSL	1800	
Antimony	µg/L	6	7.8	HQ	5.0	5.0	MCL	6	
Arsenic	µg/L	10	5.2		3.0	4.8	MCL	10	
Barium	µg/L	2000	3800	HQ	5.0	274	MCL	2000	
Benzo(a)anthracene	µg/L		3		0.2	0.2	RSL	3	
Benzo(a)pyrene	µg/L	0.2	2.5		0.2	0.2	MCL	0.2	
Benzo(b)fluoranthene	µg/L		25		0.2	0.2	RSL	25	
Benzo(k)fluoranthene	µg/L		250		0.2	0.2	RSL	250	
Benzyl alcohol	µg/L		2000	HQ	10	10	RSL	2000	
Benzyl butyl phthalate	µg/L		1600		10	10	RSL	1600	
BHC, alpha	µg/L		0.72		0.02	0.02	RSL	0.72	
BHC, beta	µg/L		2.5		0.02	0.02	RSL	2.5	
BHC, delta	µg/L		0.72	c	0.0	0.02	RSL	0.72	
BHC, gamma (Lindane)	µg/L	0.2	4.2		0.0	0.02	MCL	0.2	
bis(2-Chloroethoxy)methane	µg/L		59	HQ	10.0	10.0	RSL	59	
bis(2-Ethylhexyl)phthalate	µg/L	6	560		6.0	6.0	MCL	6	
Cadmium	µg/L	5	9.2	HQ	0.5	0.075	MCL	5	
Chlorobenzene	µg/L	100	78	HQ	1	1	MCL	100	
Chromium	µg/L	100			5.0	16	MCL	100	
Chromium, Hexavalent	µg/L		3.5		1.0	0.1	RSL	3.5	
Chrysene	µg/L		2500		0.2	0.2	RSL	2500	
Cobalt	µg/L		6	HQ	0.5	11.9	Background	11.9	h
Copper	µg/L	1300	800	HQ	5	31	MCL	1300	
Cyanide	µg/L	200			5	2.5	MCL	200	
Dibenz(a,h)anthracene	µg/L		2.5		0.2	0.2	RSL	2.5	
Diethyl phthalate	µg/L		15000	HQ	10	10	RSL	15000	
Dimethyl phthalate	µg/L		1900	HQ, d	10	10	RSL	15000	
Dinoseb	µg/L	7	15	HQ	1	1	MCL	7	
Endrin aldehyde	µg/L		2.3	HQ, e	0.02	0.02	RSL	2.3	
Fluoranthene	µg/L		800	HQ	0.2	0.2	RSL	800	
Gross Alpha	pCi/L	15			3.0	4.6	MCL	15	
Gross Beta	pCi/L	50			4.0	6.89	MCL	50	g
Heptachlor Epoxide	µg/L	0.2	97		0.02	0.02	MCL	0.2	
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	µg/L		25		0.21	0.21	RSL	97	
Indeno(1,2,3-c,d)pyrene	µg/L				0.2	0.2	RSL	25	
Lead	µg/L	15	15	HQ	2.5	0.00074	MCL	15	
Mercury	µg/L	2	5.7	HQ	0.2	0.035	MCL	2	
Methyl methanesulfonate	µg/L		79		10	10	RSL	79	

TABLE 5-1
GROUNDWATER PROTECTION STANDARDS
ORDOT DUMP POST-CLOSURE FACILITY
ORDOT-CHALAN PAGO, GUAM

Analytical Parameter (Contaminants of Concern)[1]	Units	MCL	RSL (ELCR 1E-04, HQ=1)		Laboratory Reporting Limit (RL)	Background	Basis for GWPS[3]	Interim GWPS[2]	
Naphthalene	μg/L		12		0.2	0.2	RSL	12	
Nickel	μg/L		390	HQ	5.0	0.031	RSL	390	
o-Nitrotoluene	μg/L		31		0.4	0.4	RSL	31	
Perchlorate	μg/L		14	HQ	0.2	0.041	RSL	14	
Phenanthrene	μg/L		800	HQ, f	0.2	0.2	RSL	800	
Pyrene	μg/L		120	HQ	0.2	0.2	RSL	120	
Radium-226	pCi/L	5			1.0	41.9	MCL	5	
Radium-228	pCi/L				1.0	18.65	MCL		
Selenium	μg/L	50	100	HQ	2.5	86	Background	86	h
Sulfide	μg/L	250			100	100	MCL	250	
Tin	μg/L		12000	HQ	5.0	77	RSL	12000	
Toluene	μg/L	1000	1100	HQ	1.0	1.0	MCL	1000	
Uranium	pCi/L	20	4	HQ	0.67	0.135	MCL	20	i
Vanadium	μg/L		86	HQ	10	0.036	RSL	86000	
Xylenes, Total	μg/L	10000	190	HQ	2.0	2.0	MCL	10000	
Zinc	μg/L		600	HQ	20	24	RSL	6000	

Footnotes and Abbreviations:

[1] Parameters shown on this Table are constituents which require Groundwater Protection Standards (GWPS). GWPS must be established for each Appendix II constituent (GARR Title 22 Chapter 23; 40 CFR 258) detected in one or more downgradient groundwater monitoring wells in accordance with GARR Title 22 §23506 (40 CFR 258.55 (d)(4) and 258.55(h)). For this Facility, GWPS are included for all detected Appendix II constituents, including for the single unconfirmed detected constituents and Ordot Specific Analytes detected above background more than one time at a monitoring well.

[2] The Ground Water Protection Standards, as derived in the RCRA-Compliant Groundwater Monitoring Technical Memorandum, may be a Maximum Contaminant Level (MCL) promulgated under the Safe Drinking Water Act, or, if an MCL has not been codified, either the site background concentration for that constituent or a health-based GWPS derived according to GARR Title 22 §23506(i) (40 CFR 258.55(i)). Background for organic constituents is defined as the reporting limit. Refer to Section 3.1. The USEPA Regional Screening Level (RSL) is the Excess Lifetime Cancer Risk (ELCR) of 1E-04.

[3] If the constituent has a promulgated MCL, the GWPS is the MCL, If no MCL has been published for a given Appendix II constituent, the background concentration of the constituent becomes the GWPS. In cases where the background concentration is higher than a promulgated MCL, the GWPS is set at the background level. Page 290 of the Solid Waste Disposal Facility Criteria: Technical Manual

μg/L = micrograms per liter
pg/L = picograms per liter
pCi/l = picocuries per liter
RSL = USEPA Regional Screening Level
MCL = Maximum Contaminant Limit
ELCR = Excess lifetime cancer risk
HQ = Hazard Quotient
a = Value for acenaphthene as a surrogate.
b = Value for endosulfan as a surrogate.
c = Value for alpha BHC as a surrogate.
d = Value for diethylphthalate as a surrogate.
e = Value for endrin as a surrogate.
f = Value for fluoranthene as a surrogate.
g = GWPS is based on CA OEHHA conversion from 4 mrem/year. Lab results are reported in pCi/L.
h = GWPS is set at background
i = GWPS is based on conversion factor of 0.6757 pCi/L = 1 μg/L. Lab results are reported in pCi/L.

TABLE 6-1
DETECTIONS ABOVE THE GWPS
ORDOT DUMP POST-CLOSURE FACILITY
ORDOT-CHALAN PAGO, GUAM

		Analyte:	Antimony (ug/L)			Arsenic (ug/L)			Bis(2-Ethylhexyl)phthalate (ug/L)			Gross Alpha (pCi/L)			Selenium (ug/L)		
		Groundwater Protection Standard (GWPS)	6			10			6			15			86		
			MCL			MCL			MCL			MCL			Background		
Well ID	Sampling Event	Date	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier
		Number of data points	10			10			10			10			10		
		Percent Non-detect	100			60			90			100			60		
		Interwell Prediction Limit	0.5			4.80			0.3350			2.29			86		
		Confidence Level	0.9899			0.9899			Not calculated			Not calculated			0.9899		
MW-1C	Event 01 2017 Nov	11/5/2017	< 5	5	U	< 7.8	7.8	U	< 0.67	0.67	UJ	< -0.25		UJ	**28**	27	J
MW-1C	Event 02 2017 Dec	12/18/2017	< 5	5	U	< 7.8	7.8	U	< 0.67	0.67	UJ	< 1.46		U	< 27	27	U
MW-1C	Event 03 2018 JanFeb	2/4/2018	< 5	5	U	< 7.8	7.8	U	< 0.67	0.67	UJ	< -0.31		U	< 27	27	U
MW-1C	Event 04 2018 Mar	3/12/2018	< 5	5	U	< 7.8	7.8	U	< 0.67	0.67	UJ	< 0.52		U	**27**	27	J
MW-1C	Event 05 2018 Oct	10/30/2018	< 1.0	1	U	**4.5**	0.46		< 6.9	6.9	UJ	< 4.55	4.55	UJ	< 0.24	0.24	U
MW-1C	Event 06 2019 Jan	1/14/2019	< 1.0	1	U	**4.2**	0.46		< 5.3	5.3	U	< 3.17	3.17	UJ	< 0.24	0.24	U
MW-1C	Event 07 2019 Mar	3/27/2019	< 1.0	1	U	**4.8**	0.46		< 5.0	5	U	< 5.03	5.03	UJ	< 0.24	0.24	U
MW-1C	Event 08 2019 MayJun	6/3/2019	< 0.50	0.5	U	**4.6**	1.5		< 6.5	6.5	UJ	< 4.58	4.58	UJ	< 1.0	1	U
MW-1C	Event 09 2019 Sept	9/10/2019	< 0.50	0.5	U	**5.4**	1.5		< 46	46	UJ	< 3.57	3.57	UJ	< 1.0	1	U
MW-1C	Event 10 2019 NovDec	11/13/2019	< 0.50	0.5	U	**5.5**	1.5		< 4.9	4.9	UJ	< 7.51	7.51	UJ	< 1.0	1	U
MW-1C	Event 11 2020 NovJan	11/22/2020	< 1.5	1.5	U	**4.9**	0.39		< 4.7	4.7	U	< 3.87	3.87	UJ	< 0.82	0.82	U
MW-1C	Event 13 2021 Apr	4/2/2021	< 1.5	1.5	U	**6.3**	0.39	J	NS			< 3.64	3.64	UJ	< 0.82	0.82	U
MW-2A	Event 01 2017 Nov	11/2/2017	< 5	5	U	< 7.8	7.8	U	< 0.67	0.67	UJ	< 0.05		U	**86**	27	J
MW-2A	Event 05 2018 Oct	11/6/2018	< 1.0	1	U	< 0.46	0.46	U	< 5.2	5.2	U	< 3.81	3.81	UJ	< 0.24	0.24	U
MW-2A	Event 09 2019 Sept	9/18/2019	< 0.50	0.5	U	< 1.5	1.5	U	< 5.1	5.1	U	< 6.88	6.88	UJ	< 1.0	1	U
MW-2A	Event 10 2019 NovDec	11/18/2019	< 0.50	0.5	U	< 1.5	1.5	U	< 4.9	4.9	UJ	< 7.00	7.00	UJ	< 1.0	1	U
MW-2A	Event 11 2020 NovJan	12/13/2020	< 1.5	1.5	U	< 0.39	0.39	U	< 4.9	4.9	U	< 4.03	4.03	UJ	< 0.82	0.82	U
MW-14	Event 10 2019 NovDec	12/22/2019	< 0.50	0.5	U	**1.6**	1.5	J	< 5.0	5	U	< 8.24	8.24	UJ	< 1.0	1	U
MW-14	Event 11 2020 NovJan	11/22/2020	< 1.5	1.5	U	**0.91**	0.39	J	< 4.6	4.6	U	< 4.62	4.62	UJ	< 0.82	0.82	U
MW-14	Event 12 2021 Jan	1/25/2021	< 1.5	1.5	U	**12**	0.39	J	< 4.7	4.7	U	< 4.76	4.76	UJ	< 0.82	0.82	U
MW-14	Event 13 2021 Apr	4/2/2021	< 1.5	1.5	U	**16**	0.39		NS			< 7.68	7.68	UJ	< 0.82	0.82	U
MW-5A	Event 01 2017 Nov	11/12/2017	< 5	5	U	< 7.8	7.8	U	< 0.67	0.67	UJ	< 0.86		U	**80**	27	J
MW-5A	Event 02 2017 Dec	12/19/2017	< 5	5	U	**8.2**	7.8	J	< 0.67	0.67	UJ	< 1.46		U	**75**	27	J
MW-5A	Event 03 2018 JanFeb	1/31/2018	< 5	5	U	< 7.8	7.8	U	< 0.67	0.67	UJ	< -0.18		U	**61**	27	J
MW-5A	Event 04 2018 Mar	3/13/2018	< 5	5	U	< 7.8	7.8	U	< 0.67	0.67	UJ	< 0.18		U	**100**	27	
MW-5A	Event 05 2018 Oct	11/13/2018	< 1.0	1	U	< 0.46	0.46	U	< 12	12	UJ	< 5.69	5.69	UJ	< 0.54	0.54	UJ
MW-5A	Event 06 2019 Jan	1/22/2019	< 1.0	1	U	< 0.46	0.46	U	< 5.8	5.8	U	< 7.15	7.15	UJ	< 0.24	0.24	U
MW-5A	Event 07 2019 Mar	3/25/2019	< 1.0	1	U	< 1.0	1	UJ	**23**	5.1		< 8.56	8.56	U	< 0.24	0.24	U
MW-5A	Event 08 2019 MayJun	6/18/2019	< 0.50	0.5	U	< 1.5	1.5	U	< 5.8	5.8	U	< 12.1	12.10	UJ	< 1.0	1	U
MW-5A	Event 09 2019 Sept	9/24/2019	< 0.50	0.5	U	< 1.5	1.5	U	**6.4**	6.3	J	< 12.0	12.00	UJ	< 1.0	1	U
MW-5A	Event 10 2019 NovDec	12/4/2019	< 0.50	0.5	U	< 1.5	1.5	U	< 4.9	4.9	U	< 6.42	6.42	UJ	< 1.0	1	U
MW-5A	Event 11 2020 NovJan	12/15/2020	< 1.5	1.5	U	< 0.39	0.39	U	**7.8**	4.8	J	< 5.80	5.80	UJ	< 0.82	0.82	U
MW-6	Event 01 2017 Nov	11/8/2017	**8.5**	5	J	< 7.8	7.8	U	< 0.67	0.67	UJ	< 0.08		U	< 27	27	U
MW-6	Event 02 2017 Dec	12/19/2017	< 5	5	U	**8**	7.8	J	< 0.67	0.67	UJ	< 0.01		U	**43**	27	J
MW-6	Event 03 2018 JanFeb	2/4/2018	< 5	5	U	< 7.8	7.8	U	< 0.67	0.67	UJ	< 1.78		U	**62**	27	J
MW-6	Event 05 2018 Oct	11/13/2018	< 1.0	1	U	< 0.46	0.46	U	< 5.5	5.5	U	< 8.61	8.61	UJ	< 0.33	0.33	UJ
MW-6	Event 06 2019 Jan	1/23/2019	< 1.0	1	U	< 0.46	0.46	U	< 5.6	5.6	U	< 4.72	4.72	UJ	< 0.24	0.24	U
MW-6	Event 07 2019 Mar	3/25/2019	< 1.0	1	U	< 0.74	0.74	UJ	**5.5**	5.3	J	< 8.14	8.14	U	< 0.24	0.24	U
MW-6	Event 09 2019 Sept	9/24/2019	< 0.50	0.5	U	< 1.5	11.5	U	**8.8**	6.3	J	< 6.22	6.22	UJ	< 1.0	1	U
MW-6	Event 10 2019 NovDec	12/4/2019	< 0.50	0.5	U	< 1.5	1.5	U	< 4.9	4.9	U	< 8.03	8.03	UJ	< 1.0	1	U
MW-6	Event 11 2020 NovJan	12/14/2020	< 1.5	1.5	U	< 0.39	0.39	U	< 4.8	4.8	U	< 6.08	6.08	UJ	< 0.82	0.82	U

TABLE 6-1
DETECTIONS ABOVE THE GWPS
ORDOT DUMP POST-CLOSURE FACILITY
ORDOT-CHALAN PAGO, GUAM

		Analyte:	Antimony (ug/L)			Arsenic (ug/L)			Bis(2-Ethylhexyl)phthalate (ug/L)			Gross Alpha (pCi/L)			Selenium (ug/L)		
Groundwater Protection Standard (GWPS)			**6**			**10**			**6**			**15**			**86**		
			MCL			**MCL**			**MCL**			**MCL**			**Background**		
Well ID	Sampling Event	Date	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier
		Number of data points	10			10			10			10			10		
		Percent Non-detect	100			60			90			100			60		
		Interwell Prediction Limit	0.5			4.80			0.3350			2.29			86		
		Confidence Level	0.9899			0.9899			Not calculated			Not calculated			0.9899		
MW-9	Event 01 2017 Nov	11/6/2017	< 5	5	U	< 7.8	7.8	U	< 0.67	0.67	UJ	< 1.13		U	**52**	27	J
MW-9	Event 02 2017 Dec	12/20/2017	< 5	5	U	< 7.8	7.8	U	< 0.67	0.67	UJ	< 0.05		U	< 27	27	U
MW-9	Event 03 2018 JanFeb	2/4/2018	< 5	5	U	< 7.8	7.8	U	< 0.67	0.67	UJ	< -0.47		U	**32**	27	J
MW-9	Event 04 2018 Mar	3/13/2018	< 5	5	U	< 7.8	7.8	U	< 0.67	0.67	UJ	**0.48**			**31**	27	J
MW-9	Event 05 2018 Oct	11/7/2018	< 1.0	1	U	< 0.46	0.46	U	**2**	1.2	J	< 4.34	4.34	UJ	< 0.77	0.77	UJ
MW-9	Event 06 2019 Jan	1/21/2019	< 1.0	1	U	< 0.46	0.46	U	< 5.4	5.4	U	< 3.77	3.77	UJ	< 0.24	0.24	U
MW-9	Event 07 2019 Mar	3/24/2019	< 1.0	1	U	**0.81**	0.46	J	< 5.3	5.3	U	< 4.94	4.94	U	< 0.24	0.24	U
MW-9	Event 08 2019 MayJun	6/10/2019	< 0.50	0.5	U	< 1.5	1.5	U	< 6.3	6.3	UJ	< 4.15	4.15	UJ	< 1.0	1	U
MW-9	Event 09 2019 Sept	9/18/2019	< 0.50	0.5	U	< 1.5	1.5	U	**10**	4.9		< 5.23	5.23	UJ	< 1.0	1	U
MW-9	Event 10 2019 NovDec	11/20/2019	< 1.5	1.5	U	< 0.39	0.39	U	< 4.8	4.8	U	< 6.45	6.45	UJ	< 0.82	0.82	U
MW-9	Event 11 2020 NovJan	12/13/2020	< 1.5	1.5	U	**0.76**	0.39	J	< 4.7	4.7	U	< 3.18	3.18	UJ	< 0.82	0.82	U
MW-9	Event 13 2021 Apr	4/5/2021	< 1.5	1.5	U	**1.6**	0.39	U	NS			< 4.00	4.00	UJ	< 0.82	0.82	U
MW-10	Event 01 2017 Nov	11/14/2017	< 5	5	U	< 7.8	7.8	U	< 0.67	0.67	UJ	< -0.69		U	< 27	27	U
MW-10	Event 02 2017 Dec	12/20/2017	< 5	5	U	< 7.8	7.8	U	< 0.67	0.67	UJ	< 0.46		U	**46**	27	J
MW-10	Event 03 2018 JanFeb	2/5/2018	< 5	5	U	< 7.8	7.8	U	< 0.67	0.67	UJ	< 0.87		U	< 27	27	U
MW-10	Event 05 2018 Oct	11/12/2018	< 1.0	1	U	< 0.46	0.46	U	< 5.3	5.3	U	**3.71**	3.44	J	< 0.33	0.33	UJ
MW-10	Event 06 2019 Jan	1/21/2019	< 1.0	1	U	< 0.46	0.46	U	< 5.4	5.4	U	< 3.50	3.50	UJ	**0.66**	0.24	J
MW-10	Event 07 2019 Mar	3/24/2019	< 1.0	1	U	**1**	0.46	J	**13**	6.3		< 4.79	4.79	U	< 0.24	0.24	U
MW-10	Event 08 2019 MayJun	6/12/2019	< 0.50	0.5	U	< 1.5	1.5	U	< 9.3	9.3	UJ	< 6.71	6.71	UJ	< 1.0	1	U
MW-10	Event 09 2019 Sept	9/23/2019	< 0.50	0.5	U	< 1.5	1.5	U	< 4.9	4.9	U	**10.9**	6.39	J	< 1.0	1	U
MW-10	Event 10 2019 NovDec	12/2/2019	< 0.50	0.5	U	< 1.5	1.5	U	< 5.0	5	U	< 5.43	5.43	UJ	< 1.0	1	U
MW-10	Event 11 2020 NovJan	12/13/2020	< 1.5	1.5	U	**0.83**	0.39	J	**7.4**	4.9	J	< 4.39	4.39	UJ	< 0.82	0.82	U
MW-10	Event 13 2021 Apr	4/5/2021	< 1.5	1.5	U	**0.94**	0.39	J	< 5.9	5.9	U	< 3.53	3.53	UJ	< 0.82	0.82	U
MW-11R	Event 10 2019 NovDec	12/22/2019	< 0.50	0.5	U	**5.3**	1.5		< 4.8	4.8	U	**50.3**	8.34	J	< 1.0	1	U
MW-11R	Event 11 2020 NovJan	12/14/2020	< 1.5	1.5	U	**3.2**	0.39		**8.4**	4.9	J	< 7.75	7.75	UJ	< 0.82	0.82	U
MW-11R	Event 12 2021 Jan	1/25/2021	< 1.5	1.5	U	**3.1**	0.39		< 4.6	4.6	U	< 7.70	7.7	UJ	< 0.82	0.82	U
MW-11R	Event 13 2021 Apr	4/14/2021	< 1.5	1.5	U	**3.6**	0.39	U	NS			< 5.39	5.39	UJ	< 0.82	0.82	U
MW-12	Event 01 2017 Nov	11/12/2017	< 5	5	U	< 7.8	7.8	U	< 0.67	0.67	UJ	< -0.92		U	< 27	27	U
MW-12	Event 02 2017 Dec	12/19/2017	< 5	5	U	**11**	7.8	J	< 0.67	0.67	UJ	< -0.37		U	**34**	27	J
MW-12	Event 03 2018 JanFeb	2/4/2018	< 5	5	U	< 7.8	7.8	U	< 0.67	0.67	UJ	< -0.15		U	**38**	27	J
MW-12	Event 04 2018 Mar	3/14/2018	< 5	5	U	< 7.8	7.8	U	< 0.67	0.67	UJ	< 1.33		U	< 27	27	U
MW-12	Event 05 2018 Oct	11/12/2018	< 1.0	1	U	< 0.46	0.46	U	**7.7**	5.4	J	< 5.03	5.03	UJ	< 0.24	0.24	U
MW-12	Event 06 2019 Jan	1/16/2019	< 1.0	1	U	< 0.46	0.46	U	**10**	5.3	J	< 4.03	4.03	UJ	< 0.24	0.24	U
MW-12	Event 07 2019 Mar	3/24/2019	< 1.0	1	U	< 0.46	0.46	U	< 4.0	4	U	< 5.00	5.00	U	< 0.24	0.24	U
MW-12	Event 08 2019 MayJun	6/5/2019	< 0.50	0.5	U	< 1.5	1.5	U	< 5.0	5	UJ	< 4.12	4.12	UJ	< 1.0	1	U
MW-12	Event 09 2019 Sept	9/18/2019	< 0.50	0.5	U	< 1.5	1.5	U	< 4.9	4.9	U	< 6.54	6.54	UJ	< 1.0	1	U
MW-12	Event 10 2019 NovDec	11/20/2019	< 1.5	1.5	U	< 0.39	0.39	U	< 4.9	4.9	U	< 5.71	5.71	UJ	< 0.82	0.82	U
MW-12	Event 11 2020 NovJan	12/13/2020	< 1.5	1.5	U	< 0.39	0.39	U	**21**	4.7		< 4.17	4.17	UJ	< 0.82	0.82	U
MW-12	Event 13 2021 Apr	4/14/2021	< 1.5	1.5	U	<1.3	0.39	UJ	< 6.1	6.1	U	< 4.28	4.28	UJ	< 0.82	0.82	U

TABLE 6-1
DETECTIONS ABOVE THE GWPS
ORDOT DUMP POST-CLOSURE FACILITY
ORDOT-CHALAN PAGO, GUAM

		Analyte:	Antimony (ug/L)			Arsenic (ug/L)			Bis(2-Ethylhexyl)phthalate (ug/L)			Gross Alpha (pCi/L)			Selenium (ug/L)		
		Groundwater Protection Standard (GWPS)	**6**			**10**			**6**			**15**			**86**		
			MCL			**MCL**			**MCL**			**MCL**			**Background**		
Well ID	Sampling Event	Date	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier
		Number of data points	10			10			10			10			10		
		Percent Non-detect	100			60			90			100			60		
		Interwell Prediction Limit	0.5			4.80			0.3350			2.29			86		
		Confidence Level	0.9899			0.9899			Not calculated			Not calculated			0.9899		
MW-13	Event 01 2017 Nov	11/13/2017	< 5	5	U	< 7.8	7.8	U	< 0.67	0.67	UJ	< 0.79		U	< 27	27	U
MW-13	Event 02 2017 Dec	12/19/2017	< 5	5	U	< 7.8	7.8	U	< 0.67	0.67	UJ	< 1.46		U	**32**	27	J
MW-13	Event 03 2018 JanFeb	1/31/2018	< 5	5	U	< 7.8	7.8	U	< 6.7	6.7	UJ	< 0.16		U	< 27	27	U
MW-13	Event 04 2018 Mar	3/14/2018	< 5	5	U	< 7.8	7.8	U	< 0.67	0.67	UJ	< 1.44		U	< 27	27	U
MW-13	Event 05 2018 Oct	11/6/2018	< 1.0	1	U	< 0.46	0.46	U	**7.7**	5.1	J	< 3.72	3.72	UJ	< 0.24	0.24	U
MW-13	Event 06 2019 Jan	1/14/2019	< 1.0	1	U	< 0.46	0.46	U	< 5.1	5.1	U	< 3.97	3.97	UJ	< 0.24	0.24	U
MW-13	Event 07 2019 Mar	3/27/2019	< 1.0	1	U	< 0.46	0.46	U	< 5.1	5.1	U	< 7.87	7.87	U	< 0.24	0.24	U
MW-13	Event 08 2019 MayJun	6/3/2019	< 0.50	0.5	U	< 1.5	1.5	U	< 5.4	5.4	U	< 3.92	3.92	UJ	< 1.0	1	U
MW-13	Event 09 2019 Sept	9/10/2019	< 0.50	0.5	U	< 1.5	1.5	U	< 5.7	5.7	UJ	< 3.95	3.95	UJ	< 1.0	1	U
MW-13	Event 10 2019 NovDec	11/18/2019	< 0.50	0.5	U	< 1.5	1.5	U	< 5.0	5	UJ	< 7.67	7.67	UJ	< 1.0	1	U
MW-13	Event 11 2020 NovJan	11/22/2020	< 1.5	1.5	U	< 0.39	0.39	U	**5.8**	4.7	J	< 4.26	4.26	UJ	< 0.82	0.82	U
MW-13	Event 13 2021 Apr	4/5/2021	< 1.5	1.5	U	< 0.39	0.39	U	< 6.0	6	U	< 3.07	3.07	UJ	< 0.82	0.82	U
MW-15	Event 10 2019 NovDec	12/16/2019	**0.59**	1.5	J	**16**	1.5		**6.4**	5.2	J	< 13.4	13.4	UJ	**2.4**	1	J
MW-15	Event 11 2020 NovJan	12/14/2020	< 1.5	1.5	U	**13**	0.39		< 4.9	4.9	U	< 8.03	8.03	UJ	< 0.82	0.82	U
MW-15	Event 12 2021 Jan	1/25/2021	< 1.5	1.5	U	**13**	0.39		< 4.9	4.9	U	< 6.45	6.45	UJ	< 0.82	0.82	U
MW-15	Event 13 2021 Apr	4/15/2021	< 1.5	1.5	U	**13**	0.39		NS			< 6.76	6.76	UJ	< 0.82	0.82	U
MW-16	Event 10 2019 NovDec	12/11/2019	< 0.50	0.5	U	< 1.5	1.5	U	< 4.9	4.9	U	< 9.28	9.28	UJ	**1.4**	1	J
MW-16	Event 11 2020 NovJan	12/14/2020	< 1.5	1.5	U	**1.1**	0.39	J	< 4.9	4.9	U	< 5.10	5.1	UJ	< 0.82	0.82	U
MW-16	Event 12 2021 Jan	1/25/2021	< 1.5	1.5	U	**1**	0.39	J	< 4.9	4.9	U	< 4.17	4.17	UJ	< 0.82	0.82	U
MW-16	Event 13 2021 Apr	4/15/2021	< 1.5	1.5	U	**1.7**	0.39	U	NS			< 6.53	6.53	UJ	< 0.82	0.82	U

Footnotes and Abbreviations:

Green shade denotes Groundwater Protection Standard (GWPS) at the MCL. Orange shade GWPS is Background.

Grey shaded cells represent the background data set.

Purple shaded cells are above the GWPS.

Bold results indicate a detection.

Non-parametric prediction limits were used when non-detects represented >50% of the data set.

µg/L = micrograms per liter

pg/L = picograms per liter

pCi/l = picocuries per liter

RSL = USEPA Regional Screening Level

MCL = Maximum Contaminant Limit

U or < = Result was not detected

J = Result is estimated

NS = Not Sampled

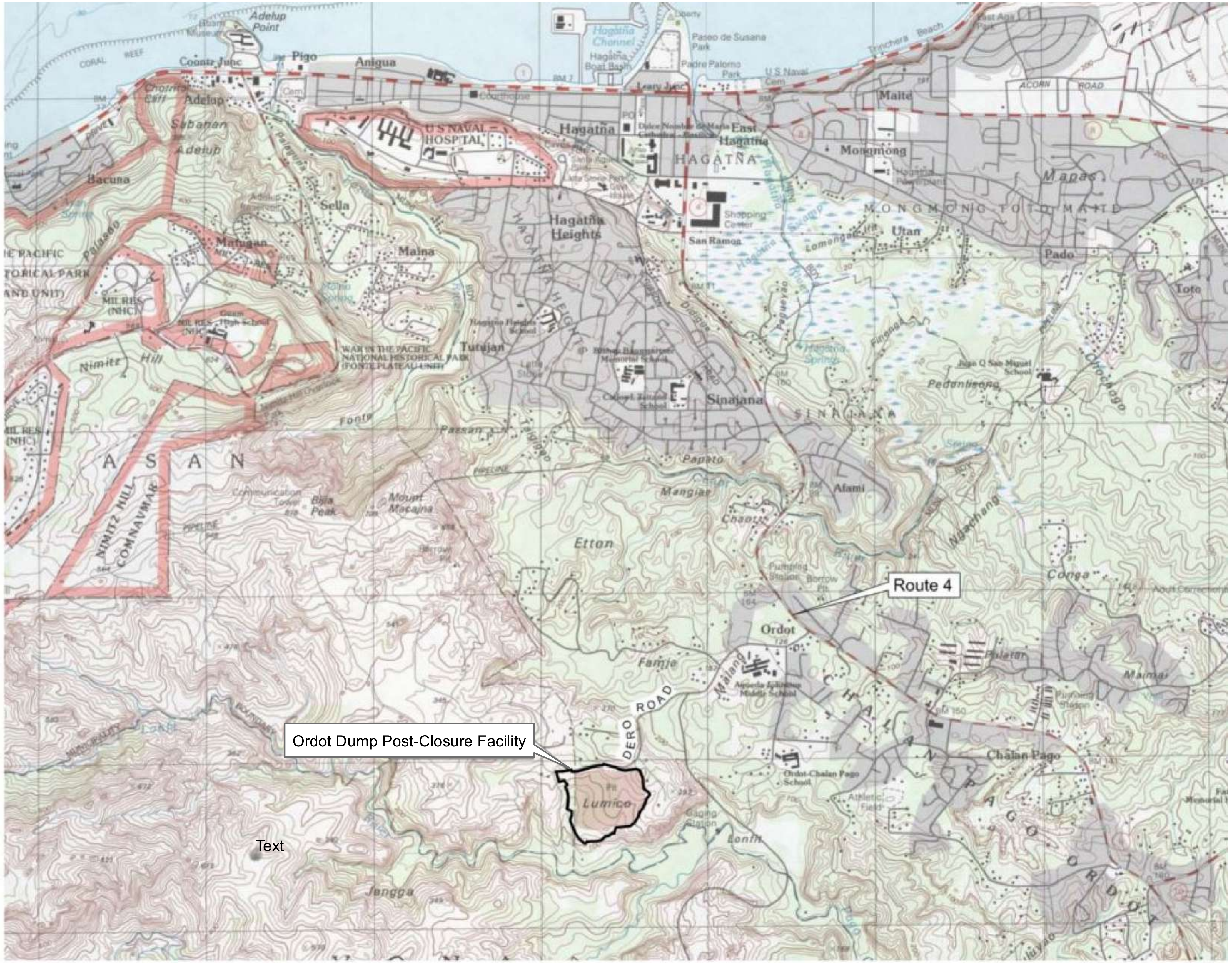
TABLE 7-1
GROUNDWATER MONITORING PROGRAM SUMMARY
ORDOT DUMP POST-CLOSURE FACILITY
ORDOT-CHALAN PAGO, GUAM

Monitoring Program	Frequency and Analytes*	Action 1	Action 2	Action 3
Interim Assessment Groundwater Monitoring Program (Interim AGMP) for New Wells per Section 7.1	Eight rounds quarterly monitoring of the Project Analyte List (Attachment A).	Complete Steps 1-5 (see Section 7.1).	Submit updated GWMP TM within 90 days of last sampling round to Guam EPA.	Within 90 days of last sampling round revert to AGMP for Existing Wells. Add to list of monitored analytes any new analyte having a detection above background.
AGMP for Existing Wells (and New Wells upon completion of Interim AGMP) per Section 7.2	Semi-annual monitoring of Appendix I constituents (GARR Title 22 Chapter 23 and 40 CFR 258), detected Appendix II constituents (GARR Title 22 Chapter 23 and 40 CFR 258) and detected Ordot Specific Analytes on the Project Analyte List, and WQPs on the Project Analyte List.	Submit semi-annual monitoring reports to Guam EPA within 90 days.	Not applicable	Not applicable
	Annual monitoring of Project Analyte List.	Submit annual monitoring reports to Guam EPA. If an Appendix II constituent not previously detected is detected above background, then notify Guam EPA within 14 days, collect a confirmation sample, and submit results within 90 days of collection.	If the exceedance of background is confirmed, determine if constituent exceeds a GWPS.	If exceedance of the GWPS, propose an alternative GWPS if in accordance with GARR Title 22 §23506(g) (40 CFR 258.55(g)); if not applicable, implement corrective measures process of GARR Title 22 §23506(i) (40 CFR 258.55(i)).
Detection Monitoring Program (DGMP)	Replace AGMP with DGMP under GARR Title 22 §23505 (40 CFR 258.54) when detected Appendix II constituents are at or below background for two consecutive sampling events.			
Emergent Chemicals	USEPA and/or Guam EPA may promulgate applicable regulations for emergent chemicals, such as perfluorooctanoic sulfonate (PFOS), and these should be incorporated, as appropriate, into the groundwater monitoring program and documented in updates to the SAP.			

Footnotes:

**Any confirmed detections of new constituents from Appendix II or the Ordot Specific Analytes from the Project Analyte List from the Interim AGMP shall be added to the semi-annual monitoring program upon completion of the Interim AGMP. Confirmed detections of new Appendix II constituents and Ordot Specific Analytes from the annual monitoring program shall be added to the next semi-annual monitoring event.*

Figures



SOURCE:
Hagatna, Guam Quadragle, USGS, Topographic Map 2000

7/20/2020

Author: TCaputi Path: V:\Ramsey\Ordot\Fig_1-1_Site_Location.mxd

Brown AND Caldwell

FIGURE 1-1
REGIONAL SITE MAP
ORDOT DUMP POST-CLOSURE FACILITY
GUAM

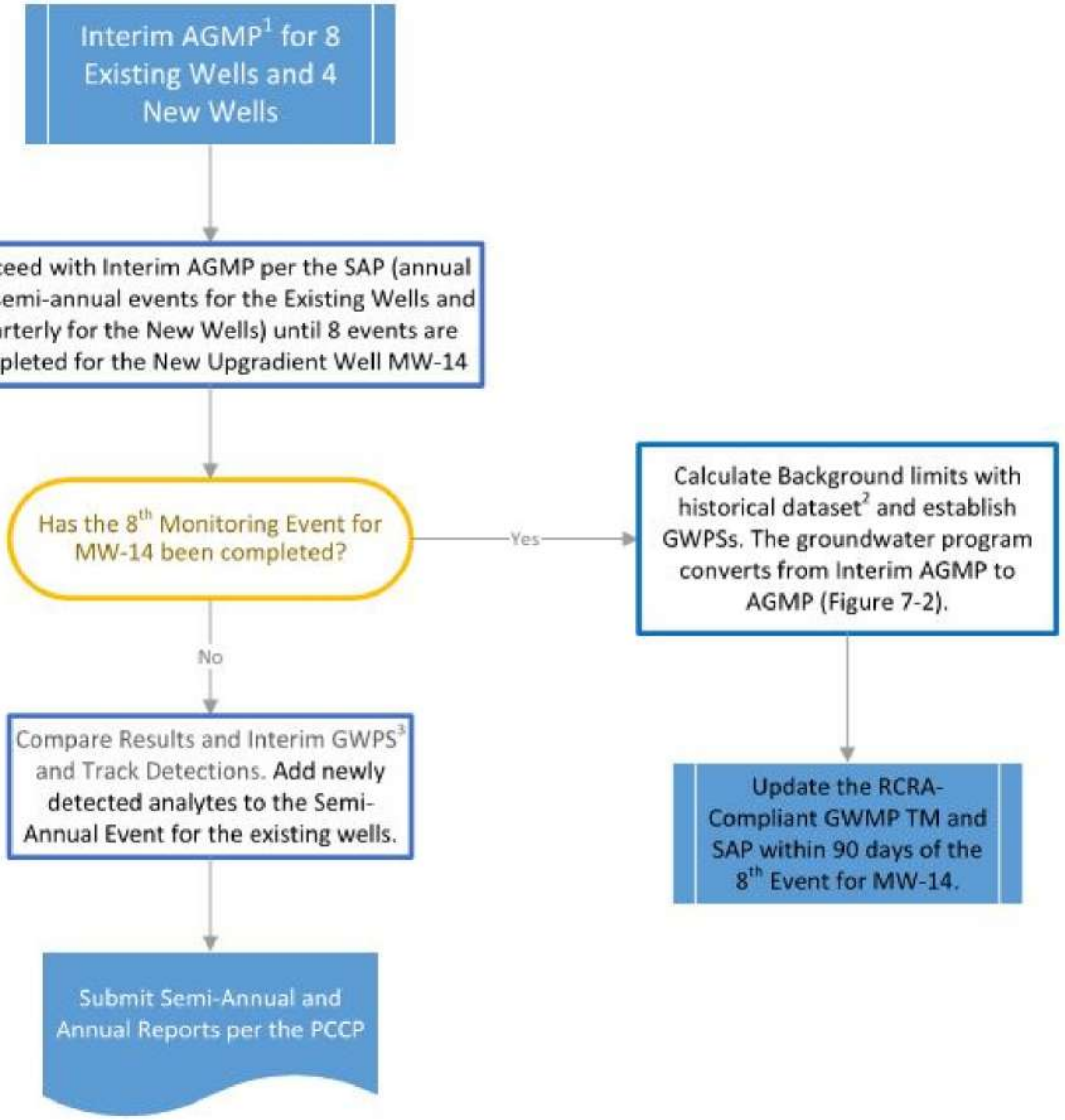
7/20/2020

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Author: TCaputi Path: V:\Ramsey\Ordot\GWTM_Fig_2-1_Monitoring_Locations.mxd

Brown AND Caldwell

FIGURE 2-1
POST-CLOSURE MONITORING LOCATIONS
ORDOT DUMP POST-CLOSURE FACILITY
GUAM



Footnotes:

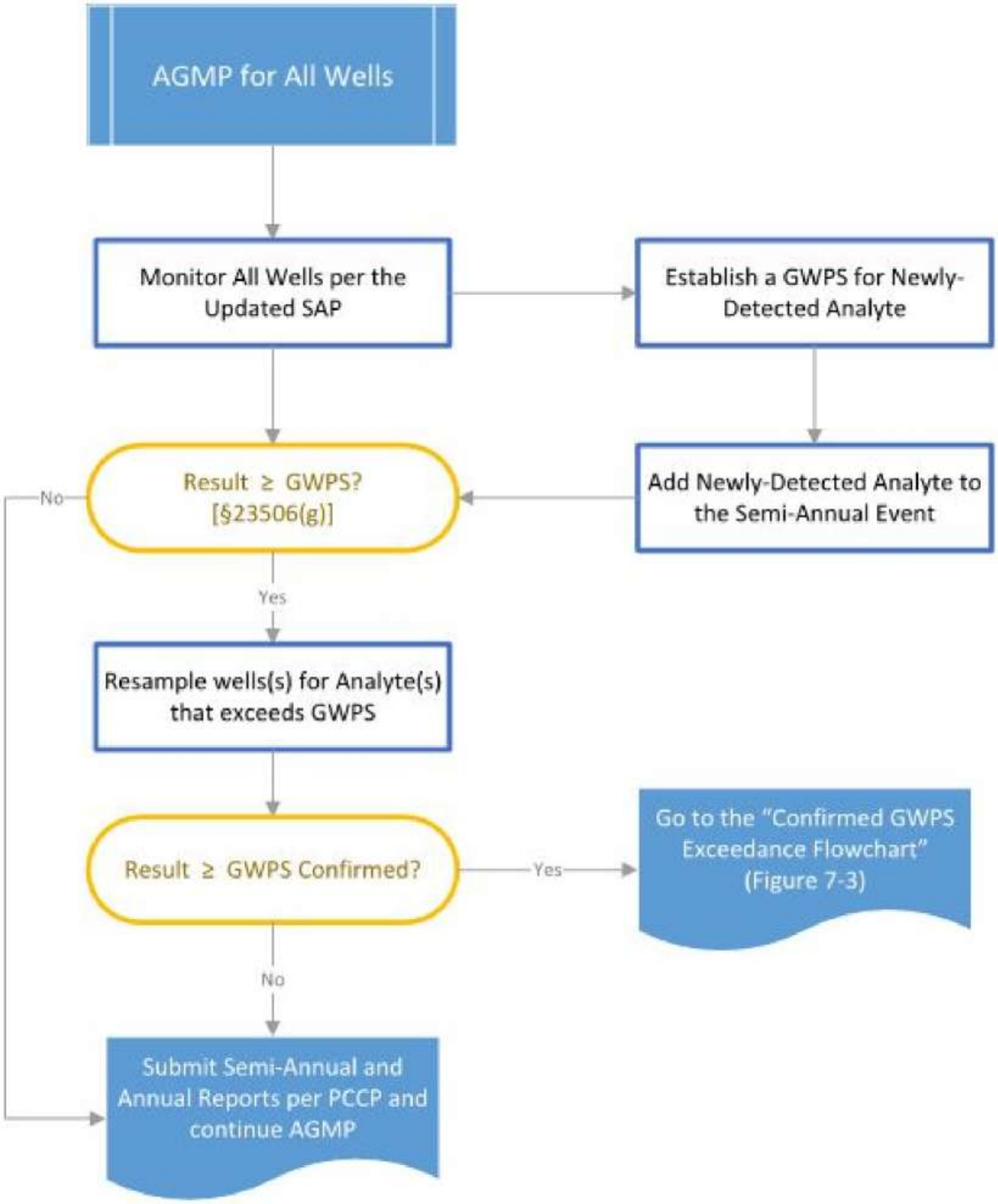
[1] The Facility is in an Interim Assessment Groundwater Monitoring Program (AGMP) until eight events have been completed for the new upgradient well MW-14.

[2] Upon completion of the 8th monitoring event for MW-14, the "historical dataset" will be comprised of the data presented in this GWMP TM and all data collected from all wells through the 8th Event from MW-14, and the GWMP TM updated within 90 days of last sampling event.

[3] Background concentrations and Groundwater Protection Standards (GWPSs) cannot be established until eight events have been completed for the new upgradient well MW-14; until then, these are interim values. The Interim Background concentrations and GWPSs are listed on Table 5-1 in this RCRA-Compliant Groundwater Monitoring Program Technical Memorandum (GWMP TM). The Interim Background concentrations for organic constituents are set at the laboratory reporting limits until 8 events have been completed for the new upgradient well MW-14.

FIGURE 7-1
PROCESS FOR REVIEWING GROUNDWATER MONITORING
RESULTS DURING INTERIM AGMP
ORDOT DUMP POST-CLOSURE FACILITY
GUAM

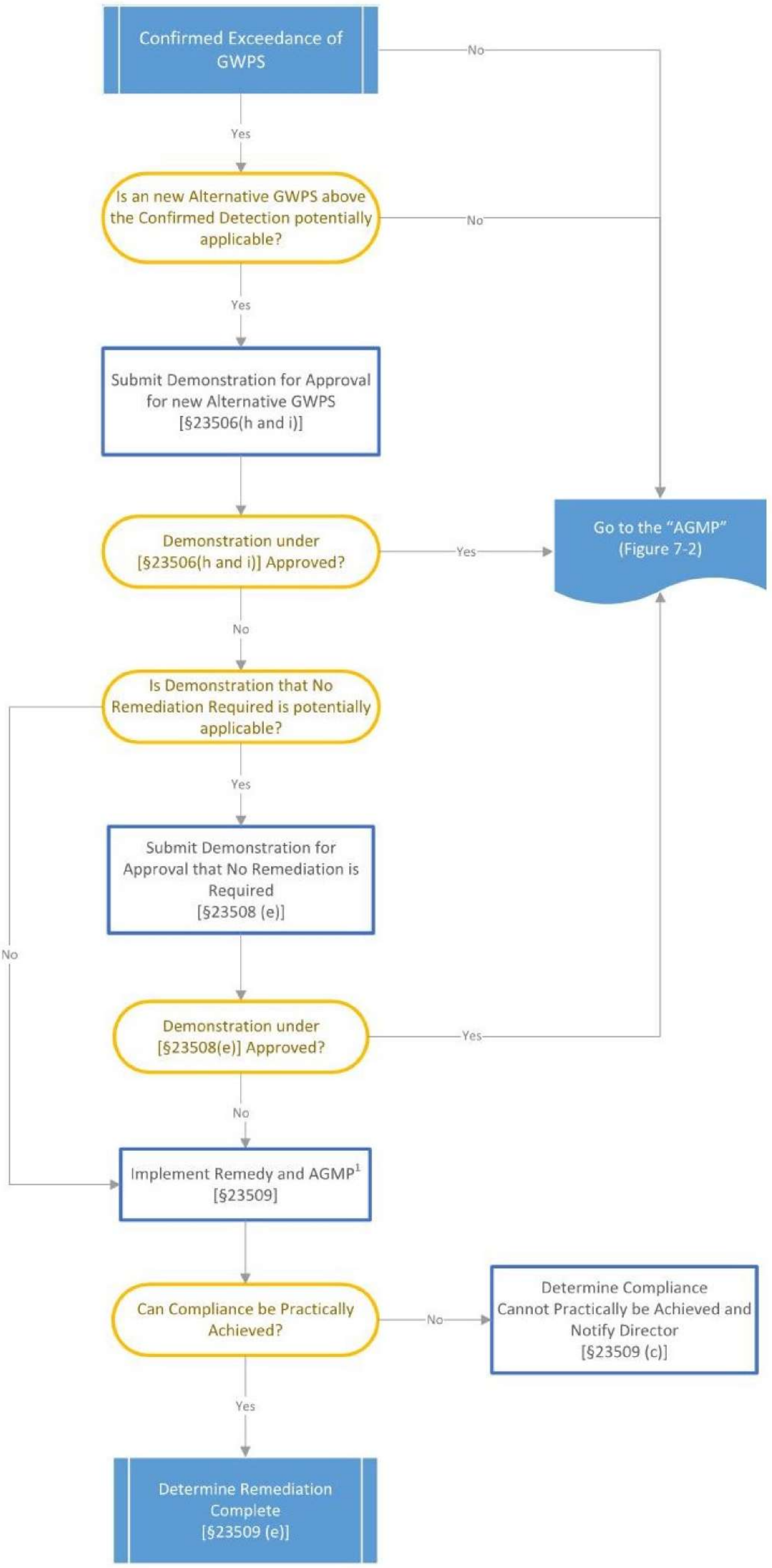
9/14/2021



Author: TCaputi Path: V:\Ramsey\Ordot\GW_TM_Fig_7-2.mxd

Brown AND Caldwell

FIGURE 7-2
PROCESS FOR REVIEWING GROUNDWATER MONITORING RESULTS DURING AGMP
ORDOT DUMP POST-CLOSURE FACILITY
GUAM



Footnote:

[1] Corrective measures have been assessed and the selected remedy as documented in the Final Construction Quality Assessment Report Ordot Dump Closure Construction and Dero Road Sewer Improvements (GHD, Inc., 2016) and monitored and maintained in accordance with the Post-Closure Care Plan.

FIGURE 7-3
PROCESS FOR EVALUATING RESULTS GREATER
THAN THE GROUNDWATER PROTECTION STANDARD
ORDOT DUMP POST-CLOSURE FACILITY, GUAM

9/14/2021

Author: TCaputi Path: V:\Ramsey\Ordot\GW_TM_Fig_7-3.mxd

Attachment A: Project Analyte List

ATTACHMENT A
PROJECT ANALYTE LIST
ORDOT DUMP POST-CLOSURE FACILITY
ORDOT-CHALAN PAGO, GUAM

Analyte Type	Analyte [a]	CAS No.	Analytical Method	Rationale for Inclusion	
VOCs	1,1,1,2-Tetrachloroethane	630-20-6	SW8260C	40 CFR 258 Appx I and II	d
VOCs	1,1,1-Trichloroethane	71-55-6	SW8260C	40 CFR 258 Appx I and II	d
VOCs	1,1,2,2-Tetrachloroethane	79-34-5	SW8260C	40 CFR 258 Appx I and II	d
VOCs	1,1,2-Trichloroethane	79-00-5	SW8260C	40 CFR 258 Appx I and II	d
VOCs	1,1-Dichloroethane	75-34-3	SW8260C	40 CFR 258 Appx I and II	d
VOCs	1,1-Dichloroethene	75-35-4	SW8260C	40 CFR 258 Appx I and II	d
VOCs	1,1-Dichloropropene	563-58-6	SW8260C	40 CFR 258 Appx II	
VOCs	1,2,3-Trichloropropane	96-18-4	SW8260C	40 CFR 258 Appx I and II	d
VOCs	1,2-Dibromo-3-chloropropane	96-12-8	SW8260C	40 CFR 258 Appx I and II	d
VOCs	1,2-Dibromoethane	106-93-4	SW8260C	40 CFR 258 Appx I and II	d
VOCs	1,2-Dichlorobenzene	95-50-1	SW8260C	40 CFR 258 Appx I and II	d
VOCs	1,2-Dichloroethane	107-06-2	SW8260C	40 CFR 258 Appx I and II	d
VOCs	1,2-Dichloropropane	78-87-5	SW8260C	40 CFR 258 Appx I and II	d
VOCs	1,3-Dichlorobenzene	541-73-1	SW8260C	40 CFR 258 Appx II	
VOCs	1,3-Dichloropropane	142-28-9	SW8260C	40 CFR 258 Appx II	
VOCs	1,4-Dichlorobenzene	106-46-7	SW8260C	40 CFR 258 Appx I and II	d
VOCs	2,2-Dichloropropane	594-20-7	SW8260C	40 CFR 258 Appx II	
VOCs	2-Hexanone (methyl butyl ketone)	591-78-6	SW8260C	40 CFR 258 Appx I and II	d
VOCs	4-Methyl-2-pentanone	108-10-1	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Acetone	67-64-1	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Acetonitrile	75-05-8	SW8260C	40 CFR 258 Appx II	
VOCs	Acrolein	107-02-8	SW8260C	40 CFR 258 Appx II	
VOCs	Acrylonitrile	107-13-1	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Allyl chloride	107-05-1	SW8260C	40 CFR 258 Appx II	
VOCs	Benzene	71-43-2	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Bromochloromethane	74-97-5	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Bromodichloromethane	75-27-4	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Bromoform	75-25-2	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Bromomethane	74-83-9	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Carbon disulfide	75-15-0	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Carbon tetrachloride	56-23-5	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Chlorobenzene	108-90-7	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Chloroethane	75-00-3	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Chloroform	67-66-3	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Chloromethane	74-87-3	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Chloroprene	126-99-8	SW8260C	40 CFR 258 Appx II	
VOCs	cis -1,2-Dichloroethene	156-59-2	SW8260C	40 CFR 258 Appx I and II	d
VOCs	cis -1,3-Dichloropropene	10061-01-5	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Dibromochloromethane	124-48-1	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Dibromomethane	74-95-3	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Dichlorodifluoromethane (CFC-12)	75-71-8	SW8260C	40 CFR 258 Appx II	
VOCs	Ethyl methacrylate	97-63-2	SW8260C	40 CFR 258 Appx II	
VOCs	Ethyl methanesulfonate	62-50-0	SW8260C	40 CFR 258 Appx II	
VOCs	Ethylbenzene	100-41-4	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Isobutyl alcohol	78-83-1	SW8260C	40 CFR 258 Appx II	
VOCs	Methacrylonitrile	126-98-7	SW8260C	40 CFR 258 Appx II	
VOCs	Methyl ethyl ketone	78-93-3	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Methyl iodide	74-88-4	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Methyl methacrylate	80-62-6	SW8260C	40 CFR 258 Appx II	
VOCs	Methylene chloride	75-09-2	SW8260C	40 CFR 258 Appx I and II	d
VOCs	o-Toluidine	95-53-4	SW8260C	40 CFR 258 Appx II	
VOCs	Propionitrile	107-12-0	SW8260C	40 CFR 258 Appx II	
VOCs	Styrene	100-42-5	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Tetrachloroethene	127-18-4	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Toluene	108-88-3	SW8260C	40 CFR 258 Appx I and II	d
VOCs	trans -1,2-Dichloroethene	156-60-5	SW8260C	40 CFR 258 Appx I and II	d
VOCs	trans -1,3-Dichloropropene	10061-02-6	SW8260C	40 CFR 258 Appx I and II	d
VOCs	trans -1,4-Dichloro-2-butene	110-57-6	SW8260C	40 CFR 258 Appx I and II	d

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ORDOT DUMP POST-CLOSURE FACILITY
ORDOT-CHALAN PAGO, GUAM

Analyte Type	Analyte [a]	CAS No.	Analytical Method	Rationale for Inclusion	
VOCs	Trichloroethene	79-01-6	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Trichlorofluoromethane	75-69-4	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Vinyl acetate	108-05-4	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Vinyl chloride	75-01-4	SW8260C	40 CFR 258 Appx I and II	d
VOCs	Xylenes (total)	1330-20-7	SW8260C	40 CFR 258 Appx I and II	d
VOCs	1,4-Dioxane	123-91-1	SW8260CSIM	Found at MSWLFs	d
SVOCs	1,2,4,5-Tetrachlorobenzene	95-94-3	SW8270D	40 CFR 258 Appx II	
SVOCs	1,2,4-Trichlorobenzene	120-82-1	SW8270D	40 CFR 258 Appx II	
SVOCs	1,3,5-Trinitrobenzene (1,3,5-TNB)	99-35-4	SW8270D	40 CFR 258 Appx II	
SVOCs	1,3-Dinitrobenzene (1,3-DNB)	99-65-0	SW8270D	40 CFR 258 Appx II	
SVOCs	1,4-Naphthoquinone	130-15-4	SW8270D	40 CFR 258 Appx II	
SVOCs	1-Naphthylamine	134-32-7	SW8270D	40 CFR 258 Appx II	
SVOCs	2,2'-Oxybis(1-chloropropane)	108-60-1	SW8270D	40 CFR 258 Appx II	
SVOCs	2,3,4,6-Tetrachlorophenol	58-90-2	SW8270D	40 CFR 258 Appx II	
SVOCs	2,4,5-Trichlorophenol	95-95-4	SW8270D	40 CFR 258 Appx II	
SVOCs	2,4,6-Trichlorophenol	88-06-2	SW8270D	40 CFR 258 Appx II	
SVOCs	2,4-Dichlorophenol	120-83-2	SW8270D	40 CFR 258 Appx II	
SVOCs	2,4-Dimethylphenol	105-67-9	SW8270D	40 CFR 258 Appx II	
SVOCs	2,4-Dinitrophenol	51-28-5	SW8270D	40 CFR 258 Appx II	
SVOCs	2,4-Dinitrotoluene	121-14-2	SW8270D	40 CFR 258 Appx II	
SVOCs	2,6-Dichlorophenol	87-65-0	SW8270D	40 CFR 258 Appx II	
SVOCs	2,6-Dinitrotoluene	606-20-2	SW8270D	40 CFR 258 Appx II	
SVOCs	2-Acetylaminofluorene	53-96-3	SW8270D	40 CFR 258 Appx II	
SVOCs	2-Chloronaphthalene	91-58-7	SW8270D	40 CFR 258 Appx II	
SVOCs	2-Chlorophenol	95-57-8	SW8270D	40 CFR 258 Appx II	
SVOCs	2-Methylphenol	95-48-7	SW8270D	40 CFR 258 Appx II	
SVOCs	2-Naphthylamine	91-59-8	SW8270D	40 CFR 258 Appx II	
SVOCs	2-Nitroaniline	88-74-4	SW8270D	40 CFR 258 Appx II	
SVOCs	2-Nitrophenol	88-75-5	SW8270D	40 CFR 258 Appx II	
SVOCs	3,3’-Dimethylbenzidine	119-93-7	SW8270D	40 CFR 258 Appx II	
SVOCs	3,3'-Dichlorobenzidine	91-94-1	SW8270D	40 CFR 258 Appx II	
SVOCs	3-Methylcholanthrene	56-49-5	SW8270D	40 CFR 258 Appx II	
SVOCs	3-Methylphenol	108-39-4	SW8270D	40 CFR 258 Appx II	
SVOCs	3-Nitroaniline	'99-09-2	SW8270D	40 CFR 258 Appx II	
SVOCs	4,6-Dinitro-2-methylphenol	534-52-1	SW8270D	40 CFR 258 Appx II	
SVOCs	4-Aminobiphenyl	92-67-1	SW8270D	40 CFR 258 Appx II	
SVOCs	4-Bromophenyl-phenylether	101-55-3	SW8270D	40 CFR 258 Appx II	
SVOCs	4-Chloro-3-methylphenol	59-50-7	SW8270D	40 CFR 258 Appx II	
SVOCs	4-Chloroaniline	106-47-8	SW8270D	40 CFR 258 Appx II	
SVOCs	4-Chlorophenyl-phenyl ether	7005-72-3	SW8270D	40 CFR 258 Appx II	
SVOCs	4-Methylphenol	106-44-5	SW8270D	40 CFR 258 Appx II	
SVOCs	4-Nitroaniline	100-01-6	SW8270D	40 CFR 258 Appx II	
SVOCs	4-Nitrophenol	100-02-7	SW8270D	40 CFR 258 Appx II	
SVOCs	5-Nitro-o-toluidine	99-55-8	SW8270D	40 CFR 258 Appx II	
SVOCs	7,12-Dimethylbenz[a] anthracene	57-97-6	SW8270D	40 CFR 258 Appx II	
SVOCs	Acetophenone	98-86-2	SW8270D	40 CFR 258 Appx II	
SVOCs	alpha, alpha-Dimethylphenethylamine	122-09-8	SW8270D	40 CFR 258 Appx II	
SVOCs	Benzo(g,h,i)perylene	191-24-2	SW8270D	40 CFR 258 Appx II	
SVOCs	Benzo(k)fluoranthene (PAH)	207-08-9	SW8270D	40 CFR 258 Appx II	d
SVOCs	Benzyl alcohol	100-51-6	SW8270D	40 CFR 258 Appx II	d
SVOCs	bis(2-Chloroethoxy)methane	111-91-1	SW8270D	40 CFR 258 Appx II	d
SVOCs	bis(2-Chloroethyl)ether	111-44-4	SW8270D	40 CFR 258 Appx II	
SVOCs	Butylbenzylphthalate	85-68-7	SW8270D	40 CFR 258 Appx II	d
SVOCs	Diallate	2303-16-4	SW8270D	40 CFR 258 Appx II	
SVOCs	Dibenzofuran	132-64-9	SW8270D	40 CFR 258 Appx II	
SVOCs	Diethylphthalate	84-66-2	SW8270D	40 CFR 258 Appx II	d
SVOCs	Dimethylphthalate	131-11-3	SW8270D	40 CFR 258 Appx II	d
SVOCs	di-n -Butylphthalate	84-74-2	SW8270D	40 CFR 258 Appx II	

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Analyte Type	Analyte [a]	CAS No.	Analytical Method	Rationale for Inclusion	
SVOCs	di-n -Octylphthalate	117-84-0	SW8270D	40 CFR 258 Appx II	
SVOCs	Diphenylamine	122-39-4	SW8270D	40 CFR 258 Appx II	
SVOCs	Disulfoton	298-04-4	SW8270D	40 CFR 258 Appx II	
SVOCs	Hexachlorobenzene	118-74-1	SW8270D	40 CFR 258 Appx II	
SVOCs	Hexachlorobutadiene	87-68-3	SW8270D	40 CFR 258 Appx II	
SVOCs	Hexachlorocyclopentadiene	77-47-4	SW8270D	40 CFR 258 Appx II	
SVOCs	Hexachloroethane	67-72-1	SW8270D	40 CFR 258 Appx II	
SVOCs	Hexachloropropene	1888-71-7	SW8270D	40 CFR 258 Appx II	
SVOCs	Isodrin	465-73-6	SW8270D	40 CFR 258 Appx II	
SVOCs	Isophorone	78-59-1	SW8270D	40 CFR 258 Appx II	
SVOCs	Isosafrole	120-58-1	SW8270D	40 CFR 258 Appx II	
SVOCs	Kepone	143-50-0	SW8270D	40 CFR 258 Appx II	
SVOCs	Methapyrilene	91-80-5	SW8270D	40 CFR 258 Appx II	
SVOCs	Methyl methanesulfonate	66-27-3	SW8270D	40 CFR 258 Appx II	d
SVOCs	Nitrobenzene	98-95-3	SW8270D	40 CFR 258 Appx II	
SVOCs	N-Nitrosodiethylamine	55-18-5	SW8270D	40 CFR 258 Appx II	
SVOCs	N-Nitrosodimethylamine	62-75-9	SW8270D	40 CFR 258 Appx II	
SVOCs	N-Nitroso-di-n -propylamine	621-64-7	SW8270D	40 CFR 258 Appx II	
SVOCs	N-Nitrosodi-n-butylamine	924-16-3	SW8270D	40 CFR 258 Appx II	
SVOCs	N-Nitrosodiphenylamine	86-30-6	SW8270D	40 CFR 258 Appx II	
SVOCs	N-Nitrosomethylethalamine	10595-95-6	SW8270D	40 CFR 258 Appx II	
SVOCs	N-Nitrosopiperidine	100-75-4	SW8270D	40 CFR 258 Appx II	
SVOCs	N-Nitrosopyrrolidine	930-55-2	SW8270D	40 CFR 258 Appx II	
SVOCs	Parathion	56-38-2	SW8270D	40 CFR 258 Appx II	
SVOCs	p-Dimethylamino azobenzene	60-11-7	SW8270D	40 CFR 258 Appx II	
SVOCs	Pentachlorobenzene	608-93-5	SW8270D	40 CFR 258 Appx II	
SVOCs	Pentachloronitrobenzene	82-68-8	SW8270D	40 CFR 258 Appx II	
SVOCs	Phenacetin	62-44-2	SW8270D	40 CFR 258 Appx II	
SVOCs	Phenanthrene	85-01-8	SW8270D	40 CFR 258 Appx II	d
SVOCs	Phenol	108-95-2	SW8270D	40 CFR 258 Appx II	
SVOCs	p-Phenylenediamine	106-50-3	SW8270D	40 CFR 258 Appx II	
SVOCs	Pronamide	23950-58-5	SW8270D	40 CFR 258 Appx II	
SVOCs	Safrole	94-59-7	SW8270D	40 CFR 258 Appx II	
SVOCs	2-Methylnaphthalene (PAH)	91-57-6	SW8270DSIM	40 CFR 258 Appx II	d
SVOCs	Acenaphthene (PAH)	83-32-9	SW8270DSIM	40 CFR 258 Appx II	d
SVOCs	Acenaphthylene (PAH)	208-96-8	SW8270DSIM	40 CFR 258 Appx II	d
SVOCs	Anthracene (PAH)	120-12-7	SW8270DSIM	40 CFR 258 Appx II	d
SVOCs	Benzo(a)anthracene (PAH)	56-55-3	SW8270DSIM	40 CFR 258 Appx II	d
SVOCs	Benzo(a)pyrene (PAH)	50-32-8	SW8270DSIM	40 CFR 258 Appx II	d
SVOCs	Benzo(b)fluoranthene (PAH)	205-99-2	SW8270DSIM	40 CFR 258 Appx II	d
SVOCs	bis(2-Ethylhexyl)phthalate	117-81-7	SW8270DSIM	40 CFR 258 Appx II	d
SVOCs	Chrysene (PAH)	218-01-9	SW8270DSIM	40 CFR 258 Appx II	d
SVOCs	Dibenzo(a,h)anthracene (PAH)	53-70-3	SW8270DSIM	40 CFR 258 Appx II	d
SVOCs	Fluoranthene (PAH)	206-44-0	SW8270DSIM	40 CFR 258 Appx II	d
SVOCs	Fluorene (PAH)	86-73-7	SW8270DSIM	40 CFR 258 Appx II	
SVOCs	Indeno(1,2,3-cd)pyrene (PAH)	193-39-5	SW8270DSIM	40 CFR 258 Appx II	d
SVOCs	Naphthalene (PAH)	91-20-3	SW8270DSIM	40 CFR 258 Appx II	
SVOCs	Pyrene (PAH)	129-00-0	SW8270DSIM	40 CFR 258 Appx II	d
Dioxin	2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCDD)	1746-01-6	E1613B	40 CFR 258 Appx II	d
Pesticides	4,4’-DDD	72-54-8	SW8081B/608	40 CFR 258 Appx II	d
Pesticides	4,4’-DDE	72-55-9	SW8081B/608	40 CFR 258 Appx II	
Pesticides	4,4’-DDT	50-29-3	SW8081B/608	40 CFR 258 Appx II	
Pesticides	Aldrin	309-00-2	SW8081B/608	40 CFR 258 Appx II	d
Pesticides	Alpha-BHC	319-84-6	SW8081B/608	40 CFR 258 Appx II	d
Pesticides	Alpha-Chlordane	5103-71-9	SW8081B/608	40 CFR 258 Appx II [b]	
Pesticides	Beta-BHC	319-85-7	SW8081B/608	40 CFR 258 Appx II	d
Pesticides	Beta-Chlordane	5103-74-2	SW8081B/608	40 CFR 258 Appx II [b]	
Pesticides	Chlordane (see Alpha-, Beta-, and Gamma-)	57-74-9	SW8081B/608	40 CFR 258 Appx II - Listed as "Chlordane" and Reported as 3 Isomers	

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ORDOT DUMP POST-CLOSURE FACILITY
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Analyte Type	Analyte [a]	CAS No.	Analytical Method	Rationale for Inclusion	
Pesticides	Chlorobenzilate	510-15-6	SW8081B/608	40 CFR 258 Appx II	
Pesticides	Delta-BHC	319-86-8	SW8081B/608	40 CFR 258 Appx II	d
Pesticides	Dieldrin	60-57-1	SW8081B/608	40 CFR 258 Appx II	
Pesticides	Endosulfan I	959-98-8	SW8081B/608	40 CFR 258 Appx II	d
Pesticides	Endosulfan II	33213-65-9	SW8081B/608	40 CFR 258 Appx II	
Pesticides	Endosulfan sulfate	1031-07-8	SW8081B/608	40 CFR 258 Appx II	
Pesticides	Endrin	72-20-8	SW8081B/608	40 CFR 258 Appx II	
Pesticides	Endrin aldehyde	7421-93-4	SW8081B/608	40 CFR 258 Appx II	d
Pesticides	Gamma-BHC (Lindane)	58-89-9	SW8081B/608	40 CFR 258 Appx II	d
Pesticides	Gamma-Chlordane	5566-34-7	SW8081B/608	40 CFR 258 Appx II [b]	
Pesticides	Heptachlor	76-44-8	SW8081B/608	40 CFR 258 Appx II	
Pesticides	Heptachlor epoxide	1024-57-3	SW8081B/608	40 CFR 258 Appx II	d
Pesticides	Methoxychlor	72-43-5	SW8081B/608	40 CFR 258 Appx II	
Pesticides	Toxaphene (plus congeners)	8001-35-2	SW8081B/608	40 CFR 258 Appx II	
PCBs	Aroclor 1016	12674-11-2	SW8082A	40 CFR 258 Appx II [c]	
PCBs	Aroclor 1221	11104-28-2	SW8082A	40 CFR 258 Appx II [c]	
PCBs	Aroclor 1232	11141-16-5	SW8082A	40 CFR 258 Appx II [c]	
PCBs	Aroclor 1242	53469-21-9	SW8082A	40 CFR 258 Appx II [c]	
PCBs	Aroclor 1248	12672-29-6	SW8082A	40 CFR 258 Appx II [c]	
PCBs	Aroclor 1254	11097-69-1	SW8082A	40 CFR 258 Appx II [c]	
PCBs	Aroclor 1260	11096-82-5	SW8082A	40 CFR 258 Appx II [c]	
PCBs	Polychlorinated biphenyls; PCBs (see Aroclors)	NA	SW8082A	40 CFR 258 Appx II - Listed as "PCBs" and Reported as 7 Aroclor mixtures	
Herbicides	2,4,5-Trichlorophenoxyacetic acid	93-76-5	SW8151A	40 CFR 258 Appx II	
Herbicides	2,4-Dichlorophenoxyacetic acid	94-75-7	SW8151A	40 CFR 258 Appx II	d
Herbicides	Dinoseb (DNBP)	88-85-7	SW8151A	40 CFR 258 Appx II	d
Herbicides	Pentachlorophenol	87-86-5	SW8151A	40 CFR 258 Appx II	
Herbicides	Silvex (2,4,5-TP)	93-72-1	SW8151A	40 CFR 258 Appx II	
Organophosphorous Compounds	Dimethoate	60-51-5	SW8141B	40 CFR 258 Appx II	
Organophosphorous Compounds	Famphur	52-85-7	SW8141B	40 CFR 258 Appx II	
Organophosphorous Compounds	Methyl parathion	298-00-0	SW8141B	40 CFR 258 Appx II	
Organophosphorous Compounds	o,o',o"-Triethylphosphorothioate	126-68-1	SW8141B	40 CFR 258 Appx II	
Organophosphorous Compounds	Phorate	298-02-2	SW8141B	40 CFR 258 Appx II	
Organophosphorous Compounds	Thionazin	297-97-2	SW8141B	40 CFR 258 Appx II	
Solid Rocket Fuel Propellant	Perchlorate	14797-73-0	SW6850	Solid rocket propellant	d
Munitions	2-Amino-4,6-dinitrotoluene	35572-78-2	SW8330B	Munitions (EPA 8330B list)	d
Munitions	2-Nitrotoluene	88-72-2	SW8330B	Munitions (EPA 8330B list)	d
Munitions	3,5-Dinitroaniline (3,5-DNA)	618-87-1	SW8330B	Munitions (EPA 8330B list)	
Munitions	3-Nitrotoluene	99-08-1	SW8330B	Munitions (EPA 8330B list)	
Munitions	4-Amino-2,4-dinitrotoluene (4-Am-DNT)	19406-51-0	SW8330B	Munitions (EPA 8330B list)	
Munitions	4-Nitrotoluene	99-99-0	SW8330B	Munitions (EPA 8330B list)	
Munitions	HMX	2691-41-0	SW8330B	Munitions (EPA 8330B list)	
Munitions	Nitroglycerin	55-63-0	SW8330B	Munitions (EPA 8330B list)	
Munitions	Picric acid	88-89-1	SW8330B	Japanese munitions (EPA 8330B list)	
Munitions	RDX	121-82-4	SW8330B	Munitions (EPA 8330B list)	d
Munitions	Tetryl	479-45-8	SW8330B	Munitions (EPA 8330B list)	
Munitions	Trinitrotoluene	118-96-7	SW8330B	Munitions (EPA 8330B list)	
Metals	Aluminum	7429-90-5	200.8	Water Quality Parameter	d
Metals	Antimony	7440-36-0	200.8	40 CFR 258 Appx I and II	d
Metals	Arsenic	7440-38-2	200.8	40 CFR 258 Appx I and II	d
Metals	Barium	7440-39-3	200.8	40 CFR 258 Appx I and II	d
Metals	Beryllium	7440-41-7	200.8	40 CFR 258 Appx I and II	d
Metals	Cadmium	7440-43-9	200.8	40 CFR 258 Appx I and II	d
Metals	Calcium	7440-70-2	200.8	Water Quality Parameter	d
Metals	Chromium	7440-47-3	200.8	40 CFR 258 Appx I and II	d
Metals	Cobalt	7440-48-4	200.8	40 CFR 258 Appx I and II	d
Metals	Copper	7440-50-8	200.8	40 CFR 258 Appx I and II	d
Metals	Iron	7439-89-6	200.8	Water Quality Parameter	d
Metals	Lead	7439-92-1	200.8	40 CFR 258 Appx I and II	d

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Analyte Type	Analyte [a]	CAS No.	Analytical Method	Rationale for Inclusion	
Metals	Magnesium	7439-95-4	200.8	Water Quality Parameter	d
Metals	Manganese	7439-96-5	200.8	Water Quality Parameter	d
Metals	Molybdenum	7439-98-7	200.8	Water Quality Parameter	d
Metals	Nickel	7440-02-0	200.8	40 CFR 258 Appx I and II	d
Metals	Potassium	7440-09-7	200.8	Water Quality Parameter	d
Metals	Selenium	7782-49-2	200.8	40 CFR 258 Appx I and II	d
Metals	Silver	7440-22-4	200.8	40 CFR 258 Appx I and II	d
Metals	Sodium	7440-23-5	200.8	Water Quality Parameter	d
Metals	Thallium	7440-28-0	200.8	40 CFR 258 Appx I and II	d
Metals	Tin	7440-31-5	200.8	40 CFR 258 Appx II	d
Metals	Uranium	7440-61-1	200.8	Low-level radioactive waste from military	d
Metals	Vanadium	7440-62-2	200.8	40 CFR 258 Appx I and II	d
Metals	Zinc	7440-66-6	200.8	40 CFR 258 Appx I and II	d
Metals	Hexavalent Chromium (Cr^{+6})	18540-29-9	218.7	More toxic form of chromium	d
Metals	Mercury (total)	7439-97-6	245.1	40 CFR 258 Appx II	d
Cyanide	Cyanide, Total	'57-12-5	SM 4500-CN-E	40 CFR 258 Appx II	d
Sulfide	Sulfide	18496-25-8	SM 4500-S^{-2}	40 CFR 258 Appx II	d
Radioactive Constituents	Gross Alpha	NA	900	Low-level radioactive waste from military	d
Radioactive Constituents	Gross Beta	NA	900	Low-level radioactive waste from military	d
Radioactive Constituents	Radium 226	13982-63-3	903.0	Low-level radioactive waste from military	d
Radioactive Constituents	Radium 228	15262-20-1	904.0	Low-level radioactive waste from military	d
Water Quality Parameters	Chloride	16887-00-6	300.0	Water Quality Parameter	d
Water Quality Parameters	Sulfate	14808-79-8	300.0	Water Quality Parameter	d
Water Quality Parameters	Ammonia (as N)	7664-41-7	350.1	Water Quality Parameter	d
Water Quality Parameters	Nitrate/Nitrite as N	NA	353.2	Water Quality Parameter	d
Water Quality Parameters	Total Dissolved Solids (TDS)	NA	A2540C	Water Quality Parameter	d
Water Quality Parameters	Total Suspended Solids (TSS)	NA	A2540D	Water Quality Parameter	d
Water Quality Parameters	Phosphate (as P)	7723-14-0	SM 4500 P-B.5	Water Quality Parameter	d
Water Quality Parameters	Alkalinity	NA	SM2320B	Water Quality Parameter	d

Notes:

[a] *There are a total of 259 project analytes: 223 40CRF258 Appendix II analytes (PCBs and Chlordane are each listed as one analyte, but these are reported as seven Aroclor mixtures and three isomers of Chlordane, respectively), 20 Ordot-specific analytes (munitions; radiological parameters; 1,4-dioxane; hexavalent chromium; and perchlorate), and 16 water quality parameters.*

[b] *Chlordane is listed on the Appendix II analyte list, but the laboratory reports three Chlordane isomers (alpha-, beta-, and gamma-Chlordane).*

[c] *PCB is listed on the Appendix II analyte list, but the laboratory reports seven PCB mixtures (Aroclor-1016, -1221, -1232, -1242, -1248, -1254, and -1260).*

[d] *Analyte Selected for Semiannual Sampling. Any newly-detected Appendix II and Ordot-Specific analytes from annual monitoring events will be analyzed in addition to the analytes checked.*

Attachment B: Data Usability Summary

Appendix B
OVERALL DATA USABILITY SUMMARY REPORT

The data quality assessment (DQA) identified analytical variances that did not meet the data of known quality protocols and could potentially affect the data usability. The purpose of this report is to evaluate how these variances affect the usability of the data.

Evaluating the quality of analytical data to determine whether the data are of sufficient quality for the intended purpose is a two-step process. The first step of the process is a DQA, which was performed as a Tier 3 Validation, to identify and summarize any quality control problems that occurred during laboratory analysis. The results are used to perform the second step, which is a data usability evaluation (DUE) to determine whether or not the quality of the analytical data is sufficient for the intended purpose. The DUE is an evaluation by the environmental professional to determine if the analytical data are of sufficient quality for the intended purpose. The DUE uses the results of the DQA and evaluates the quality of the analytical data in relation to the project-specific DQOs and the intended use of the data. The DQA should be performed when the data are received throughout the course of a project. The DUE is performed whenever the data are used to make decisions. Precision, accuracy, representativeness, completeness, and sensitivity were also used to assess data usability.

Precision expresses the closeness of agreement, or degree of dispersion, between a series of measurements. Precision is a measure of the reproducibility of sample results. The goal is to maintain a level of analytical precision consistent with the DQOs. As a conservative approach, it is appropriate to compare the greatest numeric results from a series of measurements to the applicable regulatory criteria. The current dataset estimates 8 sampling events for comparison. During each of the events, field duplicates were collected to measure sampling precision. Relative Percent Difference (RPD) is a quantitative indicator of quality assurance and quality control (QA/QC) for repeated measurements (i.e., duplicates) where the outcome is expected to be the same. For samples with non-detections, the method detection limit (MDL) was used to calculate the RPD. It is calculated using the following equation:

$$RPD = \left| \frac{x_1 - x_2}{(x_1 + x_2)/2} \right| \times 100$$

Accuracy is used to describe the agreement between an observed value and an accepted reference, or true value. The goal is to maintain a level of accuracy consistent with the DQOs. Accuracy is usually reported through the calculation of percent recovery in the lab reports. Laboratory control samples, matrix spikes and duplicates, internal standards, initial and continuing calibration are all quality measures used to assess accuracy.

Representativeness is a qualitative measurement that describes how well the analytical data characterizes a release area. Many factors can influence how representative the analytical results are for a site. These factors include the selection of appropriate analytical procedures, the sampling plan, matrix heterogeneity and the procedures and protocols used to collect, preserve, and transport samples. This has been completed through the QAPP and confirmed with each dataset.

Completeness is a quantitative measure that is used to evaluate how much valid analytical data was obtained in comparison to the amount that was planned. Completeness is usually expressed as a percentage of usable analytical data. Completeness goals must be specified for the various types of samples that will be collected during the course of an investigation. Completeness goals are used to estimate the minimum amount of analytical data required to support the conclusions of the environmental professional (8 sampling events).

Sensitivity is related to the reporting limit (RL). In this report, sensitivity refers to the capability of a method or instrument to detect a given analyte at a given concentration and reliably quantitate the analyte at that concentration. Typically, environmental professionals should be concerned that the instrument or method can detect and provide an accurate analyte concentration that is not greater than the groundwater protection standards. All reports have been reported with method detection limits (MDL) and RLs to cover this. In most cases, RLs are significantly less than the protection standards.

All results less than the RL but greater than or equal to the MDL are qualified as an approximate value, J. Samples have been properly qualified, and the analytical variances have no effect on data usability. Two outliers were determined for this qualification: Sample MW-6 sampled on11/13/18 for aluminum at 7900 ug/L and MW-9 sampled on 11/7/18 for anthracene at 0.0094 ug/L. The aluminum result at MW-6 was considered a high outlier and therefore excluded. The aluminum results for the other events were detected at lower concentrations. The anthracene result at MW-9 was considered a low outlier and therefore excluded. The anthracene results for all other events were found to be non-detect or detected right at the reporting limit.

This usability report outlines the second 4 sampling events in detail. Table 1 shows the usability for the second 4 sampling events: October 2018, January 2019, March 2019, and May 2019. Table 2 shows the usability for the first 4 sampling events performed by GLA: November 2017, December 2017, January/February 2018, and March 2018.

Table 1. October 2018, January 2019, March 2019, and May 2019 Qualifier Breakdown

Location	Total	Non-detections	Detections	Non-detections	Detections	Non-detections	Percent Not Rejected
				UJ-Estimated	J-Estimated	R-Rejected	
MW-10	1040	897	57	69	17	0	100%
MW-12	1039	922	41	61	15	0	100%
MW-13	1060	943	31	43	21	22	98%
MW-1B	1039	904	45	55	20	15	99%
MW-1C	1060	943	39	37	6	35	97%
MW-2A	260	226	13	8	13	0	100%
MW-5A	1039	935	49	21	12	22	98%
MW-6	780	693	40	13	13	21	97%
MW-9	1039	745	39	230	25	0	100%
SURW-1	1040	965	34	28	13	0	100%
SURW-5	1123	1035	34	15	16	23	98%
SURW-7	863	784	28	16	13	22	97%
SURW-8	343	292	10	9	9	23	93%

Table 2. November 2017, December 2017, January/February 2018, and March 2018 Qualifier Breakdown

Location	Total	Non-detections	Detections	Non-detections	Detections	Non-detections	Percent Not Rejected
				UJ-Estimated	J-Estimated	R-Rejected	
MW-10	853	149	26	593	24	61	93%
MW-12	1137	170	28	776	24	139	88%
MW-13	1137	137	28	825	25	122	89%
MW-1B	1138	91	44	910	33	60	95%
MW-1C	1138	102	25	911	40	60	95%
MW-2A	284	44	8	164	7	61	79%
MW-5A	1137	99	32	846	37	123	89%
MW-6	835	78	24	654	18	61	93%
MW-9	1137	179	28	830	39	61	95%
SW-4	1153	173	24	866	29	61	95%
SW-5	1136	308	22	788	18	0	100%
SW-7	569	238	18	306	6	1	100%
SW-8	285	33	6	241	5	0	100%

Event 5: October 2018 DATA USABILITY SUMMARY REPORT

Report 400-160841-1

Three out of the six coolers arrived at the lab above 6° C but below 10° C. Since the coolers were preserved on ice and the cooling process had begun, the reviewer has made a professional judgment call to not further qualify the samples. Samples have not been qualified, and the analytical variances have no effect on data usability. The data was compared to the other 7 events, and no outliers were found.

Report 400-161490-1

Samples MW-1C, DUPLICATE (MW-1B), MW-5A, and MW-6 were collected in properly preserved bottles for analysis of hexavalent chromium; however, the pH was outside the required criteria when verified by the laboratory. Samples were adjusted to pH>8 outside of the 24-hour preservation hold time. Samples have been properly qualified, and the analytical variances have no effect on data usability.

GC/MS

Report 400-160841-1

EPA Method 8330B Nitroaromatics and Nitramines were analyzed outside of the 14-day holding time for samples SURW-7, SURW-5, SURW-8, and DUPLICATE (SURW-8) due to samples being in transit by the lab. Non-detected sample analytes are qualified as unusable, R, and detected sample analytes are qualified as estimated J. Samples have been properly qualified. Historically, samples have been non-detect; therefore, unusable data may be used for comparison purposes only and must be reported as rejected. The data was compared to the other 7 events, and no outliers were found.

Bis(2-Ethylhexyl) phthalate was detected above the reporting limit in the method blank at 5.29 ug/L associated with analytical batch 400-418146. Sample SURW-1 was re-extracted and re-analyzed outside of holding time. The first set of data had a detection of 18 ug/L and an MDL of 5.5 ug/L, and the second set of data that was outside of the holding time was non-detect with a MDL of 5.2 ug/L. The first set of data will be considered usable and reportable; and the second set of data will be rejected and qualified as R. Samples have been properly qualified, and the analytical variances have no effect on data usability. The rejected result will not be reported. Historically, samples have been non-detect; therefore, unusable data may be used for comparison purposes only and must be reported as rejected. The data was compared to the other 7 events, and no outliers were found.

Hexachloropropene, 3-Methylcholanthrene, and 4,6-Dinitro-2-methylphenol LCS/LCSD percent recoveries were below control limits, and associated non-detections are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The CCV recovered outside acceptance criteria, low biased, for 2,2-Dichloropropane, Ethyl methacrylate, trans-1,3-Dichloropropene, alpha,alpha-Dimethyl phenethylamine, 4-Aminobiphenyl, Caprolactam, Diallate, N-Nitro-o-toluidine, Pentachlorobenzene, 2-Acetylaminofluorene, Isosafrole, Total Safrole, 3-Methylcholanthrene, and Hexachlorocyclopentadiene. Associated non-detected batch analytes are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Sample SURW-1 is qualified as estimated, J, due to a value at the estimated maximum possible concentration. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Report 400-161490-1

EPA Method 8330B Nitroaromatics and Nitramines were analyzed outside of the 14-day holding time for samples MW-1C, MW-1B, DUPLICATE (MW-1B), MW-5A, and MW-6 due to samples being in transit by the lab. Non-detected sample analytes are qualified as unusable, R, and detected samples are qualified as estimated J. Samples have been properly qualified. Historically, samples have been non-detect; therefore, unusable data may be used for comparison purposes only and must be reported as rejected. The data was compared to the other 7 events, and no outliers were found.

Sample MW-5A for bis(2-Ethylhexyl) phthalate was detected above the reporting limit in the method blank at 19.4 ug/L associated with analytical batch 420298. Sample was re-prepared and re-analyzed outside of holding time. Both sets of data have been reported on the lab report. The first set of data for bis(2-Ethylhexyl) phthalate had a detection of 12 ug/L and an MDL of 5.3 ug/L, and the second set of data that was outside of the holding time was non-detect with an MDL of 5.4 ug/L. The first set of data will be considered usable and reportable; and the second set of data will be rejected and qualified as R. Samples have been properly qualified, and the analytical variances have no effect on data usability. The rejected result will not be reported. Historically, samples have been non-detect; therefore, unusable data may be used for comparison purposes only and must be reported as rejected. The data was compared to the other 7 events, and no outliers were found.

Samples MW-1C, MW-1B, DUPLICATE, and EQUIPMENT BLANK had surrogate recovery for the following samples below control limits. These samples were re-analyzed outside of analytical hold time and surrogate recovery in original analysis were within control limits. Associated non-detections are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Sample MW-13 MS/MSD recoveries for analytical batch 419855 for 4-aminobiphenyl, 3,3'-dimethylbenzidine, 3-methylcholanthrene, and 2-toluidine were outside control limits. Sample MW-13 for associated non-detections are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability. The MS/MSD recoveries for p-phenylene diamine were below control limits and 0%. Sample MW-13 for p-phenylene diamine is qualified as rejected, R. Unusable data may be used for comparison purposes only and must be reported as rejected. The data was compared to the other 7 events, and no outliers were found.

The LCS/LCSD for Hexachloropropene for analytical batch 400-418622 recovered below control limits. This analyte has been identified as a poor performing analyte with recoveries less than 10%. Associated non-detected analytes for MW-1B, MW-1C, DUPLICATE (MW-1B), and EQUIPMENT BLANK are qualified as rejected, R. Unusable data may be used for comparison purposes only and must be reported as rejected. The data was compared to the other 7 events, and no outliers were found.

The LCS/LCSD recovered below the control limits for following analytes: Hexachloropropene, Hexachlorobutadiene and Atrazine. Associated non-detections for samples are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The method blank for analytical batch 400-418622 contained Di-n-butyl phthalate and bis(2-Ethylhexyl) phthalate above the method detection limit. Only associated samples collected in the batch require qualification. Detections less than five times the blank detection are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The method blank for analytical batch 420298 contained bis(2-Ethylhexyl) phthalate and Carbazole above the reporting limit. Only associated samples collected in the batch require qualification. Detections less than five times the blank detection are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The method blank for analytical batch 400-259247 contained 2,3,7,8-TCDD above the method detection limit. Only associated samples collected in the batch require qualification. Detections less than five times the blank detection are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The EQUIPMENT BLANK sample had a detection of bis(2-Ethylhexyl) phthalate, di-n-butyl phthalate, and 2,3,7,8-TCDD. The associated method blank in the associated analytical batch also had detections of these analytes, and method blank qualification applies. Only associated samples collected in the field batch require qualification: MW-1C, MW-1B, and DUPLICATE (MW-1B). Detections less than five times the equipment blank detection are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Samples MW-1C, MW-1B, DUPLICATE (MW-1B), and EQUIPMENT BLANK had the surrogate 3,4-dinitrotoluene below the lower control limits. The non-detected analyte PETN is qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The CCV recovered below acceptance criteria for 1,1,2,2-Tetrachloroethane, 1,2,3-Trichloropropane 1,2-Dibromo-3-Chloropropane, trans-1,4-Dichloro-2-butene, 4-Nitrophenol, alpha,alpha-Dimethyl phenethylamine, Nitrobenzene, N-Nitrosodi-n-butylamine, N-Nitrosopyrrolidine, Total Safrole, 3-Methylcholanthrene, Methyl methanesulfonate, N-Nitro-o-toluidine, Diallate and Hexachlorocyclopentadiene. Associated non-detected analytes are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

GC

Report 400-160841-1

Organophosphorous compounds were analyzed outside of the 7-day holding time for samples SURW-7, SURW-5, SURW-8, and DUPLICATE (SURW-8) due to a laboratory error. The laboratory mistakenly spiked the samples with target compounds. Original analyses and re-run were both performed outside of the holding time. Non-detected sample analytes are qualified as unusable, R. Samples have been properly qualified. Historically, samples have been non-detect; therefore, unusable data may be used for comparison purposes only and must be reported as rejected. The data was compared to the other 7 events, and no outliers were found.

The CCV recovered below the lower control limit for heptachlor, 4,4'-DDT, methoxychlor, beta-BHC, Endrin aldehyde and Heptachlor epoxide. Associated non-detected batch analytes are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Report 400-161490-1

The following samples for method 8081B were re-extracted outside of preparation holding time of 14 days for samples MW-10 and MW-12. The laboratory mistakenly spiked the samples with target compounds. Non-detected sample analytes are qualified as estimated with limited detection, UJ, and detected sample analytes are qualified as estimated, J. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Organophosphorous compounds were analyzed outside of the 7-day holding time for sample MW-5A and MW-6 due to a laboratory error. Non-detected sample analytes are qualified as rejected, R. Historically, samples have been non-detect; therefore, unusable data may be used for comparison purposes only and must be reported as rejected. The data was compared to the other 7 events, and no outliers were found.

The LCS/LCSD recovered below control limits for the following analytes: Dimethoate, Famphur, Methyl parathion, Phorate, and Thionazin. Associated non-detections are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The method blank contained 4,4'-DDD above the method detection limit. Associated detections less than five times the blank detection are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

For method 8141B, two surrogates are used for this analysis. For sample MW-10 and MW-12, both surrogates were below control limits. Associated non-detections are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The CCV recovered outside acceptance criteria, low biased, for Endosulfan sulfate, Endrin aldehyde, Methoxychlor, Endosulfan II, 4,4'-DDD and Endrin. Associated non-detected analytes are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

General Chemistry

Report 400-160841-1

The MS/MSD recovery for ammonia for analytical batch 400-417078 was below control limits, and sample SURW-7 is qualified as estimated, J. Sample has been properly qualified, and the analytical variances have no effect on data usability.

DUPLICATE is the duplicate for SURW-8. The ammonia RPD was above the control limit of 20%, and parent and duplicate results are qualified as estimated, J. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Report 400-161490-1

The MS/MSD recovery for ammonia was below control limits for multiple samples. Samples MW-1C, EQUIPMENT BLANK, MW-13, and MW-2A are qualified as estimated, J. Samples have been properly qualified, and the analytical variances have no effect on data usability.

DUPLICATE is the duplicate for MW-1B. All RPDs calculated are within the control limits of 20% for inorganics with the exception of ammonia, sulfate, and total suspended solids. Qualified parent and duplicate results for parameter exceeding control limits as estimated, J, reason code 8. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Metals

Report 400-160841-1

The method and calibration blank in batch 418352 for hexavalent chromium had a detection, and sample SURW-1 for hexavalent chromium is qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The post digestion spike percent recovery for silver associated with batches 400-416892 and 400-417084 was below the control limit. Associated non-detected analytes are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Report 400-161490-1

The method blank and calibration blanks contained hexavalent chromium above the method detection limit. Associated detections less than five times the blank detection are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The method blank contained selenium above the method detection limit. Associated detections less than five times the blank detection are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The EQUIPMENT BLANK sample had a detection of hexavalent chromium. The associated method blank also had a detection of hexavalent chromium, and since the EQUIPMENT BLANK detection was less than five times the Method blank detection, the EQUIPMENT BLANK detection is qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The EQUIPMENT BLANK sample had a detection of barium above the method detection limit. Associated detections less than five times the blank detection are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The CCB was found above the reporting limit for aluminum. Samples MW-5A and MW-6 with associated detections are qualified as estimated, J. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Sample MW-13 post digestion spike percent recovery for Silver associated with batches 400-416867 was below the control limit of 85%. Associated non-detected analytes are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

One field duplicate was collected for the data set: DUPLICATE is the duplicate for MW-1B. RPDs for non-detected analytes are not calculated. All RPDs calculated are above the control limits of 20% for inorganics. Aluminum, arsenic, barium, cobalt, iron, nickel, vanadium, and hexavalent chromium are qualified as estimated, J or UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Radiochemistry

Report 400-160841-1

The laboratory qualifier, G, indicates a sample with a Minimum Detectable Concentration greater than the requested RL, and non-detected samples are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Report 400-161490-1

The method blank had a detection of Gross Beta. Only associated samples collected in the batch require qualification. Detections less than five times the blank detection are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The laboratory qualifier, G, indicates a sample with a Minimum Detectable Concentration greater than the requested RL, and non-detected samples are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Event 6: January 2019 DATA USABILITY SUMMARY REPORT

Report 400-164646-1

The preservative used in the sample containers provided is not compatible with two of the Method 8260 analytes requested. Samples have been properly qualified, and the analytical variances have no effect on data usability.

GC/MS

Report 400-164493-1

The CCV recovered below acceptance criteria for 2,2-Dichloropropane, Benzo[g,h,i]perylene, Benzo[b]fluoranthene, Indeno[1,2,3-cd]pyrene, Dibenz(a,h)anthracene, N-Nitrosomethylethylamine, 4-Aminobiphenyl, Methyl methanesulfonate, and Kepone. Associated non-detected batch analytes are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Sample SURW-5 is qualified as estimated, J, due to a value at the estimated maximum possible concentration for Method 6850. Samples have been properly qualified, and the analytical variances have no effect on data usability.

DUPLICATE is the duplicate for SURW-7. The bis(2-Ethylhexyl)phthalate RPD was above the control limit of 30%, and parent and duplicate results are qualified as estimated, J. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Report 400-164646-1

The MS/MSD recoveries for Acetone, 2-Butanone, 2-Hexanone, Acetophenone, 2-Acetylaminofluorene, Ethyl methanesulfonate, Methyl methanesulfonate, n-Nitrosodiethylamine, n-Nitrosodimethylethylamine, p-Phenylene diamine, 2-Toluidine, and 1,3,5-Trinitrobenzene were below control limits. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The LCS/LCSD for Hexachloropropene, Hexachloroethane, Hexachlorobutadiene, and 1,3-Dinitrobenzene recovered below control limits. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The EQUIPMENT BLANK sample had a detection of Picric acid. Only associated samples collected in the batch require qualification. Detections less than five times the blank detection are qualified as undetected and estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The CCV recovered below acceptance criteria for 4-Aminobiphenyl, Carbazole, 2,3,4,6-Tetrachlorophenol, 2-Nitrophenol, Methyl methanesulfonate, Phenol, Isosafrole, N-

Nitrosomethylethylamine, N-Nitrosopyrrolidine, N-Nitro-o-toluidine, Hexachlorocyclopentadiene, Nitrobenzene, bis(2-Chloroethyl)ether, Ethyl methanesulfonate, 2,6-Dinitrotoluene, 2,4-Dinitrotoluene, Isophorone, alpha,alpha-Dimethyl phenethylamine, N-Nitrosodiethylamine, N-Nitrosodi-n-butylamine, 2-Acetylaminofluorene, Caprolactam, Safrole, Hexachlorocyclopentadiene, 1,3-Dinitrobenzene, 1,3,5-Trinitrobenzene, bis(2-Chloroethoxy)methane, Carbazole, Benzyl alcohol, 2,2-Dichloropropane, Dichlorodifluoromethane, Iodomethane, Kepone, and Vinyl acetate. Associated non-detected batch analytes are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Multiple samples are qualified as estimated, J, due to a value at the estimated maximum possible concentration for Method 1613B. Samples have been properly qualified, and the analytical variances have no effect on data usability.

DUPLICATE is the duplicate for MW-1C. The 2,3,7,8-TCDD was above the control limit of 30%, and parent and duplicate results are qualified as estimated, J. Samples have been properly qualified, and the analytical variances have no effect on data usability.

GC

Report 400-164493-1

The method blanks contained Silvex (2,4,5-TP) above the method detection limit. Only associated samples collected in the batch require qualification. Detections less than five times the blank detection are qualified as undetected and estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Report 400-164646-1

The Method 8081B samples were extracted outside of preparation holding time of 14 days for MW-1B. Non-detected sample analytes are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Organophosphorous compounds were analyzed outside of the 7-day holding time for sample MW-9 and MW-10. Non-detected sample analytes are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The LCS/LCSD recovery and RPD and MS/MSD recovery were below control limits for Aldrin. Associated non-detections have been properly qualified, and the analytical variances have no effect on data usability.

General Chemistry

Report 400-164493-1

DUPLICATE is the duplicate for SURW-7. The Ammonia RPD was above the control limit of 20%, and parent and duplicate results are qualified as estimated, J. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Report 400-164646-1

Total Dissolved Solids for sample MW-6 was run outside of the 7-day holding time. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The MS/MSD recovery for Sulfide was below control limits. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The method blank contained Ammonia. Associated detections less than five times the blank detection are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Metals

Report 400-164493-1

DUPLICATE is the duplicate for SURW-7. The iron RPD was above the control limit of 20%, and parent and duplicate results are qualified as estimated, J. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The CCV recovered above the upper control limit for Hexavalent chromium. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Report 400-164646-1

The method blank and calibration blanks contained Hexavalent chromium above the method detection limit. Associated detections less than five times the blank detection are qualified as estimated with limited detection, UJ. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Radiochemistry

Report 400-164493-1

The laboratory qualifier, G, indicates a sample with a Minimum Detectable Concentration greater than the requested RL. Samples have been properly qualified, and the analytical variances have no effect on data usability.

DUPLICATE is the duplicate for SURW-7. The Gross Beta RPD was above the control limit of 20%, and parent and duplicate results are qualified as estimated, J. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Report 400-164646-1

The laboratory qualifier, G, indicates a sample with a Minimum Detectable Concentration greater than the requested RL. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The MW-12 laboratory duplicate for Radium-228 had an RPD exceeding the control limit. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Event 7: March 2019 DATA USABILITY SUMMARY REPORT

Report 280-121490-1

The resampling for MW-1C, MW-13 and DUPLICATE (MW-1C) arrived at the lab above the temperature control limits, not on ice, and were run outside of the method hold time. All non-detected results for the resampling of MW-1C, MW-13 and DUPLICATE (MW-1C) are rejected and detections are qualified as estimated. Since these samples were taken before, prior samples will be used, and these samples will be considered not reportable.

GC/MS

For report 400-167568-1, the MS/MSD recoveries for Acetone, 2-Butanone, and 2-Hexanone were below control limits for sample SURW-7. For report 400-167566-1, the MS/MSD recoveries for Acetone, 2-Butanone, and 2-Hexanone were below control limits for sample MW-13. The MS/MSD recoveries for multiple analytes were below control limits for sample MW-13. Samples have been properly qualified, and the analytical variances have no effect on data usability.

For report 280-121490-1, the LCS percent recovery recovered above control limits for the following analyte: HMX. For report 400-167566-1, the LCS percent recoveries for 7,12-Dimethylbenz(a)anthracene and Hexachloropropene were below control limits. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The CCV recovered outside acceptance criteria, low biased, for alpha,alpha-Dimethyl phenethylamine, 1,1-Dichloroethane, 2,2-Dichloropropane, 2-Chloro-1,3-butadiene, 3-Chloro-1-propene, Carbon disulfide, Carbazole, p-Phenylene diamine, 3,3'-Dimethylbenzidine and 4-Aminobiphenyl. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

For report 280-121490-1, The %RPD between the primary and confirmation column exceeded 40% for o-Nitrotoluene for MW-10. The lower value was reported, and samples have been properly qualified, and the analytical variances have no effect on data usability.

The measured ion ratio did not meet qualitative identification criteria and indicates a possible interference. Samples have been properly qualified, and the analytical variances have no effect on data usability.

GC

For report 400-167566-1, the following samples were extracted outside of preparation holding time of 14 days for samples MW-13. Organophosphorous compounds were analyzed outside of the 7-day holding time for sample MW-9 and MW-10 due to a laboratory error. Samples have been properly qualified, and the analytical variances have no effect on data usability.

General Chemistry

For report 400-167568-1, sulfide for all samples was run outside of the 7 day hold time due to lab scheduling issues. For report 400-167568-1, Sulfide for MW-1B was run outside of the 7 day hold time due to lab scheduling issues, and the following samples were analyzed outside of analytical holding time due to Analyst error: MW-6 and MW-5A. Samples have been properly qualified, and the analytical variances have no effect on data usability.

For report 400-167566-1, the MSD for sample MW-13 recoveries were below control limits for the following analytes: Total cyanide. The MS/MSD RPD was also above the control limit. The MS/MSD for sample MW-1B recoveries were below control limits for the following analytes: Sulfide. Samples have been properly qualified, and the analytical variances have no effect on data usability.

For report 400-167566-1, the method blank had a detection of Phosphorus. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

For report 400-167566-1, the EQUIPMENT BLANK sample had a detection of ammonia and TSS. Only samples MW-5A and MW-6 in the data set apply. Samples have been properly qualified, and the analytical variances have no effect on data usability.

For report 400-167566-1, DUPLICATE is the duplicate for MW-1C. Parent and duplicate for ammonia had an RPD above control limits. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Metals

For report 400-167568-1, the method blank and calibration blanks for multiple analytical batches contained Hexavalent chromium above the method detection limit. Samples have been properly qualified, and the analytical variances have no effect on data usability.

For report 400-167566-1, the method blank contained Uranium above the method detection limit. The method blank and calibration blanks for multiple analytical batches contained Hexavalent chromium above the method detection limit. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The report 400-167566-1, the EQUIPMENT BLANK sample had a detection of Arsenic and Vanadium. Only samples MW-5A and MW-6 in the data set apply. Samples have been properly qualified, and the analytical variances have no effect on data usability.

For report 400-167568-1, DUPLICATE is the duplicate for SURW-7. The Iron RPD was above control limits. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Radiochemistry

For report 400-167566-1, the method blank contained Radium-226 above the method detection limit. Samples have been properly qualified, and the analytical variances have no effect on data usability.

For reports 400-167568-1 and 400-167566-1, the laboratory qualifier, G, indicates a sample with a Minimum Detectable Concentration greater than the requested RL. Samples have been properly qualified, and the analytical variances have no effect on data usability.

For report 400-167566-1, the Chain of Custody analyte list was not completed for sample DUPLICATE (MW-1C). Due to a laboratory error, Gross Alpha and beta was not run for DUPLICATE (MW-1C). Since this is the duplicate sample for MW-1C and the lab was not able to produce the data, no further action will be taken. The analytical variances have no effect on data usability.

Event 8: May/June 2019 DATA USABILITY SUMMARY REPORT

Report 400-171575-1

One cooler arrived at the lab at 11.6° C. The laboratory noted standing water in the cooler where ice once was present. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

The preservative used in the sample containers provided is not compatible with two of the Method 8260 analytes requested. The following samples were received preserved with Hydrochloric acid: SURW-1, SURW-5, and DUPLICATE (SURW-5). Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

GC/MS

Samples MW-10, MW-12, and EQUIPMENT BLANK for Method 8330B were extracted outside of the 7-day method holding due to laboratory issues. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

The MS/MSD recoveries for Acetone, 2-Butanone, 2-Hexanone, and Methapyrilene were below control limits. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

The LCS and/or LCSD percent recovery for Butyl benzyl phthalate, Dimethyl phthalate, Hexachloropropene, and Kepone were below control limits. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

The EQUIPMENT BLANK had detections of bis(2-Ethylhexyl)phthalate and Caprolactam. Only sample MW-12 in the data set applies. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

The method blanks had detections of bis(2-Ethylhexyl)phthalate, Methylene chloride, and Dimethyl phthalate. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

The CCV recovered below the lower control limit for 3-Nitroaniline, 1-Naphthylamine, 4-Aminobiphenyl, 2-Naphthylamine, Benzo[k]fluoranthene, Benzo[g,h,i]perylene, Bromomethane, Carbazole, Kepone, Dichlorodifluoromethane, Fluoranthene, alpha,alpha-Dimethyl phenethylamine, N-Nitrosodi-n-butylamine, Hexachlorocyclopentadiene, and Pyrene. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

GC

The LCS and/or LCSD percent recovery for Chlorobenzilate, delta-BHC, Famphur, Thionazin, and PCB-1016 were below control limits. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

The method blank had detections of 2,4-D. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

General Chemistry

For Reports 400-171154-1, 400-171185-1, 400-171351-1, 400-171575-1, 400-171641-1, and 400-171843-1, Sulfide for all samples was run outside of the 7-day hold time due to lab analyst issues. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

The MS/MSD recoveries for Ammonia were below control limits. Associated samples have been properly qualified, and the analytical variances have no effect on data usability. The MS/MSD recoveries for Phosphorus were below control limits. Associated sample has been properly qualified as rejected; however, this sample has been non-detect in historic data. The data was compared to the other 7 events, and no outliers were found.

DUPLICATE is the duplicate for SURW-5. RPDs for TSS and Ammonia were above control limits. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

Metals

The method blank and calibration blanks for multiple analytical batches contained Hexavalent chromium above the method detection limit. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

Radiochemistry

Multiple non-detected samples were reported with a Minimum Detectable Concentration greater than the requested RL. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

Event 9: 2019 Sept DATA USABILITY SUMMARY REPORT

The data quality assessment identified analytical variances that did not meet the data of known quality protocols and could potentially affect the data usability. The purpose of this section is to evaluate how these variances affect the usability of the data.

All results less than the RL but greater than or equal to the MDL are qualified as an approximate value, J, reason code T. Samples have been properly qualified, and the analytical variances have no effect on data usability.

The preservative used in the sample containers provided is not compatible with three of the Method 8260 analytes requested. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

Multiple coolers arrived at the laboratory above the temperature control limits. Report 280-128968-1 and 400-177343-1 required qualification. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

GC/MS

Samples arrived outside of the holding time for method 8330B and 8270D for MW-5A and MW-6. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

The MS/MSD percent recoveries and/or RPDs were outside of control limits for 2-Butanone, 2-Hexanone, Acetone, alpha,alpha-Dimethyl phenethylamine, Benzaldehyde, Hexachloropropene, and p-Phenylene diamine. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

The MS/MSD percent recoveries for multiple samples were below control limits and 0% for 2-Chloroethyl vinyl ether. Associated samples are rejected and usable for comparison purposes only.

The LCS/LCSD percent recoveries and/or were outside of control limits for HMX, RDX, Nitroglycerin, Picric acid, 3,3'-Dimethylbenzidine, Benzaldehyde, Hexachlorocyclopentadiene, Hexachlorobutadiene, Hexachloropropene, 2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol, alpha,alpha-Dimethyl phenethylamine, Kepone, p-Phenylene diamine, and Pentachlorophenol. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

The method blanks contained bis(2-Ethylhexyl)phthalate, Diethyl phthalate, Indeno [1,2,3-cd]pyrene, N-nitro-o-toluidine, Phenanthrene, and Caprolactam above the method detection limit. The Equipment Blank contained Picric acid, Benzaldehyde, bis(2-Ethylhexyl)phthalate, and Caprolactam. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

The initial calibration curve was outside method criteria for p-Phenylene diamine. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

The Perchlorate internal standard responses were outside of acceptance limits for the following sample: MW-6. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

GC

Report 280-128358-1 for method 8141B had all samples extracted outside of the 7-day method holding times due to laboratory issues. Report 400-177343-1 for method 8081B and 8141A had all samples arrived at the lab outside of the holding time. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

The LCSD percent recoveries were below control limits, and the RPD were above control limits for PCB-1016 and PCB-1260. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

General Chemistry

Multiple methods were analyzed outside of the hold time due to the samples not arriving at the laboratory in sufficient time. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

The MS/MSD recoveries for samples MW-1C and MW-9 have Nitrate/Nitrite outside of control limits. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

Method blanks contained TDS, Total phosphorus and Ammonia, and the Equipment Blank contained Ammonia and Alkalinity. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

Metals

The method blanks contained Chromium, Calcium, Iron, Manganese, and Mercury above the method detection limit. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

Sample MW-10 was analyzed outside of the hold time. The associated sample has been properly qualified, and the analytical variances have no effect on data usability.

The MS/MSD percent recoveries for sample MW-9 were below control limits for Magnesium. The associated sample has been properly qualified, and the analytical variances have no effect on data usability.

The CCV recovered above the upper control limit for Magnesium. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

The interference check standard solution associated with all samples showed results for Cobalt at a level greater than 2 times the limit of detection. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

Uranium had a serial dilution outside control limits indicating a potential matrix interference. The associated sample has been properly qualified, and the analytical variances have no effect on data usability.

Radiochemistry

Multiple detected and non-detected samples were reported with a Minimum Detectable Concentration greater than the requested RL. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

Report 400-176665-1 and 400-176874-1 had the LCS/LCSD sample percent recoveries below the control limits for Gross Alpha. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

Event 10: 2019 Nov Dec DATA USABILITY SUMMARY REPORT

The following variances were evaluated and show no effect on the data usability as a whole and apply to most or all samples:

- All results less than the RL but greater than or equal to the MDL are laboratory qualified.
- The preservative used in the sample containers provided is not compatible with three of the Method 8260 analytes requested. All samples were received preserved with Hydrochloric acid for 2-Chloroethyl vinyl ether, Acrolein, and Acrylonitrile.
- Multiple samples were reported with a Minimum Detectable Concentration greater than the requested reporting limit.
- The interference check standard solution associated with all samples showed results for Cobalt at a level greater than 2 times the limit of detection.
- Laboratory accuracy for LCS samples met control limits with the exception of multiple analytes which resulted in qualification of non-detections.
- The CCV for multiple analytes recovered outside of control limits which resulted in qualification of non-detections.

The following variances were evaluated per the samples noted and show no effect on the data usability:

- All Surface Water Samples: Samples for Hexavalent chromium arrived at the laboratory improperly preserved.
- SURW-8 and Duplicate (SURW-8): One field duplicate was collected in this dataset, and overall, showed good precision with only Ammonia, Aluminum, Chromium, Iron, and Cobalt being above control limits without gross exceedance.
- All Surface Water Samples: The method blanks had contamination of Perchlorate, Sulfate, and bis(2-Ethylhexyl) phthalate that resulted in false positives in the dataset.
- SURW-7: Method 8270D surrogate accuracy was below control limits.
- SURW-8: Hexavalent chromium was analyzed outside of the holding time.
- MW-1B, MW-1C, and Duplicate (MW-1B): Multiple methods extracted, prepared, and/or analyzed outside of the holding time due to the delayed arrival of the samples to the laboratory.
- MW-1B and Duplicate (MW-1B): One field duplicate was collected in this dataset, and overall, showed good precision with only Chromium and Hexavalent chromium being above control limits without gross exceedance.
- MW-5A and MW-6: The laboratory method blanks had detections of Ammonia (MW-6) and Perchlorate (MW-5A).
- MW-5A: The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference for 2,3,7,8-TCDD.
- MW-6: Laboratory accuracy for MS/MSD samples met control limits with the exception of Sulfide which resulted in qualification of non-detections.
- MW-6: The continuing calibration blank had a detection of Uranium above the reporting limits.
- MW-9 and MW-12: The samples were prepared outside of the holding time due to delayed arrival to the laboratory for method 8330B.
- MW-10: Laboratory accuracy for MS/MSD samples met control limits with the exception of Sulfide which resulted in qualification of non-detections.
- MW-10: The Equipment Blank had detections of 1,4-Dioxane and Caprolactam resulting in qualification of the associated sample detections.
- MW-2A and MW-13: Laboratory surrogates for method 8270D for MW-13 and MW-

2A, and method 8270D LL for MW-2A were below control limits resulting in qualification of non-detections.
- MW-13: Laboratory accuracy for MS/MSD samples met control limits with the exception of Magnesium which resulted in qualification of detections.

The following variances were evaluated per the samples noted and do have an effect on data usability:

- SURW-7: Due to surrogate issues, the laboratory reanalyzed method 8270D outside of the holding time. These reanalyzed results are rejected and considered not reportable for any purpose.
- All Surface Water Samples: Due to method reporting limit issues, the laboratory reanalyzed Hexavalent chromium outside of the holding time. These reanalyzed results are rejected and considered not reportable for any purpose.
- All Surface Water Samples Due to LCS issues, the laboratory reanalyzed kepone outside of the holding time for all samples. These reanalyzed results are rejected and considered not reportable for any purpose.
- MW-1C, MW-1B, and Duplicate (MW-1B): The laboratory noted that the samples for Hexavalent chromium arrived improperly preserved outside of the method specified pH and analyzed outside of the holding time. Associated samples have been properly qualified as estimated for the detections (MW-1B and DUPLICATE) and rejected for non-detections (MW-1C). For MW-1B and the DUPLICATE, results have a similar trend with historic data and are considered usable for intended purposes. Historically, MW-1C has been non-detect for Hexavalent chromium; therefore, the data may be used for comparison purposes only but must be noted as rejected.
- MW-13: Laboratory accuracy MS/MSD was 0% for 2-Chloroethyl vinyl ether which resulted in the rejection of the non-detection. 2-Chloroethyl vinyl ether is acid labile, and the sample was reported to have been preserved in hydrochloric acid which could have contributed to the poor recovery. Historically, MW-13 has been non-detect for 2-Chloroethyl vinyl ether; therefore, the data may be used for comparison purposes only but must be noted as rejected.
- MW-2A and MW-13: Due to surrogate issues, the laboratory reanalyzed method 8270D for MW-13 and MW-2A, and method 8270D LL for MW-2A outside of the holding time. These reanalyzed results are rejected and considered not reportable for any purpose.

The data quality assessment identified analytical variances that did not meet the data of known quality protocols and could potentially affect the data usability. The purpose of this section is to evaluate how these variances affect the usability of the data. This includes the usability summary for new sampling locations: MW-11R, MW-14, MW-15, and MW-16.

The following variances were evaluated and show no effect on the data usability as a whole and applies to most or all samples:

- All results less than the RL but greater than or equal to the MDL are qualified as an approximate value, J, reason code T.
- The preservative used in the sample containers provided is not compatible with three of the Method 8260 analytes requested. All samples were received preserved with Hydrochloric acid for 2-Chloroethyl vinyl ether, Acrolein, and Acrylonitrile.
- The interference check standard solution associated with all samples showed results for Cobalt at a level greater than 2 times the limit of detection.
- Multiple non-detected samples were reported with a Minimum Detectable Concentration greater than the requested reporting limit.

- Laboratory accuracy for LCS samples met control limits with the exception of multiple analytes which resulted in qualification of non-detections.
- The CCV for multiple analytes recovered outside of control limits which resulted in qualification of non-detections.

The following variances were evaluated per the samples noted and show no effect on the data usability:

- MW-14: The method blanks had contamination of Diethyl phthalate that resulted in false positives in the dataset.
- MW-15: Method 8330B surrogate accuracy was above control limits.
- MW-15: Method 8330B percent difference between the primary and confirmation column/detector is greater than 40%. The lower value has been reported.

The following variances were evaluated per the samples noted and do have an effect on data usability:

- MW-15: Due to LCS issues, the laboratory reanalyzed Aldrin and Heptachlor outside of the holding time. These reanalyzed results are rejected and considered not reportable for any purpose.

No other issues were identified that did not meet the Data of Known Quality Protocols, and all unqualified results can be considered data of known quality. Full breakdowns for qualifications can be found on the sample specific Tier 3 Validation reports.

Actions to be taken for future 2020 sampling events:

- The preservative used in the sample containers provided is not compatible with three of the Method 8260 analytes requested. Acid-labile samples will now be collected in non-preserved VOA vials and analyzed accordingly.
- A check in with the laboratory has been made about the interference check standard solution for Cobalt.
- More ice and less sample bottles per cooler has been implemented to prevent out of control limit temperatures.

Event 11: 2020 Nov-Jan Dec DATA USABILITY SUMMARY REPORT

Tier 2 Usability Summary:

As indicated on the Sampling and Analysis Plan (SAP), the existing wells—MW-1C, MW-2A, MW-5A, MW-6, MW-9, MW-10, MW-12, and MW-13—are to be validated at Tier 2 with one well each sampling event to be evaluated at Tier 3. MW-2A was selected for this event for Tier 3 Validation and is summarized in the Tier 3 Usability Section. The data quality assessment identified analytical variances that did not meet the data of known quality protocols and could potentially affect the data usability. The purpose of this section is to evaluate how these variances affect the usability of the data.

The following variances were evaluated and show no effect on the data usability:

- All results less than the RL but greater than or equal to the MDL are laboratory qualified.
- Sample was reported with a Minimum Detectable Concentration greater than the requested reporting limit.
- One field duplicate was collected at MW-1C in this dataset, and overall, showed good

precision with only Gross Beta being above control limits without gross exceedance.

- Sample preservation due to cooler temperature exceedance resulted in qualification.
- Headspace VOA vials resulted in qualification of ambient, equipment, and trip blank sample.
- The holding time for Sulfide was not met due to lab error resulting in qualification.
- Laboratory accuracy for the serial dilutions for Sodium exceeded control limits resulting in qualification.
- Post digestion spike did not meet control limits for multiple metals resulting in qualifications.
- The Method Blank had detections of Perchlorate resulting in qualification.
- The Equipment Blank had detections of Diethyl phthalate and 1,4-Dioxane resulting in qualification.
- Laboratory accuracy for multiple surrogates met control limits with a few exceptions which resulted in qualification.
- Laboratory accuracy for LCS samples met control limits with the exception of Hexavalent chromium, para-Phenylenediamine, a,a-Dimethylphenethylamine, and beta-BHC which resulted in qualification.
- The CCV for a,a-Dimethylphenethylamine, 1,4-Naphthoquinone, 2-Naphthylamine, 4,4'-DDT, Aroclor 1016, beta Endosulfan, Copper, Disulfoton, Endrin, Endrin aldehyde, Ethyl methanesulfonate, Heptachlor, Methoxychlor, n-Methyl-n-ethylnitrosamine, n-Nitrosopiperidine, Toxaphene, and Vanadium recovered outside of control limits which resulted in qualifications.
- Confirmation re-analysis for Method 8720D, Method 8081B, and Hexavalent chromium resulted in the rejection of the out of hold second analysis. This did not affect the quality of the data, and the first analysis is usable for intended purpose. Data from re-analysis is considered not reportable.

Tier 3 Usability Summary:

As indicated in the SAP, the new wells—MW-11R, MW-14, MW-15, and MW-16—are to be validated at Tier 3 along with one existing well, MW-2A. The data quality assessment identified analytical variances that did not meet the data of known quality protocols and could potentially affect the data usability. The purpose of this section is to evaluate how these variances affect the usability of the data.

The following variances were evaluated and show no effect on the data usability:

- All results less than the RL but greater than or equal to the MDL are laboratory qualified.
- Sample was reported with a Minimum Detectable Concentration greater than the requested reporting limit.
- Sample preservation due to cooler temperature exceedance resulted in qualification.
- Headspace VOA vials resulted in qualification of ambient, equipment, and trip blank sample.
- The holding time for Sulfide was not met due to lab error resulting in qualification.
- Laboratory accuracy for the serial dilutions for Sodium exceeded control limits resulting in qualification.
- Post digestion spike did not meet control limits for multiple metals resulting in qualifications.
- The Method Blank had detections of Perchlorate and Radium-226 resulting in qualification.
- The Equipment Blank had detections of Total xylenes and 1,4-Dioxane resulting in

qualification.

- Laboratory accuracy for multiple surrogates met control limits with a few exceptions which resulted in qualification.
- Laboratory accuracy for MS/MSD samples met control limits with the exception of Chloride, Cyanide, Gross Alpha, Silver, Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX), Nitroglycerin, Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX), PETN, and Zinc which resulted in qualification.
- Laboratory accuracy for LCS samples met control limits with the exception of Hexavalent chromium, para-Phenylenediamine, a,a-Dimethylphenethylamine, and beta-BHC which resulted in qualification.
- The CCV for 1,4-Naphthoquinone, 2-Naphthylamine, 4,4'-DDT, Aroclor 1016, beta Endosulfan, Disulfoton, Ethyl methanesulfonate, gamma-BHC, Kepone, Methoxychlor, n-Methyl-n-ethylnitrosamine, n-Nitrosopiperidine, and Vanadium recovered outside of control limits which resulted in qualifications.
- Confirmation re-analysis for Method 8720D, Method 8081B, and Hexavalent chromium resulted in the rejection of the out of hold second analysis. This did not affect the quality of the data, and the first analysis is usable for the intended purpose. Data from reanalysis is considered not reportable.

The following variances were evaluated and do have an effect on data usability:

- Data are rejected for Tin in sample MW-14 due to poor MS/MSD recovery (<10%). Sample non-detection can be used for comparison purposes only once all eight sampling events have been completed.

Event 12: 2021 Jan DATA USABILITY SUMMARY REPORT

As indicated in the SAP, the new wells—MW-11R, MW-14, MW-15, and MW-16—are to be validated at Tier 3. The data quality assessment identified analytical variances that did not meet the data of known quality protocols and could potentially affect the data usability. The purpose of this section is to evaluate how these variances affect the usability of the data.

The following variances were evaluated and show no effect on the data usability:

- All results less than the RL but greater than or equal to the MDL are laboratory qualified.
- Due to shipping constraints, some methods were analyzed outside of the holding time resulting in qualification.
- Sample was reported with a Minimum Detectable Concentration greater than the requested reporting limit.
- The Method Blank had detections of alpha-BHC resulting in qualification.
- The CCV for Aldrin, beta-BHC, Heptachlor epoxide, and Hexachlorocyclopentadiene recovered outside of control limits which resulted in qualifications.
- Field duplicate precision was outside of control limits for most analytes. It is suspected that there were issues in the collection process, but issues could not be confirmed. Parent and duplicate samples have been qualified accordingly.

The following variances were evaluated and do have an effect on data usability:

- The MW-15 detection of 2,6-Dintrotoluene is rejected due to the percent difference of the columns being above 40% and being analyzed outside of the holding time. The presence or absence of the analyte cannot be verified.

Event 13: 2021 April DATA USABILITY SUMMARY REPORT

Tier 2 Usability Summary:

As indicated in the SAP, the existing wells—MW-1C, MW-2A, MW-5A, MW-6, MW-9, MW-10, MW-12, and MW-13—are to be validated at Tier 2 with one well each sampling event to be evaluated at Tier 3. MW-5A was selected for this event for Tier 3 Validation; however, the well was dry and could not be sampled. Wells MW-2A and MW-6 were also dry and could not be sampled. These wells were analyzed for the semiannual list of analytes noted in Attachment B. The data quality assessment identified analytical variances that did not meet the data of known quality protocols and could potentially affect the data usability. The purpose of this section is to evaluate how these variances affect the usability of the data.

The following variances were evaluated and show no effect on the data usability:

- All results less than the RL but greater than or equal to the MDL are laboratory qualified.
- Sample was reported with a Minimum Detectable Concentration greater than the requested reporting limit.
- Headspace VOA vials resulted in qualification of MW-1C sample.
- Post digestion spike did not meet control limits for multiple metals resulting in qualifications.
- The Method Blank had detections of Arsenic and Perchlorate resulting in qualification.
- The Trip Blank had detections of 1,4-Dioxane resulting in qualification.
- Hexavalent chromium was improperly preserved and analyzed outside of the holding time resulting in qualification.

The following variances were evaluated and do have an effect on data usability:

- Data are rejected for Hexavalent chromium in sample MW-9 due to preservation and holding time issues. Sample non-detection can be used for comparison purposes only with historical data.

Tier 3 Usability Summary:

As indicated in the SAP, the new wells—MW-11R, MW-14, MW-15, and MW-16—are to be validated at Tier 3. Until all 8 events are completed, these wells are sampled for all methods identified in this report. The data quality assessment identified analytical variances that did not meet the data of known quality protocols and could potentially affect the data usability. The purpose of this section is to evaluate how these variances affect the usability of the data.

The following variances were evaluated and show no effect on the data usability:

- All results less than the RL but greater than or equal to the MDL are laboratory qualified.
- Sample was reported with a Minimum Detectable Concentration greater than the requested reporting limit.
- Post digestion spike did not meet control limits for multiple metals resulting in qualifications.
- Laboratory accuracy for multiple surrogates met control limits with a few exceptions which resulted in qualification.
- Laboratory accuracy for MS/MSD samples met control limits with the exception of 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, RDX, HMX, Gross Alpha which resulted in

qualification.

- Laboratory accuracy for MS/MSD samples met control limits with the exception of Gross Alpha which resulted in qualification.
- The CCV for alpha and beta-BHC recovered outside of control limits which resulted in qualifications.

The following variances were evaluated and do have an effect on data usability:

- Data are rejected for Radium-228 in sample MW-15 and MW-16 due to poor LCS recovery. Non-detect data can be used for comparison purposes only once all eight sampling events have been completed.
- Data are rejected for 2-Chloroethyl vinyl ether and Picric acid in sample MW-11R due to poor MS recoveries. Non-detect data can be used for comparison purposes only once all eight sampling events have been completed.

No other issues were identified that did not meet the Data of Known Quality Protocols, and all unqualified results can be considered data of known quality.

Complete Tier 2 and 3 Validation Reports are available upon request. Table breakdowns of qualifiers for each Event are listed below.

Please contact the undersigned if you have any questions or need further information.

Signed: Jaclyn Lauer   Dated: September 2021
Jaclyn Lauer, P.E.
Senior Engineer
Brown and Caldwell

Event 1			Total Analyte Count	Detected: No Qualifier	Non-Detected: No Qualifier	Detected: Estimated	Non-Detected: Estimated	Detected: Rejected	Non-Detected: Rejected	Percent Not Rejected
		Qualifier	-	-	U	J	UJ	R	UR	-
Well	Sample ID	Date	Count							%
MW-10	MW-10-WG-20171114	11/14/2017	282	10	23	7	181	0	61	78%
MW-12	MW-12-WG-20171112	11/12/2017	282	8	28	5	179	0	62	78%
MW-13	MW-13-WG-20171113	11/13/2017	282	7	30	5	179	0	61	78%
MW-1C	MW-1C-WG-20171105	11/5/2017	283	3	27	11	242	0	0	100%
MW-1C	MW-DUP-WG-20171105	11/5/2017	283	2	26	15	240	0	0	100%
MW-2A	MW-2A-WG-20171102	11/2/2017	282	8	24	7	182	0	61	78%
MW-5A	MW-5A-WG-20171112	11/12/2017	282	8	26	7	179	0	62	78%
MW-6	MW-6-WG-20171108	11/8/2017	282	8	25	5	244	0	0	100%
MW-9	MW-9-WG-20171106	11/6/2017	282	5	26	13	238	0	0	100%

Event 2			Total Analyte Count	Detected: No Qualifier	Non-Detected: No Qualifier	Detected: Estimated	Non-Detected: Estimated	Detected: Rejected	Non-Detected: Rejected	Percent Not Rejected
Qualifier			-	-	U	J	UJ	R	UR	-
Well	Sample ID	Date	Count							%
MW-10	MW-10-WG-20171220	12/20/2017	20		1	1	18	0	0	100%
MW-10	MW-10-WG-20181220	12/20/2017	265	6	101	10	148	0	0	100%
MW-12	MW-12-WG-20171219	12/19/2017	283	4	29	10	240	0	0	100%
MW-13	MW-13-WG-20171219	12/19/2017	283	9	27	8	239	0	0	100%
MW-1C	MW-1C-WG-20171218	12/18/2017	283	9	27	10	237	0	0	100%
MW-5A	MW-5A-WG-20171219	12/19/2017	283	6	25	12	240	0	0	100%
MW-6	MW-6-WG-20171219	12/19/2017	283	7	28	7	241	0	0	100%
MW-9	MW-9-WG-20171220	12/20/2017	20		2	0	18	0	0	100%
MW-9	MW-9-WG-20181220	12/20/2017	265	6	99	11	149	0	0	100%

Event 3			Total Analyte Count	Detected: No Qualifier	Non-Detected: No Qualifier	Detected: Estimated	Non-Detected: Estimated	Detected: Rejected	Non-Detected: Rejected	Percent Not Rejected
Qualifier			-	-	U	J	UJ	R	UR	-
Well	Sample ID	Date	Count							%
MW-10	MW-10-WG-20180205	2/5/2018	282	10	19	6	247	0	0	100%
MW-12	MW-12-WG-20180204	2/4/2018	282	10	22	4	169	0	77	73%
MW-13	MW-13-WG-20180131	1/31/2018	282	5	33	5	178	0	61	78%
MW-13	MW-DUP-WG-20180131	1/31/2018	265	6	30	7	161	0	61	77%
MW-1C	MW-1C-WG-20180204	2/4/2018	282	7	22	9	184	0	60	79%
MW-5A	MW-5A-WG-20180131	1/31/2018	282	8	26	11	176	0	61	78%
MW-6	MW-6-WG-20180204	2/4/2018	266	9	21	6	169	0	61	77%
MW-9	MW-9-WG-20180204	2/4/2018	282	8	20	8	185	0	61	78%

Event 4			Total Analyte Count	Detected: No Qualifier	Non-Detected: No Qualifier	Detected: Estimated	Non-Detected: Estimated	Detected: Rejected	Non-Detected: Rejected	Percent Not Rejected
Qualifier			-	-	U	J	UJ	R	UR	-
Well	Sample ID	Date	Count							%
MW-12	MW-12-WG-20180314	3/14/2018	282	6	87	5	184	0	0	100%
MW-13	MW-13-WG-20180314	3/14/2018	203	7	28	7	161	0	0	100%
MW-13	MW-13-WG-20180316	3/16/2018	19		19	0	0	0	0	100%
MW-13	MW-13-WG-20180412	4/12/2018	61			0	61	0	0	100%
MW-1C	MW-1C-WG-20180312	3/12/2018	282	6	22	10	244	0	0	100%
MW-5A	MW-5A-WG-20180313	3/13/2018	282	10	17	7	248	0	0	100%
MW-9	MW-9-WG-20180313	3/13/2018	282	9	27	7	239	0	0	100%

Event 5			Total Analyte Count	Detected: No Qualifier	Non-Detected: No Qualifier	Detected: Estimated	Non-Detected: Estimated	Detected: Rejected	Non-Detected: Rejected	Percent Not Rejected
Qualifier			-	-	U	J	UJ	R	UR	-
Well	Sample ID	Date	Count							%
MW-10	MW-10_20181112	11/12/2018	255	16	200	7	32	0	0	100%
MW-12	MW-12_20181112	11/12/2018	255	12	206	4	33	0	0	100%
MW-13	MW-13_20181106	11/6/2018	255	8	215	17	14	0	1	100%
MW-1C	MW-1C_20181030	10/30/2018	255	8	208	2	22	0	15	94%
MW-2A	MW-2A_20181106	11/6/2018	255	13	221	13	8	0	0	100%
MW-5A	MW-5A_20181113	11/13/2018	255	16	201	5	12	0	21	92%
MW-6	MW-6_20181113	11/13/2018	255	16	203	5	10	0	21	92%
MW-9	MW-9_20181107	11/7/2018	255	13	222	12	8	0	0	100%

Event 6			Total Analyte Count	Detected: No Qualifier	Non-Detected: No Qualifier	Detected: Estimated	Non-Detected: Estimated	Detected: Rejected	Non-Detected: Rejected	Percent Not Rejected
Qualifier			-	-	U	J	UJ	R	UR	-
Well	Sample ID	Date	Count							%
MW-10	MW-10_20190121	1/21/2019	254	12	201	3	38	0	0	100%
MW-12	MW-12_20190116	1/16/2019	254	8	222	4	20	0	0	100%
MW-13	MW-13_20190114	1/14/2019	254	7	221	2	24	0	0	100%
MW-1C	DUPLICATE_20190114	1/14/2019	254	10	226	2	16	0	0	100%
MW-1C	MW-1C_20190114	1/14/2019	254	10	227	2	15	0	0	100%
MW-5A	MW-5A_20190122	1/22/2019	254	11	236	2	5	0	0	100%
MW-6	MW-6_20190123	1/23/2019	254	8	232	6	8	0	0	100%
MW-9	MW-9_20190121	1/21/2019	254	8	205	3	38	0	0	100%

Event 7			Total Analyte Count	Detected: No Qualifier	Non-Detected: No Qualifier	Detected: Estimated	Non-Detected: Estimated	Detected: Rejected	Non-Detected: Rejected	Percent Not Rejected
Qualifier			-	-	U	J	UJ	R	UR	-
Well	Sample ID	Date	Count							%
MW-10	MW-10_20190324	3/24/2019	255	11	231	7	6	0	0	100%
MW-12	MW-12_20190324	3/24/2019	255	8	238	5	4	0	0	100%
MW-13	MW-13_20190320	3/20/2019	21		21	0	0	0	0	100%
MW-13	MW-13_20190327	3/27/2019	235	7	177	3	48	0	0	100%
MW-1C	DUPLICATE_20190320	3/20/2019	21		21	0	0	0	0	100%
MW-1C	DUPLICATE_20190327	3/27/2019	233	10	218	2	3	0	0	100%
MW-1C	MW-1C_20190320	3/20/2019	21		21	0	0	0	0	100%
MW-1C	MW-1C_20190327	3/27/2019	235	9	221	3	2	0	0	100%
MW-5A	MW-5A_20190325	3/25/2019	255	9	230	1	15	0	0	100%
MW-6	MW-6_20190325	3/25/2019	255	6	230	5	14	0	0	100%
MW-9	MW-9_20190324	3/24/2019	255	9	236	4	6	0	0	100%

Event 8			Total Analyte Count	Detected: No Qualifier	Non-Detected: No Qualifier	Detected: Estimated	Non-Detected: Estimated	Detected: Rejected	Non-Detected: Rejected	Percent Not Rejected
Qualifier			-	-	U	J	UJ	R	UR	-
Well	Sample ID	Date	Count							%
MW-10	MW-10_20190612	6/12/2019	21		4	0	17	0	0	100%
MW-10	MW-10-20190612	6/12/2019	237	9	211	5	12	0	0	100%
MW-12	MW-12_20190604	6/4/2019	21		6	0	15	0	0	100%
MW-12	MW-12-20190605	6/5/2019	235	7	213	6	9	0	0	100%
MW-13	MW-13_20190603	6/3/2019	21		21	0	0	0	0	100%
MW-13	MW-13-20190603	6/3/2019	235	5	213	2	15	0	0	100%
MW-1C	DUPLICATE_20190603	6/3/2019	21		20	0	1	0	0	100%
MW-1C	MW-1C_20190603	6/3/2019	21		20	0	1	0	0	100%
MW-1C	MW-1C-20190603	6/3/2019	235	8	215	1	11	0	0	100%
MW-5A	MW-5A-20190618	6/18/2019	235	7	215	5	7	0	1	99.6%
MW-9	MW-9_20190610	6/10/2019	21		20	0	1	0	0	100%
MW-9	MW-9-20190610	6/10/2019	235	2	14	10	209	0	0	100%

Event 9			Total Analyte Count	Detected: No Qualifier	Non-Detected: No Qualifier	Detected: Estimated	Non-Detected: Estimated	Detected: Rejected	Non-Detected: Rejected	Percent Not Rejected
Qualifier			-	-	U	J	UJ	R	UR	-
Well	Sample ID	Date	Count							%
MW-10	MW-10-20190923	9/23/2019	264	10	234	11	9	0	0	100%
MW-12	MW-12-20190918	9/18/2019	264	13	240	4	7	0	0	100%
MW-13	MW-13-20190910	9/10/2019	264	7	224	3	30	0	0	100%
MW-1C	DUPLICATE-20190910	9/10/2019	264	12	219	5	28	0	0	100%
MW-1C	MW-1C-20190910	9/10/2019	264	14	211	5	33	0	1	99.6%
MW-2A	MW-2A-20190918	9/18/2019	264	12	234	10	8	0	0	100%
MW-5A	MW-5A-20190924	9/24/2019	264	6	17	19	222	0	0	100%
MW-6	MW-6-20190924	9/24/2019	264	6	17	17	223	0	1	99.6%
MW-9	MW-9-20190918	9/18/2019	264	11	239	5	8	0	1	99.6%

Event 10			Total Analyte Count	Detected: No Qualifier	Non-Detected: No Qualifier	Detected: Estimated	Non-Detected: Estimated	Detected: Rejected	Non-Detected: Rejected	Percent Not Rejected
Qualifier			-	-	U	J	UJ	R	UR	-
Well	Sample ID	Date	Count							%
MW-10	MW-10-20191202	12/2/2019	264	11	226	8	19	0	0	100%
MW-11R	MW-11R-20191222	12/22/2019	264	16	232	7	9	0	0	100%
MW-12	MW-12-20191120	11/20/2019	264	17	222	0	25	0	0	100%
MW-13	MW-13-20191118	11/18/2019	264	9	141	5	108	0	1	99.6%
MW-14	MW-14-20191221	12/22/2019	264	16	231	4	13	0	0	100%
MW-15	MW-15-20191216	12/16/2019	264	21	226	10	7	0	0	100%
MW-16	MW-16-20191211	12/11/2019	264	16	234	6	8	0	0	100%
MW-1C	MW-1C-20191113	11/13/2019	264	12	112	4	135	0	1	99.6%
MW-2A	MW-2A-20191118	11/18/2019	264	14	136	5	109	0	0	100%
MW-5A	MW-5A-20191204	12/4/2019	244	14	211	6	13	0	0	100%
MW-5A	MW-5A-20191207	12/4/2019	21		21	0	0	0	0	100%
MW-6	MW-6-20191204	12/4/2019	244	11	210	8	15	0	0	100%
MW-6	MW-6-20191207	12/4/2019	21		21	0	0	0	0	100%
MW-9	MW-9-20191120	11/20/2019	264	17	222	0	25	0	0	100%

Event 11			Total Analyte Count	Detected: No Qualifier	Non-Detected: No Qualifier	Detected: Estimated	Non-Detected: Estimated	Detected: Rejected	Non-Detected: Rejected	Percent Not Rejected
Qualifier			-	-	U	J	UJ	R	UR	-
Well	Sample ID	Date	Count							%
MW-10	MW-10-20201213	12/13/2020	265	10	221	12	22	0	0	100%
MW-11R	MW-11R-20201214	12/14/2020	265	9	221	12	23	0	0	100%
MW-12	MW-12-20201213	12/13/2020	265	10	238	10	7	0	0	100%
MW-13	MW-13-20201122	11/22/2020	98	5	39	9	45	0	0	100%
MW-13	MW-13-20210104	1/4/2021	64	0	64	0	0	0	0	100%
MW-13	MW-13-20210118	1/18/2021	103	0	99	3	1	0	0	100%
MW-14	MW-14-20201122	11/22/2020	98	7	32	8	50	0	1	99%
MW-14	MW-14-20210104	1/4/2021	167	0	165	0	2	0	0	100%
MW-15	MW-15-20201214	12/14/2020	265	18	229	12	6	0	0	100%
MW-16	MW-16-20201214	12/14/2020	265	16	236	6	7	0	0	100%
MW-1C	DUPLICATE-20201122	11/22/2020	98	9	38	8	43	0	0	100%
MW-1C	DUPLICATE-20210104	1/4/2021	64	0	63	1	0	0	0	100%
MW-1C	DUPLICATE-20210118	1/18/2021	103	0	92	3	8	0	0	100%
MW-1C	MW-1C-20201122	11/22/2020	98	10	21	8	59	0	0	100%
MW-1C	MW-1C-20210104	1/4/2021	64	0	62	2	0	0	0	100%
MW-1C	MW-1C-20210118	1/18/2021	103	0	90	6	7	0	0	100%
MW-2A	MW-2A-20201213	12/13/2020	265	8	224	11	22	0	0	100%
MW-5A	MW-5A-20201215	12/15/2020	265	17	237	6	5	0	0	100%
MW-6	MW-6-20201214	12/14/2020	85	0	84	0	1	0	0	100%
MW-6	MW-6-20201215	12/14/2020	180	15	147	12	6	0	0	100%
MW-9	MW-9-20201213	12/13/2020	265	9	236	11	9	0	0	100%

Event 12			Total Analyte Count	Detected: No Qualifier	Non-Detected: No Qualifier	Detected: Estimated	Non-Detected: Estimated	Detected: Rejected	Non-Detected: Rejected	Percent Not Rejected
Qualifier			-	-	U	J	UJ	R	UR	-
Well	Sample ID	Date	Count							%
MW-11R	MW-11R-20210125	1/25/2021	265	15	222	6	22	0	0	100%
MW-14	DUPLICATE-20210125	1/25/2021	265	6	216	15	28	0	0	100%
MW-14	MW-14-20210125	1/25/2021	265	5	214	24	22	0	0	100%
MW-15	MW-15-20210125	1/25/2021	265	19	215	13	17	1	0	99.6%
MW-16	MW-16-20210125	1/25/2021	265	16	224	4	21	0	0	100%

Event 13			Total Analyte Count	Detected: No Qualifier	Non-Detected: No Qualifier	Detected: Estimated	Non-Detected: Estimated	Detected: Rejected	Non-Detected: Rejected	Percent Not Rejected
Qualifier			-	-	U	J	UJ	R	UR	-
Well	Sample ID	Date	Count							%
MW-10	MW-10-20210405	4/5/2021	91	10	69	10	2	0	0	100%
MW-11R	MW-11R-20210414	4/14/2021	181	15	146	8	10	0	2	99%
MW-12	MW-12-20210414	4/14/2021	91	16	70	2	3	0	0	100%
MW-13	MW-13-20210405	4/5/2021	91	11	75	3	2	0	0	100%
MW-14	MW-14-20210402	4/2/2021	116	13	100	2	1	0	0	100%
MW-15	MW-15-20210415	4/15/2021	31	11	14	4	1	0	1	97%
MW-16	MW-16-20210415	4/15/2021	31	13	13	2	2	0	1	97%
MW-1C	DUPLICATE-20210402	4/2/2021	79	9	65	4	1	0	0	100%
MW-1C	MW-1C-20210402	4/2/2021	79	9	19	3	48	0	0	100%
MW-9	MW-9-20210405	4/5/2021	91	12	71	5	2	0	1	99%

Attachment C: Project Analyte List Detections

ATTACHMENT C-1
RADIOCHEMISTRY

Analyte				Gross Alpha			Gross Beta			Radium-226			Radium-228			Uranium		
Groundwater Protection Standard (GWPS pCi/L):				15			50*			5**						20***		
				MCL			MCL			MCL			MCL			MCL		
Well ID	Sampling Event	Date	Unit	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier
Number of data points				10			10			10			10			10		
Percent Non-detect				100			50			90			90			80		
Interwell Prediction Limit				2.29			6.978			18.65			18.65			0.27		
Confidence Level				*Not calculated*			Not calculated			Not calculated			Not calculated			Not calculated		
MW-1C	Event 01 2017 Nov	11/5/2017	pCi/L	< -0.25		UJ	< 3.68		UJ	< 0.44		U	< 0.44		U	< 0.06	0.067	U
MW-1C	Event 02 2017 Dec	12/18/2017	pCi/L	< 1.46		U	< 0.4		UJ	< 0.04		U	< 0.04		U	**0.06**	0.067	J
MW-1C	Event 03 2018 JanFeb	2/4/2018	pCi/L	< -0.31		U	**1.21**			**0.97**			**0.97**			< 0.06	0.067	U
MW-1C	Event 04 2018 Mar	3/12/2018	pCi/L	< 0.52		U	**2.05**		J+	< 0.54		U	< 0.54		U	< 0.06	0.067	U
MW-1C	Event 05 2018 Oct	10/30/2018	pCi/L	< 4.55	4.55	UJ	< 2.12	2.12	U							< 0.27	0.27	U
MW-1C	Event 06 2019 Jan	1/14/2019	pCi/L	< 3.17	3.17	UJ	**4.71**	1.88								< 0.27	0.27	U
MW-1C	Event 07 2019 Mar	3/27/2019	pCi/L	< 5.03	5.03	UJ	**2.31**	2.27								< 0.27	0.27	U
MW-1C	Event 08 2019 MayJun	6/3/2019	pCi/L	< 4.58	4.58	UJ	< 2.98	2.98	U							< 0.27	0.27	U
MW-1C	Event 09 2019 Sept	9/10/2019	pCi/L	< 3.57	3.57	UJ	**2.5**	1.94								< 0.27	0.27	U
MW-1C	Event 10 2019 NovDec	11/13/2019	pCi/L	< 7.51	7.51	UJ	< 2.56	2.56	U							< 0.27	0.27	U
MW-1C	Event 11 2020 NovJan	11/22/2020	pCi/L	< 3.87	3.87	UJ	**2.06**	1.22	J							< 0.27	0.27	U
MW-1C	Event 13 2021 Apr	4/2/2021	pCi/L	< 3.64	3.64	UJ	< 1.40	1.4	U	< 0.489	0.489	U	< 0.619	0.619	U	< 0.27	0.27	U
MW-2A	Event 01 2017 Nov	11/2/2017	pCi/L	< 0.05		U	**3.16**		J+	< 0.21		U	< 0.21		U	**0.13**	0.067	J
MW-2A	Event 05 2018 Oct	11/6/2018	pCi/L	< 3.81	3.81	UJ	< 5.245	3.56	UJ							< 0.27	0.27	U
MW-2A	Event 09 2019 Sept	9/18/2019	pCi/L	< 6.88	6.88	UJ	< 3.52	3.52	U							< 0.27	0.27	U
MW-2A	Event 10 2019 NovDec	11/18/2019	pCi/L	< 7.00	7.00	UJ	**5.08**	2.5								< 0.27	0.27	U
MW-2A	Event 11 2020 NovJan	12/13/2020	pCi/L	< 4.03	4.03	UJ	**3.9**	1.72								< 0.27	0.27	U
MW-14	Event 10 2019 NovDec	12/22/2019	pCi/L	< 8.24	8.24	UJ	**4.39**	3.12								**0.33**	0.27	J
MW-14	Event 11 2020 NovJan	11/22/2020	pCi/L	< 4.62	4.62	UJ	**8.75**	1.95								< 0.27	0.27	U
MW-14	Event 12 2021 Jan	1/25/2021	pCi/L	< 4.76	4.76	UJ	**4.53**	2.34								**0.34**	0.27	J
MW-14	Event 13 2021 Apr	4/2/2021	pCi/L	< 7.68	7.68	UJ	**9.04**	2.47		< 0.531	0.531	U	< 0.545	0.545	U	< 0.27	0.27	U
MW-5A	Event 01 2017 Nov	11/12/2017	pCi/L	< 0.86		U	**8.43**			< 0.61		U	< 0.61		U	< 0.06	0.067	U
MW-5A	Event 02 2017 Dec	12/19/2017	pCi/L	< 1.46		U	**9.72**		J+	< 0.15		U	< 0.15		U	**0.41**	0.067	J
MW-5A	Event 03 2018 JanFeb	1/31/2018	pCi/L	< -0.18		U	**7.42**			< 0.44		U	< 0.44		U	**0.1**	0.067	J
MW-5A	Event 04 2018 Mar	3/13/2018	pCi/L	< 0.18		U	**6.65**		J+	< 0.96		U	< 0.96		U	**0.2**	0.067	J
MW-5A	Event 05 2018 Oct	11/13/2018	pCi/L	< 5.69	5.69	UJ	**4.87**	2.86								< 0.27	0.27	U
MW-5A	Event 06 2019 Jan	1/22/2019	pCi/L	< 7.15	7.15	UJ	< 3.29	3.29	U							**0.34**	0.27	J
MW-5A	Event 07 2019 Mar	3/25/2019	pCi/L	< 8.56	8.56	U	< 4.13	4.13	U							< 0.27	0.27	U
MW-5A	Event 08 2019 MayJun	6/18/2019	pCi/L	< 12.1	12.10	UJ	< 6.24	6.24	UJ							**0.28**	0.27	J
MW-5A	Event 09 2019 Sept	9/24/2019	pCi/L	< 12.0	12.00	UJ	**13.2**	5.33	J							< 0.27	0.27	U
MW-5A	Event 10 2019 NovDec	12/4/2019	pCi/L	< 6.42	6.42	UJ	**8.54**	2.63								< 0.27	0.27	U
MW-5A	Event 11 2020 NovJan	12/15/2020	pCi/L	< 5.80	5.80	UJ	**3.33**	2.49								< 0.27	0.27	U
MW-6	Event 01 2017 Nov	11/8/2017	pCi/L	< 0.08		U	< 1.13		U	< 0.2		U	< 0.2		U	< 0.06	0.067	U
MW-6	Event 02 2017 Dec	12/19/2017	pCi/L	< 0.01		U	< 0.85		U	< -0.01		U	< -0.01		U	**0.23**	0.067	J
MW-6	Event 03 2018 JanFeb	2/4/2018	pCi/L	< 1.78		U	< -0.15		U	**0.73**			**0.73**			**0.21**	0.067	J
MW-6	Event 05 2018 Oct	11/13/2018	pCi/L	< 8.61	8.61	UJ	< 4.03	4.03	UJ							**0.55**	0.27	J
MW-6	Event 06 2019 Jan	1/23/2019	pCi/L	< 4.72	4.72	UJ	< 2.25	2.25	U							**0.48**	0.27	J
MW-6	Event 07 2019 Mar	3/25/2019	pCi/L	< 8.14	8.14	U	< 3.37	3.37	U							< 0.27	0.27	U
MW-6	Event 09 2019 Sept	9/24/2019	pCi/L	< 6.22	6.22	UJ	< 2.42	2.42	U							**0.32**	0.27	J
MW-6	Event 10 2019 NovDec	12/4/2019	pCi/L	< 8.03	8.03	UJ	< 3.48	3.48	U							< 0.46	0.46	UJ
MW-6	Event 11 2020 NovJan	12/14/2020	pCi/L	< 6.08	6.08	UJ	**4.26**	2.88								**0.35**	0.27	J
MW-9	Event 01 2017 Nov	11/6/2017	pCi/L	< 1.13		U	**4.88**		J+	< 0.61		U	< 0.61		U	< 0.06	0.067	U
MW-9	Event 02 2017 Dec	12/20/2017	pCi/L	< 0.05		U	< 0.64		U	< 0.32		U	< 0.32		U	**0.1**	0.067	J
MW-9	Event 03 2018 JanFeb	2/4/2018	pCi/L	< -0.47		U	**3.02**			< 0.8		U	< 0.8		U	**0.1**	0.067	J
MW-9	Event 04 2018 Mar	3/13/2018	pCi/L	**0.48**			< 3.21		U	**0.34**			**0.34**			**0.11**	0.067	J
MW-9	Event 05 2018 Oct	11/7/2018	pCi/L	< 4.34	4.34	UJ	**3.37**	1.78								< 0.27	0.27	U
MW-9	Event 06 2019 Jan	1/21/2019	pCi/L	< 3.77	3.77	UJ	**2.19**	1.99								< 0.27	0.27	U
MW-9	Event 07 2019 Mar	3/24/2019	pCi/L	< 4.94	4.94	U	**5.09**	2.79								< 0.27	0.27	U
MW-9	Event 08 2019 MayJun	6/10/2019	pCi/L	< 4.15	4.15	UJ	**4.16**	3.14	J							< 0.27	0.27	U
MW-9	Event 09 2019 Sept	9/18/2019	pCi/L	< 5.23	5.23	UJ	**3.35**	3.01								< 0.27	0.27	U
MW-9	Event 10 2019 NovDec	11/20/2019	pCi/L	< 6.45	6.45	UJ	**3.69**	1.57								< 0.27	0.27	U
MW-9	Event 11 2020 NovJan	12/13/2020	pCi/L	< 3.18	3.18	UJ	**4.59**	1.54								< 0.27	0.27	U
MW-9	Event 13 2021 Apr	4/5/2021	pCi/L	< 4.00	4.00	UJ	**3.53**	1.64		< 0.443	0.443	U	< 0.530	0.53	U	< 0.27	0.27	U

ATTACHMENT C-1
RADIOCHEMISTRY

			Analyte	Gross Alpha			Gross Beta			Radium-226			Radium-228			Uranium		
Groundwater Protection Standard (GWPS pCi/L):				15			50*			5**						20***		
				MCL			MCL			MCL			MCL			MCL		
Well ID	Sampling Event	Date	Unit	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier
			Number of data points	10			10			10			10			10		
			Percent Non-detect	100			50			90			90			80		
			Interwell Prediction Limit	2.29			6.978			18.65			18.65			0.27		
			Confidence Level	*Not calculated*			Not calculated			Not calculated			Not calculated			Not calculated		
MW-10	Event 01 2017 Nov	11/14/2017	pCi/L	< -0.69		U	**2.97**			< 0.04		U	< 0.04		U	< 0.06	0.067	U
MW-10	Event 02 2017 Dec	12/20/2017	pCi/L	< 0.46		U	< 1.34		U	< 0.62		U	< 0.62		U	**0.31**	0.067	J
MW-10	Event 03 2018 JanFeb	2/5/2018	pCi/L	< 0.87		U	< 5.53		U	< 0.3		U	< 0.3		U	**0.3**	0.067	J
MW-10	Event 05 2018 Oct	11/12/2018	pCi/L	**3.71**	3.44	J	**4.23**	1.58								**0.33**	0.27	J
MW-10	Event 06 2019 Jan	1/21/2019	pCi/L	< 3.50	3.50	UJ	**4.41**	1.58								**0.25**	0.27	J
MW-10	Event 07 2019 Mar	3/24/2019	pCi/L	< 4.79	4.79	U	**3.81**	2.19								**0.30**	0.27	
MW-10	Event 08 2019 MayJun	6/12/2019	pCi/L	< 6.71	6.71	UJ	< 3.62	3.62	U							**0.52**	0.27	J
MW-10	Event 09 2019 Sept	9/23/2019	pCi/L	**10.9**	6.39	J	< 4.32	4.32	UJ							**0.47**	0.27	J
MW-10	Event 10 2019 NovDec	12/2/2019	pCi/L	< 5.43	5.43	UJ	< 1.79	1.79	U							**0.37**	0.27	J
MW-10	Event 11 2020 NovJan	12/13/2020	pCi/L	< 4.39	4.39	UJ	**1.81**	1.76								**0.59**	0.27	J
MW-10	Event 13 2021 Apr	4/5/2021	pCi/L	< 3.53	3.53	UJ	**1.94**	1.69		< 0.452	0.452	U	< 0.563	0.563	U	**0.33**	0.27	J
MW-11R	Event 10 2019 NovDec	12/22/2019	pCi/L	**50.3**	8.34	J	**5.83**	5.33	J						U	**0.27**	0.27	J
MW-11R	Event 11 2020 NovJan	12/14/2020	pCi/L	< 7.75	7.75	UJ	**7.28**	3.17							U	< 0.27	0.27	U
MW-11R	Event 12 2021 Jan	1/25/2021	pCi/L	< 7.70	7.7	UJ	**9.85**	3.39							UJ	< 0.27	0.27	U
MW-11R	Event 13 2021 Apr	4/14/2021	pCi/L	< 5.39	5.39	UJ	**7.67**	3.02		< 0.884	0.884	U	< 0.655	0.655	U	< 0.27	0.27	U
MW-12	Event 01 2017 Nov	11/12/2017	pCi/L	< -0.92		U	**3.51**			< 0.4		U	< 0.4		U	< 0.06	0.067	U
MW-12	Event 02 2017 Dec	12/19/2017	pCi/L	< -0.37		U	**2.61**		J+	< 0.05		U	< 0.05		U	< 0.06	0.067	U
MW-12	Event 03 2018 JanFeb	2/4/2018	pCi/L	< -0.15		U	**2.16**			**0.78**			**0.78**			< 0.06	0.067	U
MW-12	Event 04 2018 Mar	3/14/2018	pCi/L	< 1.33		U	< 2.84		U	< -0.03		U	< -0.03		U	< 0.06	0.067	U
MW-12	Event 05 2018 Oct	11/12/2018	pCi/L	< 5.03	5.03	UJ	**2.91**	1.84								< 0.27	0.27	U
MW-12	Event 06 2019 Jan	1/16/2019	pCi/L	< 4.03	4.03	UJ	**3.11**	1.81								< 0.27	0.27	U
MW-12	Event 07 2019 Mar	3/24/2019	pCi/L	< 5.00	5.00	U	**4.4**	2.35								< 0.27	0.27	U
MW-12	Event 08 2019 MayJun	6/5/2019	pCi/L	< 4.12	4.12	UJ	**3.18**	3.04								< 0.27	0.27	U
MW-12	Event 09 2019 Sept	9/18/2019	pCi/L	< 6.54	6.54	UJ	< 4.13	4.13	UJ							< 0.27	0.27	U
MW-12	Event 10 2019 NovDec	11/20/2019	pCi/L	< 5.71	5.71	UJ	**4.31**	1.84								< 0.27	0.27	U
MW-12	Event 11 2020 NovJan	12/13/2020	pCi/L	< 4.17	4.17	UJ	**3.74**	2.21								< 0.27	0.27	U
MW-12	Event 13 2021 Apr	4/14/2021	pCi/L	< 4.28	4.28	UJ	**3.61**	1.63		< 0.747	0.747	U	< 1.23	1.23	UJ	< 0.27	0.27	U
MW-13	Event 01 2017 Nov	11/13/2017	pCi/L	< 0.79		U	< 1.6		U	< 0.3		U	< 0.3		U	< 0.06	0.067	U
MW-13	Event 02 2017 Dec	12/19/2017	pCi/L	< 1.46		U	**1.61**			< 0.08		U	< 0.08		U	**0.07**	0.067	J
MW-13	Event 03 2018 JanFeb	1/31/2018	pCi/L	< 0.16		U	< 1.26		UJ	< 0.36		U	< 0.36		U	< 0.06	0.067	U
MW-13	Event 04 2018 Mar	3/14/2018	pCi/L	< 1.44		U	< 1.38		U	< -0.03		U	< -0.03		U	< 0.06	0.067	U
MW-13	Event 05 2018 Oct	11/6/2018	pCi/L	< 3.72	3.72	UJ	< 1.76	1.76	U							< 0.27	0.27	U
MW-13	Event 06 2019 Jan	1/14/2019	pCi/L	< 3.97	3.97	UJ	**3.21**	1.99								< 0.27	0.27	U
MW-13	Event 07 2019 Mar	3/27/2019	pCi/L	< 7.87	7.87	U	< 3.38	3.38	U							< 0.27	0.27	U
MW-13	Event 08 2019 MayJun	6/3/2019	pCi/L	< 3.92	3.92	UJ	< 1.82	1.82	U							< 0.27	0.27	U
MW-13	Event 09 2019 Sept	9/10/2019	pCi/L	< 3.95	3.95	UJ	< 1.81	1.81	U							< 0.27	0.27	U
MW-13	Event 10 2019 NovDec	11/18/2019	pCi/L	< 7.67	7.67	UJ	< 2.36	2.36	U							< 0.27	0.27	U
MW-13	Event 11 2020 NovJan	11/22/2020	pCi/L	< 4.26	4.26	UJ	< 1.59	1.59	U							< 0.27	0.27	U
MW-13	Event 13 2021 Apr	4/5/2021	pCi/L	< 3.07	3.07	UJ	< 1.34	1.34	U	< 0.518	0.518	U	< 0.549	0.549	U	< 0.27	0.27	U
MW-15	Event 10 2019 NovDec	12/16/2019	pCi/L	< 13.4	13.4	UJ	**7.93**	4.23	J							**0.91**	0.27	
MW-15	Event 11 2020 NovJan	12/14/2020	pCi/L	< 8.03	8.03	UJ	**8.88**	4.56	J							**0.46**	0.27	J
MW-15	Event 12 2021 Jan	1/25/2021	pCi/L	< 6.45	6.45	UJ	**4.65**	3.27								**0.41**	0.27	J
MW-15	Event 13 2021 Apr	4/15/2021	pCi/L	< 6.76	6.76	UJ	< 3.75	3.75	U	< 0.602	0.602	U	< 0.500	0.5	UR	**0.42**	0.27	J
MW-16	Event 10 2019 NovDec	12/11/2019	pCi/L	< 9.28	9.28	UJ	**5.17**	3.14								< 0.27	0.27	U
MW-16	Event 11 2020 NovJan	12/14/2020	pCi/L	< 5.10	5.1	UJ	**2.42**	2.26								< 0.27	0.27	U
MW-16	Event 12 2021 Jan	1/25/2021	pCi/L	< 4.17	4.17	UJ	< 2.05	2.05	U							< 0.27	0.27	U
MW-16	Event 13 2021 Apr	4/15/2021	pCi/L	< 6.53	6.53	UJ	< 3.74	3.74	U	< 1.05	1.05	UJ	< 0.500	0.5	UR	< 0.27	0.27	U

Footnotes and Abbreviations:

**Gross Beta GWPS is based on CA OEHHA conversion from 4 mrem/yr (https://oehha.ca.gov/media/downloads/water/chemicals/phg/grossbetahealth_0.pdf*

*** Background Radium 226 and 228 is higher than the sum MCL of 5 pCi/L because Method 901.1 and Methods 903.0 and 904.0 do not have the same reporting limits. Background will be recalculated after 8 events for New wells are complete.*

**** Uranium GWPS MCL expressed in pCi/L based on conversion factor of 0.6757 pCi/L = 1 ug/L.*

Green Shade denotes GWPS at the MCL.

U or < = Result was not detected

J = Result is estimated.

R = Data were rejected during the validation process but are considered usable based on the Validator's professional judgement.

NS = Not sampled

Grey shaded cells represent the background data set that was used to develop the statistical limit for comparisons.

Detections are bolded and purple shaded cells are above the groundwater protection standards (background) indicated in the table.

Non-parametric prediction limits were used when non-detects represented greater than 50% of the data set.

ATTACHMENT C-2
PCB AND PESTICIDES

			Analyte:	4,4-DDD			Aldrin			Alpha-Endosulfan			Alpha-BHC			Beta-BHC			Delta-BHC			Gamma-BHC			Endrin Aldehyde			Heptachlor Epoxide		
			Groundwater Protection Standard (GWPS ug/l):	3.2			0.092			100			0.72			0.72			0.092			0.092			2.3			0.2		
				RSL			RSL			RSL			RSL			RSL			RSL			RSL			RSL			RSL		
Well ID	Sampling Event	Date	Unit	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier
			Number of data points	10			10			10			10			10			10			10			10			10		
			Percent Non-detect	100			100			100			100			100			100			100			100			100		
			Interwell Prediction Limit	0.00065			0.00065			0.00065			0.0008			0.00065			0.00046			0.0055			0.0006			0.0007		
			Confidence Level	Not calculated			Not calculated			Not calculated			Not calculated			Not calculated			Not calculated			Not calculated			Not calculated			Not calculated		
MW-1C	Event 01 2017 Nov	11/5/2017	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-1C	Event 02 2017 Dec	12/18/2017	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-1C	Event 03 2018 JanFeb	2/4/2018	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-1C	Event 04 2018 Mar	3/12/2018	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-1C	Event 05 2018 Oct	10/30/2018	UG/L	< 0.0043	0.0043	UJ	< 0.0015	0.0015	U	< 0.0015	0.0015	U	< 0.0018	0.0018	U	< 0.0015	0.0015	U	< 0.0010	0.001	U	< 0.012	0.012	U	< 0.0014	0.0014	UJ	< 0.0016	0.0016	U
MW-1C	Event 06 2019 Jan	1/14/2019	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0015	0.0015	U	< 0.0012	0.0012	U	< 0.00087	0.00087	U	< 0.010	0.01	U	< 0.0012	0.0012	U	< 0.0013	0.0013	U
MW-1C	Event 07 2019 Mar	3/27/2019	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0015	0.0015	U	< 0.0012	0.0012	U	< 0.00086	0.00086	U	< 0.010	0.01	U	< 0.0012	0.0012	U	< 0.0013	0.0013	U
MW-1C	Event 08 2019 MayJun	6/3/2019	UG/L	< 0.0013	0.0013	U	< 0.0013	0.0013	U	< 0.0013	0.0013	U	< 0.0016	0.0016	U	< 0.0013	0.0013	U	< 0.00092	0.00092	UJ	< 0.011	0.011	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U
MW-1C	Event 09 2019 Sept	9/10/2019	UG/L	< 0.0013	0.0013	U	< 0.0013	0.0013	U	< 0.0013	0.0013	U	< 0.0016	0.0016	U	< 0.0013	0.0013	U	< 0.00091	0.00091	U	< 0.011	0.011	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U
MW-1C	Event 10 2019 NovDec	11/13/2019	UG/L	< 0.0011	0.0011	UJ	< 0.0011	0.0011	UJ	< 0.0011	0.0011	UJ	< 0.0014	0.0014	UJ	< 0.0011	0.0011	UJ	< 0.00080	0.0008	UJ	< 0.0095	0.0095	UJ	< 0.0011	0.0011	UJ	< 0.0012	0.0012	UJ
MW-1C	Event 11 2020 NovJan	11/22/2020	UG/L	< 0.0012	0.0012	UJ	< 0.0012	0.0012	UJ	< 0.0012	0.0012	UJ	< 0.0014	0.0014	UJ	< 0.0012	0.0012	UJ	< 0.00081	0.00081	UJ	< 0.0097	0.0097	UJ	< 0.0011	0.0011	UJ	< 0.0012	0.0012	UJ
MW-2A	Event 01 2017 Nov	11/2/2017	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	U	< 0.0024	0.0024	U	< 0.0023	0.0023	U	< 0.0025	0.0025	U	< 0.0024	0.0024	U	< 0.0024	0.0024	U	< 0.0039	0.0039	U	< 0.0042	0.0042	U
MW-2A	Event 05 2018 Oct	11/6/2018	UG/L	< 0.0013	0.0013	U	< 0.0013	0.0013	U	< 0.0013	0.0013	U	< 0.0016	0.0016	U	< 0.0013	0.0013	U	< 0.00090	0.0009	U	< 0.011	0.011	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U
MW-2A	Event 09 2019 Sept	9/18/2019	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0015	0.0015	U	< 0.0012	0.0012	U	< 0.00085	0.00085	U	< 0.010	0.01	U	< 0.0011	0.0011	U	< 0.0013	0.0013	U
MW-2A	Event 10 2019 NovDec	11/18/2019	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U	< 0.0012	0.0012	U	< 0.00083	0.00083	U	< 0.0098	0.0098	U	< 0.0011	0.0011	U	< 0.0013	0.0013	U
MW-2A	Event 11 2020 NovJan	12/13/2020	UG/L	< 0.0011	0.0011	U	< 0.0011	0.0011	U	< 0.0011	0.0011	U	< 0.0014	0.0014	U	< 0.0011	0.0011	U	< 0.00080	0.0008	U	< 0.0096	0.0096	U	< 0.0011	0.0011	U	< 0.0012	0.0012	U
MW-14	Event 10 2019 NovDec	12/22/2019	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U	< 0.0012	0.0012	U	< 0.00082	0.00082	U	< 0.0097	0.0097	U	< 0.0011	0.0011	U	< 0.0012	0.0012	U
MW-14	Event 11 2020 NovJan	11/22/2020	UG/L	< 0.0012	0.0012	UJ	< 0.0012	0.0012	UJ	< 0.0012	0.0012	UJ	< 0.0014	0.0014	UJ	< 0.0012	0.0012	UJ	< 0.00081	0.00081	UJ	< 0.0096	0.0096	UJ	< 0.0011	0.0011	UJ	< 0.0012	0.0012	UJ
MW-14	Event 12 2021 Jan	1/25/2021	UG/L	< 0.0011	0.0011	U	< 0.0011	0.0011	U	< 0.0011	0.0011	U	< 0.0048	0.0048	UJ	**0.0057**	0.0011	J	< 0.00080	0.0008	U	< 0.0096	0.0096	U	< 0.0011	0.0011	U	< 0.0012	0.0012	U
MW-5A	Event 01 2017 Nov	11/12/2017	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-5A	Event 02 2017 Dec	12/19/2017	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-5A	Event 03 2018 JanFeb	1/31/2018	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-5A	Event 04 2018 Mar	3/13/2018	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-5A	Event 05 2018 Oct	11/13/2018	UG/L	< 0.0013	0.0013	U	< 0.0013	0.0013	U	0.0031	0.0013	J	< 0.0015	0.0015	U	< 0.0013	0.0013	U	**0.0042**	0.00089	J	< 0.011	0.011	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U
MW-5A	Event 06 2019 Jan	1/22/2019	UG/L	< 0.0013	0.0013	U	< 0.0013	0.0013	UJ	< 0.0013	0.0013	U	< 0.0015	0.0015	U	< 0.0013	0.0013	U	< 0.00089	0.00089	U	< 0.011	0.011	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U
MW-5A	Event 07 2019 Mar	3/25/2019	UG/L	< 0.0013	0.0013	U	< 0.0013	0.0013	U	< 0.0013	0.0013	U	< 0.0015	0.0015	U	< 0.0013	0.0013	U	< 0.00089	0.00089	U	< 0.011	0.011	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U
MW-5A	Event 08 2019 MayJun	6/18/2019	UG/L	< 0.0013	0.0013	U	< 0.0013	0.0013	U	< 0.0013	0.0013	U	< 0.0016	0.0016	U	< 0.0013	0.0013	U	< 0.00091	0.00091	UJ	< 0.011	0.011	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U
MW-5A	Event 09 2019 Sept	9/24/2019	UG/L	< 0.0012	0.0012	UJ	< 0.0012	0.0012	UJ	< 0.0012	0.0012	UJ	**0.043**	0.0015	J	**0.012**	0.0012	J	**0.019**	0.00086	J	**0.023**	0.01	J	< 0.0011	0.0011	UJ	< 0.0013	0.0013	UJ
MW-5A	Event 10 2019 NovDec	12/4/2019	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U	< 0.0012	0.0012	U	< 0.00081	0.00081	UJ	< 0.0096	0.0096	U	< 0.0011	0.0011	U	< 0.0012	0.0012	U
MW-5A	Event 11 2020 NovJan	12/15/2020	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U	< 0.0012	0.0012	U	< 0.00082	0.00082	U	< 0.0098	0.0098	U	< 0.0011	0.0011	U	< 0.0013	0.0013	U
MW-6	Event 01 2017 Nov	11/8/2017	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-6	Event 02 2017 Dec	12/19/2017	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-6	Event 03 2018 JanFeb	2/4/2018	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-6	Event 05 2018 Oct	11/13/2018	UG/L	< 0.0013	0.0013	U	< 0.0013	0.0013	U	< 0.0013	0.0013	U	< 0.0015	0.0015	U	< 0.0013	0.0013	U	< 0.00089	0.00089	U	< 0.011	0.011	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U
MW-6	Event 06 2019 Jan	1/23/2019	UG/L	< 0.0013	0.0013	U	< 0.0013	0.0013	UJ	< 0.0013	0.0013	U	< 0.0015	0.0015	U	< 0.0013	0.0013	U	< 0.00090	0.0009	U	< 0.011	0.011	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U
MW-6	Event 07 2019 Mar	3/25/2019	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0015	0.0015	U	< 0.0012	0.0012	U	< 0.00087	0.00087	U	< 0.010	0.01	U	< 0.0012	0.0012	U	< 0.0013	0.0013	U
MW-6	Event 09 2019 Sept	9/24/2019	UG/L	< 0.0012	0.0012	UJ	< 0.0012	0.0012	UJ	< 0.0012	0.0012	UJ	**0.062**	0.0015	J	**0.024**	0.0012	J	**0.041**	0.00085	J	**0.036**	0.01	J	< 0.0011	0.0011	UJ	< 0.0013	0.0013	UJ
MW-6	Event 10 2019 NovDec	12/4/2019	UG/L	< 0.0011	0.0011	U	< 0.0011	0.0011	U	< 0.0011	0.0011	U	< 0.0014	0.0014	U	< 0.0011	0.0011	U	< 0.00080	0.0008	UJ	< 0.0095	0.0095	U	< 0.0011	0.0011	U	< 0.0012	0.0012	U
MW-6	Event 11 2020 NovJan	12/14/2020	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U	< 0.0012	0.0012	U	< 0.00084	0.00084	U	< 0.010	0.01	U	< 0.0011	0.0011	U	< 0.0013	0.0013	U
MW-9	Event 01 2017 Nov	11/6/2017	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-9	Event 02 2017 Dec	12/20/2017	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-9	Event 03 2018 JanFeb	2/4/2018	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-9	Event 04 2018 Mar	3/13/2018	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-9	Event 05 2018 Oct	11/7/2018	UG/L	< 0.0012	0.0012	U	**0.0042**	0.0012	J	< 0.0012	0.0012	U	< 0.0015	0.0015	U	< 0.0012	0.0012	U	< 0.00086	0.00086	U	< 0.010	0.01	U	< 0.0011	0.0011	U	< 0.0013	0.0013	U
MW-9	Event 06 2019 Jan	1/21/2019	UG/L	< 0.0013	0.0013	U	< 0.0013	0.0013	UJ	< 0.0013	0.0013	U	< 0.0016	0.0016	U	< 0.0013	0.0013	U	< 0.00093	0.00093	U	< 0.011	0.011	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U
MW-9	Event 07 2019 Mar	3/24/2019	UG/L	< 0.0015	0.0015	U	< 0.0015	0.0015	U	< 0.0015	0.0015	U	< 0.0018	0.0018	U	< 0.0015	0.0015	U	< 0.0011	0.0011	U	< 0.013	0.013	U	< 0.0014	0.0014	U	< 0.0016	0.0016	U
MW-9	Event 08 2019 MayJun	6/10/2019	UG/L	< 0.0012	0.0012	UJ	< 0.0012	0.0012	UJ	< 0.0012	0.0012	UJ	< 0.0014	0.0014	UJ	< 0.0012	0.0012	UJ	< 0.00082	0.00082	UJ	< 0.0097	0.0097	UJ	< 0.0011	0.0011	UJ	< 0.0012	0.0012	UJ
MW-9	Event 09 2019 Sept	9/18/2019	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U	< 0.0012	0.0012	U	< 0.00082	0.00082	U	< 0.0098	0.0098	U	< 0.0011	0.0011	U	< 0.0013	0.0013	U
MW-9	Event 10 2019 NovDec	11/20/2019	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U	< 0.0012	0.0012	U	< 0.00084	0.00084	U	< 0.010	0.01	U	< 0.0011	0.0011	U	< 0.0013	0.0013	U
MW-9	Event 11 2020 NovJan	12/13/2020	UG/L	< 0.0011	0.0011	U	< 0.0011	0.0011	U	< 0.0011	0.0011	U	< 0.0014	0.0014	U	< 0.0011	0.0011	U	< 0.00080	0.0008	U	< 0.0096	0.0096	U	< 0.0011	0.0011	U	< 0.0012	0.0012	U

ATTACHMENT C-2
PCB AND PESTICIDES

Analyte:				4,4-DDD			Aldrin			Alpha-Endosulfan			Alpha-BHC			Beta-BHC			Delta-BHC			Gamma-BHC			Endrin Aldehyde			Heptachlor Epoxide		
Groundwater Protection Standard (GWPS ug/l):				3.2			0.092			100			0.72			0.72			0.092			0.092			2.3			0.2		
				RSL			RSL			RSL			RSL			RSL			RSL			RSL			RSL			RSL		
Well ID	Sampling Event	Date	Unit	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier
Number of data points				10			10			10			10			10			10			10			10			10		
Percent Non-detect				100			100			100			100			100			100			100			100			100		
Interwell Prediction Limit				0.00065			0.00065			0.00065			0.0008			0.00065			0.00046			0.0055			0.0006			0.0007		
Confidence Level				Not calculated			Not calculated			Not calculated			Not calculated			Not calculated			Not calculated			Not calculated			Not calculated			Not calculated		
MW-10	Event 01 2017 Nov	11/14/2017	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-10	Event 02 2017 Dec	12/20/2017	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-10	Event 03 2018 JanFeb	2/5/2018	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-10	Event 05 2018 Oct	11/12/2018	UG/L	< 0.0013	0.0013	UJ	< 0.0013	0.0013	UJ	< 0.0013	0.0013	UJ	< 0.0015	0.0015	UJ	< 0.0013	0.0013	UJ	< 0.00090	0.0009	UJ	< 0.011	0.011	UJ	**0.002**	0.0012	J	< 0.0014	0.0014	UJ
MW-10	Event 06 2019 Jan	1/21/2019	UG/L	< 0.0013	0.0013	U	< 0.0013	0.0013	UJ	< 0.0013	0.0013	U	< 0.0016	0.0016	U	< 0.0013	0.0013	U	< 0.00093	0.00093	U	< 0.011	0.011	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U
MW-10	Event 07 2019 Mar	3/24/2019	UG/L	< 0.0013	0.0013	U	< 0.0013	0.0013	U	< 0.0013	0.0013	U	< 0.0016	0.0016	U	< 0.0013	0.0013	U	< 0.00093	0.00093	U	< 0.011	0.011	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U
MW-10	Event 08 2019 MayJun	6/12/2019	UG/L	< 0.0015	0.0015	U	< 0.0015	0.0015	U	< 0.0015	0.0015	U	< 0.0018	0.0018	U	< 0.0015	0.0015	U	< 0.0011	0.0011	UJ	< 0.013	0.013	U	< 0.0014	0.0014	U	< 0.0016	0.0016	U
MW-10	Event 09 2019 Sept	9/23/2019	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U	< 0.0012	0.0012	U	< 0.00082	0.00082	U	< 0.0097	0.0097	U	< 0.0011	0.0011	U	< 0.0012	0.0012	U
MW-10	Event 10 2019 NovDec	12/2/2019	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U	< 0.0012	0.0012	U	< 0.00084	0.00084	U	< 0.010	0.01	U	< 0.0011	0.0011	U	< 0.0013	0.0013	U
MW-10	Event 11 2020 NovJan	12/13/2020	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U	< 0.0012	0.0012	U	< 0.00082	0.00082	U	< 0.0097	0.0097	U	< 0.0011	0.0011	U	< 0.0012	0.0012	U
MW-11R	Event 10 2019 NovDec	12/22/2019	UG/L	< 0.0011	0.0011	U	< 0.0011	0.0011	U	< 0.0011	0.0011	U	< 0.0014	0.0014	U	< 0.0011	0.0011	U	< 0.00080	0.0008	U	< 0.0095	0.0095	U	< 0.0011	0.0011	U	< 0.0012	0.0012	U
MW-11R	Event 11 2020 NovJan	12/14/2020	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U	< 0.0012	0.0012	U	< 0.00082	0.00082	U	< 0.0098	0.0098	U	< 0.0011	0.0011	U	< 0.0013	0.0013	U
MW-11R	Event 12 2021 Jan	1/25/2021	UG/L	< 0.0011	0.0011	U	< 0.0011	0.0011	U	< 0.0011	0.0011	U	< 0.0071	0.0071	UJ	< 0.0011	0.0011	U	< 0.00078	0.00078	U	< 0.0093	0.0093	U	< 0.0010	0.001	U	**0.0088**	0.0012	J
MW-11R	Event 13 2021 Apr	4/14/2021	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0015	0.0015	UJ	< 0.0012	0.0012	UJ	< 0.00086	0.00086	U	< 0.010	0.01	U	< 0.0011	0.0011	U	< 0.0013	0.0013	U
MW-12	Event 01 2017 Nov	11/12/2017	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-12	Event 02 2017 Dec	12/19/2017	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-12	Event 03 2018 JanFeb	2/4/2018	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-12	Event 04 2018 Mar	3/14/2018	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-12	Event 05 2018 Oct	11/12/2018	UG/L	< 0.0013	0.0013	UJ	< 0.0013	0.0013	UJ	< 0.0013	0.0013	UJ	< 0.0015	0.0015	UJ	< 0.0013	0.0013	UJ	< 0.00089	0.00089	UJ	< 0.011	0.011	UJ	< 0.0012	0.0012	UJ	< 0.0014	0.0014	UJ
MW-12	Event 06 2019 Jan	1/16/2019	UG/L	< 0.0013	0.0013	U	< 0.0013	0.0013	U	< 0.0013	0.0013	U	< 0.0016	0.0016	U	< 0.0013	0.0013	U	< 0.00091	0.00091	U	< 0.011	0.011	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U
MW-12	Event 07 2019 Mar	3/24/2019	UG/L	< 0.0013	0.0013	U	< 0.0013	0.0013	U	< 0.0013	0.0013	U	< 0.0015	0.0015	U	< 0.0013	0.0013	U	< 0.00090	0.0009	U	< 0.011	0.011	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U
MW-12	Event 08 2019 MayJun	6/5/2019	UG/L	< 0.0011	0.0011	U	< 0.0011	0.0011	U	< 0.0011	0.0011	U	< 0.0014	0.0014	U	< 0.0011	0.0011	U	< 0.00080	0.0008	UJ	< 0.0095	0.0095	U	< 0.0011	0.0011	U	< 0.0012	0.0012	U
MW-12	Event 09 2019 Sept	9/18/2019	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U	< 0.0012	0.0012	U	< 0.00082	0.00082	U	< 0.0097	0.0097	U	< 0.0011	0.0011	U	< 0.0012	0.0012	U
MW-12	Event 10 2019 NovDec	11/20/2019	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U	< 0.0012	0.0012	U	< 0.00084	0.00084	U	< 0.010	0.01	U	< 0.0011	0.0011	U	< 0.0013	0.0013	U
MW-12	Event 11 2020 NovJan	12/13/2020	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U	< 0.0012	0.0012	U	< 0.00081	0.00081	U	< 0.0097	0.0097	U	< 0.0011	0.0011	U	< 0.0012	0.0012	U
MW-13	Event 01 2017 Nov	11/13/2017	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-13	Event 02 2017 Dec	12/19/2017	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-13	Event 03 2018 JanFeb	1/31/2018	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-13	Event 04 2018 Mar	3/14/2018	UG/L	< 0.0025	0.0025	UJ	< 0.0019	0.0019	UJ	< 0.0024	0.0024	UJ	< 0.0023	0.0023	UJ	< 0.0025	0.0025	UJ	< 0.0024	0.0024	UJ	< 0.0024	0.0024	UJ	< 0.0039	0.0039	UJ	< 0.0042	0.0042	UJ
MW-13	Event 05 2018 Oct	11/6/2018	UG/L	**0.0034**	0.0013	J	< 0.0013	0.0013	U	< 0.0013	0.0013	U	**0.0027**	0.0015	J	< 0.0013	0.0013	U	< 0.00088	0.00088	U	< 0.010	0.01	U	< 0.0012	0.0012	U	< 0.0013	0.0013	U
MW-13	Event 06 2019 Jan	1/14/2019	UG/L	< 0.0013	0.0013	U	< 0.0013	0.0013	UJ	< 0.0013	0.0013	U	< 0.0015	0.0015	U	< 0.0013	0.0013	U	< 0.00090	0.0009	U	< 0.011	0.011	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U
MW-13	Event 07 2019 Mar	3/27/2019	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0015	0.0015	U	< 0.0012	0.0012	U	< 0.00085	0.00085	U	< 0.010	0.01	U	< 0.0011	0.0011	U	< 0.0013	0.0013	U
MW-13	Event 08 2019 MayJun	6/3/2019	UG/L	< 0.0013	0.0013	U	< 0.0013	0.0013	U	< 0.0013	0.0013	U	< 0.0015	0.0015	U	< 0.0013	0.0013	U	< 0.00088	0.00088	UJ	< 0.011	0.011	U	< 0.0012	0.0012	U	< 0.0013	0.0013	U
MW-13	Event 09 2019 Sept	9/10/2019	UG/L	< 0.0013	0.0013	U	< 0.0013	0.0013	U	< 0.0013	0.0013	U	< 0.0016	0.0016	U	< 0.0013	0.0013	U	< 0.00093	0.00093	U	< 0.011	0.011	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U
MW-13	Event 10 2019 NovDec	11/18/2019	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0015	0.0015	U	< 0.0012	0.0012	U	< 0.00087	0.00087	U	< 0.010	0.01	U	< 0.0012	0.0012	U	< 0.0013	0.0013	U
MW-13	Event 11 2020 NovJan	11/22/2020	UG/L	< 0.0012	0.0012	UJ	< 0.0012	0.0012	UJ	< 0.0012	0.0012	UJ	< 0.0014	0.0014	UJ	< 0.0012	0.0012	UJ	< 0.00081	0.00081	UJ	< 0.0097	0.0097	UJ	< 0.0011	0.0011	UJ	< 0.0012	0.0012	UJ
MW-15	Event 10 2019 NovDec	12/16/2019	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	UJ	< 0.0012	0.0012	U	< 0.0014	0.0014	U	< 0.0012	0.0012	U	< 0.00084	0.00084	U	< 0.010	0.01	U	< 0.0011	0.0011	U	< 0.0013	0.0013	U
MW-15	Event 11 2020 NovJan	12/14/2020	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U	< 0.0012	0.0012	U	< 0.00083	0.00083	U	< 0.0099	0.0099	U	< 0.0011	0.0011	U	< 0.0013	0.0013	U
MW-15	Event 12 2021 Jan	1/25/2021	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U	< 0.0012	0.0012	U	< 0.00084	0.00084	U	< 0.010	0.01	U	< 0.0011	0.0011	U	< 0.0013	0.0013	U
MW-16	Event 10 2019 NovDec	12/11/2019	UG/L	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0012	0.0012	U	< 0.0014	0.0014	U	< 0.0012	0.0012	U	< 0.00081	0.00081	UJ	< 0.0096	0.0096	U	< 0.0011	0.0011	U	< 0.0012	0.0012	U
MW-16	Event 11 2020 NovJan	12/14/2020	UG/L	< 0.0011	0.0011	U	< 0.0011	0.0011	U	< 0.0011	0.0011	U	< 0.0014	0.0014	U	< 0.0011	0.0011	U	< 0.00080	0.0008	U	< 0.0095	0.0095	U	< 0.0011	0.0011	U	< 0.0012	0.0012	U
MW-16	Event 12 2021 Jan	1/25/2021	UG/L	< 0.0012	0.0012	U	0.0025	0.0012	J	< 0.0012	0.0012	U	< 0.0044	0.0044	UJ	< 0.0012	0.0012	U	< 0.00081	0.00081	U	< 0.0097	0.0097	U	< 0.0011	0.0011	U	< 0.0012	0.0012	U

Footnotes and Abbreviations:

Blue Shade GWPS is RSL.

U or < = Result was not detected

J = Result is estimated

R = Data were rejected during the validation process but are considered usable based on the Validator's professional judgement

NS = Not sampled

UG/L - micrograms per liter

Grey shaded cells represent the background data set that was used to develop the statistical limit for comparisons.

Detections are bolded and purple shaded cells are above the groundwater protection standards (background) indicated in the table.

Non-parametric prediction limits were used when non-detects represented greater than 50% of the data set.

Confidence limits were not generated for organic compounds since they are assumed to be non-detect.

ATTACHMENT C-3
HERBICIDES

NO DETECTIONS

ATTACHMENT C-4
SEMIVOLATILE ORGANIC COMPOUNDS

			Analytes	2,4-D			2-Methylnaphtha			3-Methylphenol/4-Methylphenol (m			Acenaphthene			Acenaphthylene			Anthracene			Benzo(a)anthracene			Benzo(a)pyrene			Benzo(b)fluoranthene			Benzo(k)fluoranthene		
Groundwater Protection Standard (GWPS ug/l):				70			36			20			530			530			1800			3.00			0.2			25.00			250		
				MCL			RSL			RSL			RSL			RSL			RSL			RSL			MCL			RSL			RSL		
Well ID	Sampling Event	Date	Unit	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual
			Number of data points	10			10			10			10			10			10			10			10			10			10		
			Percent Non-detect	70			100			90			90			100			100			100			90			100			90		
			Interwell Prediction Limit	< 0.057			0.033			NS			NS			0.0245			0.0175			0.015			0.0205			0.0145			0.016		
			Confidence Level	Not calculated			Not calculated			Not calculated			Not calculated			Not calculated			Not calculated			Not calculated			Not calculated			Not calculated			Not calculated		
MW-1C	Event 01 2017 Nov	11/5/2017	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	**0.03**	0.03	J-	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-1C	Event 02 2017 Dec	12/18/2017	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-1C	Event 03 2018 JanFeb	2/4/2018	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	**0.07**	0.03	J-	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-1C	Event 04 2018 Mar	3/12/2018	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	**0.12**	0.03	J-	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-1C	Event 05 2018 Oct	10/30/2018	UG/L	< 0.10	0.1	U	**0.19**	0.063	J	< 0.41	0.41	U	< 0.034	0.034	U	< 0.047	0.047	U	< 0.034	0.034	U	< 0.048	0.048	U	< 0.044	0.044	U	< 0.036	0.036	U	< 0.11	0.11	U
MW-1C	Event 06 2019 Jan	1/14/2019	UG/L	< 0.10	0.1	U	< 0.063	0.063	U	< 0.41	0.41	U	< 0.034	0.034	U	< 0.047	0.047	U	< 0.034	0.034	U	< 0.048	0.048	U	< 0.044	0.044	U	< 0.036	0.036	U	< 0.11	0.11	U
MW-1C	Event 07 2019 Mar	3/27/2019	UG/L	< 0.10	0.1	U	< 0.060	0.06	U	< 0.39	0.39	U	< 0.032	0.032	U	< 0.045	0.045	U	< 0.032	0.032	U	< 0.046	0.046	U	< 0.042	0.042	U	< 0.034	0.034	U	< 0.10	0.1	U
MW-1C	Event 08 2019 MayJun	6/3/2019	UG/L	< 0.099	0.099	U	< 0.066	0.066	U	< 0.43	0.43	U	< 0.035	0.035	U	< 0.049	0.049	U	< 0.035	0.035	U	< 0.051	0.051	U	< 0.046	0.046	U	< 0.037	0.037	U	< 0.11	0.11	U
MW-1C	Event 09 2019 Sept	9/10/2019	UG/L	< 0.098	0.098	U	< 0.060	0.06	U	< 0.39	0.39	U	0.043	0.032	J	< 0.045	0.045	U	< 0.032	0.032	U	< 0.046	0.046	U	< 0.042	0.042	U	< 0.034	0.034	U	< 0.099	0.099	U
MW-1C	Event 10 2019 NovDec	11/13/2019	UG/L	< 0.099	0.099	UJ	< 0.058	0.058	UJ	< 0.38	0.38	UJ	< 0.031	0.031	UJ	< 0.044	0.044	UJ	< 0.031	0.031	UJ	< 0.045	0.045	UJ	< 0.041	0.041	UJ	< 0.033	0.033	UJ	< 0.097	0.097	UJ
MW-1C	Event 11 2020 NovJan	11/22/2020	UG/L	< 0.10	0.1	UJ	NS			NS			NS			NS			NS			NS			NS			NS			NS		
MW-1C	Event 11 2020 NovJan	1/18/2021	UG/L	NS			< 0.056	0.056	U	< 0.37	0.37	U	< 0.030	0.03	U	< 0.042	0.042	U	< 0.030	0.03	U	**0.15**	0.043	J	< 0.039	0.039	U	0.07	0.032	J	0.11	0.094	J
MW-2A	Event 01 2017 Nov	11/2/2017	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-2A	Event 05 2018 Oct	11/6/2018	UG/L	< 0.10	0.1	U	< 0.063	0.063	U	< 0.41	0.41	U	< 0.034	0.034	U	< 0.047	0.047	U	< 0.034	0.034	U	**0.11**	0.048	J	**0.051**	0.044	J	**0.045**	0.036	J	**0.11**	0.1	J
MW-2A	Event 09 2019 Sept	9/18/2019	UG/L	< 0.10	0.1	U	< 0.061	0.061	U	< 0.40	0.4	U	< 0.032	0.032	U	< 0.046	0.046	U	**0.081**	0.032	J	< 0.047	0.047	U	< 0.043	0.043	U	< 0.035	0.035	U	< 0.10	0.1	U
MW-2A	Event 10 2019 NovDec	11/18/2019	UG/L	< 0.10	0.1	U	< 0.059	0.059	UJ	< 0.38	0.38	UJ	< 0.031	0.031	UJ	< 0.044	0.044	UJ	< 0.031	0.031	UJ	< 0.045	0.045	UJ	< 0.041	0.041	UJ	< 0.033	0.033	UJ	< 0.098	0.098	UJ
MW-2A	Event 11 2020 NovJan	12/13/2020	UG/L	< 0.099	0.099	U	< 0.058	0.058	U	< 0.38	0.38	U	< 0.031	0.031	U	< 0.044	0.044	U	< 0.031	0.031	U	**0.05**	0.045	J	**0.046**	0.041	J	< 0.033	0.033	U	< 0.097	0.097	U
MW-14	Event 10 2019 NovDec	12/22/2019	UG/L	< 0.097	0.097	U	< 0.060	0.06	U	< 0.39	0.39	U	< 0.032	0.032	U	< 0.045	0.045	U	< 0.032	0.032	U	< 0.046	0.046	U	< 0.042	0.042	U	< 0.034	0.034	U	< 0.10	0.1	U
MW-14	Event 11 2020 NovJan	11/22/2020	UG/L	< 0.10	0.1	UJ	NS			NS			NS			NS			NS			NS			NS			NS			NS		
MW-14	Event 11 2020 NovJan	1/4/2021	UG/L	NS			< 0.056	0.056	U	< 0.36	0.36	U	< 0.030	0.03	U	< 0.042	0.042	U	< 0.030	0.03	U	< 0.043	0.043	U	< 0.039	0.039	U	< 0.031	0.031	U	< 0.093	0.093	U
MW-14	Event 12 2021 Jan	1/25/2021	UG/L	< 0.10	0.1	U	< 0.056	0.056	U	< 0.37	0.37	U	< 0.030	0.03	U	< 0.042	0.042	U	< 0.030	0.03	U	< 0.043	0.043	U	< 0.040	0.04	U	< 0.032	0.032	U	< 0.094	0.094	U
MW-5A	Event 01 2017 Nov	11/12/2017	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-5A	Event 02 2017 Dec	12/19/2017	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-5A	Event 03 2018 JanFeb	1/31/2018	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-5A	Event 04 2018 Mar	3/13/2018	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-5A	Event 05 2018 Oct	11/13/2018	UG/L	< 0.10	0.1	U	< 0.063	0.063	U	< 0.41	0.41	U	< 0.034	0.034	U	< 0.047	0.047	U	< 0.034	0.034	U	< 0.048	0.048	U	< 0.044	0.044	U	< 0.036	0.036	U	< 0.11	0.11	U
MW-5A	Event 06 2019 Jan	1/22/2019	UG/L	< 0.10	0.1	U	< 0.070	0.07	U	< 0.45	0.45	U	< 0.037	0.037	U	< 0.052	0.052	U	< 0.037	0.037	U	< 0.053	0.053	U	< 0.049	0.049	U	< 0.039	0.039	U	< 0.12	0.12	U
MW-5A	Event 07 2019 Mar	3/25/2019	UG/L	< 0.10	0.1	U	< 0.061	0.061	U	< 0.40	0.4	U	< 0.033	0.033	U	< 0.046	0.046	U	< 0.033	0.033	U	< 0.047	0.047	U	< 0.043	0.043	U	< 0.035	0.035	U	< 0.10	0.1	U
MW-5A	Event 08 2019 MayJun	6/18/2019	UG/L	< 0.12	0.12	U	< 0.069	0.069	U	< 0.45	0.45	U	< 0.037	0.037	U	< 0.052	0.052	U	< 0.037	0.037	U	< 0.053	0.053	U	< 0.048	0.048	U	< 0.039	0.039	U	< 0.12	0.12	U
MW-5A	Event 09 2019 Sept	9/24/2019	UG/L	< 0.10	0.1	UJ	< 0.062	0.062	UJ	< 0.40	0.4	UJ	< 0.033	0.033	UJ	< 0.046	0.046	UJ	< 0.033	0.033	UJ	< 0.047	0.047	UJ	< 0.043	0.043	UJ	< 0.035	0.035	UJ	< 0.10	0.1	UJ
MW-5A	Event 10 2019 NovDec	12/4/2019	UG/L	< 0.10	0.1	U	< 0.059	0.059	U	< 0.38	0.38	U	< 0.031	0.031	U	< 0.044	0.044	U	< 0.031	0.031	U	< 0.045	0.045	U	< 0.041	0.041	U	< 0.033	0.033	U	< 0.098	0.098	U
MW-5A	Event 11 2020 NovJan	12/15/2020	UG/L	< 0.10	0.1	U	< 0.058	0.058	U	< 0.38	0.38	U	< 0.031	0.031	U	< 0.044	0.044	U	< 0.031	0.031	U	< 0.045	0.045	U	< 0.041	0.041	U	< 0.033	0.033	U	< 0.097	0.097	U
MW-6	Event 01 2017 Nov	11/8/2017	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-6	Event 02 2017 Dec	12/19/2017	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-6	Event 03 2018 JanFeb	2/4/2018	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	< 0.03	0.03	UJ	< 0.025	0.025	UJ	< 0.025	0.025	UJ	< 0.025	0.025	UJ	< 0.036	0.036	UJ	< 0.024	0.024	UJ	< 0.027	0.027	UJ
MW-6	Event 05 2018 Oct	11/13/2018	UG/L	< 0.10	0.1	U	< 0.066	0.066	U	< 0.43	0.43	U	< 0.035	0.035	U	< 0.050	0.05	U	< 0.035	0.035	U	< 0.051	0.051	U	< 0.046	0.046	U	< 0.038	0.038	U	< 0.11	0.11	U
MW-6	Event 06 2019 Jan	1/23/2019	UG/L	< 0.10	0.1	U	< 0.067	0.067	U	< 0.43	0.43	U	< 0.036	0.036	U	< 0.050	0.05	U	< 0.036	0.036	U	< 0.051	0.051	U	< 0.047	0.047	U	< 0.038	0.038	U	< 0.11	0.11	U
MW-6	Event 07 2019 Mar	3/25/2019	UG/L	< 0.10	0.1	U	< 0.063	0.063	U	< 0.41	0.41	U	< 0.034	0.034	U	< 0.047	0.047	U	< 0.034	0.034	U	< 0.048	0.048	U	< 0.044	0.044	U	**0.051**	0.036	J	< 0.11	0.11	U
MW-6	Event 09 2019 Sept	9/24/2019	UG/L	< 0.10	0.1	UJ	< 0.061	0.061	UJ	< 0.40	0.4	UJ	< 0.033	0.033	UJ	< 0.046	0.046	UJ	< 0.033	0.033	UJ	< 0.047	0.047	UJ	< 0.043	0.043	UJ	< 0.035	0.035	UJ	< 0.10	0.1	UJ
MW-6	Event 10 2019 NovDec	12/4/2019	UG/L	< 0.10	0.1	U	< 0.059	0.059	U	< 0.38	0.38	U	< 0.032	0.032	U	< 0.044	0.044	U	< 0.032	0.032	U	< 0.045	0.045	U	< 0.041	0.041	U	< 0.033	0.033	U	< 0.099	0.099	U
MW-6	Event 11 2020 NovJan	12/14/2020	UG/L	< 0.10	0.1	U	< 0.057	0.057	U	< 0.37	0.37	U	< 0.030	0.03	U	< 0.043	0.043	U	< 0.030	0.03	U	**0.07**	0.044	J	**0.056**	0.04	J	**0.036**	0.032	J	< 0.095	0.095	U
MW-9	Event 01 2017 Nov	11/6/2017	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	**0.18**	0.03	J-	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-9	Event 02 2017 Dec	12/20/2017	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-9	Event 03 2018 JanFeb	2/4/2018	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-9	Event 04 2018 Mar	3/13/2018	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-9	Event 05 2018 Oct	11/7/2018	UG/L	< 0.10	0.1	U	< 0.015	0.015	U	< 0.094	0.094	U	**0.17**	0.0077		< 0.011	0.011	U	**0.0094**	0.0077	J	**0.022**	0.011	J	< 0.010	0.01	U	**0.011**	0.0082	J	**0.025**	0.024	J
MW-9	Event 06 2019 Jan	1/21/2019	UG/L	< 0.10	0.1	U	< 0.065	0.065	U	< 0.42	0.42	U	< 0.035	0.035	U	< 0.049	0.049	U	< 0.035	0.035	U	< 0.050	0.05	U	< 0.045	0.045	U	< 0.037	0.037	U	< 0.11	0.11	U
MW-9	Event 07 2019 Mar	3/24/2019	UG/L	< 0.10	0.1	U	< 0.063	0.063	U	< 0.41	0.41	U	< 0.034	0.034	U	< 0.047	0.047	U	< 0.034	0.034	U	< 0.049	0.049	U	< 0.044	0.044	U	< 0.036	0.036	U	< 0.11	0.11	U
MW-9	Event 08 2019 MayJun	6/10/2019	UG/L	< 0.10	0.1	UJ	< 0.075	0.075	UJ	< 0.49	0.49	UJ	< 0.040	0.04	UJ	< 0.056	0.056	UJ	< 0.040	0.04	UJ	< 0.058	0.058	UJ	< 0.053	0.053	UJ	< 0.043	0.043	UJ	< 0.13	0.13	UJ
MW-9	Event 09 2019 Sept	9/18/2019	UG/L	0.18	0.1	J	< 0.059	0.059	U	< 0.38	0.38	U	< 0.031	0.031	U	< 0.044	0.044	U	< 0.031	0.031	U	< 0.045	0.045	U	< 0.041	0.041	U	< 0.033	0.033	U	< 0.098	0.098	U
MW-9	Event 10 2019 NovDec	11/20/2019	UG/L	< 0.15	0.15	U	< 0.057	0.057	U	< 0.37	0.37	U	< 0.031	0.031	U	< 0.043	0.043	U	< 0.031	0.031	U	< 0.044	0.044	U	< 0.040	0.04	U	< 0.033	0.033	U	< 0.096	0.096	U
MW-9	Event 11 2020 NovJan	12/13/2020	UG/L	< 0.10	0.1	U	< 0.057	0.057	U	< 0.37	0.37	U	0.31	0.03		< 0.043	0.043	U	< 0.030	0.03	U	**0.047**	0.044	J	< 0.040	0.04	U	< 0.032	0.032	U	< 0.095	0.095	U

ATTACHMENT C-4

SEMIVOLATILE ORGANIC COMPOUNDS

			Analytes	2,4-D			2-Methylnaphthalene			3-Methylphenol/4-Methylphenol (m			Acenaphthene			Acenaphthylene			Anthracene			Benzo(a)anthracene			Benzo(a)pyrene			Benzo(b)fluoranthene			Benzo(k)fluoranthene		
			Groundwater Protection Standard (GWPS ug/l):	70			36			20			530			530			1800			3.00			0.2			25.00			250		
				MCL			RSL			RSL			RSL			RSL			RSL			RSL			MCL			RSL			RSL		
Well ID	Sampling Event	Date	Unit	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual
MW-10	Event 01 2017 Nov	11/14/2017	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-10	Event 02 2017 Dec	12/20/2017	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-10	Event 03 2018 JanFeb	2/5/2018	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-10	Event 05 2018 Oct	11/12/2018	UG/L	< 0.10	0.1	U	< 0.064	0.064	U	< 0.41	0.41	U	< 0.034	0.034	U	< 0.048	0.048	U	< 0.034	0.034	U	< 0.049	0.049	U	< 0.045	0.045	U	< 0.036	0.036	U	< 0.11	0.11	U
MW-10	Event 06 2019 Jan	1/21/2019	UG/L	< 0.10	0.1	U	< 0.065	0.065	U	< 0.42	0.42	U	< 0.035	0.035	U	< 0.049	0.049	U	< 0.035	0.035	U	< 0.050	0.05	U	< 0.046	0.046	U	< 0.037	0.037	U	< 0.11	0.11	U
MW-10	Event 07 2019 Mar	3/24/2019	UG/L	< 0.10	0.1	U	< 0.075	0.075	U	< 0.49	0.49	U	< 0.040	0.04	U	< 0.056	0.056	U	< 0.040	0.04	U	< 0.058	0.058	U	< 0.053	0.053	U	< 0.043	0.043	U	< 0.13	0.13	U
MW-10	Event 08 2019 MayJun	6/12/2019	UG/L	< 0.10	0.1	U	< 0.063	0.063	U	< 0.41	0.41	U	< 0.033	0.033	U	< 0.047	0.047	U	< 0.033	0.033	U	< 0.048	0.048	U	< 0.044	0.044	U	< 0.036	0.036	U	< 0.10	0.1	UJ
MW-10	Event 09 2019 Sept	9/23/2019	UG/L	< 0.099	0.099	U	< 0.059	0.059	U	< 0.38	0.38	U	< 0.031	0.031	U	< 0.044	0.044	U	< 0.031	0.031	U	< 0.045	0.045	U	< 0.041	0.041	U	< 0.033	0.033	U	< 0.098	0.098	U
MW-10	Event 10 2019 NovDec	12/2/2019	UG/L	< 0.11	0.11	U	< 0.060	0.06	U	< 0.39	0.39	U	< 0.032	0.032	U	< 0.045	0.045	U	< 0.032	0.032	U	< 0.046	0.046	U	< 0.042	0.042	U	< 0.034	0.034	U	< 0.10	0.1	U
MW-10	Event 11 2020 NovJan	12/13/2020	UG/L	< 0.10	0.1	U	< 0.058	0.058	U	< 0.38	0.38	U	< 0.031	0.031	U	< 0.044	0.044	U	< 0.031	0.031	U	< 0.045	0.045	U	< 0.041	0.041	U	< 0.033	0.033	U	< 0.097	0.097	U
MW-10	Event 13 2021 Apr	4/5/2021	UG/L																														
MW-11R	Event 10 2019 NovDec	12/22/2019	UG/L	< 0.099	0.099	U	< 0.058	0.058	U	**6**	0.38	J	< 0.031	0.031	U	< 0.043	0.043	U	< 0.031	0.031	U	< 0.044	0.044	U	< 0.041	0.041	U	< 0.033	0.033	U	< 0.097	0.097	U
MW-11R	Event 11 2020 NovJan	12/14/2020	UG/L	< 0.10	0.1	U	< 0.059	0.059	U	< 0.39	0.39	U	< 0.032	0.032	U	< 0.044	0.044	U	< 0.032	0.032	U	< 0.045	0.045	U	< 0.041	0.041	U	< 0.034	0.034	U	< 0.099	0.099	U
MW-11R	Event 12 2021 Jan	1/25/2021	UG/L	< 0.094	0.094	U	< 0.056	0.056	U	< 0.36	0.36	U	< 0.030	0.03	U	< 0.042	0.042	U	< 0.030	0.03	U	< 0.043	0.043	U	< 0.039	0.039	U	< 0.032	0.032	U	< 0.093	0.093	U
MW-11R	Event 13 2021 Apr	4/14/2021	UG/L	< 0.11	0.11	U	< 0.063	0.063	U	NS			< 0.034	0.034	U	< 0.047	0.047	U	**0.055**	0.034	J	< 0.048	0.048	UJ	< 0.044	0.044	U	< 0.036	0.036	U	< 0.11	0.11	U
MW-12	Event 01 2017 Nov	11/12/2017	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-12	Event 02 2017 Dec	12/19/2017	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-12	Event 03 2018 JanFeb	2/4/2018	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UR	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-12	Event 04 2018 Mar	3/14/2018	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-12	Event 05 2018 Oct	11/12/2018	UG/L	< 0.10	0.1	U	< 0.065	0.065	U	< 0.42	0.42	U	< 0.035	0.035	U	< 0.049	0.049	U	< 0.035	0.035	U	< 0.050	0.05	U	< 0.045	0.045	U	< 0.037	0.037	U	< 0.11	0.11	U
MW-12	Event 06 2019 Jan	1/16/2019	UG/L	< 0.10	0.1	U	< 0.064	0.064	U	< 0.42	0.42	U	< 0.034	0.034	U	< 0.048	0.048	U	< 0.034	0.034	U	< 0.049	0.049	U	< 0.045	0.045	U	< 0.036	0.036	U	< 0.11	0.11	U
MW-12	Event 07 2019 Mar	3/24/2019	UG/L	< 0.10	0.1	U	< 0.048	0.048	U	< 0.31	0.31	U	< 0.026	0.026	U	< 0.036	0.036	U	< 0.026	0.026	U	< 0.037	0.037	U	**0.053**	0.034	J	**0.046**	0.027	J	< 0.080	0.08	U
MW-12	Event 08 2019 MayJun	6/5/2019	UG/L	< 1.2	1.2	UJ	< 0.057	0.057	U	< 0.37	0.37	U	< 0.030	0.03	U	< 0.042	0.042	U	< 0.030	0.03	U	< 0.043	0.043	U	< 0.040	0.04	U	< 0.032	0.032	U	< 0.094	0.094	U
MW-12	Event 09 2019 Sept	9/18/2019	UG/L	< 0.10	0.1	U	< 0.059	0.059	U	< 0.38	0.38	U	< 0.031	0.031	U	< 0.044	0.044	U	< 0.031	0.031	U	< 0.045	0.045	U	< 0.041	0.041	U	< 0.033	0.033	U	< 0.098	0.098	U
MW-12	Event 10 2019 NovDec	11/20/2019	UG/L	< 0.15	0.15	U	< 0.059	0.059	U	< 0.38	0.38	U	< 0.031	0.031	U	< 0.044	0.044	U	< 0.031	0.031	U	< 0.045	0.045	U	< 0.041	0.041	U	< 0.033	0.033	U	< 0.098	0.098	U
MW-12	Event 11 2020 NovJan	12/13/2020	UG/L	< 0.10	0.1	U	< 0.056	0.056	U	< 0.37	0.37	U	< 0.030	0.03	U	< 0.042	0.042	U	< 0.030	0.03	U	**0.044**	0.043	J	< 0.039	0.039	U	< 0.032	0.032	U	< 0.094	0.094	U
MW-12	Event 13 2021 Apr	4/14/2021	UG/L																														
MW-13	Event 01 2017 Nov	11/13/2017	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-13	Event 02 2017 Dec	12/19/2017	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-13	Event 03 2018 JanFeb	1/31/2018	UG/L	< 0.057	0.057	UJ	< 3.8	3.8	UJ	< 7.2	7.2	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-13	Event 04 2018 Mar	3/14/2018	UG/L	< 0.057	0.057	UJ	< 0.38	0.38	UJ	< 0.72	0.72	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.03	0.03	UJ	< 0.043	0.043	UJ	< 0.029	0.029	UJ	< 0.032	0.032	UJ
MW-13	Event 05 2018 Oct	11/6/2018	UG/L	< 0.10	0.1	U	**0.071**	0.062	J	< 0.40	0.4	U	< 0.033	0.033	U	**0.053**	0.046	J	**0.071**	0.033	J	**0.15**	0.047	J	**0.063**	0.043	J	**0.063**	0.035	J	**0.11**	0.1	J
MW-13	Event 06 2019 Jan	1/14/2019	UG/L	< 0.10	0.1	U	< 0.061	0.061	U	< 0.40	0.4	U	< 0.033	0.033	U	< 0.046	0.046	U	< 0.033	0.033	U	< 0.047	0.047	U	< 0.043	0.043	U	< 0.035	0.035	U	< 0.10	0.1	U
MW-13	Event 07 2019 Mar	3/27/2019	UG/L	< 0.10	0.1	U	< 0.061	0.061	U	< 0.40	0.4	U	< 0.033	0.033	U	< 0.046	0.046	U	< 0.033	0.033	U	< 0.047	0.047	UJ	< 0.043	0.043	UJ	< 0.035	0.035	UJ	< 0.10	0.1	UJ
MW-13	Event 08 2019 MayJun	6/3/2019	UG/L	< 0.10	0.1	U	< 0.065	0.065	U	< 0.42	0.42	U	< 0.035	0.035	U	< 0.049	0.049	U	< 0.035	0.035	U	< 0.050	0.05	U	< 0.045	0.045	U	< 0.037	0.037	U	< 0.11	0.11	U
MW-13	Event 09 2019 Sept	9/10/2019	UG/L	< 0.10	0.1	U	< 0.058	0.058	U	< 0.38	0.38	U	< 0.031	0.031	U	< 0.044	0.044	U	< 0.031	0.031	U	< 0.045	0.045	U	< 0.041	0.041	U	< 0.033	0.033	U	< 0.097	0.097	U
MW-13	Event 10 2019 NovDec	11/18/2019	UG/L	< 0.10	0.1	U	< 0.060	0.06	UJ	< 0.39	0.39	UJ	< 0.032	0.032	UJ	< 0.045	0.045	UJ	< 0.032	0.032	UJ	< 0.046	0.046	UJ	< 0.042	0.042	UJ	< 0.034	0.034	UJ	< 0.099	0.099	UJ
MW-13	Event 11 2020 NovJan	11/22/2020	UG/L	< 0.10	0.1	UJ	NS			NS			NS			NS			NS			NS			NS			NS			NS		
MW-13	Event 11 2020 NovJan	1/18/2021	UG/L	NS			< 0.057	0.057	U	< 0.37	0.37	U	< 0.030	0.03	U	< 0.043	0.043	U	< 0.030	0.03	U	**0.069**	0.044	J	< 0.040	0.04	U	< 0.032	0.032	U	< 0.095	0.095	U
MW-13	Event 13 2021 Apr	4/5/2021	UG/L	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
MW-15	Event 10 2019 NovDec	12/16/2019	UG/L	< 0.10	0.1	U	< 0.062	0.062	U	< 0.40	0.4	U	< 0.033	0.033	U	< 0.047	0.047	U	< 0.033	0.033	U	< 0.048	0.048	U	< 0.044	0.044	U	< 0.035	0.035	U	< 0.10	0.1	U
MW-15	Event 11 2020 NovJan	12/14/2020	UG/L	< 0.10	0.1	U	< 0.059	0.059	U	< 0.38	0.38	U	< 0.031	0.031	U	< 0.044	0.044	U	< 0.031	0.031	U	< 0.045	0.045	U	**0.062**	0.041	J	**0.043**	0.033	J	< 0.098	0.098	U
MW-15	Event 12 2021 Jan	1/25/2021	UG/L	< 0.10	0.1	U	< 0.058	0.058	U	< 0.38	0.38	U	< 0.031	0.031	U	< 0.044	0.044	U	< 0.031	0.031	U	**0.077**	0.045	J	**0.14**	0.041	J	**0.16**	0.033	J	**0.17**	0.097	J
MW-16	Event 10 2019 NovDec	12/11/2019	UG/L	< 0.099	0.099	U	< 0.059	0.059	U	< 0.38	0.38	U	< 0.031	0.031	U	< 0.044	0.044	U	< 0.031	0.031	U	< 0.045	0.045	U	< 0.041	0.041	U	< 0.033	0.033	U	< 0.098	0.098	U
MW-16	Event 11 2020 NovJan	12/14/2020	UG/L	< 0.10	0.1	U	< 0.059	0.059	U	< 0.38	0.38	U	< 0.031	0.031	U	< 0.044	0.044	U	< 0.031	0.031	U	**0.054**	0.045	J	**0.052**	0.041	J	< 0.033	0.033	U	< 0.098	0.098	U
MW-16	Event 12 2021 Jan	1/25/2021	UG/L	< 0.10	0.1	U	< 0.059	0.059	U	< 0.38	0.38	U	< 0.031	0.031	U	< 0.044	0.044	U	< 0.031	0.031	U	< 0.045	0.045	U	**0.088**	0.041	J	< 0.033	0.033	U	< 0.098	0.098	U

Footnotes and Abbreviations:

Green shade GWPS is MCL. Blue Shade GWPS is RSL.

U or < = Result was not detected

J = Result is estimated

R = Data were rejected during the validation process but are considered usable based on the Validator's professional judgement

NS = Not sampled

UG/L - micrograms per liter

Grey shaded cells represent the background data set that was used to develop the statistical limit for comparisons.

Non-parametric prediction limits were used when non-detects represented greater than 50% of the data set.

Detections are bolded and purple shaded cells are above the groundwater protection standards (background) indicated in the table.

Confidence limits were not generated for organic compounds since they are assumed to be non-detect.

ATTACHMENT C-4
SEMIVOLATILE ORGANIC COMPOUNDS

			Analytes	Benzyl alcohol			Benzyl butyl phthalate			bis(2-Chloroethoxy)methan			bis(2-Ethylhexyl)phthalate			Chrysene			Dibenz(a,h)anthracene			Diethyl phthalate			Dimethyl phthalate			Dinoseb			Fluoranthene		
Groundwater Protection Standard (GWPS ug/l):				2,000			1,600			59			6			25,000.00			2.50			15,000.00			15,000.00			7			800		
				RSL			RSL			RSL			MCL			RSL			RSL			RSL			RSL			MCL			RSL		
Well ID	Sampling Event	Date	Unit	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual
			Number of data points	10			10			10			10			10			10				10		10			10			10		
			Percent Non-detect	100			100			100			90			100			100			100			100			100			100		
			Interwell Prediction Limit	0.22			0.09			0.08			0.335			0.0145			0.0205			0.115			0.085			0.017			0.0135		
			Confidence Level	Not calculated			Not calculated			Not calculated			Not calculated			Not calculated			Not calculated						Not calculated			Not calculated			Not calculated		
MW-1C	Event 01 2017 Nov	11/5/2017	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-1C	Event 02 2017 Dec	12/18/2017	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-1C	Event 03 2018 JanFeb	2/4/2018	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-1C	Event 04 2018 Mar	3/12/2018	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-1C	Event 05 2018 Oct	10/30/2018	UG/L	< 2.1	2.1	U	< 0.20	0.2	U	< 0.17	0.17	U	< 6.9	6.9	UJ	< 0.078	0.078	U	< 0.053	0.053	U	< 0.25	0.25	U	< 0.18	0.18	U	< 0.066	0.066	U	< 0.071	0.071	U
MW-1C	Event 06 2019 Jan	1/14/2019	UG/L	< 2.1	2.1	U	< 0.20	0.2	U	< 0.17	0.17	U	< 5.3	5.3	U	< 0.078	0.078	U	< 0.053	0.053	U	< 0.25	0.25	U	< 0.18	0.18	U	< 0.066	0.066	U	< 0.071	0.071	U
MW-1C	Event 07 2019 Mar	3/27/2019	UG/L	< 2.0	2	U	< 0.19	0.19	U	< 0.16	0.16	U	< 5.0	5	U	< 0.074	0.074	U	< 0.050	0.05	U	< 0.24	0.24	U	< 0.17	0.17	U	< 0.066	0.066	U	< 0.068	0.068	U
MW-1C	Event 08 2019 MayJun	6/3/2019	UG/L	< 2.2	2.2	U	< 0.21	0.21	U	< 0.18	0.18	U	< 6.5	6.5	UJ	< 0.081	0.081	U	< 0.055	0.055	U	< 0.26	0.26	U	< 0.19	0.19	U	< 0.062	0.062	U	< 0.075	0.075	U
MW-1C	Event 09 2019 Sept	9/10/2019	UG/L	< 2.0	2	U	< 0.19	0.19	U	< 0.16	0.16	U	< 46	46	UJ	< 0.074	0.074	U	< 0.050	0.05	U	**0.34**	0.24	J	< 0.17	0.17	U	< 0.062	0.062	U	< 0.068	0.068	U
MW-1C	Event 10 2019 NovDec	11/13/2019	UG/L	< 1.9	1.9	UJ	< 0.18	0.18	UJ	< 0.16	0.16	UJ	< 4.9	4.9	UJ	< 0.072	0.072	UJ	< 0.049	0.049	UJ	< 0.23	0.23	UJ	< 0.17	0.17	UJ	< 0.062	0.062	UJ	< 0.066	0.066	UJ
MW-1C	Event 11 2020 NovJan	11/22/2020	UG/L	NS			NS			NS			NS			NS			NS			NS			NS			< 0.066	0.066	UJ	NS		
MW-1C	Event 11 2020 NovJan	1/18/2021	UG/L	< 1.9	1.9	U	< 0.18	0.18	U	< 0.15	0.15	U	< 4.7	4.7	U	**0.098**	0.069	J	< 0.047	0.047	U	< 0.23	0.23	U	< 0.16	0.16	U	NS			**0.071**	0.064	J
MW-2A	Event 01 2017 Nov	11/2/2017	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-2A	Event 05 2018 Oct	11/6/2018	UG/L	< 2.1	2.1	U	< 0.20	0.2	U	< 0.17	0.17	U	< 5.2	5.2	U	**0.098**	0.078	J	< 0.052	0.052	U	**0.47**	0.25	J	< 0.18	0.18	U	< 0.066	0.066	U	**0.1**	0.071	J
MW-2A	Event 09 2019 Sept	9/18/2019	UG/L	< 2.0	2	U	< 0.19	0.19	U	< 0.16	0.16	U	< 5.1	5.1	U	< 0.075	0.075	U	**0.2**	0.051		< 0.24	0.24	U	< 0.17	0.17	U	< 0.065	0.065	U	**0.11**	0.069	J
MW-2A	Event 10 2019 NovDec	11/18/2019	UG/L	< 2.0	2	UJ	< 0.19	0.19	UJ	< 0.16	0.16	UJ	< 4.9	4.9	UJ	< 0.073	0.073	UJ	< 0.049	0.049	UJ	< 0.24	0.24	UJ	< 0.17	0.17	UJ	< 0.065	0.065	U	< 0.067	0.067	UJ
MW-2A	Event 11 2020 NovJan	12/13/2020	UG/L	< 1.9	1.9	U	< 0.18	0.18	U	< 0.16	0.16	U	< 4.9	4.9	U	< 0.072	0.072	U	**0.16**	0.049	J	< 0.23	0.23	U	< 0.17	0.17	U	< 0.062	0.062	U	< 0.066	0.066	U
MW-14	Event 10 2019 NovDec	12/22/2019	UG/L	< 2.0	2	U	< 0.19	0.19	U	< 0.16	0.16	U	< 5.0	5	U	< 0.074	0.074	U	< 0.050	0.05	U	< 0.37	0.37	UJ	< 0.17	0.17	U	< 0.061	0.061	U	< 0.068	0.068	U
MW-14	Event 11 2020 NovJan	11/22/2020	UG/L	NS			NS			NS			NS			NS			NS			NS			NS			< 0.066	0.066	UJ	NS		
MW-14	Event 11 2020 NovJan	1/4/2021	UG/L	< 1.9	1.9	U	< 0.18	0.18	U	< 0.15	0.15	U	< 4.6	4.6	U	< 0.069	0.069	U	< 0.046	0.046	U	< 0.22	0.22	U	< 0.16	0.16	U	NS			< 0.063	0.063	U
MW-14	Event 12 2021 Jan	1/25/2021	UG/L	< 1.9	1.9	U	< 0.18	0.18	U	< 0.15	0.15	U	< 4.7	4.7	U	< 0.070	0.07	U	< 0.047	0.047	U	< 0.23	0.23	U	< 0.16	0.16	U	< 0.065	0.065	U	< 0.064	0.064	U
MW-5A	Event 01 2017 Nov	11/12/2017	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-5A	Event 02 2017 Dec	12/19/2017	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-5A	Event 03 2018 JanFeb	1/31/2018	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-5A	Event 04 2018 Mar	3/13/2018	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-5A	Event 05 2018 Oct	11/13/2018	UG/L	< 2.1	2.1	U	**0.62**	0.2	J	< 0.17	0.17	U	< 12	12	UJ	< 0.078	0.078	U	< 0.053	0.053	U	< 0.25	0.25	U	< 0.18	0.18	U	< 0.066	0.066	U	< 0.072	0.072	U
MW-5A	Event 06 2019 Jan	1/22/2019	UG/L	< 2.3	2.3	U	< 0.22	0.22	U	< 0.19	0.19	U	< 5.8	5.8	U	< 0.086	0.086	U	< 0.058	0.058	U	< 0.28	0.28	U	< 0.20	0.2	U	< 0.066	0.066	U	< 0.079	0.079	U
MW-5A	Event 07 2019 Mar	3/25/2019	UG/L	< 2.0	2	U	< 0.19	0.19	U	< 0.16	0.16	U	**23**	5.1		< 0.076	0.076	U	< 0.051	0.051	U	< 0.25	0.25	U	< 0.17	0.17	U	< 0.066	0.066	U	< 0.069	0.069	U
MW-5A	Event 08 2019 MayJun	6/18/2019	UG/L	< 2.3	2.3	U	< 0.22	0.22	U	< 0.18	0.18	U	< 5.8	5.8	U	< 0.085	0.085	U	< 0.058	0.058	U	< 0.28	0.28	U	< 1.2	1.2	UJ	< 0.075	0.075	U	< 0.078	0.078	U
MW-5A	Event 09 2019 Sept	9/24/2019	UG/L	< 2.1	2.1	UJ	< 0.20	0.2	UJ	< 0.16	0.16	UJ	**6.4**	6.3	J	< 0.076	0.076	UJ	< 0.051	0.051	UJ	< 0.25	0.25	UJ	< 0.17	0.17	UJ	**0.43**	0.066	J	< 0.070	0.07	UJ
MW-5A	Event 10 2019 NovDec	12/4/2019	UG/L	< 2.0	2	U	< 0.19	0.19	U	< 0.16	0.16	U	< 4.9	4.9	U	< 0.072	0.072	U	< 0.049	0.049	U	< 0.23	0.23	U	< 0.17	0.17	U	< 0.066	0.066	U	< 0.066	0.066	U
MW-5A	Event 11 2020 NovJan	12/15/2020	UG/L	< 1.9	1.9	U	< 0.18	0.18	U	< 0.16	0.16	U	**7.8**	4.8	J	< 0.072	0.072	U	< 0.048	0.048	U	< 0.23	0.23	U	< 0.16	0.16	U	< 0.064	0.064	U	< 0.066	0.066	U
MW-6	Event 01 2017 Nov	11/8/2017	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-6	Event 02 2017 Dec	12/19/2017	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-6	Event 03 2018 JanFeb	2/4/2018	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.024	0.024	UJ	< 0.034	0.034	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-6	Event 05 2018 Oct	11/13/2018	UG/L	< 2.2	2.2	U	< 0.21	0.21	U	< 0.18	0.18	U	< 5.5	5.5	U	< 0.082	0.082	U	< 0.055	0.055	U	< 0.26	0.26	U	< 0.19	0.19	U	< 0.066	0.066	U	< 0.075	0.075	U
MW-6	Event 06 2019 Jan	1/23/2019	UG/L	< 2.2	2.2	U	< 0.21	0.21	U	**1.1**	0.18	J	< 5.6	5.6	U	< 0.082	0.082	U	< 0.056	0.056	U	< 0.27	0.27	U	< 0.19	0.19	U	< 0.066	0.066	U	< 0.076	0.076	U
MW-6	Event 07 2019 Mar	3/25/2019	UG/L	< 2.1	2.1	U	< 0.20	0.2	U	< 0.17	0.17	U	**5.5**	5.3	J	< 0.078	0.078	U	< 0.053	0.053	U	< 0.25	0.25	U	< 0.18	0.18	U	< 0.066	0.066	U	< 0.071	0.071	U
MW-6	Event 09 2019 Sept	9/24/2019	UG/L	< 2.0	2	UJ	< 0.19	0.19	UJ	< 0.16	0.16	UJ	**8.8**	6.3	J	< 0.075	0.075	UJ	< 0.051	0.051	UJ	< 0.24	0.24	UJ	< 0.17	0.17	UJ	< 0.066	0.066	UJ	< 0.069	0.069	UJ
MW-6	Event 10 2019 NovDec	12/4/2019	UG/L	< 2.0	2	U	< 0.19	0.19	U	< 0.16	0.16	U	< 4.9	4.9	U	< 0.073	0.073	U	< 0.049	0.049	U	< 0.24	0.24	U	< 0.17	0.17	U	< 0.066	0.066	U	< 0.067	0.067	U
MW-6	Event 11 2020 NovJan	12/14/2020	UG/L	< 1.9	1.9	U	< 0.18	0.18	U	< 0.15	0.15	U	< 4.8	4.8	U	< 0.070	0.07	U	**0.17**	0.048	J	**0.58**	0.23	J	< 0.16	0.16	U	< 0.064	0.064	U	**0.066**	0.065	J
MW-9	Event 01 2017 Nov	11/6/2017	UG/L	**0.53**	0.44	J-	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-9	Event 02 2017 Dec	12/20/2017	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-9	Event 03 2018 JanFeb	2/4/2018	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-9	Event 04 2018 Mar	3/13/2018	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-9	Event 05 2018 Oct	11/7/2018	UG/L	< 0.48	0.48	U	< 0.046	0.046	U	< 0.039	0.039	U	**2**	1.2	J	< 0.018	0.018	U	< 0.012	0.012	U	**0.14**	0.058	J	< 0.041	0.041	U	< 0.066	0.066	U	< 0.016	0.016	U
MW-9	Event 06 2019 Jan	1/21/2019	UG/L	< 2.2	2.2	UJ	< 0.21	0.21	U	< 0.17	0.17	UJ	< 5.4	5.4	U	< 0.080	0.08	U	< 0.054	0.054	U	< 0.26	0.26	U	< 0.18	0.18	U	< 0.066	0.066	U	< 0.074	0.074	U
MW-9	Event 07 2019 Mar	3/24/2019	UG/L	< 2.1	2.1	U	< 0.20	0.2	U	< 0.17	0.17	U	< 5.3	5.3	U	< 0.078	0.078	U	**0.091**	0.053	J	< 0.25	0.25	U	< 0.18	0.18	U	< 0.066	0.066	U	< 0.072	0.072	U
MW-9	Event 08 2019 MayJun	6/10/2019	UG/L	< 2.5	2.5	UJ	< 0.24	0.24	UJ	< 0.20	0.2	UJ	< 6.3	6.3	UJ	< 0.093	0.093	UJ	< 0.063	0.063	UJ	< 0.30	0.3	UJ	**0.36**	0.21	J	< 0.066	0.066	UJ	< 0.085	0.085	UJ
MW-9	Event 09 2019 Sept	9/18/2019	UG/L	< 2.0	2	U	< 0.19	0.19	U	< 0.16	0.16	U	**10**	4.9		< 0.073	0.073	U	< 0.049	0.049	U	< 0.24	0.24	U	< 0.17	0.17	U	< 0.064	0.064	U	< 0.067	0.067	U
MW-9	Event 10 2019 NovDec	11/20/2019	UG/L	< 1.9	1.9	U	< 0.18	0.18	U	< 0.15	0.15	U	< 4.8	4.8	U	< 0.071	0.071	U	< 0.048	0.048	U	< 0.23	0.23	U	< 0.16	0.16	U	< 0.094	0.094	U	< 0.065	0.065	U
MW-9	Event 11 2020 NovJan	12/13/2020	UG/L	< 1.9	1.9	U	< 0.18	0.18	U	< 0.15	0.15	U	< 4.7	4.7	U	< 0.070	0.07	U	< 0.047	0.047	U	0.51	0.23	J	< 0.16	0.16	U	< 0.064	0.064	U	< 0.064	0.064	U

ATTACHMENT C-4
SEMIVOLATILE ORGANIC COMPOUNDS

			Analytes	Benzyl alcohol			Benzyl butyl phthalate			bis(2-Chloroethoxy)methan			bis(2-Ethylhexyl)phthalate			Chrysene			Dibenz(a,h)anthracene			Diethyl phthalate			Dimethyl phthalate			Dinoseb			Fluoranthene		
Groundwater Protection Standard (GWPS ug/l):				2,000			1,600			59			6			25,000.00			2.50			15,000.00			15,000.00			7			800		
				RSL			RSL			RSL			MCL			RSL			RSL			RSL			RSL			MCL			RSL		
Well ID	Sampling Event	Date	Unit	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual
MW-10	Event 01 2017 Nov	11/14/2017	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-10	Event 02 2017 Dec	12/20/2017	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-10	Event 03 2018 JanFeb	2/5/2018	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-10	Event 05 2018 Oct	11/12/2018	UG/L	< 2.1	2.1	U	< 0.20	0.2	U	< 0.17	0.17	U	< 5.3	5.3	U	< 0.078	0.078	U	< 0.053	0.053	U	< 0.25	0.25	U	< 0.18	0.18	U	< 0.066	0.066	U	< 0.072	0.072	U
MW-10	Event 06 2019 Jan	1/21/2019	UG/L	< 2.2	2.2	UJ	< 0.21	0.21	U	< 0.17	0.17	UJ	< 5.4	5.4	U	< 0.080	0.08	U	< 0.054	0.054	U	< 0.26	0.26	U	< 0.18	0.18	U	< 0.066	0.066	U	< 0.074	0.074	U
MW-10	Event 07 2019 Mar	3/24/2019	UG/L	< 2.5	2.5	U	< 0.24	0.24	U	< 0.20	0.2	U	**13**	6.3		< 0.093	0.093	U	< 0.063	0.063	U	< 0.30	0.3	U	< 0.21	0.21	U	< 0.066	0.066	U	< 0.085	0.085	U
MW-10	Event 08 2019 MayJun	6/12/2019	UG/L	< 2.1	2.1	U	< 0.20	0.2	U	< 0.17	0.17	U	< 9.3	9.3	UJ	< 0.077	0.077	U	< 0.052	0.052	U	< 0.25	0.25	U	< 0.18	0.18	U	< 0.066	0.066	U	< 0.071	0.071	U
MW-10	Event 09 2019 Sept	9/23/2019	UG/L	< 2.0	2	U	< 0.19	0.19	U	< 0.16	0.16	U	< 4.9	4.9	U	< 0.073	0.073	U	< 0.049	0.049	U	< 0.24	0.24	U	< 0.17	0.17	U	< 0.063	0.063	U	< 0.067	0.067	U
MW-10	Event 10 2019 NovDec	12/2/2019	UG/L	< 2.0	2	U	< 0.19	0.19	U	< 0.16	0.16	U	< 5.0	5	U	< 0.074	0.074	U	< 0.050	0.05	UJ	< 0.24	0.24	U	< 0.17	0.17	U	< 0.070	0.07	U	< 0.068	0.068	U
MW-10	Event 11 2020 NovJan	12/13/2020	UG/L	< 1.9	1.9	U	< 0.18	0.18	U	< 0.16	0.16	U	**7.4**	4.9	J	< 0.072	0.072	U	< 0.049	0.049	U	< 0.23	0.23	U	< 0.16	0.16	U	< 0.063	0.063	U	< 0.066	0.066	U
MW-10	Event 13 2021 Apr	4/5/2021	UG/L										< 5.9	5.9	U	NS			NS			NS			NS			NS			NS		
MW-11R	Event 10 2019 NovDec	12/22/2019	UG/L	< 1.9	1.9	U	< 0.18	0.18	U	< 0.15	0.15	U	< 4.8	4.8	U	< 0.071	0.071	U	< 0.048	0.048	U	< 0.23	0.23	U	< 0.16	0.16	U	< 0.063	0.063	U	< 0.066	0.066	U
MW-11R	Event 11 2020 NovJan	12/14/2020	UG/L	< 2.0	2	U	< 0.19	0.19	U	< 0.16	0.16	U	**8.4**	4.9	J	< 0.073	0.073	U	< 0.049	0.049	U	**0.76**	0.24	J	< 0.17	0.17	U	< 0.064	0.064	U	< 0.067	0.067	U
MW-11R	Event 12 2021 Jan	1/25/2021	UG/L	< 1.9	1.9	U	< 0.18	0.18	U	< 0.15	0.15	U	< 4.6	4.6	U	< 0.069	0.069	U	< 0.046	0.046	U	**0.49**	0.22	J	< 0.16	0.16	U	< 0.059	0.059	U	< 0.063	0.063	U
MW-11R	Event 13 2021 Apr	4/14/2021	UG/L	NS			NS			NS			NS			< 0.078	0.078	UJ	< 0.053	0.053	U	NS			NS			< 0.068	0.068	U	< 0.072	0.072	U
MW-12	Event 01 2017 Nov	11/12/2017	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-12	Event 02 2017 Dec	12/19/2017	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-12	Event 03 2018 JanFeb	2/4/2018	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-12	Event 04 2018 Mar	3/14/2018	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-12	Event 05 2018 Oct	11/12/2018	UG/L	< 2.2	2.2	U	< 0.21	0.21	U	< 0.17	0.17	U	**7.7**	5.4	J	< 0.080	0.08	U	< 0.054	0.054	U	< 0.26	0.26	U	< 0.18	0.18	U	< 0.066	0.066	U	< 0.073	0.073	U
MW-12	Event 06 2019 Jan	1/16/2019	UG/L	< 2.1	2.1	U	< 0.20	0.2	U	< 0.17	0.17	U	**10**	5.3	J	< 0.079	0.079	U	< 0.053	0.053	U	< 0.26	0.26	U	< 0.18	0.18	U	< 0.066	0.066	U	< 0.073	0.073	U
MW-12	Event 07 2019 Mar	3/24/2019	UG/L	< 1.6	1.6	U	< 0.15	0.15	U	< 0.13	0.13	U	< 4.0	4	U	< 0.059	0.059	U	< 0.040	0.04	U	< 0.19	0.19	U	< 0.14	0.14	U	< 0.066	0.066	U	**0.054**	0.054	J
MW-12	Event 08 2019 MayJun	6/5/2019	UG/L	< 1.9	1.9	U	< 0.18	0.18	U	< 0.15	0.15	U	< 5.0	5	UJ	< 0.070	0.07	U	< 0.047	0.047	U	**0.46**	0.23	J	< 0.16	0.16	U	< 0.066	0.066	U	< 0.064	0.064	UJ
MW-12	Event 09 2019 Sept	9/18/2019	UG/L	< 2.0	2	U	< 0.19	0.19	U	< 0.16	0.16	U	< 4.9	4.9	U	< 0.073	0.073	U	< 0.049	0.049	U	< 0.24	0.24	U	< 0.17	0.17	U	**0.52**	0.063	J	< 0.067	0.067	U
MW-12	Event 10 2019 NovDec	11/20/2019	UG/L	< 2.0	2	U	< 0.19	0.19	U	< 0.16	0.16	U	< 4.9	4.9	U	< 0.073	0.073	U	< 0.049	0.049	U	< 0.24	0.24	U	< 0.17	0.17	U	< 0.094	0.094	U	< 0.067	0.067	U
MW-12	Event 11 2020 NovJan	12/13/2020	UG/L	< 1.9	1.9	U	< 0.18	0.18	U	< 0.15	0.15	U	**21**	4.7		< 0.069	0.069	U	**0.16**	0.047	J	**0.28**	0.23	J	< 0.16	0.16	U	< 0.063	0.063	U	< 0.064	0.064	U
MW-12	Event 13 2021 Apr	4/14/2021	UG/L										< 6.1	6.1	U	NS			NS			NS			NS			NS			NS		
MW-13	Event 01 2017 Nov	11/13/2017	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-13	Event 02 2017 Dec	12/19/2017	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-13	Event 03 2018 JanFeb	1/31/2018	UG/L	< 4.4	4.4	UJ	< 7.7	7.7	UJ	< 4.5	4.5	UJ	< 6.7	6.7	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 3.5	3.5	UJ	< 4	4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-13	Event 04 2018 Mar	3/14/2018	UG/L	< 0.44	0.44	UJ	< 0.77	0.77	UJ	< 0.45	0.45	UJ	< 0.67	0.67	UJ	< 0.029	0.029	UJ	< 0.041	0.041	UJ	< 0.35	0.35	UJ	< 0.4	0.4	UJ	< 0.034	0.034	UJ	< 0.027	0.027	UJ
MW-13	Event 05 2018 Oct	11/6/2018	UG/L	< 2.1	2.1	U	< 0.20	0.2	U	< 0.16	0.16	U	**7.7**	5.1	J	**0.11**	0.076	J	**0.22**	0.051		**0.45**	0.25	J	< 0.17	0.17	U	< 0.066	0.066	U	**0.25**	0.07	
MW-13	Event 06 2019 Jan	1/14/2019	UG/L	< 2.0	2	U	< 0.19	0.19	U	< 0.16	0.16	U	< 5.1	5.1	U	< 0.076	0.076	U	< 0.051	0.051	U	< 0.25	0.25	U	< 0.17	0.17	U	< 0.066	0.066	U	< 0.070	0.07	U
MW-13	Event 07 2019 Mar	3/27/2019	UG/L	< 2.0	2	U	< 0.19	0.19	UJ	< 0.16	0.16	U	< 5.1	5.1	U	< 0.075	0.075	UJ	< 0.051	0.051	UJ	< 0.24	0.24	U	< 0.17	0.17	U	< 0.066	0.066	U	< 0.069	0.069	U
MW-13	Event 08 2019 MayJun	6/3/2019	UG/L	< 2.2	2.2	U	< 0.20	0.2	U	< 0.17	0.17	U	< 5.4	5.4	U	< 0.080	0.08	U	< 0.054	0.054	U	< 0.26	0.26	U	< 0.18	0.18	U	< 0.066	0.066	U	< 0.073	0.073	U
MW-13	Event 09 2019 Sept	9/10/2019	UG/L	< 1.9	1.9	U	< 0.18	0.18	U	< 0.16	0.16	U	< 5.7	5.7	UJ	< 0.072	0.072	U	< 0.049	0.049	U	< 0.23	0.23	U	< 0.17	0.17	U	< 0.064	0.064	U	< 0.066	0.066	U
MW-13	Event 10 2019 NovDec	11/18/2019	UG/L	< 2.0	2	UJ	< 0.19	0.19	UJ	< 0.16	0.16	UJ	< 5.0	5	UJ	< 0.074	0.074	UJ	< 0.050	0.05	UJ	< 0.24	0.24	UJ	< 0.17	0.17	UJ	< 0.065	0.065	U	< 0.068	0.068	UJ
MW-13	Event 11 2020 NovJan	11/22/2020	UG/L	NS			NS			NS			NS			NS			NS			NS			NS			< 0.066	0.066	UJ	NS		
MW-13	Event 11 2020 NovJan	1/18/2021	UG/L	< 1.9	1.9	U	< 0.18	0.18	U	< 0.15	0.15	U	**5.8**	4.7	J	< 0.070	0.07	U	< 0.047	0.047	U	< 0.23	0.23	U	< 0.16	0.16	U	NS			< 0.064	0.064	U
MW-13	Event 13 2021 Apr	4/5/2021	UG/L	NS			NS			NS			< 6.0	6	U	NS			NS			NS			NS			NS			NS		
MW-15	Event 10 2019 NovDec	12/16/2019	UG/L	< 2.1	2.1	U	< 0.20	0.2	U	< 0.17	0.17	U	**6.4**	5.2	J	< 0.077	0.077	U	< 0.052	0.052	U	< 0.25	0.25	U	< 0.18	0.18	U	< 0.065	0.065	U	< 0.071	0.071	U
MW-15	Event 11 2020 NovJan	12/14/2020	UG/L	< 2.0	2	U	< 0.19	0.19	U	< 0.16	0.16	U	< 4.9	4.9	U	< 0.072	0.072	U	**0.18**	0.049	J	< 0.23	0.23	U	< 0.17	0.17	U	< 0.064	0.064	U	< 0.066	0.066	U
MW-15	Event 12 2021 Jan	1/25/2021	UG/L	< 1.9	1.9	U	< 0.19	0.19	U	< 0.16	0.16	U	< 4.9	4.9	U	< 0.072	0.072	U	< 0.049	0.049	U	< 0.23	0.23	U	< 0.17	0.17	U	< 0.065	0.065	U	< 0.066	0.066	U
MW-16	Event 10 2019 NovDec	12/11/2019	UG/L	< 2.0	2	U	< 0.19	0.19	U	< 0.16	0.16	U	< 4.9	4.9	U	< 0.072	0.072	U	< 0.049	0.049	U	< 0.23	0.23	U	< 0.17	0.17	U	< 0.063	0.063	U	< 0.066	0.066	U
MW-16	Event 11 2020 NovJan	12/14/2020	UG/L	< 2.0	2	U	< 0.19	0.19	U	< 0.16	0.16	U	< 4.9	4.9	U	< 0.072	0.072	U	< 0.049	0.049	U	< 0.24	0.24	U	< 0.17	0.17	U	< 0.064	0.064	U	< 0.067	0.067	U
MW-16	Event 12 2021 Jan	1/25/2021	UG/L	< 2.0	2	U	< 0.19	0.19	U	< 0.16	0.16	U	< 4.9	4.9	U	< 0.072	0.072	U	< 0.049	0.049	U	< 0.24	0.24	U	< 0.17	0.17	U	< 0.065	0.065	U	< 0.067	0.067	U

Footnotes and Abbreviations:

Green shade GWPS is MCL. Blue Shade GWPS is RSL.

U or < = Result was not detected

J = Result is estimated

R = Data were rejected during the validation process but are considered usable base

NS = Not sampled

UG/L - micrograms per liter

Grey shaded cells represent the background data set that was used to develop the st

Non-parametric prediction limits were used when non-detects represented greater th

Detections are bolded and purple shaded cells are above the groundwater protection

Confidence limits were not generated for organic compounds since they are assumed

ATTACHMENT C-4

SEMIVOLATILE ORGANIC COMPOUNDS

			Analytes	Indeno(1,2,3-c,d)pyrene			Methyl methanesulfonate			Naphthalene			Phenanthrene			Pyrene		
Groundwater Protection Standard (GWPS ug/l):				25			79			12			800			120		
				RSL			RSL			RSL			RSL			RSL		
Well ID	Sampling Event	Date	Unit	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual
			Number of data points	10			10			10			10			10		
			Percent Non-detect	100			100			100			100			100		
			Interwell Prediction Limit	0.021			0.1			0.0125			0.0135			0.0165		
			Confidence Level	Not calculated			Not calculated			Not calculated			Not calculated			Not calculated		
MW-1C	Event 01 2017 Nov	11/5/2017	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-1C	Event 02 2017 Dec	12/18/2017	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-1C	Event 03 2018 JanFeb	2/4/2018	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-1C	Event 04 2018 Mar	3/12/2018	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-1C	Event 05 2018 Oct	10/30/2018	UG/L	< 0.045	0.045	U	< 0.22	0.22	U	< 0.099	0.099	U	< 0.038	0.038	U	< 0.042	0.042	U
MW-1C	Event 06 2019 Jan	1/14/2019	UG/L	< 0.045	0.045	U	< 0.22	0.22	UJ	< 0.099	0.099	U	< 0.038	0.038	U	< 0.042	0.042	U
MW-1C	Event 07 2019 Mar	3/27/2019	UG/L	< 0.043	0.043	U	< 0.21	0.21	U	< 0.094	0.094	U	< 0.036	0.036	U	< 0.040	0.04	U
MW-1C	Event 08 2019 MayJun	6/3/2019	UG/L	< 0.047	0.047	U	< 0.23	0.23	U	< 0.10	0.1	U	< 0.040	0.04	U	< 0.044	0.044	UJ
MW-1C	Event 09 2019 Sept	9/10/2019	UG/L	< 0.047	0.047	UJ	< 0.21	0.21	U	< 0.093	0.093	U	< 0.036	0.036	U	< 0.040	0.04	U
MW-1C	Event 10 2019 NovDec	11/13/2019	UG/L	< 0.042	0.042	UJ	< 0.20	0.2	UJ	< 0.092	0.092	UJ	< 0.035	0.035	UJ	< 0.039	0.039	UJ
MW-1C	Event 11 2020 NovJan	11/22/2020	UG/L	NS			NS			NS			NS			NS		
MW-1C	Event 11 2020 NovJan	1/18/2021	UG/L	< 0.040	0.04	U	< 0.20	0.2	U	< 0.088	0.088	U	< 0.034	0.034	U	0.054	0.038	J
MW-2A	Event 01 2017 Nov	11/2/2017	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-2A	Event 05 2018 Oct	11/6/2018	UG/L	**0.19**	0.045	J	< 0.22	0.22	U	< 0.098	0.098	U	< 0.038	0.038	U	**0.14**	0.042	J
MW-2A	Event 09 2019 Sept	9/18/2019	UG/L	**0.18**	0.044	J	< 0.21	0.21	U	**0.26**	0.095		**0.06**	0.037	J	< 0.041	0.041	U
MW-2A	Event 10 2019 NovDec	11/18/2019	UG/L	< 0.042	0.042	UJ	< 0.21	0.21	UJ	< 0.093	0.093	UJ	< 0.035	0.035	UJ	< 0.039	0.039	UJ
MW-2A	Event 11 2020 NovJan	12/13/2020	UG/L	< 0.042	0.042	U	< 0.20	0.2	U	< 0.091	0.091	U	< 0.035	0.035	U	< 0.039	0.039	U
MW-14	Event 10 2019 NovDec	12/22/2019	UG/L	< 0.043	0.043	U	< 0.21	0.21	U	< 0.094	0.094	U	< 0.036	0.036	U	< 0.040	0.04	U
MW-14	Event 11 2020 NovJan	11/22/2020	UG/L	NS			NS			NS			NS			NS		
MW-14	Event 11 2020 NovJan	1/4/2021	UG/L	< 0.040	0.04	U	< 0.19	0.19	U	< 0.087	0.087	U	< 0.033	0.033	U	< 0.037	0.037	U
MW-14	Event 12 2021 Jan	1/25/2021	UG/L	< 0.040	0.04	U	< 0.20	0.2	U	< 0.088	0.088	U	< 0.034	0.034	U	< 0.038	0.038	U
MW-5A	Event 01 2017 Nov	11/12/2017	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-5A	Event 02 2017 Dec	12/19/2017	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-5A	Event 03 2018 JanFeb	1/31/2018	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	**0.05**	0.025	J-	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-5A	Event 04 2018 Mar	3/13/2018	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-5A	Event 05 2018 Oct	11/13/2018	UG/L	< 0.045	0.045	U	< 0.22	0.22	UJ	< 0.099	0.099	U	< 0.038	0.038	U	< 0.042	0.042	U
MW-5A	Event 06 2019 Jan	1/22/2019	UG/L	< 0.050	0.05	U	< 0.24	0.24	U	< 0.11	0.11	U	< 0.042	0.042	U	< 0.046	0.046	U
MW-5A	Event 07 2019 Mar	3/25/2019	UG/L	< 0.044	0.044	U	< 0.21	0.21	U	< 0.096	0.096	U	< 0.037	0.037	U	< 0.041	0.041	U
MW-5A	Event 08 2019 MayJun	6/18/2019	UG/L	< 0.050	0.05	U	< 0.24	0.24	U	< 0.11	0.11	U	< 0.042	0.042	U	< 0.046	0.046	U
MW-5A	Event 09 2019 Sept	9/24/2019	UG/L	< 0.044	0.044	UJ	< 0.26	0.26	UJ	< 0.097	0.097	UJ	< 0.037	0.037	UJ	< 0.041	0.041	UJ
MW-5A	Event 10 2019 NovDec	12/4/2019	UG/L	< 0.042	0.042	U	< 0.21	0.21	U	< 0.092	0.092	U	< 0.035	0.035	U	< 0.039	0.039	U
MW-5A	Event 11 2020 NovJan	12/15/2020	UG/L	< 0.042	0.042	U	< 0.20	0.2	U	< 0.091	0.091	U	< 0.035	0.035	U	< 0.039	0.039	U
MW-6	Event 01 2017 Nov	11/8/2017	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-6	Event 02 2017 Dec	12/19/2017	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-6	Event 03 2018 JanFeb	2/4/2018	UG/L	< 0.036	0.036	UJ	< 0.42	0.42	UJ	< 0.021	0.021	UJ	< 0.023	0.023	UJ	< 0.028	0.028	UJ
MW-6	Event 05 2018 Oct	11/13/2018	UG/L	< 0.047	0.047	U	< 0.23	0.23	UJ	< 0.10	0.1	U	< 0.040	0.04	U	< 0.044	0.044	U
MW-6	Event 06 2019 Jan	1/23/2019	UG/L	< 0.048	0.048	U	< 0.23	0.23	U	< 0.10	0.1	U	< 0.040	0.04	U	< 0.044	0.044	U
MW-6	Event 07 2019 Mar	3/25/2019	UG/L	**0.065**	0.045	J	< 0.22	0.22	U	< 0.099	0.099	U	< 0.038	0.038	U	< 0.042	0.042	U
MW-6	Event 09 2019 Sept	9/24/2019	UG/L	< 0.044	0.044	UJ	< 0.26	0.26	UJ	< 0.096	0.096	UJ	< 0.037	0.037	UJ	< 0.041	0.041	UJ
MW-6	Event 10 2019 NovDec	12/4/2019	UG/L	< 0.042	0.042	U	< 0.21	0.21	U	< 0.093	0.093	U	< 0.035	0.035	U	< 0.039	0.039	U
MW-6	Event 11 2020 NovJan	12/14/2020	UG/L	**0.054**	0.041	J	< 0.20	0.2	U	< 0.089	0.089	U	< 0.034	0.034	U	< 0.038	0.038	U
MW-9	Event 01 2017 Nov	11/6/2017	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	**0.08**	0.025	J-	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-9	Event 02 2017 Dec	12/20/2017	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-9	Event 03 2018 JanFeb	2/4/2018	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-9	Event 04 2018 Mar	3/13/2018	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-9	Event 05 2018 Oct	11/7/2018	UG/L	**0.042**	0.01	J	< 0.051	0.051	U	< 0.023	0.023	U	< 0.0087	0.0087	U	**0.016**	0.0097	J
MW-9	Event 06 2019 Jan	1/21/2019	UG/L	< 0.046	0.046	U	< 0.23	0.23	UJ	< 0.10	0.1	U	< 0.039	0.039	U	< 0.043	0.043	U
MW-9	Event 07 2019 Mar	3/24/2019	UG/L	**0.09**	0.045	J	< 0.22	0.22	U	< 0.099	0.099	U	< 0.038	0.038	U	< 0.042	0.042	U
MW-9	Event 08 2019 MayJun	6/10/2019	UG/L	< 0.054	0.054	UJ	< 0.26	0.26	UJ	< 0.12	0.12	UJ	< 0.045	0.045	UJ	< 0.050	0.05	UJ
MW-9	Event 09 2019 Sept	9/18/2019	UG/L	< 0.042	0.042	U	< 0.21	0.21	U	< 0.092	0.092	U	< 0.035	0.035	U	< 0.039	0.039	U
MW-9	Event 10 2019 NovDec	11/20/2019	UG/L	< 0.041	0.041	U	< 0.20	0.2	U	< 0.090	0.09	U	< 0.034	0.034	U	< 0.038	0.038	U
MW-9	Event 11 2020 NovJan	12/13/2020	UG/L	< 0.041	0.041	U	< 0.20	0.2	U	< 0.089	0.089	U	< 0.034	0.034	U	< 0.038	0.038	U

ATTACHMENT C-4
SEMIVOLATILE ORGANIC COMPOUNDS

			Analytes	Indeno(1,2,3-c,d)pyrene			Methyl methanesulfonate			Naphthalene			Phenanthrene			Pyrene		
Groundwater Protection Standard (GWPS ug/l):				25			79			12			800			120		
				RSL			RSL			RSL			RSL			RSL		
Well ID	Sampling Event	Date	Unit	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual
MW-10	Event 01 2017 Nov	11/14/2017	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-10	Event 02 2017 Dec	12/20/2017	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-10	Event 03 2018 JanFeb	2/5/2018	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-10	Event 05 2018 Oct	11/12/2018	UG/L	< 0.046	0.046	U	< 0.22	0.22	UJ	< 0.10	0.1	U	< 0.038	0.038	U	< 0.042	0.042	U
MW-10	Event 06 2019 Jan	1/21/2019	UG/L	< 0.047	0.047	U	< 0.23	0.23	UJ	< 0.10	0.1	U	< 0.039	0.039	U	< 0.043	0.043	U
MW-10	Event 07 2019 Mar	3/24/2019	UG/L	< 0.054	0.054	U	< 0.26	0.26	U	< 0.12	0.12	U	< 0.045	0.045	U	< 0.050	0.05	U
MW-10	Event 08 2019 MayJun	6/12/2019	UG/L	< 0.045	0.045	U	< 0.22	0.22	U	< 0.098	0.098	U	< 0.038	0.038	U	< 0.042	0.042	U
MW-10	Event 09 2019 Sept	9/23/2019	UG/L	< 0.042	0.042	U	< 0.21	0.21	U	< 0.092	0.092	U	< 0.035	0.035	U	< 0.039	0.039	U
MW-10	Event 10 2019 NovDec	12/2/2019	UG/L	< 0.043	0.043	U	< 0.21	0.21	U	< 0.094	0.094	U	< 0.036	0.036	U	< 0.040	0.04	U
MW-10	Event 11 2020 NovJan	12/13/2020	UG/L	< 0.042	0.042	U	< 0.20	0.2	U	< 0.091	0.091	U	< 0.035	0.035	U	< 0.039	0.039	U
MW-10	Event 13 2021 Apr	4/5/2021	UG/L	NS			NS			NS			NS			NS		
MW-11R	Event 10 2019 NovDec	12/22/2019	UG/L	< 0.042	0.042	U	< 0.20	0.2	U	< 0.091	0.091	U	< 0.035	0.035	U	< 0.039	0.039	U
MW-11R	Event 11 2020 NovJan	12/14/2020	UG/L	< 0.042	0.042	U	< 0.21	0.21	U	< 0.093	0.093	U	< 0.036	0.036	U	< 0.039	0.039	U
MW-11R	Event 12 2021 Jan	1/25/2021	UG/L	< 0.040	0.04	U	< 0.19	0.19	U	< 0.087	0.087	U	< 0.033	0.033	U	< 0.037	0.037	U
MW-11R	Event 13 2021 Apr	4/14/2021	UG/L	< 0.045	0.045	U	NS			< 0.099	0.099	U	< 0.038	0.038	U	**0.043**	0.042	J
MW-12	Event 01 2017 Nov	11/12/2017	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-12	Event 02 2017 Dec	12/19/2017	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-12	Event 03 2018 JanFeb	2/4/2018	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-12	Event 04 2018 Mar	3/14/2018	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-12	Event 05 2018 Oct	11/12/2018	UG/L	< 0.046	0.046	U	< 0.23	0.23	UJ	< 0.10	0.1	U	< 0.039	0.039	U	< 0.043	0.043	U
MW-12	Event 06 2019 Jan	1/16/2019	UG/L	< 0.046	0.046	U	< 0.22	0.22	UJ	< 0.10	0.1	U	< 0.038	0.038	U	< 0.043	0.043	U
MW-12	Event 07 2019 Mar	3/24/2019	UG/L	**0.056**	0.034	J	< 0.17	0.17	U	< 0.075	0.075	U	< 0.029	0.029	U	< 0.032	0.032	U
MW-12	Event 08 2019 MayJun	6/5/2019	UG/L	< 0.041	0.041	U	< 0.20	0.2	U	< 0.089	0.089	U	< 0.034	0.034	U	< 0.038	0.038	U
MW-12	Event 09 2019 Sept	9/18/2019	UG/L	< 0.042	0.042	U	< 0.21	0.21	U	**0.22**	0.092		< 0.035	0.035	U	< 0.039	0.039	U
MW-12	Event 10 2019 NovDec	11/20/2019	UG/L	< 0.042	0.042	U	< 0.21	0.21	U	< 0.092	0.092	U	< 0.035	0.035	U	< 0.039	0.039	U
MW-12	Event 11 2020 NovJan	12/13/2020	UG/L	< 0.040	0.04	U	< 0.20	0.2	U	< 0.088	0.088	U	< 0.034	0.034	U	< 0.038	0.038	U
MW-12	Event 13 2021 Apr	4/14/2021	UG/L	NS			NS			NS			NS			NS		
MW-13	Event 01 2017 Nov	11/13/2017	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-13	Event 02 2017 Dec	12/19/2017	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-13	Event 03 2018 JanFeb	1/31/2018	UG/L	< 0.043	0.043	UJ	< 4.2	4.2	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-13	Event 04 2018 Mar	3/14/2018	UG/L	< 0.043	0.043	UJ	< 0.42	0.42	UJ	< 0.025	0.025	UJ	< 0.027	0.027	UJ	< 0.033	0.033	UJ
MW-13	Event 05 2018 Oct	11/6/2018	UG/L	**0.2**	0.044	J	< 0.22	0.22	U	< 0.097	0.097	U	**0.1**	0.037	J	**0.24**	0.041	
MW-13	Event 06 2019 Jan	1/14/2019	UG/L	< 0.044	0.044	U	< 0.21	0.21	UJ	< 0.096	0.096	U	< 0.037	0.037	U	< 0.041	0.041	U
MW-13	Event 07 2019 Mar	3/27/2019	UG/L	< 0.044	0.044	U	**0.4**	0.21	J	< 0.096	0.096	U	< 0.037	0.037	U	< 0.041	0.041	U
MW-13	Event 08 2019 MayJun	6/3/2019	UG/L	< 0.046	0.046	U	< 0.23	0.23	U	< 0.10	0.1	U	< 0.039	0.039	U	< 0.043	0.043	UJ
MW-13	Event 09 2019 Sept	9/10/2019	UG/L	< 0.042	0.042	U	< 0.20	0.2	U	< 0.091	0.091	U	< 0.035	0.035	U	< 0.039	0.039	U
MW-13	Event 10 2019 NovDec	11/18/2019	UG/L	< 0.043	0.043	UJ	< 0.21	0.21	UJ	< 0.093	0.093	UJ	< 0.036	0.036	UJ	< 0.040	0.04	UJ
MW-13	Event 11 2020 NovJan	11/22/2020	UG/L	NS			NS			NS			NS			NS		
MW-13	Event 11 2020 NovJan	1/18/2021	UG/L	< 0.041	0.041	U	< 0.20	0.2	U	< 0.089	0.089	U	**0.12**	0.034	J	< 0.038	0.038	U
MW-13	Event 13 2021 Apr	4/5/2021	UG/L	NS			NS			NS			NS			NS		
MW-15	Event 10 2019 NovDec	12/16/2019	UG/L	< 0.045	0.045	U	< 0.22	0.22	U	< 0.098	0.098	U	< 0.037	0.037	U	< 0.042	0.042	U
MW-15	Event 11 2020 NovJan	12/14/2020	UG/L	**0.051**	0.042	J	< 0.20	0.2	U	< 0.092	0.092	U	< 0.035	0.035	U	< 0.039	0.039	U
MW-15	Event 12 2021 Jan	1/25/2021	UG/L	< 0.042	0.042	U	< 0.20	0.2	U	< 0.092	0.092	U	< 0.035	0.035	U	< 0.039	0.039	U
MW-16	Event 10 2019 NovDec	12/11/2019	UG/L	< 0.042	0.042	U	< 0.21	0.21	U	< 0.092	0.092	U	< 0.035	0.035	U	< 0.039	0.039	U
MW-16	Event 11 2020 NovJan	12/14/2020	UG/L	< 0.042	0.042	U	< 0.21	0.21	U	< 0.092	0.092	U	< 0.035	0.035	U	< 0.039	0.039	U
MW-16	Event 12 2021 Jan	1/25/2021	UG/L	< 0.042	0.042	U	< 0.21	0.21	U	< 0.092	0.092	U	< 0.035	0.035	U	< 0.039	0.039	U

Footnotes and Abbreviations:

Green shade GWPS is MCL. Blue Shade GWPS is RSL.

U or < = Result was not detected

J = Result is estimated

R = Data were rejected during the validation process but are considered usable base

NS = Not sampled

UG/L - micrograms per liter

Grey shaded cells represent the background data set that was used to develop the st

Non-parametric prediction limits were used when non-detects represented greater th

Detections are bolded and purple shaded cells are above the groundwater protection

Confidence limits were not generated for organic compounds since they are assumed

ATTACHMENT C-5
VOLATILE ORGANIC COMPOUNDS

Analyte				1,4-Dioxane			Toluene			Acetone			Chlorobenzene		
Groundwater Protection Standard (GWPS ug/L):				46			1,000			14000			100		
				RSL			MCL			RSL			MCL		
Well ID	Sampling Event	Date	Unit	Result	MDL	Qualifier	Result	MDL	Qualifier						
Number of data points				5			10			10			10		
Percent Non-detect				100			90			100			90		
Interwell Prediction Limit				0.15			0.205			5			0.25		
Confidence Level				Not calculated			Not calculated			Not calculated			Not calculated		
MW-1C	Event 01 2017 Nov	11/5/2017	UG/L	NS			< 0.093	0.093	UJ	< 4.6	4.6	UJ	**0.39**	0.093	J-
MW-1C	Event 02 2017 Dec	12/18/2017	UG/L	NS			**0.15**	0.093	J-	< 4.6	4.6	UJ	**0.44**	0.093	J-
MW-1C	Event 03 2018 JanFeb	2/4/2018	UG/L	NS			< 0.093	0.093	UR	< 4.6	4.6	UR	**0.44**	0.093	J-
MW-1C	Event 04 2018 Mar	3/12/2018	UG/L	NS			< 0.093	0.093	UJ	< 4.6	4.6	UJ	**0.4**	0.093	J-
MW-1C	Event 05 2018 Oct	10/30/2018	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-1C	Event 06 2019 Jan	1/14/2019	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-1C	Event 07 2019 Mar	3/27/2019	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-1C	Event 08 2019 MayJun	6/3/2019	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-1C	Event 09 2019 Sept	9/10/2019	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	UJ	< 0.50	0.5	U
MW-1C	Event 10 2019 NovDec	11/13/2019	UG/L	< 0.11	0.11	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-1C	Event 11 2020 NovJan	1/4/2021	UG/L	< 0.27	0.27	U	< 0.24	0.24	U	< 8.0	8	U	**0.26**	0.18	J
MW-1C	Event 13 2021 Apr	4/2/2021	UG/L	< 0.27	0.27	U	< 0.24	0.24	UJ	< 8.0	8	UJ	< 0.18	0.18	UJ
MW-2A	Event 01 2017 Nov	11/2/2017	UG/L				< 0.093	0.093	UR	< 4.6	4.6	UR	< 0.093	0.093	UR
MW-2A	Event 05 2018 Oct	11/6/2018	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-2A	Event 09 2019 Sept	9/18/2019	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-2A	Event 10 2019 NovDec	11/18/2019	UG/L	< 0.11	0.11	U	**6**	4.1	J	< 100	100	U	< 5.0	5	U
MW-2A	Event 11 2020 NovJan	12/13/2020	UG/L	**0.35**	0.27	J	< 0.24	0.24	U	< 8.0	8	U	< 0.18	0.18	U
MW-14	Event 10 2019 NovDec	12/22/2019	UG/L	**2.2**	0.3		< 0.41	0.41	U	**75**	10		< 0.50	0.5	U
MW-14	Event 11 2020 NovJan	1/4/2021	UG/L	< 0.27	0.27	U	< 0.24	0.24	U	< 8.0	8	U	< 0.18	0.18	U
MW-14	Event 12 2021 Jan	1/25/2021	UG/L	**2.9**	0.27		< 0.24	0.24	U	< 8.0	8	U	< 0.18	0.18	U
MW-14	Event 13 2021 Apr	4/2/2021	UG/L	**7.5**	0.27		< 0.24	0.24	U	< 8.0	8	U	< 0.18	0.18	U
MW-5A	Event 01 2017 Nov	11/12/2017	UG/L				< 0.093	0.093	UR	< 4.6	4.6	UR	< 0.093	0.093	UR
MW-5A	Event 02 2017 Dec	12/19/2017	UG/L				< 0.093	0.093	UJ	< 4.6	4.6	UJ	< 0.093	0.093	UJ
MW-5A	Event 03 2018 JanFeb	1/31/2018	UG/L				< 0.093	0.093	UR	< 4.6	4.6	UR	< 0.093	0.093	UR
MW-5A	Event 04 2018 Mar	3/13/2018	UG/L				< 0.093	0.093	UJ	< 4.6	4.6	UJ	< 0.093	0.093	UJ
MW-5A	Event 05 2018 Oct	11/13/2018	UG/L	**1.4**	0.3		< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-5A	Event 06 2019 Jan	1/22/2019	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-5A	Event 07 2019 Mar	3/25/2019	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-5A	Event 08 2019 MayJun	6/18/2019	UG/L	**0.56**	0.3	J	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-5A	Event 09 2019 Sept	9/24/2019	UG/L	**1.5**	0.3	J	< 0.41	0.41	UJ	< 10	10	UJ	< 0.50	0.5	UJ
MW-5A	Event 10 2019 NovDec	12/4/2019	UG/L	**1.3**	0.11		< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-5A	Event 11 2020 NovJan	12/15/2020	UG/L	**1.5**	0.27		< 0.24	0.24	U	< 8.0	8	U	< 0.18	0.18	U
MW-6	Event 01 2017 Nov	11/8/2017	UG/L				< 0.093	0.093	UJ	< 4.6	4.6	UJ	< 0.093	0.093	UJ
MW-6	Event 02 2017 Dec	12/19/2017	UG/L				< 0.093	0.093	UJ	< 4.6	4.6	UJ	< 0.093	0.093	UJ
MW-6	Event 03 2018 JanFeb	2/4/2018	UG/L				< 0.093	0.093	UR	< 4.6	4.6	UR	< 0.093	0.093	UR
MW-6	Event 05 2018 Oct	11/13/2018	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-6	Event 06 2019 Jan	1/23/2019	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-6	Event 07 2019 Mar	3/25/2019	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-6	Event 09 2019 Sept	9/24/2019	UG/L	**0.61**	0.3	J	< 0.41	0.41	UJ	< 10	10	UJ	< 0.50	0.5	UJ
MW-6	Event 10 2019 NovDec	12/4/2019	UG/L	**0.17**	0.11	J	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-6	Event 11 2020 NovJan	12/14/2020	UG/L	< 0.42	0.42	UJ	< 0.24	0.24	U	< 8.0	8	U	< 0.18	0.18	U
MW-9	Event 01 2017 Nov	11/6/2017	UG/L				< 0.093	0.093	UJ	< 4.6	4.6	UJ	0.22	0.093	J-
MW-9	Event 02 2017 Dec	12/20/2017	UG/L				< 0.093	0.093	U	< 4.6	4.6	U	< 0.093	0.093	U
MW-9	Event 03 2018 JanFeb	2/4/2018	UG/L				< 0.093	0.093	UR	< 4.6	4.6	UR	< 0.093	0.093	UR
MW-9	Event 04 2018 Mar	3/13/2018	UG/L				< 0.093	0.093	UJ	< 4.6	4.6	UJ	< 0.093	0.093	UJ
MW-9	Event 05 2018 Oct	11/7/2018	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-9	Event 06 2019 Jan	1/21/2019	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-9	Event 07 2019 Mar	3/24/2019	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-9	Event 08 2019 MayJun	6/10/2019	UG/L	< 0.30	0.3	UJ	< 0.41	0.41	UJ	< 10	10	UJ	< 0.50	0.5	UJ
MW-9	Event 09 2019 Sept	9/18/2019	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	UJ	< 0.50	0.5	U
MW-9	Event 10 2019 NovDec	11/20/2019	UG/L	**0.49**	0.11		< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-9	Event 11 2020 NovJan	12/13/2020	UG/L	**0.4**	0.27	J	< 0.24	0.24	U	< 8.0	8	U	< 0.18	0.18	U
MW-9	Event 13 2021 Apr	4/5/2021	UG/L	< 0.80	0.8	UJ	< 0.24	0.24	U	< 8.0	8	U	< 0.18	0.18	U

ATTACHMENT C-5
VOLATILE ORGANIC COMPOUNDS

			Analyte	1,4-Dioxane			Toluene			Acetone			Chlorobenzene		
			Groundwater Protection Standard (GWPS ug/L):	46			1,000			14000			100		
				RSL			MCL			RSL			MCL		
Well ID	Sampling Event	Date	Unit	Result	MDL	Qualifier	Result	MDL	Qualifier						
			Number of data points	5			10			10			10		
			Percent Non-detect	100			90			100			90		
			Interwell Prediction Limit	0.15			0.205			5			0.25		
			Confidence Level	Not calculated			Not calculated			Not calculated			Not calculated		
MW-10	Event 01 2017 Nov	11/14/2017	UG/L				< 0.093	0.093	UR	< 4.6	4.6	UR	< 0.093	0.093	UR
MW-10	Event 02 2017 Dec	12/20/2017	UG/L				< 0.093	0.093	U	< 4.6	4.6	U	< 0.093	0.093	U
MW-10	Event 03 2018 JanFeb	2/5/2018	UG/L				< 0.093	0.093	UJ	< 4.6	4.6	UJ	< 0.093	0.093	UJ
MW-10	Event 05 2018 Oct	11/12/2018	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-10	Event 06 2019 Jan	1/21/2019	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-10	Event 07 2019 Mar	3/24/2019	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-10	Event 08 2019 MayJun	6/12/2019	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	UJ	< 0.50	0.5	U
MW-10	Event 09 2019 Sept	9/23/2019	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-10	Event 10 2019 NovDec	12/2/2019	UG/L	< 0.21	0.21	UJ	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-10	Event 11 2020 NovJan	12/13/2020	UG/L	< 0.27	0.27	U	< 0.24	0.24	U	< 8.0	8	U	< 0.18	0.18	U
MW-10	Event 13 2021 Apr	4/5/2021	UG/L	< 0.27	0.27	U	< 0.24	0.24	U	< 8.0	8	U	< 0.18	0.18	U
MW-11R	Event 10 2019 NovDec	12/22/2019	UG/L	**9.3**	0.3		< 0.41	0.41	U	**13**	10	J	< 0.50	0.5	U
MW-11R	Event 11 2020 NovJan	12/14/2020	UG/L	**12**	0.27		< 0.24	0.24	U	< 8.0	8	U	**0.82**	0.18	J
MW-11R	Event 12 2021 Jan	1/25/2021	UG/L	**9.1**	0.27		< 0.24	0.24	U	< 8.0	8	U	< 0.18	0.18	U
MW-11R	Event 13 2021 Apr	4/14/2021	UG/L	**9.4**	0.27		< 0.24	0.24	U	< 8.0	8	U	**0.8**	0.18	J
MW-12	Event 01 2017 Nov	11/12/2017	UG/L				< 0.093	0.093	UR	< 4.6	4.6	UR	< 0.093	0.093	UR
MW-12	Event 02 2017 Dec	12/19/2017	UG/L				< 0.093	0.093	UJ	< 4.6	4.6	UJ	< 0.093	0.093	UJ
MW-12	Event 03 2018 JanFeb	2/4/2018	UG/L				< 0.093	0.093	UR	< 4.6	4.6	UR	< 0.093	0.093	UR
MW-12	Event 04 2018 Mar	3/14/2018	UG/L				< 0.093	0.093	U	< 4.6	4.6	U	< 0.093	0.093	U
MW-12	Event 05 2018 Oct	11/12/2018	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-12	Event 06 2019 Jan	1/16/2019	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-12	Event 07 2019 Mar	3/24/2019	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-12	Event 08 2019 MayJun	6/5/2019	UG/L	**0.72**	0.3	J	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-12	Event 09 2019 Sept	9/18/2019	UG/L	**1.4**	0.3		< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-12	Event 10 2019 NovDec	11/20/2019	UG/L	**0.55**	0.11		< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-12	Event 11 2020 NovJan	12/13/2020	UG/L	**0.74**	0.27	J	< 0.24	0.24	U	< 8.0	8	U	< 0.18	0.18	U
MW-12	Event 13 2021 Apr	4/14/2021	UG/L	**1**	0.27	J	< 0.24	0.24	U	< 8.0	8	U	< 0.18	0.18	U
MW-13	Event 01 2017 Nov	11/13/2017	UG/L				**1**	0.093	J-	< 4.6	4.6	UR	< 0.093	0.093	UR
MW-13	Event 02 2017 Dec	12/19/2017	UG/L				< 0.093	0.093	UJ	< 4.6	4.6	UJ	< 0.093	0.093	UJ
MW-13	Event 03 2018 JanFeb	1/31/2018	UG/L				< 0.093	0.093	UR	< 4.6	4.6	UR	< 0.093	0.093	UR
MW-13	Event 04 2018 Mar	4/12/2018	UG/L				< 0.093	0.093	UJ	< 4.6	4.6	UJ	< 0.093	0.093	UJ
MW-13	Event 05 2018 Oct	11/6/2018	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-13	Event 06 2019 Jan	1/14/2019	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-13	Event 07 2019 Mar	3/27/2019	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	UJ	< 0.50	0.5	U
MW-13	Event 08 2019 MayJun	6/3/2019	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	UJ	< 0.50	0.5	U
MW-13	Event 09 2019 Sept	9/10/2019	UG/L	< 0.30	0.3	U	< 0.41	0.41	U	< 10	10	U	< 0.50	0.5	U
MW-13	Event 10 2019 NovDec	11/18/2019	UG/L	< 0.11	0.11	U	**0.87**	0.41	J	< 10	10	U	< 0.50	0.5	U
MW-13	Event 11 2020 NovJan	1/4/2021	UG/L	< 0.27	0.27	U	< 0.24	0.24	U	< 8.0	8	U	< 0.18	0.18	U
MW-13	Event 13 2021 Apr	4/5/2021	UG/L	< 0.42	0.42	UJ	< 0.24	0.24	U	< 8.0	8	U	< 0.18	0.18	U
MW-15	Event 10 2019 NovDec	12/16/2019	UG/L	**42**	0.3		< 0.82	0.82	U	**2000**	20		< 1.0	1	U
MW-15	Event 11 2020 NovJan	12/14/2020	UG/L	**19**	0.27		< 0.24	0.24	U	< 8.0	8	U	< 0.18	0.18	U
MW-15	Event 12 2021 Jan	1/25/2021	UG/L	**21**	0.27		< 0.24	0.24	U	**300**	8	J	< 0.18	0.18	U
MW-16	Event 10 2019 NovDec	12/11/2019	UG/L	**3.1**	0.3		< 0.41	0.41	U	**12**	10	J	< 0.50	0.5	U
MW-16	Event 11 2020 NovJan	12/14/2020	UG/L	< 3.6	3.6	UJ	< 0.24	0.24	U	< 8.0	8	U	< 0.18	0.18	U
MW-16	Event 12 2021 Jan	1/25/2021	UG/L	**3.7**	0.27		< 0.24	0.24	U	< 8.0	8	U	< 0.18	0.18	U

Footnotes and Abbreviations:

Green shade GWPS is MCL. Blue Shade GWPS is RSL.

U or < = Result was not detected

J = Result is estimated

R = Data were rejected during the validation process but are considered usable based on the Validator's professional judgement

NS = Not sampled

UG/L - micrograms per liter

Grey shaded cells represent the background data set that was used to develop the statistical limit for comparisons.

Non-parametric prediction limits were used when non-detects represented greater than 50% of the data set.

Detections are bolded and purple shaded cells are above the groundwater protection standard (background) indicated in the table.

ATTACHMENT C-6
METALS

			Analyte	Aluminum			Antimony			Arsenic			Barium			Cadmium			Chromium			Chromium, Hexavalent			Cobalt			Copper			Iron		
			Groundwater Protection Standard (GWPS)	20000/500-200			6			10			2000			5			100			3.5			11.9			1300			14000/300		
				RSL/SM			MCL			MCL			MCL			MCL			MCL			RSL			Background			MCL			RSL/SMCL		
Well	Event	Date	Unit	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual
			Number of data points	10			10			10			10			10			10			10			10			10			10		
			Percent Non-detect	70			100			60			10			100			50			100			10			80			0		
			Interwell Prediction Limit	6.2			0.0005			0.0048			0.3432			0.000075			0.016			0.0001			0.01188			0.031			8.086		
			Confidence Level	0.9899			0.9899			0.9899			0.9899			0.9899			0.9899			0.9899			0.9899			0.9899			0.9899		
MW-1C	Event 01 2017 Nov	11/5/2017	ug/L	< 26	26	U	< 5	5	U	< 7.8	7.8	U	10	3.5		< 1.1	1.1	U	2.1	1.2	J	< 0.031	0.031	U	7.5	1.8	J	< 1.2	1.2	U	180	30	J
MW-1C	Event 02 2017 Dec	12/18/2017	ug/L	63	26		< 5	5	U	< 7.8	7.8	U	8.2	3.5	J	< 1.1	1.1	U	< 1.2	1.2	U	< 0.031	0.031	U	7.2	1.8	J	31	1.2		600	30	
MW-1C	Event 03 2018 JanFeb	2/4/2018	ug/L	< 26	26	U	< 5	5	U	< 7.8	7.8	U	7.4	3.5	J	< 1.1	1.1	U	< 1.2	1.2	U	< 0.031	0.031	U	6.1	1.8	J	< 1.2	1.2	U	1500	30	
MW-1C	Event 04 2018 Mar	3/12/2018	ug/L	< 26	26	U	< 5	5	U	< 7.8	7.8	U	6.1	3.5	J	< 1.1	1.1	U	< 1.2	1.2	U	< 0.031	0.031	U	5.1	1.8	J	< 1.2	1.2	U	1800	30	
MW-1C	Event 05 2018 Oct	10/30/2018	ug/L	< 21	21	U	< 1.0	1	U	4.5	0.46		< 3.6	3.6	UJ	< 0.34	0.34	U	3.8	1.1		< 0.20	0.2	UJ	3.4	0.4		< 2.1	2.1	U	2400	53	
MW-1C	Event 06 2019 Jan	1/14/2019	ug/L	< 21	21	U	< 1.0	1	U	4.2	0.46		3.2	0.49		< 0.34	0.34	U	< 1.1	1.1	U	< 0.51	0.51	UJ	2.9	0.4		< 2.1	2.1	U	2700	53	
MW-1C	Event 07 2019 Mar	3/27/2019	ug/L	< 21	21	U	< 1.0	1	U	4.8	0.46		3.6	0.49		< 0.34	0.34	U	< 1.1	1.1	U	< 0.20	0.2	U	2.9	0.4		< 2.1	2.1	U	3000	53	
MW-1C	Event 08 2019 MayJun	6/3/2019	ug/L	< 18	18	U	< 0.50	0.5	U	4.6	1.5		4.4	0.61	J	< 0.15	0.15	U	< 1.6	1.6	U	< 0.20	0.2	U	3.2	0.12		< 1.7	1.7	U	3200	25	
MW-1C	Event 09 2019 Sept	9/10/2019	ug/L	< 18	18	U	< 0.50	0.5	U	5.4	1.5		3.8	0.61	J	< 0.15	0.15	U	< 1.6	1.6	U	< 0.20	0.2	U	3.1	0.12	J	< 1.7	1.7	U	3000	25	
MW-1C	Event 10 2019 NovDec	11/13/2019	ug/L	< 18	18	U	< 0.50	0.5	U	5.5	1.5		4	0.61	J	< 0.15	0.15	U	< 1.6	1.6	U	< 0.20	0.2	UR	3	0.12	J	< 1.7	1.7	U	2900	25	
MW-1C	Event 11 2020 NovJan	11/22/2020	ug/L	< 14	14	U	< 1.5	1.5	U	4.9	0.39		5	0.7		< 0.28	0.28	U	< 1.0	1	U	< 0.20	0.2	UJ	3.1	0.56		< 1.0	1	U	3000	79	
MW-1C	Event 13 2021 Apr	4/2/2021	ug/L	29	14		< 1.5	1.5	U	6.3	0.39	J	4.3	0.7		< 0.28	0.28	U	< 1.0	1	U	NS			3.2	0.56		< 1.0	1	U	3000	79	
MW-2A	Event 01 2017 Nov	11/2/2017	ug/L	110	26		< 5	5	U	< 7.8	7.8	U	7.8	3.5	J	< 1.1	1.1	U	3.4	1.2	J	< 0.031	0.031	U	< 1.8	1.8	U	< 1.2	1.2	U	87	30	
MW-2A	Event 05 2018 Oct	11/6/2018	ug/L	6200	21		< 1.0	1	U	< 0.46	0.46	U	120	0.49		< 0.34	0.34	U	16	1.1		< 0.20	0.2	U	5	0.4		6	2.1		5700	53	
MW-2A	Event 09 2019 Sept	9/18/2019	ug/L	29	18	J	< 0.50	0.5	U	< 1.5	1.5	U	9.6	0.61		< 0.15	0.15	U	< 1.6	1.6	U	< 0.20	0.2	U	< 0.12	0.12	U	1.8	1.7	J	< 26	26	UJ
MW-2A	Event 10 2019 NovDec	11/18/2019	ug/L	< 18	18	U	< 0.50	0.5	U	< 1.5	1.5	U	17	0.61		< 0.15	0.15	U	2.1	1.6	J	0.48	0.2	J	< 0.12	0.12	UJ	< 1.7	1.7	U	27	25	J
MW-2A	Event 11 2020 NovJan	12/13/2020	ug/L	< 14	14	U	< 1.5	1.5	U	< 0.39	0.39	U	14	0.7	J	< 0.28	0.28	U	< 1.0	1	U	< 0.20	0.2	U	< 0.56	0.56	U	< 1.0	1	U	< 79	79	U
MW-14	Event 10 2019 NovDec	12/22/2019	ug/L	< 18	18	U	< 0.50	0.5	U	1.6	1.5	J	5.6	0.61		< 0.15	0.15	U	< 1.6	1.6	U	< 0.20	0.2	U	1.3	0.12	J	< 1.7	1.7	U	180	25	
MW-14	Event 11 2020 NovJan	11/22/2020	ug/L	< 14	14	U	< 1.5	1.5	U	0.91	0.39	J	2.6	0.7		< 0.28	0.28	U	< 1.0	1	U	< 0.20	0.2	UJ	< 0.56	0.56	U	< 1.0	1	U	300	79	
MW-14	Event 12 2021 Jan	1/25/2021	ug/L	37000	14	J	< 1.5	1.5	U	12	0.39	J	75	0.7	J	< 0.28	0.28	U	72	1	J	< 0.20	0.2	UJ	22	0.56	J	53	1	J	35000	79	J
MW-14	Event 13 2021 Apr	4/2/2021	ug/L	650	14		< 1.5	1.5	U	16	0.39		3.5	0.7		< 0.28	0.28	U	2	1	J	NS			< 0.56	0.56	U	1.3	1	J	1700	79	
MW-5A	Event 01 2017 Nov	11/12/2017	ug/L	35	26	J	< 5	5	U	< 7.8	7.8	U	71	3.5		< 1.1	1.1	U	2.5	1.2	J	< 0.031	0.031	UR	1.9	1.8	J	< 1.2	1.2	U	170	30	
MW-5A	Event 02 2017 Dec	12/19/2017	ug/L	340	26	J+	< 5	5	U	8.2	7.8	J	58	3.5		< 1.1	1.1	U	< 1.2	1.2	U	< 0.031	0.031	U	2.6	1.8	J	55	1.2		600	30	
MW-5A	Event 03 2018 JanFeb	1/31/2018	ug/L	810	26	J	< 5	5	U	< 7.8	7.8	U	60	3.5		< 1.1	1.1	U	2.6	1.2	J	< 0.031	0.031	U	4.1	1.8	J	< 1.2	1.2	U	2800	30	J+
MW-5A	Event 04 2018 Mar	3/13/2018	ug/L	1300	26		< 5	5	U	< 7.8	7.8	U	61	3.5		< 1.1	1.1	U	4.1	1.2	J	< 0.031	0.031	U	3	1.8	J	< 1.2	1.2	U	2700	30	
MW-5A	Event 05 2018 Oct	11/13/2018	ug/L	1100	21	J	< 1.0	1	U	< 0.46	0.46	U	46	0.49		< 0.34	0.34	U	2.2	1.1	J	< 0.20	0.2	UJ	2.9	0.4		2.9	2.1		3200	53	
MW-5A	Event 06 2019 Jan	1/22/2019	ug/L	42	21		< 1.0	1	U	< 0.46	0.46	U	50	0.49		< 0.34	0.34	U	< 1.1	1.1	U	< 0.37	0.37	UJ	2.5	0.4		< 2.1	2.1	U	1800	53	
MW-5A	Event 07 2019 Mar	3/25/2019	ug/L	140	21		< 1.0	1	U	< 1.0	1	UJ	51	0.49		< 0.34	0.34	U	< 1.1	1.1	U	< 0.20	0.2	U	1.7	0.4	J	7.9	2.1		3100	53	
MW-5A	Event 08 2019 MayJun	6/18/2019	ug/L	35	18	J	< 0.50	0.5	U	< 1.5	1.5	U	59	0.61		< 0.15	0.15	U	< 1.6	1.6	U	< 0.20	0.2	U	1.9	0.12		2.5	1.7	J	350	25	
MW-5A	Event 09 2019 Sept	9/24/2019	ug/L	21	18	J	< 0.50	0.5	U	< 1.5	1.5	U	69	0.61		< 0.15	0.15	U	< 1.6	1.6	U	< 0.20	0.2	UJ	0.44	0.12	J	2.4	1.7	J	< 59	59	UJ
MW-5A	Event 10 2019 NovDec	12/4/2019	ug/L	22	18	J	< 0.50	0.5	U	< 1.5	1.5	U	42	0.61		< 0.15	0.15	U	1.6	1.6	J	< 0.20	0.2	U	0.72	0.12	J	< 1.7	1.7	U	100	25	
MW-5A	Event 11 2020 NovJan	12/15/2020	ug/L	45	14		< 1.5	1.5	U	< 0.39	0.39	U	42	0.7		< 0.28	0.28	U	< 1.0	1	U	< 0.20	0.2	U	0.61	0.56	J	1.6	1	J	< 79	79	U
MW-6	Event 01 2017 Nov	11/8/2017	ug/L	170	26		8.5	5	J	< 7.8	7.8	U	130	3.5		< 1.1	1.1	U	1.6	1.2	J	0.04	0.031	J-	< 1.8	1.8	U	< 1.2	1.2	U	190	30	
MW-6	Event 02 2017 Dec	12/19/2017	ug/L	< 26	26	U	< 5	5	U	8	7.8	J	130	3.5		< 1.1	1.1	U	< 1.2	1.2	U	< 0.031	0.031	U	2.8	1.8	J	40	1.2		110	30	
MW-6	Event 03 2018 JanFeb	2/4/2018	ug/L	66	26		< 5	5	U	< 7.8	7.8	U	140	3.5		< 1.1	1.1	U	< 1.2	1.2	U	< 0.031	0.031	U	2.3	1.8	J	< 1.2	1.2	U	120	30	
MW-6	Event 05 2018 Oct	11/13/2018	ug/L	7900	21	J	< 1.0	1	U	< 0.46	0.46	U	170	0.49		< 0.34	0.34	U	16	1.1		< 0.24	0.24	UJ	8.9	0.4		13	2.1		6400	53	
MW-6	Event 06 2019 Jan	1/23/2019	ug/L	74	21		< 1.0	1	U	< 0.46	0.46	U	140	0.49		< 0.34	0.34	U	< 1.1	1.1	U	< 0.39	0.39	UJ	2	0.4	J	< 2.1	2.1	U	64	53	J
MW-6	Event 07 2019 Mar	3/25/2019	ug/L	85	21		< 1.0	1	U	< 0.74	0.74	UJ	140	0.49		< 0.34	0.34	U	< 1.1	1.1	U	< 0.20	0.2	U	1.8	0.4	J	< 2.1	2.1	U	83	53	J
MW-6	Event 09 2019 Sept	9/24/2019	ug/L	45	18	J	< 0.50	0.5	U	< 1.5	1.5	U	160	0.61		< 0.15	0.15	U	< 1.6	1.6	U	< 0.20	0.2	UJ	0.61	0.12	J	< 1.7	1.7	U	< 28	28	UJ
MW-6	Event 10 2019 NovDec	12/4/2019	ug/L	99	18	J	< 0.50	0.5	U	< 1.5	1.5	U	170	0.61		< 0.15	0.15	U	1.6	1.6	J	< 0.20	0.2	U	0.77	0.12	J	< 1.7	1.7	U	91	25	J
MW-6	Event 11 2020 NovJan	12/14/2020	ug/L	100	14		< 1.5	1.5	U	< 0.39	0.39	U	160	0.7		< 0.28	0.28	U	< 1.0	1	U	< 0.20	0.2	U	0.61	0.56	J	1.4	1	J	< 79	79	U
MW-9	Event 01 2017 Nov	11/6/2017	ug/L	100	26		< 5	5	U	< 7.8	7.8	U	< 3.5	3.5	U	< 1.1	1.1	U	1.3	1.2	J	< 0.031	0.031	U	< 1.8	1.8	U	1.2	1.2	J	150	30	
MW-9	Event 02 2017 Dec	12/20/2017	ug/L	1300	26		< 5	5	U	< 7.8	7.8	U	4.3	3.5	J	< 1.1	1.1	U	1.3	1.2	J	0.03	0.031	J-	< 1.8	1.8	U	5.6	1.2	J	970	30	
MW-9	Event 03 2018 JanFeb	2/4/2018	ug/L	290	26		< 5	5	U	< 7.8	7.8	U	< 3.5	3.5	U	< 1.1	1.1	U	< 1.2	1.2	U	0.04	0.031	J	< 1.8	1.8	U	2.6	1.2	J	240	30	
MW-9	Event 04 2018 Mar	3/13/2018	ug/L	240	26		< 5	5	U	< 7.8	7.8	U	< 3.5	3.5	U	< 1.1	1.1	U	1.3	1.2	J	< 0.031	0.031	U	< 1.8	1.8	U	2.9	1.2	J	320	30	
MW-9	Event 05 2018 Oct	11/7/2018	ug/L	520	21		< 1.0	1	U	< 0.46	0.46	U	1.1	0.49	J	< 0.34	0.34	U	< 1.1	1.1	U	< 0.20	0.2	U	< 0.40	0.4	U	3.4	2.1		430	53	
MW-9	Event 06 2019 Jan	1/21/2019	ug/L	220	21		< 1.0	1	U	< 0.46	0.46	U	< 0.49	0.49	U	< 0.34	0.34	U	< 1.1	1.1	U	< 0.56	0.56	UJ	< 0.40	0.4	U	2.4	2.1	J	140	53	
MW-9	Event 07 2019 Mar	3/24/2019	ug/L	56	21		< 1.0	1	U	0.81	0.46	J	< 0.49	0.49	U	< 0.34	0.34	U	< 1.1	1.1	U	< 0.38	0.38	UJ	< 0.40	0.4	U	2.8	2.1		< 53	53	U
MW-9	Event 08 2019 MayJun	6/10/2019	ug/L	86	18	J	< 0.50	0.5	U	< 1.5	1.5	U	< 0.61	0.61	U	< 0.15	0.15	U	< 1.6	1.6	U	< 0.20	0.2	UJ	0.27	0.12	J	7.1	1.7		76	25	J
MW-9	Event 09 2019 Sept	9/18/2019	ug/L	< 18	18	U	< 0.50	0.5	U	< 1.5	1.5	U	< 0.61	0.61	U	< 0.15	0.15	U	< 1.6	1.6	U	< 0.20	0.2	U	< 0.12	0.12	U	< 1.7	1.7	U	< 25	25	U
MW-9	Event 10 2019 NovDec	11/20/2019	ug/L	120	14		< 1.5	1.5	U	< 0.39	0.39	U	13	0.7		< 0.28	0.28	U	< 1.0	1	U	< 0.20	0.2	U	< 0.56	0.56	U	3.8	1		< 79	79	U
MW-9	Event 11 2020 NovJan	12/13/2020	ug/L	37	14		< 1.5	1.5	U	0.76	0.39	J	< 0.70	0.7	U	< 0.28	0.28	U	< 1.0	1	U	0.5	0.2	J	< 0.56	0.56	U	1.9	1	J	< 79	79	U
MW-9	Event 13 2021 Apr	4/5/2021	ug/L	39	14		< 1.5	1.5	U	1.6	0.39	U	< 0.70	0.7	U	< 0.28	0.28	U	< 1.0	1	U	< 0.20	0.2	UR	< 0.56	0.56	U	1.3	1	J	< 79	79	U

ATTACHMENT C-6
METALS

			Analyte	Lead			Mercury			Nickel			Selenium*			Tin			Vanadium			Zinc		
Groundwater Protection Standard (GWPS)				15			2			390			86			12000			86000			6000		
				MCL			MCL			RSL			Background			RSL			RSL			RSL		
Well	Event	Date	Unit	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual
Number of data points				10			10			10			10			10			10			10		
Percent Non-detect				80			100			80			60			50			80			80		
Interwell Prediction Limit				0.00074			0.000035			0.031			0.086			0.077			0.036			0.024		
Confidence Level				0.9899			0.9899			0.9899			0.9899			0.9899			0.9899			0.9899		
MW-1C	Event 01 2017 Nov	11/5/2017	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	23	2.3		28	27	J	31	5.5	J	< 2.8	2.8	U	< 9.5	9.5	U
MW-1C	Event 02 2017 Dec	12/18/2017	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	16	2.3		< 27	27	U	35	5.5	J	< 2.8	2.8	U	24	9.5	J
MW-1C	Event 03 2018 JanFeb	2/4/2018	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	15	2.3		< 27	27	U	25	5.5	J	< 2.8	2.8	U	< 9.5	9.5	U
MW-1C	Event 04 2018 Mar	3/12/2018	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	15	2.3		27	27	J	25	5.5	J	< 2.8	2.8	U	< 9.5	9.5	U
MW-1C	Event 05 2018 Oct	10/30/2018	ug/L	< 0.35	0.35	U	< 0.070	0.07	U	9.9	1.8		< 0.24	0.24	U	< 1.1	1.1	U	< 1.4	1.4	U	< 6.5	6.5	U
MW-1C	Event 06 2019 Jan	1/14/2019	ug/L	< 0.35	0.35	U	< 0.070	0.07	U	6.1	1.8		< 0.24	0.24	U	< 1.1	1.1	U	< 1.4	1.4	U	< 6.5	6.5	U
MW-1C	Event 07 2019 Mar	3/27/2019	ug/L	0.63	0.35	J	< 0.070	0.07	U	5.8	1.8		< 0.24	0.24	U	< 1.1	1.1	U	< 1.4	1.4	U	< 6.5	6.5	U
MW-1C	Event 08 2019 MayJun	6/3/2019	ug/L	< 0.98	0.98	U	< 0.070	0.07	U	6.7	1.9		< 1.0	1	U	< 1.4	1.4	U	< 5.3	5.3	U	< 9.6	9.6	U
MW-1C	Event 09 2019 Sept	9/10/2019	ug/L	< 0.98	0.98	U	< 0.080	0.08	U	5.8	1.9		< 1.0	1	U	3.3	1.4	J	< 5.3	5.3	U	< 9.6	9.6	U
MW-1C	Event 10 2019 NovDec	11/13/2019	ug/L	< 0.98	0.98	U	< 0.080	0.08	U	5.5	1.9		< 1.0	1	U	< 1.4	1.4	U	< 5.3	5.3	U	< 9.6	9.6	U
MW-1C	Event 11 2020 NovJan	11/22/2020	ug/L	< 0.29	0.29	U	< 0.070	0.08	U	5.2	1.5		< 0.82	0.82	U	< 1.6	1.6	U	< 2.0	2	U	< 8.8	8.8	UJ
MW-1C	Event 13 2021 Apr	4/2/2021	ug/L	< 0.29	0.29	U	NS			5.1	1.5		< 0.82	0.82	U	< 1.6	1.6	U	< 2.0	2	U	< 8.8	8.8	U
MW-2A	Event 01 2017 Nov	11/2/2017	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	4.2	2.3	J	86	27	J	47	5.5	J	13	2.8		< 9.5	9.5	U
MW-2A	Event 05 2018 Oct	11/6/2018	ug/L	0.74	0.35	J	< 0.070	0.07	U	14	1.8		< 0.24	0.24	U	< 1.1	1.1	U	36	1.4		9.6	6.5	J
MW-2A	Event 09 2019 Sept	9/18/2019	ug/L	< 0.98	0.98	U	< 0.12	0.12	UJ	< 1.9	1.9	U	< 1.0	1	U	< 1.4	1.4	U	8.4	5.3	J	< 9.6	9.6	U
MW-2A	Event 10 2019 NovDec	11/18/2019	ug/L	< 0.98	0.98	U	< 0.080	0.08	U	< 1.9	1.9	U	< 1.0	1	U	< 1.4	1.4	U	15	5.3		< 9.6	9.6	U
MW-2A	Event 11 2020 NovJan	12/13/2020	ug/L	< 0.29	0.29	U	< 0.070	0.07	U	1.8	1.5	J	< 0.82	0.82	U	< 1.6	1.6	U	10	2		< 8.8	8.8	U
MW-14	Event 10 2019 NovDec	12/22/2019	ug/L	< 0.98	0.98	U	< 0.080	0.08	U	3.6	1.9	J	< 1.0	1	U	< 1.4	1.4	U	12	5.3		< 9.6	9.6	U
MW-14	Event 11 2020 NovJan	11/22/2020	ug/L	< 0.29	0.29	U	< 0.070	0.07	U	< 1.5	1.5	U	< 0.82	0.82	U	< 1.6	1.6	UR	16	2	J	< 8.8	8.8	UJ
MW-14	Event 12 2021 Jan	1/25/2021	ug/L	7.7	0.29	J	< 0.070	0.07	U	53	1.5	J	< 0.82	0.82	U	2.8	1.6	J	130	2	J	96	8.8	J
MW-14	Event 13 2021 Apr	4/2/2021	ug/L	< 0.29	0.29	U	NS			< 1.5	1.5	U	< 0.82	0.82	U	< 1.6	1.6	U	3.5	2		< 8.8	8.8	U
MW-5A	Event 01 2017 Nov	11/12/2017	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	11	2.3		80	27	J	17	5.5	J	< 2.8	2.8	U	< 9.5	9.5	U
MW-5A	Event 02 2017 Dec	12/19/2017	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	8.7	2.3	J	75	27	J	35	5.5	J	3.4	2.8	J	13	9.5	J
MW-5A	Event 03 2018 JanFeb	1/31/2018	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	7.5	2.3	J	61	27	J	7.8	5.5	J	3.6	2.8	J	< 9.5	9.5	U
MW-5A	Event 04 2018 Mar	3/13/2018	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	9.4	2.3	J	100	27		10	5.5	J	3.8	2.8	J	< 9.5	9.5	U
MW-5A	Event 05 2018 Oct	11/13/2018	ug/L	< 0.35	0.35	U	< 0.070	0.07	U	6.4	1.8		< 0.54	0.54	UJ	< 1.1	1.1	U	4.4	1.4		< 6.5	6.5	U
MW-5A	Event 06 2019 Jan	1/22/2019	ug/L	< 0.35	0.35	U	< 0.070	0.07	U	5.2	1.8		< 0.24	0.24	U	< 1.1	1.1	U	< 1.4	1.4	U	< 6.5	6.5	U
MW-5A	Event 07 2019 Mar	3/25/2019	ug/L	< 0.35	0.35	U	< 0.070	0.07	U	5.1	1.8		< 0.24	0.24	U	< 1.1	1.1	U	< 5.8	5.8	UJ	< 6.5	6.5	U
MW-5A	Event 08 2019 MayJun	6/18/2019	ug/L	< 0.98	0.98	U	0.077	0.07	J	7.1	1.9		< 1.0	1	U	< 1.4	1.4	U	< 5.3	5.3	U	< 9.6	9.6	U
MW-5A	Event 09 2019 Sept	9/24/2019	ug/L	< 0.98	0.98	U	< 0.080	0.08	U	7.4	1.9		< 1.0	1	U	< 1.4	1.4	U	< 5.3	5.3	U	< 9.6	9.6	U
MW-5A	Event 10 2019 NovDec	12/4/2019	ug/L	< 0.98	0.98	U	< 0.080	0.08	U	6.3	1.9		< 1.0	1	U	< 1.4	1.4	U	< 5.3	5.3	U	< 9.6	9.6	U
MW-5A	Event 11 2020 NovJan	12/15/2020	ug/L	< 0.29	0.29	U	< 0.070	0.07	U	5	1.5		< 0.82	0.82	U	< 1.6	1.6	U	2.1	2	J	< 8.8	8.8	U
MW-6	Event 01 2017 Nov	11/8/2017	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	4.9	2.3	J	< 27	27	U	< 5.5	5.5	U	< 2.8	2.8	U	< 9.5	9.5	U
MW-6	Event 02 2017 Dec	12/19/2017	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	5.8	2.3	J	43	27	J	35	5.5	J	< 2.8	2.8	U	< 9.5	9.5	U
MW-6	Event 03 2018 JanFeb	2/4/2018	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	6	2.3	J	62	27	J	6.3	5.5	J	< 2.8	2.8	U	< 9.5	9.5	U
MW-6	Event 05 2018 Oct	11/13/2018	ug/L	1	0.35	J	< 0.070	0.07	U	13	1.8		< 0.33	0.33	UJ	< 1.1	1.1	U	19	1.4		11	6.5	J
MW-6	Event 06 2019 Jan	1/23/2019	ug/L	< 0.35	0.35	U	< 0.070	0.07	U	4.5	1.8		< 0.24	0.24	U	< 1.1	1.1	U	2	1.4	J	< 6.5	6.5	U
MW-6	Event 07 2019 Mar	3/25/2019	ug/L	< 0.35	0.35	U	< 0.070	0.07	U	4.1	1.8		< 0.24	0.24	U	< 1.1	1.1	U	< 4.6	4.6	UJ	< 6.5	6.5	U
MW-6	Event 09 2019 Sept	9/24/2019	ug/L	< 0.98	0.98	U	< 0.080	0.08	U	4.9	1.9	J	< 1.0	1	U	< 1.4	1.4	U	< 5.3	5.3	U	< 9.6	9.6	U
MW-6	Event 10 2019 NovDec	12/4/2019	ug/L	< 0.98	0.98	U	< 0.080	0.08	U	4.8	1.9	J	< 1.0	1	U	< 1.4	1.4	U	< 5.3	5.3	U	< 9.6	9.6	U
MW-6	Event 11 2020 NovJan	12/14/2020	ug/L	< 0.29	0.29	U	< 0.070	0.07	U	3.2	1.5		< 0.82	0.82	U	< 1.6	1.6	U	< 2.0	2	U	< 8.8	8.8	U
MW-9	Event 01 2017 Nov	11/6/2017	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	4.6	2.3	J	52	27	J	25	5.5	J	8.4	2.8	J	< 9.5	9.5	U
MW-9	Event 02 2017 Dec	12/20/2017	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	3.6	2.3	J	< 27	27	U	41	5.5	J	13	2.8		13	9.5	J
MW-9	Event 03 2018 JanFeb	2/4/2018	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	4.9	2.3	J	32	27	J	18	5.5	J	9.3	2.8	J	< 9.5	9.5	U
MW-9	Event 04 2018 Mar	3/13/2018	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	4.9	2.3	J	31	27	J	28	5.5	J	9.6	2.8	J	< 9.5	9.5	U
MW-9	Event 05 2018 Oct	11/7/2018	ug/L	< 0.35	0.35	U	< 0.070	0.07	U	2	1.8	J	< 0.77	0.77	UJ	< 1.1	1.1	U	11	1.4		< 6.5	6.5	U
MW-9	Event 06 2019 Jan	1/21/2019	ug/L	< 0.35	0.35	U	< 0.070	0.07	U	2.2	1.8	J	< 0.24	0.24	U	< 1.1	1.1	U	12	1.4		< 6.5	6.5	U
MW-9	Event 07 2019 Mar	3/24/2019	ug/L	< 0.35	0.35	U	< 0.070	0.07	U	2.7	1.8		< 0.24	0.24	U	< 1.1	1.1	U	13	1.4		9.3	6.5	J
MW-9	Event 08 2019 MayJun	6/10/2019	ug/L	< 0.98	0.98	U	< 0.070	0.07	U	4.4	1.9	J	< 1.0	1	U	< 1.4	1.4	U	10	5.3		< 9.6	9.6	U
MW-9	Event 09 2019 Sept	9/18/2019	ug/L	< 0.98	0.98	U	< 0.13	0.13	UJ	< 1.9	1.9	U	< 1.0	1	U	< 1.4	1.4	U	13	5.3		10	9.6	J
MW-9	Event 10 2019 NovDec	11/20/2019	ug/L	< 0.29	0.29	U	< 0.070	0.07	U	3.2	1.5		< 0.82	0.82	U	< 1.6	1.6	U	10	2		< 8.8	8.8	U
MW-9	Event 11 2020 NovJan	12/13/2020	ug/L	< 0.29	0.29	U	< 0.070	0.07	U	< 1.5	1.5	U	< 0.82	0.82	U	< 1.6	1.6	U	9.1	2		< 8.8	8.8	U
MW-9	Event 13 2021 Apr	4/5/2021	ug/L	< 0.29	0.29	U	NS			2.3	1.5	J	< 0.82	0.82	U	< 1.6	1.6	U	7.6	2		< 8.8	8.8	U

ATTACHMENT C-6
METALS

Analyte				Aluminum			Antimony			Arsenic			Barium			Cadmium			Chromium			Chromium, Hexavalent			Cobalt			Copper			Iron		
Groundwater Protection Standard (GWPS)				20000/500-200			6			10			2000			5			100			3.5			11.9			1300			14000/300		
				RSL/SM			MCL			MCL			MCL			MCL			MCL			RSL			Background			MCL			RSL/SMCL		
Well	Event	Date	Unit	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual
Number of data points				10			10			10			10			10			10			10			10			10			10		
Percent Non-detect				70			100			60			10			100			50			100			10			80			0		
Interwell Prediction Limit				6.2			0.0005			0.0048			0.3432			0.000075			0.016			0.0001			0.01188			0.031			8.086		
Confidence Level				0.9899			0.9899			0.9899			0.9899			0.9899			0.9899			0.9899			0.9899			0.9899			0.9899		
MW-10	Event 01 2017 Nov	11/14/2017	ug/L	**680**	26		< 5	5	U	< 7.8	7.8	U	< 3.5	3.5	U	< 1.1	1.1	U	**4.9**	1.2	J	**2.1**	0.031	J-	< 1.8	1.8	U	**1.7**	1.2	J	**800**	30	
MW-10	Event 02 2017 Dec	12/20/2017	ug/L	**3000**	26		< 5	5	U	< 7.8	7.8	U	< 3.5	3.5	U	< 1.1	1.1	U	**5.3**	1.2	J	**1**	0.031	J-	< 1.8	1.8	U	**9.6**	1.2	J	**1800**	30	
MW-10	Event 03 2018 JanFeb	2/5/2018	ug/L	**890**	26		< 5	5	U	< 7.8	7.8	U	< 3.5	3.5	U	< 1.1	1.1	U	**10**	1.2		**1.1**	0.031		< 1.8	1.8	U	**2.2**	1.2	J	**950**	30	
MW-10	Event 05 2018 Oct	11/12/2018	ug/L	**6900**	21		< 1.0	1	U	< 0.46	0.46	U	**7.1**	0.49		< 0.34	0.34	U	**11**	1.1		**2.3**	0.2		**3.1**	0.4		**8.4**	2.1		**4500**	53	
MW-10	Event 06 2019 Jan	1/21/2019	ug/L	**120**	21		< 1.0	1	U	< 0.46	0.46	U	< 0.49	0.49	U	< 0.34	0.34	U	**2.8**	1.1		< 2.6	2.6	UJ	< 0.40	0.4	U	< 2.1	2.1	U	**350**	53	
MW-10	Event 07 2019 Mar	3/24/2019	ug/L	**90**	21		< 1.0	1	U	**1**	0.46	J	**0.58**	0.49	J	< 0.34	0.34	U	**2.4**	1.1	J	**1.8**	0.2		< 0.40	0.4	U	< 2.1	2.1	U	**95**	53	J
MW-10	Event 08 2019 MayJun	6/12/2019	ug/L	**260**	18		< 0.50	0.5	U	< 1.5	1.5	U	**1.5**	0.61	J	< 0.15	0.15	U	**5.6**	1.6		**0.68**	0.2	J	**0.44**	0.12	J	**6.1**	1.7		**280**	25	
MW-10	Event 09 2019 Sept	9/23/2019	ug/L	**24**	18	J	< 0.50	0.5	U	< 1.5	1.5	U	**0.93**	0.61	J	< 0.15	0.15	U	**2.4**	1.6	J	**1.6**	0.2	J	< 0.12	0.12	U	< 1.7	1.7	U	**25**	25	J
MW-10	Event 10 2019 NovDec	12/2/2019	ug/L	**42**	18	J	< 0.50	0.5	U	< 1.5	1.5	U	**0.84**	0.61	J	< 0.15	0.15	U	**3**	1.6	J	**1.4**	0.2		< 0.12	0.12	U	**2.1**	1.7	J	**36**	25	J
MW-10	Event 11 2020 NovJan	12/13/2020	ug/L	**120**	14		< 1.5	1.5	U	**0.83**	0.39	J	**0.97**	0.7	J	< 0.28	0.28	U	< 1.0	1	U	**1.4**	0.2	J	< 0.56	0.56	U	< 1.0	1	U	< 79	79	U
MW-10	Event 13 2021 Apr	4/5/2021	ug/L	**85**	14		< 1.5	1.5	U	**0.94**	0.39	J	**1.2**	0.7	J	< 0.28	0.28	U	< 1.0	1	U	**1.1**	0.2	J	< 0.56	0.56	U	< 1.0	1	U	< 79	79	U
MW-11R	Event 10 2019 NovDec	12/22/2019	ug/L	< 18	18	U	< 0.50	0.5	U	**5.3**	1.5		**11**	0.61		< 0.15	0.15	U	< 1.6	1.6	U	< 0.20	0.2	U	**1.6**	0.12	J	< 1.7	1.7	U	**460**	25	
MW-11R	Event 11 2020 NovJan	12/14/2020	ug/L	**19**	14	J	< 1.5	1.5	U	**3.2**	0.39		**12**	0.7	J	< 0.28	0.28	U	< 1.0	1	U	< 0.20	0.2	U	**0.8**	0.56	J	< 1.0	1	U	< 79	79	U
MW-11R	Event 12 2021 Jan	1/25/2021	ug/L	**18**	14	J	< 1.5	1.5	U	**3.1**	0.39		**13**	0.7		< 0.28	0.28	U	< 1.0	1	U	< 0.20	0.2	UJ	**0.71**	0.56	J	< 1.0	1	U	**84**	79	J
MW-11R	Event 13 2021 Apr	4/14/2021	ug/L	< 14	14	U	< 1.5	1.5	U	**3.6**	0.39	U	**12**	0.7		< 0.28	0.28	U	< 1.0	1	U	< 0.20	0.2	U	**0.91**	0.56	J	< 1.0	1	U	**96**	79	J
MW-12	Event 01 2017 Nov	11/12/2017	ug/L	**130**	26		< 5	5	U	< 7.8	7.8	U	**8**	3.5	J	< 1.1	1.1	U	**2.3**	1.2	J	< 0.031	0.031	UR	< 1.8	1.8	U	< 1.2	1.2	U	**2100**	30	
MW-12	Event 02 2017 Dec	12/19/2017	ug/L	**44**	26	J+	< 5	5	U	**11**	7.8	J	**7.4**	3.5	J	< 1.1	1.1	U	< 1.2	1.2	U	< 0.031	0.031	U	< 1.8	1.8	U	**6.8**	1.2	J	**1700**	30	
MW-12	Event 03 2018 JanFeb	2/4/2018	ug/L	**96**	26		< 5	5	U	< 7.8	7.8	U	**12**	3.5		< 1.1	1.1	U	< 1.2	1.2	U	< 0.031	0.031	U	< 1.8	1.8	U	< 1.2	1.2	U	**2100**	30	
MW-12	Event 04 2018 Mar	3/14/2018	ug/L	**58**	26		< 5	5	U	< 7.8	7.8	U	**9.5**	3.5	J	< 1.1	1.1	U	< 1.2	1.2	U	< 0.031	0.031	U	< 1.8	1.8	U	< 1.2	1.2	U	**1900**	30	
MW-12	Event 05 2018 Oct	11/12/2018	ug/L	**880**	21		< 1.0	1	U	< 0.46	0.46	U	**20**	0.49		< 0.34	0.34	U	**1.9**	1.1	J	< 0.20	0.2	U	**0.6**	0.4	J	< 2.1	2.1	U	**3500**	53	
MW-12	Event 06 2019 Jan	1/16/2019	ug/L	**66**	21		< 1.0	1	U	< 0.46	0.46	U	**12**	0.49		< 0.34	0.34	U	< 1.1	1.1	U	< 0.46	0.46	UJ	< 0.40	0.4	U	< 2.1	2.1	U	**2400**	53	
MW-12	Event 07 2019 Mar	3/24/2019	ug/L	**32**	21		< 1.0	1	U	< 0.46	0.46	U	**11**	0.49		< 0.34	0.34	U	< 1.1	1.1	U	< 0.20	0.2	U	< 0.40	0.4	U	< 2.1	2.1	U	**2400**	53	
MW-12	Event 08 2019 MayJun	6/5/2019	ug/L	**33**	18	J	< 0.50	0.5	U	< 1.5	1.5	U	**14**	0.61		< 0.15	0.15	U	< 1.6	1.6	U	< 0.20	0.2	U	**0.14**	0.12	J	< 1.7	1.7	U	**2600**	25	
MW-12	Event 09 2019 Sept	9/18/2019	ug/L	**38**	18	J	< 0.50	0.5	U	< 1.5	1.5	U	**15**	0.61		< 0.15	0.15	U	< 1.6	1.6	U	< 0.20	0.2	U	< 0.12	0.12	U	< 1.7	1.7	U	**3100**	25	
MW-12	Event 10 2019 NovDec	11/20/2019	ug/L	**210**	14		< 1.5	1.5	U	< 0.39	0.39	U	**16**	0.7		< 0.28	0.28	U	< 1.0	1	U	< 0.20	0.2	U	< 0.56	0.56	U	< 1.0	1	U	**3200**	79	
MW-12	Event 11 2020 NovJan	12/13/2020	ug/L	**25**	14		< 1.5	1.5	U	< 0.39	0.39	U	**12**	0.7	J	< 0.28	0.28	U	< 1.0	1	U	< 0.20	0.2	U	< 0.56	0.56	U	< 1.0	1	U	**3200**	79	
MW-12	Event 13 2021 Apr	4/14/2021	ug/L	**230**	14		< 1.5	1.5	U	<1.3	0.39	UJ	**19**	0.7		< 0.28	0.28	U	< 1.0	1	U	< 0.20	0.2	U	< 0.56	0.56	U	< 1.0	1	U	**3800**	79	
MW-13	Event 01 2017 Nov	11/13/2017	ug/L	**260**	26		< 5	5	U	< 7.8	7.8	U	**13**	3.5		**1.2**	1.1	J	< 1.2	1.2	U	< 0.031	0.031	UR	< 1.8	1.8	U	**1.2**	1.2	J	**200**	30	
MW-13	Event 02 2017 Dec	12/19/2017	ug/L	**2800**	26	J+	< 5	5	U	< 7.8	7.8	U	**28**	3.5		< 1.1	1.1	U	< 1.2	1.2	U	< 0.031	0.031	U	**2.2**	1.8	J	**14**	1.2		**2000**	30	
MW-13	Event 03 2018 JanFeb	1/31/2018	ug/L	**220**	26	J	< 5	5	U	< 7.8	7.8	U	**15**	3.5		< 1.1	1.1	U	< 1.2	1.2	U	< 0.031	0.031	U	< 1.8	1.8	U	< 1.2	1.2	U	**440**	30	J
MW-13	Event 04 2018 Mar	3/14/2018	ug/L	**2100**	26		< 5	5	U	< 7.8	7.8	U	**21**	3.5		< 1.1	1.1	U	**7.5**	1.2	J	< 0.031	0.031	U	< 1.8	1.8	U	**2.8**	1.2	J	**1700**	30	
MW-13	Event 05 2018 Oct	11/6/2018	ug/L	< 21	21	U	< 1.0	1	U	< 0.46	0.46	U	**12**	0.49		< 0.34	0.34	U	< 1.1	1.1	U	< 0.20	0.2	U	< 0.40	0.4	U	< 2.1	2.1	U	< 53	53	U
MW-13	Event 06 2019 Jan	1/14/2019	ug/L	< 21	21	U	< 1.0	1	U	< 0.46	0.46	U	**12**	0.49		< 0.34	0.34	U	< 1.1	1.1	U	< 0.47	0.47	UJ	< 0.40	0.4	U	< 2.1	2.1	U	< 53	53	U
MW-13	Event 07 2019 Mar	3/27/2019	ug/L	**46**	21		< 1.0	1	U	< 0.46	0.46	U	**12**	0.49		< 0.34	0.34	U	< 1.1	1.1	U	< 0.23	0.23	UJ	< 0.40	0.4	U	< 2.1	2.1	U	< 53	53	U
MW-13	Event 08 2019 MayJun	6/3/2019	ug/L	**110**	18		< 0.50	0.5	U	< 1.5	1.5	U	**13**	0.61		< 0.15	0.15	U	< 1.6	1.6	U	< 0.20	0.2	U	< 0.12	0.12	U	< 1.7	1.7	U	**72**	25	J
MW-13	Event 09 2019 Sept	9/10/2019	ug/L	**21**	18	J	< 0.50	0.5	U	< 1.5	1.5	U	**15**	0.61		< 0.15	0.15	U	< 1.6	1.6	U	< 0.20	0.2	U	< 0.12	0.12	U	< 1.7	1.7	U	< 25	25	U
MW-13	Event 10 2019 NovDec	11/18/2019	ug/L	< 18	18	U	< 0.50	0.5	U	< 1.5	1.5	U	**18**	0.61		< 0.15	0.15	U	**2.1**	1.6	J	< 0.20	0.2	U	< 0.12	0.12	UJ	**2**	1.7	J	< 25	25	U
MW-13	Event 11 2020 NovJan	11/22/2020	ug/L	< 14	14	U	< 1.5	1.5	U	< 0.39	0.39	U	**15**	0.7		< 0.28	0.28	U	< 1.0	1	U	< 0.20	0.2	UJ	< 0.56	0.56	U	**2.3**	1	J	< 79	79	U
MW-13	Event 13 2021 Apr	4/5/2021	ug/L	**28**	14		< 1.5	1.5	U	< 0.39	0.39	U	**13**	0.7		< 0.28	0.28	U	< 1.0	1	U	< 0.20	0.2	U	< 0.56	0.56	U	< 1.0	1	U	< 79	79	U
MW-15	Event 10 2019 NovDec	12/16/2019	ug/L	**130**	18		**0.59**	0.5	J	**16**	1.5		**1**	0.61	J	< 0.15	0.15	U	< 1.6	1.6	U	< 0.20	0.2	U	**0.57**	0.12	J	**2.7**	1.7	J	**210**	25	
MW-15	Event 11 2020 NovJan	12/14/2020	ug/L	**740**	14		< 1.5	1.5	U	**13**	0.39		**3.2**	0.7		< 0.28	0.28	U	**1.7**	1	J	< 0.20	0.2	U	**0.93**	0.56	J	**2.4**	1	J	**840**	79	
MW-15	Event 12 2021 Jan	1/25/2021	ug/L	**240**	14		< 1.5	1.5	U	**13**	0.39		**2.8**	0.7		< 0.28	0.28	U	< 1.0	1	U	**0.56**	0.2	J	< 0.56	0.56	U	**2.3**	1	J	**230**	79	
MW-15	Event 13 2021 Apr	4/15/2021	ug/L	**240**	14		< 1.5	1.5	U	**13**	0.39		**1.7**	0.7	J	< 0.28	0.28	U	**1.3**	1	J				< 0.56	0.56	U	**3.4**	1		**270**	79	
MW-16	Event 10 2019 NovDec	12/11/2019	ug/L	**84**	18	J	< 0.50	0.5	U	< 1.5	1.5	U	**15**	0.61		< 0.15	0.15	U	< 1.6	1.6	U	< 0.20	0.2	U	**5.1**	0.12	J	< 1.7	1.7	U	**21000**	25	
MW-16	Event 11 2020 NovJan	12/14/2020	ug/L	**650**	14		< 1.5	1.5	U	**1.1**	0.39	J	**59**	0.7		< 0.28	0.28	U	**1.7**	1	J	< 0.20	0.2	U	**2.2**	0.56	J	< 1.0	1	U	**75000**	79	
MW-16	Event 12 2021 Jan	1/25/2021	ug/L	**140**	14		< 1.5	1.5	U	**1**	0.39	J	**42**	0.7		< 0.28	0.28	U	< 1.0	1	U	< 0.20	0.2	UJ	**1.9**	0.56	J	< 1.0	1	U	**59000**	79	
MW-16	Event 13 2021 Apr	4/15/2021	ug/L	**2700**	14		< 1.5	1.5	U	**1.7**	0.39	U	**55**	0.7	J	< 0.28	0.28	U	**8.9**	1		NS			**2.9**	0.56		**7.2**	1		**62000**	79	

Footnotes and Abbreviations:

* Selenium background exceeds the MCL of 0.05 MG/L. Therefore, the GWPS is background.

Green shade GWPS is MCL. Blue Shade GWPS is RSL. Orange Shade GWPS is Background.

U or < = Result was not detected

J = Result is estimated

R = Data were rejected during the validation process but are considered usable based on the Validator's professional judgement

NS = Not sampled

ug/L - micrograms per liter

Grey shaded cells represent the background data set that was used to develop the statistical limit for comparisons.

Non-parametric prediction limits were used when non-detects represented greater than 50% of the data set.

Detections are bolded and purple shaded cells are above the groundwater protection standard (background) indicated in the table.

ATTACHMENT C-6
METALS

Analyte				Lead			Mercury			Nickel			Selenium*			Tin			Vanadium			Zinc		
Groundwater Protection Standard (GWPS)				15			2			390			86			12000			86000			6000		
				MCL			MCL			RSL			Background			RSL			RSL			RSL		
Well	Event	Date	Unit	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual	Result	MDL	Qual
Number of data points				10			10			10			10			10			10			10		
Percent Non-detect				80			100			80			60			50			80			80		
Interwell Prediction Limit				0.00074			0.000035			0.031			0.086			0.077			0.036			0.024		
Confidence Level				0.9899			0.9899			0.9899			0.9899			0.9899			0.9899			0.9899		
MW-10	Event 01 2017 Nov	11/14/2017	ug/L	< 3.5	3.5	U	**0.05**	0.029	J	**5.9**	2.3	J	< 27	27	U	**24**	5.5	J	**33**	2.8		< 9.5	9.5	U
MW-10	Event 02 2017 Dec	12/20/2017	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	**9.9**	2.3	J	**46**	27	J	**28**	5.5	J	**41**	2.8		< 9.5	9.5	U
MW-10	Event 03 2018 JanFeb	2/5/2018	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	**8.3**	2.3	J	< 27	27	U	**6.5**	5.5	J	**46**	2.8		< 9.5	9.5	U
MW-10	Event 05 2018 Oct	11/12/2018	ug/L	< 0.35	0.35	U	< 0.070	0.07	U	**15**	1.8		< 0.33	0.33	UJ	< 1.1	1.1	U	**34**	1.4		**8.1**	6.5	J
MW-10	Event 06 2019 Jan	1/21/2019	ug/L	< 0.35	0.35	U	< 0.070	0.07	U	**3.7**	1.8		**0.66**	0.24	J	< 1.1	1.1	U	**26**	1.4		< 6.5	6.5	U
MW-10	Event 07 2019 Mar	3/24/2019	ug/L	< 0.35	0.35	U	< 0.070	0.07	U	**3.2**	1.8		< 0.24	0.24	U	< 1.1	1.1	U	**30**	1.4		< 6.5	6.5	U
MW-10	Event 08 2019 MayJun	6/12/2019	ug/L	< 0.98	0.98	U	< 0.070	0.07	U	**11**	1.9		< 1.0	1	U	< 1.4	1.4	U	**33**	5.3		< 9.6	9.6	U
MW-10	Event 09 2019 Sept	9/23/2019	ug/L	< 0.98	0.98	U	< 0.089	0.089	UJ	**3.3**	1.9	J	< 1.0	1	U	< 1.4	1.4	U	**38**	5.3		< 9.6	9.6	U
MW-10	Event 10 2019 NovDec	12/2/2019	ug/L	< 0.98	0.98	U	< 0.080	0.08	U	**3.1**	1.9	J	< 1.0	1	U	< 1.4	1.4	U	**30**	5.3		< 9.6	9.6	U
MW-10	Event 11 2020 NovJan	12/13/2020	ug/L	< 0.29	0.29	U	< 0.070	0.07	U	**4.1**	1.5	J	< 0.82	0.82	U	< 1.6	1.6	U	**35**	2		< 8.8	8.8	U
MW-10	Event 13 2021 Apr	4/5/2021	ug/L	< 0.29	0.29	U	NS			< 1.5	1.5	U	< 0.82	0.82	U	< 1.6	1.6	U	**32**	2		< 8.8	8.8	U
MW-11R	Event 10 2019 NovDec	12/22/2019	ug/L	< 0.98	0.98	U	< 0.080	0.08	U	**22**	1.9		< 1.0	1	U	< 1.4	1.4	U	< 5.3	5.3	U	< 9.6	9.6	U
MW-11R	Event 11 2020 NovJan	12/14/2020	ug/L	< 0.29	0.29	U	< 0.070	0.07	U	**19**	1.5	J	< 0.82	0.82	U	< 1.6	1.6	U	< 2.0	2	U	< 8.8	8.8	U
MW-11R	Event 12 2021 Jan	1/25/2021	ug/L	< 0.29	0.29	U	< 0.070	0.07	U	**19**	1.5		< 0.82	0.82	U	< 1.6	1.6	U	< 2.0	2	U	< 8.8	8.8	U
MW-11R	Event 13 2021 Apr	4/14/2021	ug/L	< 0.29	0.29	U	< 0.070	0.07	U	**20**	1.5		< 0.82	0.82	U	< 1.6	1.6	U	< 2.0	2	U	< 8.8	8.8	UJ
MW-12	Event 01 2017 Nov	11/12/2017	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	**3.7**	2.3	J	< 27	27	U	**27**	5.5	J	< 2.8	2.8	U	< 9.5	9.5	U
MW-12	Event 02 2017 Dec	12/19/2017	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	< 2.3	2.3	U	**34**	27	J	**45**	5.5	J	< 2.8	2.8	U	< 9.5	9.5	U
MW-12	Event 03 2018 JanFeb	2/4/2018	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	**5**	2.3	J	**38**	27	J	**20**	5.5	J	< 2.8	2.8	U	< 9.5	9.5	U
MW-12	Event 04 2018 Mar	3/14/2018	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	< 2.3	2.3	U	< 27	27	U	**34**	5.5	J	< 2.8	2.8	U	< 9.5	9.5	U
MW-12	Event 05 2018 Oct	11/12/2018	ug/L	**0.86**	0.35	J	< 0.070	0.07	U	**3.3**	1.8		< 0.24	0.24	U	< 1.1	1.1	U	**2.8**	1.4		< 6.5	6.5	U
MW-12	Event 06 2019 Jan	1/16/2019	ug/L	< 0.35	0.35	U	< 0.070	0.07	U	**2.2**	1.8	J	< 0.24	0.24	U	< 1.1	1.1	U	< 1.4	1.4	U	< 6.5	6.5	U
MW-12	Event 07 2019 Mar	3/24/2019	ug/L	< 0.35	0.35	U	< 0.070	0.07	U	**1.9**	1.8	J	< 0.24	0.24	U	< 1.1	1.1	U	< 1.4	1.4	U	< 6.5	6.5	U
MW-12	Event 08 2019 MayJun	6/5/2019	ug/L	< 0.98	0.98	U	< 0.070	0.07	U	**3.2**	1.9	J	< 1.0	1	U	< 1.4	1.4	U	< 5.3	5.3	U	< 9.6	9.6	U
MW-12	Event 09 2019 Sept	9/18/2019	ug/L	< 0.98	0.98	U	< 0.087	0.087	UJ	**2.1**	1.9	J	< 1.0	1	U	< 1.4	1.4	U	< 5.3	5.3	U	< 9.6	9.6	U
MW-12	Event 10 2019 NovDec	11/20/2019	ug/L	< 0.29	0.29	U	< 0.070	0.07	U	**2.8**	1.5		< 0.82	0.82	U	< 1.6	1.6	U	< 2.0	2	U	< 8.8	8.8	U
MW-12	Event 11 2020 NovJan	12/13/2020	ug/L	< 0.29	0.29	U	< 0.070	0.07	U	**1.6**	1.5	J	< 0.82	0.82	U	< 1.6	1.6	U	< 2.0	2	U	< 8.8	8.8	U
MW-12	Event 13 2021 Apr	4/14/2021	ug/L	< 0.29	0.29	U	NS			**3.1**	1.5		< 0.82	0.82	U	< 1.6	1.6	U	< 2.0	2	U	< 8.8	8.8	U
MW-13	Event 01 2017 Nov	11/13/2017	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	< 2.3	2.3	U	< 27	27	U	**34**	5.5	J	< 2.8	2.8	U	< 9.5	9.5	U
MW-13	Event 02 2017 Dec	12/19/2017	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	< 2.3	2.3	U	**32**	27	J	**51**	5.5		**6.2**	2.8	J	**11**	9.5	J
MW-13	Event 03 2018 JanFeb	1/31/2018	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	< 2.3	2.3	U	< 27	27	U	**31**	5.5	J	< 2.8	2.8	U	< 9.5	9.5	U
MW-13	Event 04 2018 Mar	3/14/2018	ug/L	< 3.5	3.5	U	< 0.029	0.029	U	**7.5**	2.3	J	< 27	27	U	**37**	5.5	J	**5**	2.8	J	< 9.5	9.5	U
MW-13	Event 05 2018 Oct	11/6/2018	ug/L	< 0.35	0.35	U	**0.07**	0.07	J	< 1.8	1.8	U	< 0.24	0.24	U	< 1.1	1.1	U	**2**	1.4	J	< 6.5	6.5	U
MW-13	Event 06 2019 Jan	1/14/2019	ug/L	< 0.35	0.35	U	< 0.070	0.07	U	< 1.8	1.8	U	< 0.24	0.24	U	< 1.1	1.1	U	**2.7**	1.4		< 6.5	6.5	U
MW-13	Event 07 2019 Mar	3/27/2019	ug/L	< 0.35	0.35	U	< 0.070	0.07	U	< 1.8	1.8	U	< 0.24	0.24	U	< 1.1	1.1	U	**2.2**	1.4	J	< 6.5	6.5	U
MW-13	Event 08 2019 MayJun	6/3/2019	ug/L	< 0.98	0.98	U	< 0.070	0.07	U	< 1.9	1.9	U	< 1.0	1	U	< 1.4	1.4	U	< 5.3	5.3	U	< 9.6	9.6	U
MW-13	Event 09 2019 Sept	9/10/2019	ug/L	< 0.98	0.98	U	< 0.080	0.08	U	< 1.9	1.9	U	< 1.0	1	U	< 1.4	1.4	U	< 5.3	5.3	U	< 9.6	9.6	U
MW-13	Event 10 2019 NovDec	11/18/2019	ug/L	< 0.98	0.98	U	< 0.080	0.08	U	< 1.9	1.9	U	< 1.0	1	U	< 1.4	1.4	U	< 5.3	5.3	U	< 9.6	9.6	U
MW-13	Event 11 2020 NovJan	11/22/2020	ug/L	< 0.29	0.29	U	< 0.070	0.07	U	< 1.5	1.5	U	< 0.82	0.82	U	< 1.6	1.6	U	**2.8**	2	J	< 8.8	8.8	UJ
MW-13	Event 13 2021 Apr	4/5/2021	ug/L	< 0.29	0.29	U	NS			< 1.5	1.5	U	< 0.82	0.82	U	< 1.6	1.6	U	< 2.0	2	U	< 8.8	8.8	U
MW-15	Event 10 2019 NovDec	12/16/2019	ug/L	< 0.98	0.98	U	**0.085**	0.08	J	**14**	1.9		**2.4**	1	J	< 1.4	1.4	U	**12**	5.3		< 9.6	9.6	U
MW-15	Event 11 2020 NovJan	12/14/2020	ug/L	< 0.29	0.29	U	< 0.070	0.07	U	**17**	1.5		< 0.82	0.82	U	< 1.6	1.6	U	**17**	2		**740**	8.8	
MW-15	Event 12 2021 Jan	1/25/2021	ug/L	< 0.29	0.29	U	< 0.070	0.07	U	**14**	1.5		< 0.82	0.82	U	< 1.6	1.6	U	**19**	2		< 8.8	8.8	U
MW-15	Event 13 2021 Apr	4/15/2021	ug/L	< 0.29	0.29	U	NS			**16**	1.5		< 0.82	0.82	U	< 1.6	1.6	U	**19**	2		< 8.8	8.8	U
MW-16	Event 10 2019 NovDec	12/11/2019	ug/L	< 0.98	0.98	U	**0.1**	0.08	J	**9.6**	1.9		**1.4**	1	J	< 1.4	1.4	U	< 5.3	5.3	U	< 9.6	9.6	U
MW-16	Event 11 2020 NovJan	12/14/2020	ug/L	< 0.29	0.29	U	< 0.070	0.07	U	**5.7**	1.5		< 0.82	0.82	U	< 1.6	1.6	U	< 2.0	2	U	< 8.8	8.8	U
MW-16	Event 12 2021 Jan	1/25/2021	ug/L	< 0.29	0.29	U	< 0.070	0.07	U	**5.1**	1.5		< 0.82	0.82	U	< 1.6	1.6	U	< 2.0	2	U	< 8.8	8.8	U
MW-16	Event 13 2021 Apr	4/15/2021	ug/L	**0.57**	0.29	J	NS			**9.9**	1.5		< 0.82	0.82	U	< 1.6	1.6	U	**6.2**	2		< 8.8	8.8	U

Footnotes and Abbreviations:

* Selenium background exceeds the MCL of 0.05 MG/L. Therefore, the GWP

Green shade GWPS is MCL. Blue Shade GWPS is RSL. Orange Shade GWPS i

U or < = Result was not detected

J = Result is estimated

R = Data were rejected during the validation process but are considered usab

NS = Not sampled

ug/L - micrograms per liter

Grey shaded cells represent the background data set that was used to develo

Non-parametric prediction limits were used when non-detects represented gr

Detections are bolded and purple shaded cells are above the groundwater pr

ATTACHMENT C-7
INORGANICS

				Ammonia (as N)			Chloride			Cyanide, total			Nitrate-nitrite (as N)			Sulfate			Sulfide			Total dissolved solids (TDS)			Total Phosphate as P			Total Phosphorus as P			Total Suspended Solids		
			RSL, Primary or Secondary MCL:	14 RSL 0.3 SMCL			250 SMCL			0.2 MCL			10 MCL			500 SMCL			250 (Used Sulfate)			500 SMCL			NA			NA			NA		
Well ID	Sampling Event	Date	Unit	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier
			Number of data points	9			10			10			5			10			10			10			10			10			10		
			Percent Non-detect	66.7			0			100			80			0			100			0			40			40			40		
			Interwell Prediction Limit	0.21			26.25			0.0025			< 0.018			14.1			0.0285			560.9			Not calculated			0.4727			120		
			Confidence Level	0.9883			0.9991			0.9899			0.97722			0.9991			0.9899			0.9998486			Not calculated			0.9998			0.9899		
MW-1C	Event 01 2017 Nov	11/5/2017	MG/L	< 0.02	0.02	U	21	0.077		< 0.0017	0.0017	UJ				6.7	0.13	J	< 0.05	0.05	UJ	460	20	J-	< 0.02	0.02	U				1.9	0.56	J
MW-1C	Event 02 2017 Dec	12/18/2017	MG/L	< 0.02	0.02	U	22	0.077		< 0.0017	0.0017	U				1.1	0.13		< 0.05	0.05	UJ	430	20		0.07	0.02					3.3	0.56	
MW-1C	Event 03 2018 JanFeb	2/4/2018	MG/L	0.03	0.02	J	23	0.077		< 0.0017	0.0017	U				0.48	0.13	J	< 0.05	0.05	U	440	20		0.03	0.02	J				2.6	0.62	
MW-1C	Event 04 2018 Mar	3/12/2018	MG/L	< 0.02	0.02	U	23	0.077		< 0.0017	0.0017	U				0.43	0.13	J	< 0.05	0.05	U	440	20		0.07	0.02					3	0.62	J-
MW-1C	Event 05 2018 Oct	10/30/2018	MG/L	6.5	0.044		22	0.89		< 0.0050	0.005	U	< 0.018	0.018	UJ	4.4	0.7	J	< 0.057	0.057	U	460	3.4					< 0.032	0.032	U	< 3.2	3.2	U
MW-1C	Event 06 2019 Jan	1/14/2019	MG/L	< 0.038	0.038	UJ	20	0.89		< 0.0050	0.005	U	< 0.018	0.018	U	2.8	0.7		< 0.057	0.057	U	350	3.4					0.067	0.032	J	< 3.2	3.2	U
MW-1C	Event 07 2019 Mar	3/27/2019	MG/L	0.1	0.024	J	19	0.89		< 0.0050	0.005	U	< 0.018	0.018	U	2.9	0.7		< 0.057	0.057	U	380	3.4					0.097	0.032	J	< 3.2	3.2	U
MW-1C	Event 08 2019 MayJun	6/3/2019	MG/L	< 0.024	0.024	U	19	0.89		< 0.0050	0.005	U	< 0.018	0.018	U	2.8	0.7		< 0.057	0.057	UJ	400	3.4					0.13	0.032		< 3.2	3.2	U
MW-1C	Event 09 2019 Sept	9/10/2019	MG/L	< 0.024	0.024	U	19	0.89		**0.012**	0.005		< 0.018	0.018	UJ	5.3	0.7		< 0.057	0.057	U	370	3.4					< 0.032	0.032	U	6	3.2	
MW-1C	Event 10 2019 NovDec	11/13/2019	MG/L	< 0.024	0.024	U	19	0.89		< 0.0050	0.005	U	< 0.018	0.018	U	6.1	0.7		< 0.057	0.057	UJ	460	3.4	J				< 0.032	0.032	U	6	3.2	J
MW-1C	Event 11 2020 NovJan	11/22/2020	MG/L	0.51	0.12	J	22	0.12	J	< 0.0050	0.005	UJ	< 0.018	0.018	UJ	5.5	0.37	J	< 0.057	0.057	UJ	400	5	J				0.061	0.032	J	< 5.0	5	UJ
MW-2A	Event 01 2017 Nov	11/2/2017	MG/L	< 0.02	0.02	U	21	0.077		< 0.0017	0.0017	UJ				7.9	0.13		< 0.05	0.05	UJ	470	33		< 0.02	0.02	U				0.67	0.56	
MW-2A	Event 05 2018 Oct	11/6/2018	MG/L	0.21	0.022	J	20	0.89		< 0.0050	0.005	U	0.044	0.018	J	8.2	0.7		< 0.057	0.057	U	400	3.4					< 0.032	0.032	U	120	3.2	
MW-2A	Event 09 2019 Sept	9/18/2019	MG/L	< 0.17	0.17	UJ	22	0.89		< 0.0050	0.005	U	0.23	0.018		10	0.7		< 0.057	0.057	U	270	3.4					< 0.032	0.032	U	< 3.2	3.2	U
MW-2A	Event 10 2019 NovDec	11/18/2019	MG/L	1.4	0.024		21	0.89		< 0.0050	0.005	U	0.24	0.018		8.4	0.7		< 0.057	0.057	U	420	3.4					< 0.032	0.032	U	< 3.2	3.2	U
MW-2A	Event 11 2020 NovJan	12/13/2020	MG/L	< 0.024	0.024	U	21	0.12		< 0.0050	0.005	U	0.11	0.018		10	0.37		< 0.057	0.057	UJ	380	5					< 0.032	0.032	U	< 1.0	1	U
MW-14	Event 10 2019 NovDec	12/22/2019	MG/L	0.63	0.024		18	0.89		< 0.0050	0.005	U	< 0.018	0.018	U	3.9	0.7		< 0.057	0.057	U	440	3.4					< 0.032	0.032	U	< 3.2	3.2	U
MW-14	Event 11 2020 NovJan	11/22/2020	MG/L	0.059	0.024	J	12	0.12	J	< 0.0050	0.005	UJ	< 0.018	0.018	UJ	3	0.37	J	< 0.057	0.057	UJ	480	5	J				< 0.032	0.032	UJ	< 1.7	1.7	UJ
MW-14	Event 12 2021 Jan	1/25/2021	MG/L	< 0.024	0.024	U	19	0.12		< 0.0050	0.005	U	0.019	0.018	J	2.6	0.37	J	< 0.057	0.057	UJ	620	5					0.047	0.032	J	< 0.83	0.83	U
MW-5A	Event 01 2017 Nov	11/12/2017	MG/L	< 0.02	0.02	U	130	0.077		**0.0018**	0.0017	J-				42	0.13		< 0.05	0.05	U	900	50		< 0.02	0.02	U				2.2	0.56	J-
MW-5A	Event 02 2017 Dec	12/19/2017	MG/L	< 0.02	0.02	U	100	0.077		< 0.0017	0.0017	U				39	0.13		< 0.05	0.05	UJ	790	50	J-	< 0.02	0.02	U				3.2	0.56	J-
MW-5A	Event 03 2018 JanFeb	1/31/2018	MG/L	0.26	0.02		190	0.077		< 0.0017	0.0017	U				65	0.13		< 0.05	0.05	U	840	50		0.020	0.02	J				17	0.62	
MW-5A	Event 04 2018 Mar	3/13/2018	MG/L	0.12	0.02		170	0.077		< 0.0017	0.0017	U				57	0.13		< 0.05	0.05	U	810	50		< 0.02	0.020	U				3.4	0.62	
MW-5A	Event 05 2018 Oct	11/13/2018	MG/L	0.46	0.022		130	4.5		< 0.0050	0.005	U	1.7	0.018		44	3.5		< 0.057	0.057	U	700	6.8					< 0.032	0.032	U	14	3.2	
MW-5A	Event 06 2019 Jan	1/22/2019	MG/L	0.6	0.022		150	4.5		< 0.0050	0.005	U	< 0.018	0.018	U	62	3.5		< 0.057	0.057	U	420	3.4					0.84	0.032		< 3.2	3.2	U
MW-5A	Event 07 2019 Mar	3/25/2019	MG/L	< 2.0	2	UJ	180	4.5		< 0.0050	0.005	UJ	< 0.018	0.018	U	51	3.5		< 0.057	0.057	U	790	6.8					< 0.061	0.061	UJ	< 14	14	UJ
MW-5A	Event 08 2019 MayJun	6/18/2019	MG/L	< 0.024	0.024	U	140	14		< 0.0050	0.005	U	< 0.018	0.018	U	44	1.5		< 0.057	0.057	UJ	400	3.4					< 0.032	0.032	UR	< 3.2	3.2	U
MW-5A	Event 09 2019 Sept	9/24/2019	MG/L	0.14	0.12	J	160	4.5	J	< 0.0050	0.005	UJ	2.4	0.036	J	31	0.7	J	< 0.057	0.057	UJ	730	6.8	J				< 0.032	0.032	UJ	< 3.2	3.2	UJ
MW-5A	Event 10 2019 NovDec	12/4/2019	MG/L	< 0.12	0.12	U	110	4.5		< 0.0050	0.005	U	0.046	0.018	J	25	3.5		< 0.057	0.057	U	620	6.8					< 0.032	0.032	U	< 3.2	3.2	U
MW-5A	Event 11 2020 NovJan	12/15/2020	MG/L	0.063	0.024		99	1.2		< 0.0050	0.005	U	0.46	0.018		9.2	0.37		< 0.057	0.057	UJ	580	5					< 0.032	0.032	U	< 1.0	1	U
MW-6	Event 01 2017 Nov	11/8/2017	MG/L	< 0.02	0.02	U	41	0.077		< 0.0017	0.0017	UJ				32	0.13		< 0.05	0.05	UJ	690	33	J-	0.050	0.020					< 1.1	1.1	UJ
MW-6	Event 02 2017 Dec	12/19/2017	MG/L	< 0.02	0.02	U	34	0.077		< 0.0017	0.0017	U				32	0.13		< 0.05	0.05	UJ	720	33	J-	< 0.02	0.020	U				< 0.56	0.56	UJ
MW-6	Event 03 2018 JanFeb	2/4/2018	MG/L	0.07	0.02	J	32	0.077		< 0.0017	0.0017	U				32	0.13		< 0.05	0.05	U	750	33		< 0.02	0.020	U				1.1	0.56	
MW-6	Event 05 2018 Oct	11/13/2018	MG/L	1.4	0.022		16	4.5		**0.083**	0.005		< 0.018	0.018	U	28	3.5		**0.14**	0.057		500	6.8					0.060	0.032	J	99	3.2	
MW-6	Event 06 2019 Jan	1/23/2019	MG/L	3.3	0.022		12	4.5		< 0.0050	0.005	U	1	0.018		28	3.5		< 0.057	0.057	UJ	560	3.4	J				< 0.032	0.032	U	8	3.2	
MW-6	Event 07 2019 Mar	3/25/2019	MG/L	< 1.6	1.6	UJ	13	4.5		< 0.0050	0.005	UJ	< 0.018	0.018	U	28	3.5		< 0.057	0.057	U	520	3.4					< 0.037	0.037	UJ	< 14	14	UJ
MW-6	Event 09 2019 Sept	9/24/2019	MG/L	0.16	0.12	J	17	0.89	J	< 0.0050	0.005	UJ	0.12	0.018	J	25	0.7	J	< 0.057	0.057	UJ	520	3.4	J				< 0.032	0.032	UJ	< 3.2	3.2	UJ
MW-6	Event 10 2019 NovDec	12/4/2019	MG/L	< 0.14	0.14	UJ	14	4.5		< 0.0050	0.005	U	0.021	0.018	J	26	3.5		< 0.057	0.057	UJ	550	6.8					< 0.032	0.032	U	5	3.2	
MW-6	Event 11 2020 NovJan	12/14/2020	MG/L	1.1	0.024		8.5	0.12		< 0.0050	0.005	U	0.042	0.018	J	16	0.37		< 0.057	0.057	UJ	450	5					< 0.032	0.032	U	2.4	1	
MW-9	Event 01 2017 Nov	11/6/2017	MG/L	< 0.02	0.02	U	42	0.077		< 0.0017	0.0017	UJ				2.9	0.13		< 0.05	0.05	UJ	470	20	J-	< 0.02	0.020	U				2.7	0.56	J-
MW-9	Event 02 2017 Dec	12/20/2017	MG/L	0.05	0.02	J	26	0.077		< 0.0017	0.0017	U				3.7	0.13		< 0.05	0.05	U	420	20	J-	< 0.02	0.02	U				25	0.56	J-
MW-9	Event 03 2018 JanFeb	2/4/2018	MG/L	0.02	0.02	J	49	0.077		< 0.0017	0.0017	U				4	0.13		< 0.05	0.05	U	490	33		< 0.02	0.02	U				12	0.62	
MW-9	Event 04 2018 Mar	3/13/2018	MG/L	< 0.02	0.02	U	62	0.077		< 0.0017	0.0017	UJ				3.8	0.13		< 0.05	0.05	U	490	33		< 0.05	0.05	U				3.2	0.62	
MW-9	Event 05 2018 Oct	11/7/2018	MG/L	4.2	0.022		31	0.89		< 0.0050	0.005	U	< 0.018	0.018	U	2.8	0.7		**0.059**	0.057	J	360	3.4					< 0.032	0.032	U	32	3.2	
MW-9	Event 06 2019 Jan	1/21/2019	MG/L	0.74	0.022		29	0.89		< 0.0050	0.005	U	< 0.018	0.018	U	2.9	0.7		< 0.057	0.057	U	290	3.4					< 0.032	0.032	U	< 3.2	3.2	U
MW-9	Event 07 2019 Mar	3/24/2019	MG/L	< 0.12	0.12	U	39	0.89		< 0.0050	0.005	U	< 0.018	0.018	U	3.3	0.7		< 0.057	0.057	U	370	3.4					< 0.13	0.13	UJ	14	3.2	
MW-9	Event 08 2019 MayJun	6/10/2019	MG/L	< 0.024	0.024	UJ	58	3.5	J	< 0.0050	0.005	UJ	< 0.018	0.018	UJ	3.9	0.6	J	< 0.057	0.057	UJ	450	3.4	J				0.057	0.032	J	< 3.2	3.2	UJ
MW-9	Event 09 2019 Sept	9/18/2019	MG/L	0.36	0.024		14	0.89		< 0.0050	0.005	U	0.064	0.018	J	2.2	0.7		< 0.057	0.057	U	310	3.4					< 0.032	0.032	U	< 3.2	3.2	U
MW-9	Event 10 2019 NovDec	11/20/2019	MG/L	0.053	0.024		40	0.89		< 0.0050	0.005	U	< 0.018	0.018	U	2.4	0.7		< 0.057	0.057	U	400	3.4					< 0.032	0.032	U	< 3.2	3.2	U
MW-9	Event 11 2020 NovJan	12/13/2020	MG/L	< 0.024	0.024	U	16	0.12		< 0.0050	0.005	U	< 0.018	0.018	U	1.2	0.37		< 0.057	0.057	UJ	340	5					< 0.032	0.032	U	< 1.0	1	U
MW-9	Event 13 2021 Apr	4/5/2021	MG/L	4.9	0.024		53	0.6		NS			< 0.018	0.018	U	2.3	0.37		< 0.057	0.057	U	430	5					0.081	0.032	J	< 1.7	1.7	U

				Ammonia (as N)			Chloride			Cyanide, total			Nitrate-nitrite (as N)			Sulfate			Sulfide			Total dissolved solids (TDS)			Total Phosphate as P			Total Phosphorus as P			Total Suspended Solids		
			RSL, Primary or Secondary MCL:	14 RSL 0.3 SMCL			250 SMCL			0.2 MCL			10 MCL			500 SMCL			250 (Used Sulfate)			500 SMCL			NA			NA			NA		
Well ID	Sampling Event	Date	Unit	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier
			Number of data points	9			10			10			5			10			10			10			10			10			10		
			Percent Non-detect	66.7			0			100			80			0			100			0			40			40			40		
			Interwell Prediction Limit	0.21			26.25			0.0025			< 0.018			14.1			0.0285			560.9			Not calculated			0.4727			120		
			Confidence Level	0.9883			0.9991			0.9899			0.97722			0.9991			0.9899			0.9998486			Not calculated			0.9998			0.9899		
MW-10	Event 01 2017 Nov	11/14/2017	MG/L	< 0.02	0.02	U	25	0.077		< 0.0017	0.0017	UJ				7.5	0.13		< 0.05	0.05	UJ	430	20		0.05	0.02					11	0.56	
MW-10	Event 02 2017 Dec	12/20/2017	MG/L	< 0.02	0.02	U	16	0.077		< 0.0017	0.0017	U				5.6	0.13		< 0.05	0.05	U	420	20	J-	0.06	0.02					10	0.56	J-
MW-10	Event 03 2018 JanFeb	2/5/2018	MG/L	< 0.02	0.02	U	28	0.077		< 0.0017	0.0017	U				6.5	0.13		< 0.05	0.05	U	450	33		0.070	0.020					88	2.5	J-
MW-10	Event 05 2018 Oct	11/12/2018	MG/L	1.2	0.022		16	0.89		< 0.0050	0.005	U	0.047	0.018	J	5.3	0.7		< 0.057	0.057	U	440	3.4					0.051	0.032	J	64	3.2	
MW-10	Event 06 2019 Jan	1/21/2019	MG/L	0.12	0.022		17	0.89		< 0.0050	0.005	U	0.065	0.018		5.3	0.7		< 0.057	0.057	U	340	3.4					0.13	0.032		< 3.2	3.2	U
MW-10	Event 07 2019 Mar	3/24/2019	MG/L	< 0.12	0.12	U	18	0.89		< 0.0050	0.005	U	0.044	0.018	J	4.9	0.7		< 0.057	0.057	U	390	3.4					< 0.24	0.24	UJ	7	3.2	
MW-10	Event 08 2019 MayJun	6/12/2019	MG/L	< 0.024	0.024	U	71	7		< 0.0050	0.005	U	< 0.018	0.018	U	7.6	0.6		< 0.057	0.057	UJ	480	3.4					0.038	0.032	J	< 3.2	3.2	U
MW-10	Event 09 2019 Sept	9/23/2019	MG/L	< 0.024	0.024	U	16	0.89		< 0.0050	0.005	U	0.031	0.018	J	22	0.7		< 0.057	0.057	U	400	3.4					< 0.077	0.077	UJ	< 3.2	3.2	U
MW-10	Event 10 2019 NovDec	12/2/2019	MG/L	< 0.024	0.024	U	14	0.89		< 0.0050	0.005	U	< 0.018	0.018	U	7.1	0.7		< 0.057	0.057	UJ	390	3.4					< 0.032	0.032	U	< 3.2	3.2	U
MW-10	Event 11 2020 NovJan	12/13/2020	MG/L	0.053	0.024		13	0.12		< 0.0050	0.005	U	0.027	0.018	J	22	0.37		< 0.057	0.057	UJ	380	5					< 0.032	0.032	U	< 1.0	1	U
MW-10	Event 13 2021 Apr	4/5/2021	MG/L	4.9	0.024		19	0.12		NS			0.023	0.018	J	2.6	0.37		< 0.057	0.057	U	430	5					0.08	0.032	J	< 1.7	1.7	U
MW-11R	Event 10 2019 NovDec	12/22/2019	MG/L	2	0.024		240	8.9		< 0.0050	0.005	U	< 0.018	0.018	U	3.6	0.7		< 0.057	0.057	U	820	3.4					0.069	0.032	J	< 3.2	3.2	U
MW-11R	Event 11 2020 NovJan	12/14/2020	MG/L	< 0.024	0.024	U	270	1.2		< 0.0050	0.005	U	< 0.018	0.018	U	2.8	0.37		< 0.057	0.057	UJ	770	10					< 0.032	0.032	U	1.2	1	
MW-11R	Event 12 2021 Jan	1/25/2021	MG/L	0.062	0.024		270	1.2		< 0.0050	0.005	U	< 0.018	0.018	U	1.3	0.37		< 0.057	0.057	UJ	960	5					< 0.032	0.032	U	< 0.83	0.83	U
MW-11R	Event 13 2021 Apr	4/14/2021	MG/L	1.8	0.12		280	1.2		< 0.0050	0.005	U	< 0.018	0.018	U	0.87	0.37	J	< 0.057	0.057	U	980	10					0.051	0.032	J	3.3	1.7	
MW-12	Event 01 2017 Nov	11/12/2017	MG/L	< 0.02	0.02	U	29	0.077		< 0.0017	0.0017	UJ				28	0.13		< 0.05	0.05	U	440	20		0.3	0.02					9.1	0.56	J-
MW-12	Event 02 2017 Dec	12/19/2017	MG/L	< 0.02	0.02	U	39	0.077		< 0.0017	0.0017	U				23	0.13		< 0.05	0.05	UJ	450	20	J-	0.04	0.02	J				1.6	0.56	J-
MW-12	Event 03 2018 JanFeb	2/4/2018	MG/L	0.06	0.02	J	41	0.077		< 0.0017	0.0017	U				22	0.13		< 0.05	0.05	U	450	20		< 0.02	0.02	U				26	0.56	
MW-12	Event 04 2018 Mar	3/14/2018	MG/L	0.07	0.02	J	54	0.077		< 0.0017	0.0017	U				17	0.13		< 0.05	0.05	UJ	500	33	J-	0.05	0.02					4.7	0.91	J-
MW-12	Event 05 2018 Oct	11/12/2018	MG/L	0.23	0.022		32	0.89		< 0.0050	0.005	U	< 0.018	0.018	U	25	0.7		< 0.057	0.057	U	440	3.4					< 0.032	0.032	U	30	3.2	
MW-12	Event 06 2019 Jan	1/16/2019	MG/L	< 0.097	0.097	UJ	36	0.89		< 0.0050	0.005	U	< 0.018	0.018	U	26	0.7		< 0.057	0.057	U	370	3.4					0.039	0.032	J	7	3.2	
MW-12	Event 07 2019 Mar	3/24/2019	MG/L	< 0.12	0.12	U	38	0.89		< 0.0050	0.005	U	< 0.018	0.018	U	27	0.7		< 0.057	0.057	U	410	3.4					< 0.11	0.11	UJ	17	3.2	
MW-12	Event 08 2019 MayJun	6/5/2019	MG/L	0.037	0.024	J	56	1.8		< 0.0050	0.005	U	< 0.018	0.018	U	20	0.7		< 0.057	0.057	UJ	500	3.4					< 0.096	0.096	UJ	7	3.2	
MW-12	Event 09 2019 Sept	9/18/2019	MG/L	0.9	0.024		36	0.89		< 0.0050	0.005	U	< 0.018	0.018	U	34	0.7		< 0.057	0.057	U	430	3.4					< 0.056	0.056	UJ	< 3.2	3.2	U
MW-12	Event 10 2019 NovDec	11/20/2019	MG/L	0.4	0.024		39	0.89		< 0.0050	0.005	U	< 0.018	0.018	U	35	0.7		< 0.057	0.057	U	440	3.4					< 0.032	0.032	U	22	3.2	
MW-12	Event 11 2020 NovJan	12/13/2020	MG/L	< 0.024	0.024	U	28	0.12		< 0.0050	0.005	U	< 0.018	0.018	U	27	0.37		< 0.057	0.057	UJ	440	5					< 0.032	0.032	U	7.5	2.5	
MW-12	Event 13 2021 Apr	4/14/2021	MG/L	5.6	0.048		42	0.12		NS			< 0.018	0.018	U	21	0.37		< 0.057	0.057	U	440	5					0.048	0.032	J	11	5	
MW-13	Event 01 2017 Nov	11/13/2017	MG/L	< 0.02	0.02	U	38	0.077		< 0.0017	0.0017	UJ				13	0.13		< 0.05	0.05	UJ	470	20		< 0.02	0.02	U				10	0.56	J-
MW-13	Event 02 2017 Dec	12/19/2017	MG/L	< 0.02	0.02	U	35	0.077		< 0.0017	0.0017	U				13	0.13		< 0.05	0.05	UJ	470	20	J-	0.11	0.02					95	1.2	J-
MW-13	Event 03 2018 JanFeb	1/31/2018	MG/L	< 0.02	0.02	U	39	0.077		< 0.0017	0.0017	U				12	0.13		< 0.05	0.05	U	460	20		0.04	0.02	J				5.2	0.56	J
MW-13	Event 04 2018 Mar	3/14/2018	MG/L	< 0.02	0.02	U	43	0.077		< 0.0017	0.0017	U				12	0.13		< 0.05	0.05	UJ	410	20	J-	0.08	0.02					69	1	J-
MW-13	Event 05 2018 Oct	11/6/2018	MG/L	0.89	0.022	J	28	0.89		< 0.0050	0.005	U	< 0.018	0.018	U	15	0.7		< 0.057	0.057	U	400	3.4					< 0.032	0.032	U	< 3.2	3.2	U
MW-13	Event 06 2019 Jan	1/14/2019	MG/L	< 0.022	0.022	U	31	0.89		< 0.0050	0.005	U	< 0.018	0.018	U	15	0.7		< 0.057	0.057	U	440	3.4					0.036	0.032	J	< 3.2	3.2	U
MW-13	Event 07 2019 Mar	3/27/2019	MG/L	0.39	0.024		31	0.89		< 0.0050	0.005	UJ	0.088	0.018		15	0.7		< 0.057	0.057	U	460	3.4					0.048	0.032	J	< 3.2	3.2	U
MW-13	Event 08 2019 MayJun	6/3/2019	MG/L	< 0.024	0.024	UJ	41	1.8		< 0.0050	0.005	U	< 0.018	0.018	U	12	1.4		< 0.057	0.057	UJ	620	3.4					0.085	0.032	J	< 3.2	3.2	U
MW-13	Event 09 2019 Sept	9/10/2019	MG/L	< 0.33	0.33	UJ	30	0.89		< 0.0050	0.005	U	0.71	0.018		19	0.7		< 0.057	0.057	U	450	3.4					< 0.032	0.032	U	< 3.2	3.2	U
MW-13	Event 10 2019 NovDec	11/18/2019	MG/L	< 0.024	0.024	U	31	0.89		< 0.0050	0.005	U	0.022	0.018	J	17	0.7		< 0.057	0.057	U	450	3.4					< 0.032	0.032	U	< 3.2	3.2	U
MW-13	Event 11 2020 NovJan	11/22/2020	MG/L	< 0.024	0.024	UJ	31	0.12	J	< 0.0050	0.005	UJ	0.1	0.018	J	16	0.37	J	< 0.057	0.057	UJ	560	5	J				< 0.032	0.032	UJ	< 1.0	1	UJ
MW-13	Event 13 2021 Apr	4/5/2021	MG/L	1.4	0.024		43	0.12		NS			< 0.018	0.018	U	11	0.37		< 0.057	0.057	U	450	5					0.083	0.032	J	2	1.7	
MW-15	Event 10 2019 NovDec	12/16/2019	MG/L	0.92	0.12		470	8.9		< 0.0050	0.005	U	< 0.018	0.018	U	100	7		**0.069**	0.057	J	1500	17					0.27	0.032		14	3.2	
MW-15	Event 11 2020 NovJan	12/14/2020	MG/L	< 0.024	0.024	U	330	1.2	J	< 0.0050	0.005	U	0.12	0.018		29	3.7		**0.057**	0.057	J	970	10					0.49	0.032		8	1.7	
MW-15	Event 12 2021 Jan	1/25/2021	MG/L	0.12	0.12	J	270	1.2		< 0.0050	0.005	U	0.35	0.018		24	0.37		**0.077**	0.057	J	980	5					0.47	0.032		4.7	1.7	
MW-16	Event 10 2019 NovDec	12/11/2019	MG/L	0.24	0.024		180	4.5		< 0.0050	0.005	U	< 0.018	0.018	U	29	3.5		< 0.057	0.057	U	440	6.8					< 0.032	0.032	U	13	3.2	
MW-16	Event 11 2020 NovJan	12/14/2020	MG/L	0.052	0.024		140	1.2		< 0.0050	0.005	U	< 0.018	0.018	U	31	0.37		< 0.057	0.057	UJ	520	5					< 0.032	0.032	U	70	5	
MW-16	Event 12 2021 Jan	1/25/2021	MG/L	< 0.12	0.12	U	150	1.2		< 0.0050	0.005	U	< 0.018	0.018	U	24	0.37		< 0.057	0.057	UJ	540	5					< 0.032	0.032	U	100	5	

Footnotes and Abbreviations:

GWPS are not applicable to inorganics because secondary MCLs are not health risk based and inorganics are not Appendix II constituents.

U or < = Result was not detected

J = Result is estimated

MG/L - milligrams per liter

R = Data were rejected during the validation process but are considered usable based on the Validator's professional judgement

NS = Not sampled

Grey shaded cells represent the background data set that was used to develop the statistical limit for comparisons.

Non-parametric prediction limits were used when non-detects represented greater than 50% of the data set.

Detections are bolded and purple shaded cells are above the groundwater protection standard (background) indicated in the table.

ATTACHMENT C-8
EXPLOSIVES

			Analyte	2-Amino-4,6-dinitrotoluene			Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)			o-Nitrotoluene		
Groundwater Protection Standard (GWPS ug/L):				1.9			97			31		
				RSL			RSL			RSL		
Well ID	Sampling Event	Date	Unit	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier
			Number of data points	Not calculated			10			10		
			Percent Non-detect	Not calculated			100			100		
			Interwell Prediction Limit	Not calculated			0.0255			0.036		
			Confidence Level	Not calculated			Not calculated			Not calculated		
MW-1C	Event 01 2017 Nov	11/5/2017	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-1C	Event 02 2017 Dec	12/18/2017	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-1C	Event 03 2018 JanFeb	2/4/2018	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-1C	Event 04 2018 Mar	3/12/2018	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-1C	Event 05 2018 Oct	10/30/2018	ug/L	< 0.10	0.1	UR	< 0.065	0.065	UR	< 0.072	0.072	UR
MW-1C	Event 06 2019 Jan	1/14/2019	ug/L	< 0.055	0.055	U	< 0.057	0.057	U	< 0.093	0.093	U
MW-1C	Event 07 2019 Mar	3/20/2019	ug/L	< 0.051	0.051	U	< 0.16	0.16	U	< 0.086	0.086	U
MW-1C	Event 08 2019 MayJun	6/3/2019	ug/L	< 0.054	0.054	U	< 0.17	0.17	U	< 0.091	0.091	U
MW-1C	Event 09 2019 Sept	9/10/2019	ug/L	< 0.054	0.054	UJ	< 0.17	0.17	UJ	< 0.091	0.091	UJ
MW-1C	Event 10 2019 NovDec	11/13/2019	ug/L	< 0.052	0.052	U	< 0.16	0.16	U	< 0.088	0.088	U
MW-1C	Event 11 2020 NovJan	11/22/2020	ug/L	< 0.051	0.051	UJ	< 0.051	0.051	UJ	< 0.085	0.085	UJ
MW-2A	Event 01 2017 Nov	11/2/2017	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-2A	Event 05 2018 Oct	11/6/2018	ug/L	< 0.10	0.1	U	< 0.065	0.065	U	< 0.072	0.072	U
MW-2A	Event 09 2019 Sept	9/18/2019	ug/L	< 0.052	0.052	U	< 0.16	0.16	U	< 0.088	0.088	U
MW-2A	Event 10 2019 NovDec	11/18/2019	ug/L	< 0.050	0.05	U	< 0.15	0.15	U	< 0.084	0.084	U
MW-2A	Event 11 2020 NovJan	12/13/2020	ug/L	< 0.051	0.051	UJ	< 0.052	0.052	UJ	< 0.086	0.086	UJ
MW-14	Event 10 2019 NovDec	12/22/2019	ug/L	< 0.048	0.048	U	< 0.15	0.15	U	< 0.081	0.081	U
MW-14	Event 11 2020 NovJan	11/22/2020	ug/L	< 0.051	0.051	U	< 0.051	0.051	UJ	< 0.085	0.085	U
MW-14	Event 12 2021 Jan	1/25/2021	ug/L	< 0.050	0.05	UJ	< 0.051	0.051	UJ	< 0.085	0.085	UJ
MW-14	Event 13 2021 Apr	4/2/2021	ug/L	< 0.051	0.051	U	< 0.052	0.052	U	< 0.086	0.086	U
MW-5A	Event 01 2017 Nov	11/12/2017	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-5A	Event 02 2017 Dec	12/19/2017	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-5A	Event 03 2018 JanFeb	1/31/2018	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-5A	Event 04 2018 Mar	3/13/2018	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-5A	Event 05 2018 Oct	11/13/2018	ug/L	< 0.10	0.1	UR	< 0.068	0.068	UR	< 0.075	0.075	UR
MW-5A	Event 06 2019 Jan	1/22/2019	ug/L	< 0.050	0.05	U	< 0.052	0.052	U	< 0.084	0.084	U
MW-5A	Event 07 2019 Mar	3/25/2019	ug/L	< 0.050	0.05	U	< 0.16	0.16	U	< 0.085	0.085	U
MW-5A	Event 08 2019 MayJun	6/17/2019	ug/L	< 0.055	0.055	U	< 0.17	0.17	U	< 0.093	0.093	U
MW-5A	Event 09 2019 Sept	9/24/2019	ug/L	< 0.055	0.055	UJ	< 0.17	0.17	UJ	< 0.092	0.092	UJ
MW-5A	Event 10 2019 NovDec	12/4/2019	ug/L	< 0.050	0.05	U	< 0.16	0.16	U	< 0.085	0.085	U
MW-5A	Event 11 2020 NovJan	12/15/2020	ug/L	< 0.051	0.051	U	< 0.052	0.052	U	< 0.086	0.086	U
MW-6	Event 01 2017 Nov	11/8/2017	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-6	Event 02 2017 Dec	12/19/2017	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-6	Event 05 2018 Oct	11/13/2018	ug/L	< 0.10	0.1	UR	< 0.065	0.065	UR	< 0.073	0.073	UR
MW-6	Event 06 2019 Jan	1/23/2019	ug/L	< 0.053	0.053	U	< 0.055	0.055	U	< 0.090	0.09	U
MW-6	Event 07 2019 Mar	3/25/2019	ug/L	< 0.052	0.052	U	< 0.16	0.16	U	< 0.088	0.088	U
MW-6	Event 09 2019 Sept	9/24/2019	ug/L	< 0.052	0.052	UJ	< 0.16	0.16	UJ	< 0.088	0.088	UJ
MW-6	Event 10 2019 NovDec	12/4/2019	ug/L	< 0.047	0.047	U	< 0.15	0.15	U	< 0.080	0.08	U
MW-6	Event 11 2020 NovJan	12/14/2020	ug/L	< 0.051	0.051	U	< 0.052	0.052	U	< 0.087	0.087	U
MW-9	Event 01 2017 Nov	11/6/2017	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-9	Event 02 2017 Dec	12/20/2017	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-9	Event 03 2018 JanFeb	2/4/2018	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-9	Event 04 2018 Mar	3/13/2018	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-9	Event 05 2018 Oct	11/7/2018	ug/L	< 0.10	0.1	U	< 0.067	0.067	U	< 0.075	0.075	U
MW-9	Event 06 2019 Jan	1/21/2019	ug/L	< 0.057	0.057	U	< 0.059	0.059	U	< 0.096	0.096	U
MW-9	Event 07 2019 Mar	3/24/2019	ug/L	< 0.054	0.054	U	< 0.17	0.17	U	< 0.090	0.09	U
MW-9	Event 08 2019 MayJun	6/10/2019	ug/L	< 0.054	0.054	U	< 0.17	0.17	U	< 0.092	0.092	U
MW-9	Event 09 2019 Sept	9/18/2019	ug/L	< 0.051	0.051	U	< 0.16	0.16	U	< 0.086	0.086	U
MW-9	Event 10 2019 NovDec	11/20/2019	ug/L	< 0.051	0.051	UJ	< 0.16	0.16	UJ	< 0.087	0.087	UJ
MW-9	Event 11 2020 NovJan	12/13/2020	ug/L	< 0.050	0.05	U	< 0.051	0.051	U	< 0.085	0.085	U

ATTACHMENT C-8
EXPLOSIVES

			Analyte	2-Amino-4,6-dinitrotoluene			Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)			o-Nitrotoluene		
Groundwater Protection Standard (GWPS ug/L):				1.9			97			31		
				RSL			RSL			RSL		
Well ID	Sampling Event	Date	Unit	Result	MDL	Qualifier	Result	MDL	Qualifier	Result	MDL	Qualifier
MW-10	Event 01 2017 Nov	11/14/2017	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-10	Event 02 2017 Dec	12/20/2017	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-10	Event 03 2018 JanFeb	2/5/2018	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-10	Event 05 2018 Oct	11/12/2018	ug/L	< 0.10	0.1	U	< 0.065	0.065	U	< 0.072	0.072	U
MW-10	Event 06 2019 Jan	1/21/2019	ug/L	< 0.058	0.058	U	< 0.060	0.06	U	< 0.098	0.098	U
MW-10	Event 07 2019 Mar	3/24/2019	ug/L	< 0.051	0.051	U	< 0.16	0.16	U	**0.28**	0.087	J
MW-10	Event 08 2019 MayJun	6/12/2019	ug/L	< 0.057	0.057	UJ	< 0.18	0.18	UJ	< 0.096	0.096	UJ
MW-10	Event 09 2019 Sept	9/23/2019	ug/L	< 0.053	0.053	U	< 0.17	0.17	U	< 0.090	0.09	U
MW-10	Event 10 2019 NovDec	12/2/2019	ug/L	< 0.050	0.05	U	< 0.16	0.16	U	< 0.084	0.084	U
MW-10	Event 11 2020 NovJan	12/13/2020	ug/L	< 0.051	0.051	UJ	< 0.052	0.052	UJ	< 0.086	0.086	UJ
MW-11R	Event 10 2019 NovDec	12/22/2019	ug/L	< 0.048	0.048	U	< 0.15	0.15	U	< 0.081	0.081	U
MW-11R	Event 11 2020 NovJan	12/14/2020	ug/L	< 0.051	0.051	UJ	< 0.052	0.052	UJ	< 0.086	0.086	UJ
MW-11R	Event 12 2021 Jan	1/25/2021	ug/L	< 0.051	0.051	UJ	< 0.051	0.051	UJ	< 0.085	0.085	UJ
MW-11R	Event 13 2021 Apr	4/14/2021	ug/L	**0.17**	0.056	J	< 0.056	0.056	UJ	< 0.094	0.094	U
MW-12	Event 01 2017 Nov	11/12/2017	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-12	Event 02 2017 Dec	12/19/2017	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-12	Event 03 2018 JanFeb	2/4/2018	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-12	Event 04 2018 Mar	3/14/2018	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-12	Event 05 2018 Oct	11/12/2018	ug/L	< 0.10	0.1	U	< 0.066	0.066	U	< 0.073	0.073	U
MW-12	Event 06 2019 Jan	1/16/2019	ug/L	< 0.054	0.054	U	**0.13**	0.055	J	< 0.090	0.09	U
MW-12	Event 07 2019 Mar	3/24/2019	ug/L	< 0.052	0.052	U	< 0.16	0.16	U	< 0.087	0.087	U
MW-12	Event 08 2019 MayJun	6/4/2019	ug/L	< 0.056	0.056	UJ	< 0.17	0.17	UJ	< 0.094	0.094	UJ
MW-12	Event 09 2019 Sept	9/18/2019	ug/L	< 0.052	0.052	U	< 0.16	0.16	U	< 0.088	0.088	U
MW-12	Event 10 2019 NovDec	11/20/2019	ug/L	< 0.051	0.051	UJ	< 0.16	0.16	UJ	< 0.086	0.086	UJ
MW-12	Event 11 2020 NovJan	12/13/2020	ug/L	< 0.051	0.051	U	< 0.052	0.052	U	< 0.086	0.086	U
MW-13	Event 01 2017 Nov	11/13/2017	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-13	Event 02 2017 Dec	12/19/2017	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-13	Event 03 2018 JanFeb	1/31/2018	ug/L	< 0.125	0.125	UJ	< 0.123	0.123	UJ	< 0.126	0.126	UJ
MW-13	Event 04 2018 Mar	3/16/2018	ug/L	< 0.125	0.125	U	< 0.123	0.123	U	< 0.126	0.126	U
MW-13	Event 05 2018 Oct	11/6/2018	ug/L	< 0.099	0.099	U	< 0.064	0.064	U	< 0.071	0.071	U
MW-13	Event 06 2019 Jan	1/14/2019	ug/L	< 0.052	0.052	U	< 0.054	0.054	U	< 0.088	0.088	U
MW-13	Event 07 2019 Mar	3/20/2019	ug/L	< 0.054	0.054	U	< 0.17	0.17	U	< 0.091	0.091	U
MW-13	Event 08 2019 MayJun	6/3/2019	ug/L	< 0.053	0.053	U	< 0.16	0.16	U	< 0.089	0.089	U
MW-13	Event 09 2019 Sept	9/10/2019	ug/L	< 0.056	0.056	UJ	< 0.18	0.18	UJ	< 0.095	0.095	UJ
MW-13	Event 10 2019 NovDec	11/18/2019	ug/L	< 0.051	0.051	U	< 0.16	0.16	U	< 0.085	0.085	U
MW-13	Event 11 2020 NovJan	11/22/2020	ug/L	< 0.052	0.052	U	< 0.052	0.052	U	< 0.087	0.087	U
MW-15	Event 10 2019 NovDec	12/16/2019	ug/L	< 0.056	0.056	U	< 0.17	0.17	U	**0.32**	0.094	J
MW-15	Event 11 2020 NovJan	12/14/2020	ug/L	< 0.051	0.051	U	< 0.052	0.052	U	< 0.086	0.086	U
MW-15	Event 12 2021 Jan	1/25/2021	ug/L	< 0.051	0.051	UJ	< 0.052	0.052	UJ	< 0.086	0.086	UJ
MW-16	Event 10 2019 NovDec	12/11/2019	ug/L	< 0.048	0.048	U	< 0.15	0.15	U	< 0.081	0.081	U
MW-16	Event 11 2020 NovJan	12/14/2020	ug/L	< 0.051	0.051	U	< 0.052	0.052	U	< 0.086	0.086	U
MW-16	Event 12 2021 Jan	1/25/2021	ug/L	< 0.051	0.051	UJ	< 0.052	0.052	UJ	< 0.086	0.086	UJ

Footnotes and Abbreviations:

Blue shade GWPS is RSL.

U or < = Result was not detected

J = Result is estimated

R = Data were rejected during the validation process but are considered usable based on the Validator's professional judgement

NS = Not sampled

ug/L - micrograms per liter

Grey shaded cells represent the background data set that was used to develop the statistical limit for comparisons.

Non-parametric prediction limits were used when non-detects represented greater than 50% of the data set.

Detections are bolded and purple shaded cells are above the groundwater protection standard (background) indicated in the table.

ATTACHMENT C-9

DIOXIN AND PERCHLORATE

		Analyte	2,3,7,8-TCDD (pg/L)			Perchlorate (ug/L)		
Groundwater Protection Standard (GWPS):			**30**			**14**		
			MCL			**RSL**		
Well ID	Sampling Event	Date	Result	MDL	Qualifier	Result	MDL	Qualifier
		Number of data points	10			10		
		Percent Non-detect	90			100		
		Interwell Prediction Limit	0.1165			0.014		
		Confidence Level	Not calculated			Not calculated		
MW-1C	Event 01 2017 Nov	11/5/2017	< 0.235	0.235	U	< 0.2	0.2	U
MW-1C	Event 02 2017 Dec	12/18/2017	< 0.233	0.233	U	< 0.2	0.2	U
MW-1C	Event 03 2018 JanFeb	2/4/2018	< 0.233	0.233	U	< 0.2	0.2	U
MW-1C	Event 04 2018 Mar	3/12/2018	< 0.233	0.233	U	< 2	2	U
MW-1C	Event 05 2018 Oct	10/30/2018	< 0.44	0.44	U	< 0.082	0.082	U
MW-1C	Event 06 2019 Jan	1/14/2019	**1.5**	0.3	J	< 0.082	0.082	U
MW-1C	Event 07 2019 Mar	3/27/2019	< 0.86	0.86	U	< 0.082	0.082	U
MW-1C	Event 08 2019 MayJun	6/3/2019	< 1.3	1.3	U	< 0.082	0.082	U
MW-1C	Event 09 2019 Sept	9/10/2019	< 0.96	0.96	U	< 0.027	0.027	U
MW-1C	Event 10 2019 NovDec	11/13/2019	< 1.3	1.3	U	< 0.027	0.027	U
MW-1C	Event 11 2020 NovJan	11/22/2020	< 0.52	0.52	UJ	< 0.10	0.1	UJ
MW-2A	Event 01 2017 Nov	11/2/2017	< 0.235	0.235	U	< 0.2	0.2	UJ
MW-2A	Event 05 2018 Oct	11/6/2018	< 1.0	1	U	< 0.082	0.082	U
MW-2A	Event 09 2019 Sept	9/18/2019	< 0.59	0.59	U	**0.13**	0.027	J
MW-2A	Event 10 2019 NovDec	11/18/2019	< 0.61	0.61	U	**0.074**	0.027	J
MW-2A	Event 11 2020 NovJan	12/13/2020	< 1.2	1.2	U	< 0.030	0.03	U
MW-14	Event 10 2019 NovDec	12/22/2019	< 1.1	1.1	U	< 0.027	0.027	U
MW-14	Event 11 2020 NovJan	11/22/2020	< 0.53	0.53	UJ	< 0.065	0.065	UJ
MW-14	Event 12 2021 Jan	1/25/2021	< 2.3	2.3	U	< 0.030	0.03	U
MW-5A	Event 01 2017 Nov	11/12/2017	< 0.233	0.233	U	< 0.2	0.2	U
MW-5A	Event 02 2017 Dec	12/19/2017	< 0.233	0.233	U	< 0.2	0.2	U
MW-5A	Event 03 2018 JanFeb	1/31/2018	< 0.235	0.235	U	< 0.2	0.2	U
MW-5A	Event 04 2018 Mar	3/13/2018	< 0.233	0.233	U	< 2	2	U
MW-5A	Event 05 2018 Oct	11/13/2018	< 1.3	1.3	U	< 0.082	0.082	U
MW-5A	Event 06 2019 Jan	1/22/2019	**2.5**	0.34	J	< 0.082	0.082	U
MW-5A	Event 07 2019 Mar	3/25/2019	< 4.7	4.7	U	< 0.082	0.082	U
MW-5A	Event 08 2019 MayJun	6/18/2019	< 1.5	1.5	U	< 0.085	0.085	U
MW-5A	Event 09 2019 Sept	9/24/2019	< 0.51	0.51	UJ	**0.17**	0.027	J
MW-5A	Event 10 2019 NovDec	12/4/2019	**2.5**	0.41	J	< 0.070	0.07	UJ
MW-5A	Event 11 2020 NovJan	12/15/2020	< 1.1	1.1	U	**0.064**	0.03	J
MW-6	Event 01 2017 Nov	11/8/2017	< 0.235	0.235	U	< 0.2	0.2	U
MW-6	Event 02 2017 Dec	12/19/2017	< 0.233	0.233	U	< 0.2	0.2	U
MW-6	Event 03 2018 JanFeb	2/4/2018	< 0.233	0.233	U	< 0.2	0.2	U
MW-6	Event 05 2018 Oct	11/13/2018	< 1.2	1.2	U	< 0.082	0.082	U
MW-6	Event 06 2019 Jan	1/23/2019	< 0.32	0.32	U	< 0.082	0.082	U
MW-6	Event 07 2019 Mar	3/25/2019	< 0.78	0.78	U	< 0.082	0.082	U
MW-6	Event 09 2019 Sept	9/24/2019	< 0.49	0.49	UJ	< 0.027	0.027	UJ
MW-6	Event 10 2019 NovDec	12/4/2019	< 0.98	0.98	U	< 0.027	0.027	U
MW-6	Event 11 2020 NovJan	12/14/2020	< 0.70	0.7	U	< 0.030	0.03	U
MW-9	Event 01 2017 Nov	11/6/2017	< 0.235	0.235	U	< 0.2	0.2	U
MW-9	Event 02 2017 Dec	12/20/2017	< 0.233	0.233	U	< 0.2	0.2	U
MW-9	Event 03 2018 JanFeb	2/4/2018	< 0.233	0.233	U	< 0.2	0.2	U
MW-9	Event 04 2018 Mar	3/13/2018	< 0.235	0.235	U	< 2	2	U
MW-9	Event 05 2018 Oct	11/7/2018	< 0.72	0.72	U	< 0.082	0.082	U
MW-9	Event 06 2019 Jan	1/21/2019	**1.3**	0.34	J	< 0.082	0.082	U
MW-9	Event 07 2019 Mar	3/24/2019	< 1.3	1.3	U	< 0.082	0.082	U
MW-9	Event 08 2019 MayJun	6/10/2019	< 0.46	0.46	UJ	< 0.085	0.085	UJ
MW-9	Event 09 2019 Sept	9/18/2019	< 0.52	0.52	U	**0.12**	0.027	J
MW-9	Event 10 2019 NovDec	11/20/2019	< 2.0	2	U	< 0.027	0.027	U
MW-9	Event 11 2020 NovJan	12/13/2020	< 0.84	0.84	U	**0.07**	0.03	J
MW-9	Event 13 2021 Apr	4/5/2021	NS			< 0.030	0.03	U

ATTACHMENT C-9
DIOXIN AND PERCHLORATE

		Analyte	2,3,7,8-TCDD (pg/L)			Perchlorate (ug/L)		
Groundwater Protection Standard (GWPS):			30			14		
			MCL			RSL		
Well ID	Sampling Event	Date	Result	MDL	Qualifier	Result	MDL	Qualifier
		Number of data points	10			10		
		Percent Non-detect	90			100		
		Interwell Prediction Limit	0.1165			0.014		
		Confidence Level	Not calculated			Not calculated		
MW-10	Event 01 2017 Nov	11/14/2017	< 0.233	0.233	U	**0.28**	0.2	J
MW-10	Event 02 2017 Dec	12/20/2017	< 0.233	0.233	U	**0.27**	0.2	J
MW-10	Event 03 2018 JanFeb	2/5/2018	< 0.233	0.233	U	**0.2**	0.2	J
MW-10	Event 05 2018 Oct	11/12/2018	< 0.90	0.9	U	**0.22**	0.082	J
MW-10	Event 06 2019 Jan	1/21/2019	< 0.41	0.41	U	**0.24**	0.082	J
MW-10	Event 07 2019 Mar	3/24/2019	< 1.4	1.4	U	**0.16**	0.082	J
MW-10	Event 08 2019 MayJun	6/12/2019	< 0.39	0.39	U	< 0.085	0.085	U
MW-10	Event 09 2019 Sept	9/23/2019	**3.6**	0.61	J	**0.27**	0.027	
MW-10	Event 10 2019 NovDec	12/2/2019	< 0.91	0.91	U	**0.23**	0.027	
MW-10	Event 11 2020 NovJan	12/13/2020	< 1.1	1.1	U	**0.16**	0.03	J
MW-10	Event 13 2021 Apr	4/5/2021	NS			< 0.12	0.12	UJ
MW-11R	Event 10 2019 NovDec	12/22/2019	< 1.0	1	U	< 0.027	0.027	U
MW-11R	Event 11 2020 NovJan	12/14/2020	< 0.95	0.95	U	< 0.030	0.03	U
MW-11R	Event 12 2021 Jan	1/25/2021	< 4.8	4.8	U	< 0.030	0.03	U
MW-11R	Event 13 2021 Apr	4/14/2021	< 1.3	1.3	U	< 0.060	0.06	U
MW-12	Event 01 2017 Nov	11/12/2017	< 0.233	0.233	U	< 0.2	0.2	U
MW-12	Event 02 2017 Dec	12/19/2017	< 0.233	0.233	U	< 0.2	0.2	U
MW-12	Event 03 2018 JanFeb	2/4/2018	< 0.233	0.233	U	< 0.2	0.2	U
MW-12	Event 04 2018 Mar	3/14/2018	< 0.235	0.235	U	< 2	2	U
MW-12	Event 05 2018 Oct	11/12/2018	< 0.94	0.94	U	< 0.082	0.082	U
MW-12	Event 06 2019 Jan	1/16/2019	< 0.49	0.49	U	< 0.082	0.082	U
MW-12	Event 07 2019 Mar	3/24/2019	< 1.2	1.2	U	< 0.082	0.082	U
MW-12	Event 08 2019 MayJun	6/5/2019	< 1.0	1	U	< 0.082	0.082	U
MW-12	Event 09 2019 Sept	9/18/2019	< 0.50	0.5	U	< 0.027	0.027	U
MW-12	Event 10 2019 NovDec	11/20/2019	< 1.5	1.5	U	< 0.027	0.027	U
MW-12	Event 11 2020 NovJan	12/13/2020	< 1.3	1.3	U	< 0.030	0.03	U
MW-12	Event 13 2021 Apr	4/14/2021	NS			< 0.030	0.03	U
MW-13	Event 01 2017 Nov	11/13/2017	< 0.233	0.233	U	< 0.2	0.2	U
MW-13	Event 02 2017 Dec	12/19/2017	< 0.233	0.233	U	< 0.2	0.2	U
MW-13	Event 03 2018 JanFeb	1/31/2018	< 0.235	0.235	U	< 0.2	0.2	U
MW-13	Event 04 2018 Mar	3/16/2018	< 0.235	0.235	U	< 0.2	0.2	U
MW-13	Event 05 2018 Oct	11/6/2018	< 0.96	0.96	U	< 0.082	0.082	U
MW-13	Event 06 2019 Jan	1/14/2019	**0.65**	0.24	J	< 0.082	0.082	U
MW-13	Event 07 2019 Mar	3/27/2019	< 0.93	0.93	U	< 0.082	0.082	U
MW-13	Event 08 2019 MayJun	6/3/2019	< 4.2	4.2	U	< 0.082	0.082	U
MW-13	Event 09 2019 Sept	9/10/2019	< 0.67	0.67	U	< 0.027	0.027	U
MW-13	Event 10 2019 NovDec	11/18/2019	< 0.59	0.59	U	< 0.027	0.027	U
MW-13	Event 11 2020 NovJan	11/22/2020	< 0.55	0.55	UJ	< 0.049	0.049	UJ
MW-13	Event 13 2021 Apr	4/5/2021	NS			< 0.030	0.03	U
MW-15	Event 10 2019 NovDec	12/16/2019	< 1.2	1.2	U	< 0.027	0.027	U
MW-15	Event 11 2020 NovJan	12/14/2020	< 0.98	0.98	U	< 0.030	0.03	U
MW-15	Event 12 2021 Jan	1/25/2021	< 5.1	5.1	U	< 0.030	0.03	U
MW-16	Event 10 2019 NovDec	12/11/2019	< 0.91	0.91	U	< 0.027	0.027	U
MW-16	Event 11 2020 NovJan	12/14/2020	< 0.81	0.81	U	< 0.030	0.03	U
MW-16	Event 12 2021 Jan	1/25/2021	< 5.2	5.2	U	< 0.030	0.03	U

Footnotes and Abbreviations:

Green shade GWPS is MCL. Blue Shade GWPS is RSL.

U or < = Result was not detected

J = Result is estimated

NS = Not sampled

Grey shaded cells represent the background data set that was used to develop the statistical limit for comparisons.

Non-parametric prediction limits were used when non-detects represented greater than 50% of the data set.

Detections are bolded.

Attachment D: Groundwater Protection Standards

ATTACHMENT D
DEVELOPMENT OF GROUNDWATER PROTECTION STANDARDS

								Event	Event 01 2017 Nov	Event 01 2017 Nov	Event 01 2017 Nov	Event 01 2017 Nov	Event 01 2017 Nov	Event 01 2017 Nov	Event 02 2017 Dec	Event 02 2017 Dec	Event 02 2017 Dec	Event 02 2017 Dec	Event 02 2017 Dec	Event 02 2017 Dec	Event 03 2018 JanFeb	Event 03 2018 JanFeb	Event 03 2018 JanFeb	Event 03 2018 JanFeb	Event 03 2018 JanFeb	Event 03 2018 JanFeb	Event 04 2018 Mar	Event 04 2018 Mar	Event 04 2018 Mar	Event 04 2018 Mar	Event 05 2018 Oct	Event 05 2018 Oct	Event 05 2018 Oct	Event 05 2018 Oct	Event 05 2018 Oct	Event 05 2018 Oct	Event 06 2019 Jan	Event 06 2019 Jan	Event 06 2019 Jan	Event 06 2019 Jan	Event 06 2019 Jan	Event 06 2019 Jan	Event 07 2019 Mar	Event 07 2019 Mar	Event 07 2019 Mar	Event 07 2019 Mar	Event 07 2019 Mar	Event 07 2019 Mar	Event 08 2019 MayJun	Event 08 2019 MayJun	Event 08 2019 MayJun	Event 08 2019 MayJun	Event 08 2019 MayJun	Event 09 2019 Sept	Event 09 2019 Sept	Event 09 2019 Sept	Event 09 2019 Sept	Event 09 2019 Sept	Event 09 2019 Sept
								Well	MW-10	MW-12	MW-13	MW-5A	MW-6	MW-9	MW-10	MW-12	MW-13	MW-5A	MW-6	MW-9	MW-10	MW-12	MW-13	MW-5A	MW-6	MW-9	MW-12	MW-13	MW-5A	MW-9	MW-10	MW-12	MW-13	MW-5A	MW-6	MW-9	MW-10	MW-12	MW-13	MW-5A	MW-6	MW-9	MW-10	MW-12	MW-13	MW-5A	MW-6	MW-9	MW-10	MW-12	MW-13	MW-5A	MW-9	MW-10	MW-12	MW-13	MW-5A	MW-6	MW-9
Chemical	Cas#	Unit	MCL	RSL (ELCR 1E-04, HQ=1)		Basis	Interim GWPS		Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
1,4-Dioxane	123-91-1	ug/L		46		RSL	46	g	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.72	ND	0.56	ND	ND	1.4	ND	1.5	0.61	ND
2,3,7,8-TCDD	1746-01-6	pg/L	30	12		MCL	30		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.65	2.5	ND	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.6	ND	ND	ND	ND	ND
2,4-D	94-75-7	ug/L	70	170	HQ	MCL	70		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.18
2-Amino-4,6-dinitrotoluene	35572-78-2	ug/L		1.9	HQ	RSL	1.9		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	91-57-6	ug/L		36	HQ	RSL	36		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.071	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p-Cresol	MEPH1314	ug/L		930	HQ	RSL	930		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	72-54-8	ug/L		3.2		RSL	3.2	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0034	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	83-32-9	ug/L		530	HQ	RSL	530		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	208-96-8	ug/L		530	HQ, a	RSL	530		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.053	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	67-64-1	ug/L		14000	HQ	RSL	14000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aldrin	309-00-2	ug/L		0.092	b	RSL	0.092	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0042	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
alpha Endosulfan (Endosulfan I)	959-98-8	ug/L		100	HQ	RSL	100		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0031	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	120-12-7	ug/L		1800	HQ	RSL	1800		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.071	ND	ND	0.0094	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony	7440-36-0	ug/L	6	7.8	HQ	MCL	6		ND	ND	ND	ND	8.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	7440-38-2	ug/L	10	5.2		MCL	10		ND	ND	ND	ND	ND	ND	ND	11	ND	8.2	8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	0.81	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barium	7440-39-3	ug/L	2000	3800	HQ	MCL	2000		ND	8	13	71	130	ND	ND	7.4	28	58	130	4.3	ND	12	15	60	140	ND	9.5	21	61	ND	7.1	20	12	46	170	1.1	ND	12	12	50	140	ND	0.58	11	12	51	140	ND	1.5	14	13	59	ND	0.93	15	15	69	160	ND
Benzo(a)anthracene	56-55-3	ug/L		3		RSL	3	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.15	ND	ND	0.022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	50-32-8	ug/L	0.2	2.5		MCL	0.2		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.063	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.053	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	205-99-2	ug/L		25		RSL	25	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.063	ND	ND	0.011	ND	ND	ND	ND	ND	ND	ND	0.046	ND	ND	0.051	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	207-08-9	ug/L		250		RSL	250	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.11	ND	ND	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	100-51-6	ug/L		2000	HQ	RSL	2000		ND	ND	ND	ND	ND	0.53	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl butyl phthalate	85-68-7	ug/L		1600		RSL	1600	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.62	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BHC, alpha	319-84-6	ug/L		0.72		RSL	0.72	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0027	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.043	0.062	ND
BHC, beta	319-85-7	ug/L		2.5		RSL	2.5	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.012	0.024	ND
BHC, delta	319-86-8	ug/L		0.72	c	RSL	0.72	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0042	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.019	0.041	ND
BHC, gamma (Lindane)	58-89-9	ug/L	0.2	4.2		MCL	0.2		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.023	0.036	ND
bis(2-Chloroethoxy)methane	111-91-1	ug/L		59	HQ	RSL	59		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	117-81-7	ug/L	6	560		MCL	6		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.7	7.7	ND	ND	2	ND	10	ND	ND	ND	ND	13	ND	ND	23	5.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.4	8.8	10
Cadmium	7440-43-9	ug/L	5	9.2	HQ	MCL	5		ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	108-90-7	ug/L	100	78	HQ	MCL	100		ND	ND	ND	ND	ND	0.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	7440-47-3	ug/L	100			MCL	100		4.9	2.3	ND	2.5	1.6	1.3	5.3	ND	ND	ND	ND	1.3	10	ND	ND	2.6	ND	ND	ND	7.5	4.1	1.3	11	1.9	ND	2.2	16	ND	2.8	ND	ND	ND	ND	ND	2.4	ND	ND	ND	ND	ND	5.6	ND	ND	ND	ND	2.4	ND	ND	ND	ND	ND
Chromium, Hexavalent	18540-29-9	ug/L		3.5		RSL	3.5	g	2.1	ND	ND	ND	0.04	ND	1	ND	ND	ND	ND	0.03	1.1	ND	ND	ND	ND	0.04	ND	ND	ND	ND	2.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.8	ND	ND	ND	ND	ND	0.68	ND	ND	ND	ND	1.6	ND	ND	ND	ND	ND
Chrysene	218-01-9	ug/L		2500		RSL	2500	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt	7440-48-4	ug/L		6	HQ	Background	11.9	i	ND	ND	ND	1.9	ND	ND	ND	ND	2.2	2.6	2.8	ND	ND	ND	ND	4.1	2.3	ND	ND	ND	3	ND	3.1	0.6	ND	2.9	8.9	ND	ND	ND	ND	2.5	2	ND	ND	ND	ND	1.7	1.8	ND	0.44	0.14	ND	1.9	0.27	ND	ND	ND	0.44	0.61	ND
Copper	7440-50-8	ug/L	1300	800	HQ	MCL	1300		1.7	ND	1.2	ND	ND	1.2	9.6	6.8	14	55	40	5.6	2.2	ND	ND	ND	ND	2.6	ND	2.8	ND	2.9	8.4	ND	ND	2.9	13	3.4	ND	ND	ND	ND	ND	2.4	ND	ND	ND	7.9	ND	2.8	6.1	ND	ND	2.5	7.1	ND	ND	ND	2.4	ND	ND
Cyanide	57-12-5	ug/L	200			MCL	200		ND	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	83	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	53-70-3	ug/L		2.5		RSL	2.5	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.091	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	84-66-2	ug/L		15000	HQ	RSL	15000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.45	ND	ND	0.14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.46	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	131-11-3	ug/L		1900	HQ, d	RSL	15000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.36	ND	ND	ND	ND	ND	ND
Dinoseb	88-85-7	ug/L	7	15	HQ	MCL	7		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.52	ND	0.43	ND	ND
Endrin aldehyde	7421-93-4	ug/L		2.3	HQ, e	RSL	2.3		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	206-44-0	ug/L		800	HQ	RSL	800		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.054	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gross Alpha	GRA	pCi/L	15			MCL	15		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.48	3.71	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.9	ND	ND	ND	ND	ND
Gross Beta	GRB	pCi/L	50			MCL	50	h	2.97	3.51	ND	8.43	ND	4.88	ND	2.61	1.61	9.72	ND	ND	ND	2.16	ND	7.42	ND	3.02	ND	ND	6.65	ND	4.23	2.91	ND	4.87	ND	3.37	4.41	3.11	3.21	ND	ND	2.19	3.81	4.4	ND	ND	ND	5.09	ND	3.18	ND	ND	4.16	ND	ND	ND	13.2	ND	3.35
Heptachlor epoxide	1024-57-3	ug/L	0.2	97		MCL	0.2		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
RDX	121-82-4	ug/L		25		RSL	97	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-c,d)pyrene	193-39-5	ug/L				RSL	25	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2	ND	ND	0.042	ND	ND	ND	ND	ND	ND	ND	0.056	ND	ND	0.065	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	7439-92-1	ug/L	15	15	HQ	MCL	15		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.86	ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	7439-97-6	ug/L	2	5.7	HQ	MCL	2		0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.077	ND	ND	ND	ND	ND	ND	ND
Methyl methanesulfonate	66-27-3	ug/L		79		RSL	79	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	91-20-3	ug/L		12		RSL	12	g	ND	ND	ND	ND	ND	0.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.22	ND	ND	ND	ND
Nickel	7440-02-0	ug/L		390	HQ	RSL	390		5.9	3.7	ND	11	4.9	4.6	9.9	ND	ND	8.7	5.8	3.6	8.3	5	ND	7.5	6	4.9	ND	7.5	9.4	4.9	15	3.3	ND	6.4	13	2	3.7	2.2	ND	5.2	4.5	2.2	3.2	1.9	ND	5.1	4.1	2.7	11	3.2	ND	7.1	4.4	3.3	2.1	ND	7.4	4.9	ND
o-Nitrotoluene	88-72-2	ug/L		31		RSL	31	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	14797-73-0	ug/L		14	HQ	RSL	14		0.28	ND	ND	ND	ND	ND	0.27	ND	ND	ND	ND	ND	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.22	ND	ND	ND	ND	ND	0.24	ND	ND	ND	ND	ND	0.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.27	ND	ND	0.17	ND	0.12
Phenanthrene	85-01-8	ug/L		800	HQ, f	RSL	800		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	129-00-0	ug/L		120	HQ	RSL	120		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.24	ND	ND	0.016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Radium-226	13982-63-3	pCi/L	5			MCL	5		ND	ND	ND	ND	0.52	ND	ND	ND	ND	ND	0.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	30.3	23.5	37.5	ND	ND	32.4	37.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	21.8	ND
Radium-228	15262-20-1	pCi/L	5			MCL	5		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.78	ND	ND	0.73	ND	ND	ND	ND	0.34	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	33.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	7782-49-2	ug/L	50	100	HQ	Background	86	i	ND	ND	ND	80	ND	52	46	34	32	75	43	ND	ND	38	ND	61	62	32	ND	ND	100	31	ND	ND	ND	ND	ND	ND	0.66	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sulfide	18496-25-8	ug/L	250			MCL	250		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	140	59	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tin	7440-31-5	ug/L		12000	HQ	RSL	12000		24	27	34	17	ND	25	28	45	51	35	35	41	6.5	20	31	7.8	6.3	18	34	37	10	28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	108-88-3	ug/L	1000	1100	HQ	MCL	1000		ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Uranium	7440-61-1	pCi/L	20	4	HQ	MCL	20	j	ND	ND	ND	ND	ND	ND	0.31	ND	0.07	0.41	0.23	0.1	0.3	ND	ND	0.1	0.21	0.1	ND	ND	0.2	0.11	0.33	ND	ND	ND	0.55	ND	0.37	ND	ND	0.34	0.48	ND	ND	ND	ND	ND	ND	ND	0.52	ND	ND	0.28	ND	0.47	ND	ND	ND	0.32	ND
Vanadium	7440-62-2	ug/L		86	HQ	RSL	86000		33	ND	ND	ND	ND	8.4	41	ND	6.2	3.4	ND	13	46	ND	ND	3.6	ND	9.3	ND	5	3.8	9.6	34	2.8	2	4.4	19	11	26	ND	2.7	ND	2	12	30	ND	2.2	ND	ND	13	33	ND	ND	ND	10	38	ND	ND	ND	ND	13
Xylenes, total	1330-20-7	ug/L	10000	190	HQ	MCL	10000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	7440-66-6	ug/L		600	HQ	RSL	6000		ND	ND	ND	ND	ND	ND	ND	ND	11	13	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.1	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10

Footnotes and Abbreviations:

µg/L - micrograms per liter
pg/L - picogram per liter
pCi/L - picocuries per liter
RSL - USEA Regional Screening Level
MCL - Maximum Contaminant Limit
ELCR - Excess lifteime cancer risk
HQ - Hazard Quotient
GWPS - Groundwater Protection Standard
Orange GWPS Exceedance

a Value for acenaphthene
b Value for endosulfan
c Value for alpha BHC
d Value for diethylphthalate
e Value for endrin
f Value for fluoranthene as a surrogate
g GWPS is set at a target ELCR of 1E-04
h GWPS is based on CA OEHHA conversion from 4 mrem/year. Lab results are reported in pCi/L.
i GWPS is set at background
j GWPS is based on conversion factor of 0.6757 pCi/L = 1 µg/L. Lab results are reported in pCi/L.

Brown AND Caldwell

ATTACHMENT D
DEVELOPMENT OF GROUNDWATER PROTECTION STANDARDS

								Event	Event 10 2019 NovDec	Event 10 2019 NovDec	Event 10 2019 NovDec	Event 10 2019 NovDec	Event 10 2019 NovDec	Event 10 2019 NovDec	Event 10 2019 NovDec	Event 10 2019 NovDec	Event 10 2019 NovDec	Event 11 2020 NovJan	Event 11 2020 NovJan	Event 11 2020 NovJan	Event 11 2020 NovJan	Event 11 2020 NovJan	Event 11 2020 NovJan	Event 11 2020 NovJan	Event 11 2020 NovJan	Event 11 2020 NovJan	Event 12 2021 Jan	Event 12 2021 Jan	Event 12 2021 Jan	Event 13 2021 Apr	Event 13 2021 Apr	Event 13 2021 Apr	Event 13 2021 Apr	Event 13 2021 Apr	Event 13 2021 Apr	Event 13 2021 Apr	Data Evaluation													
								Well	MW-10	MW-11R	MW-12	MW-13	MW-15	MW-16	MW-5A	MW-6	MW-9	MW-10	MW-11R	MW-12	MW-13	MW-15	MW-16	MW-5A	MW-6	MW-9	MW-11R	MW-15	MW-16	MW-10	MW-11R	MW-12	MW-13	MW-15	MW-16	MW-9	Range of MDLs		Range of RLs		RL Comparison									
Chemical	Cas#	Unit	MCL	RSL (ELCR 1E-04, HQ=1)		Basis	Interim GWPS		Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Min MDL	Max MDL	Min RL	Max RL	GWPS< Lowest RL	GWPS< Lowest MDL	INTERIM GWPS	Background	Number of Detections	Number of Samples	Detection Frequency	Maximum Observed Detection	Max Detection >GWPS	Max Detection > Background
1,4-Dioxane	123-91-1	ug/L		46		RSL	46	g	ND	9.3	0.55	ND	42	3.1	1.3	0.17	0.49	ND	12	0.74	ND	19	ND	1.5	ND	0.4	9.1	21	3.7	ND	9.4	1	ND	NS	NS	ND	0.11	3.6	0.3	12.5	NO	NO	46	1	23	55	42%	42	NO	YES
2,3,7,8-TCDD	1746-01-6	pg/L	30	12		MCL	30		ND	ND	ND	ND	ND	ND	2.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.233	5.2	5	12	NO	NO	30	0.1165	5	73	7%	3.6	NO	YES
2,4-D	94-75-7	ug/L	70	170	HQ	MCL	70		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.057	1.2	0.05	23.95	NO	NO	70	10	1	73	1%	0.18	NO	NO
2-Amino-4,6-dinitrotoluene	35572-78-2	ug/L		1.9	HQ	RSL	1.9		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.17	NS	NS	NS	NS	NS	0.047	0.125	0.11	0.5	NO	NO	1.9	0.11	1	72	1%	0.17	NO	YES
2-Methylnaphthalene	91-57-6	ug/L		36	HQ	RSL	36		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.015	3.8	0.048	3.8	NO	NO	36	0.2	1	73	1%	0.071	NO	NO
m,p-Cresol	MEPH1314	ug/L		930	HQ	RSL	930		ND	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS	NS	NS	0.094	7.2	0.72	25	NO	NO	930	20	1	72	1%	6	NO	NO
4,4'-DDD	72-54-8	ug/L		3.2		RSL	3.2	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.0011	0.0025	2.50E-03	0.025	NO	NO	3.2	0.02	1	73	1%	0.0034	NO	NO
Acenaphthene	83-32-9	ug/L		530	HQ	RSL	530		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.31	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.0077	4	0.02	4	NO	NO	530	0.2	2	73	3%	0.31	NO	YES
Acenaphthylene	208-96-8	ug/L		530	HQ, a	RSL	530		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.011	3.4	0.02	3.4	NO	NO	530	0.2	1	73	1%	0.053	NO	NO
Acetone	67-64-1	ug/L		14000	HQ	RSL	14000		ND	13	ND	ND	2000	12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	300	ND	ND	ND	ND	ND	NS	NS	ND	4.6	20	4.6	50	NO	NO	14000	10	4	77	5%	2000	NO	YES
Aldrin	309-00-2	ug/L		0.092	b	RSL	0.092	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0025	NS	ND	NS	NS	NS	NS	NS	0.0011	0.0019	1.90E-03	0.025	NO	NO	0.092	0.02	2	73	3%	0.0042	NO	NO
alpha Endosulfan (Endosulfan I)	959-98-8	ug/L		100	HQ	RSL	100		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.0011	0.0024	2.40E-03	0.025	NO	NO	100	0.02	1	73	1%	0.0031	NO	NO
Anthracene	120-12-7	ug/L		1800	HQ	RSL	1800		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.055	NS	NS	NS	NS	NS	0.0077	3.2	0.02	3.2	NO	NO	1800	0.2	3	73	4%	0.071	NO	NO
Antimony	7440-36-0	ug/L	6	7.8	HQ	MCL	6		ND	ND	ND	ND	0.59	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0005	5	0.0025	5	NO	NO	6	5	2	79	3%	8.5	YES	YES
Arsenic	7440-38-2	ug/L	10	5.2		MCL	10		ND	5.3	ND	ND	16	ND	ND	ND	ND	0.83	3.2	ND	ND	13	1.1	ND	ND	0.76	3.1	13	1	0.94	3.6	ND	ND	13	1.7	1.6	0.00039	7.8	0.0013	7.8	NO	NO	10	4.8	20	79	25%	16	YES	YES
Barium	7440-39-3	ug/L	2000	3800	HQ	MCL	2000		0.84	11	16	18	1	15	42	170	13	0.97	12	12	15	3.2	59	42	160	ND	13	2.8	42	1.2	12	19	13	1.7	55	ND	0.00049	3.5	0.0025	3.5	NO	NO	2000	274	66	79	84%	170	NO	NO
Benzo(a)anthracene	56-55-3	ug/L		3		RSL	3	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.044	0.069	ND	0.054	ND	0.07	0.047	ND	0.077	ND	NS	ND	NS	NS	NS	NS	NS	0.011	3.7	0.02	3.7	NO	NO	3	0.2	8	73	11%	0.15	NO	NO
Benzo(a)pyrene	50-32-8	ug/L	0.2	2.5		MCL	0.2		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.062	0.052	ND	0.056	ND	ND	0.14	0.088	NS	ND	NS	NS	NS	NS	NS	0.01	8.7	0.03	8.7	NO	NO	0.2	0.2	7	73	10%	0.14	NO	NO
Benzo(b)fluoranthene	205-99-2	ug/L		25		RSL	25	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.043	ND	ND	0.036	ND	ND	0.16	ND	NS	ND	NS	NS	NS	NS	NS	0.0082	8.8	0.02	8.8	NO	NO	25	0.2	7	73	10%	0.16	NO	NO
Benzo(k)fluoranthene	207-08-9	ug/L		250		RSL	250	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.17	ND	NS	ND	NS	NS	NS	NS	NS	0.024	9.6	0.02	9.6	NO	NO	250	0.2	3	73	4%	0.17	NO	NO
Benzyl alcohol	100-51-6	ug/L		2000	HQ	RSL	2000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS	NS	NS	0.44	4.4	0.44	13	NO	NO	2000	10	1	72	1%	0.53	NO	NO
Benzyl butyl phthalate	85-68-7	ug/L		1600		RSL	1600	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS	NS	NS	0.046	7.7	0.77	13	NO	NO	1600	10	1	72	1%	0.62	NO	NO
BHC, alpha	319-84-6	ug/L		0.72		RSL	0.72	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.0014	0.0071	2.30E-03	0.025	NO	NO	0.72	0.02	3	73	4%	0.062	NO	YES
BHC, beta	319-85-7	ug/L		2.5		RSL	2.5	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.0011	0.0025	2.50E-03	0.025	NO	NO	2.5	0.02	2	73	3%	0.024	NO	YES
BHC, delta	319-86-8	ug/L		0.72	c	RSL	0.72	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.00078	0.0024	2.40E-03	0.025	NO	NO	0.72	0.02	3	73	4%	0.041	NO	YES
BHC, gamma (Lindane)	58-89-9	ug/L	0.2	4.2		MCL	0.2		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.0024	0.013	2.40E-03	0.025	NO	NO	0.2	0.02	2	73	3%	0.036	NO	YES
bis(2-Chloroethoxy)methane	111-91-1	ug/L		59	HQ	RSL	59		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS	NS	NS	0.039	4.5	0.45	13	NO	NO	59	10	1	72	1%	1.1	NO	NO
bis(2-Ethylhexyl)phthalate	117-81-7	ug/L	6	560		MCL	6		ND	ND	ND	ND	6.4	ND	ND	ND	ND	7.4	8.4	21	5.8	ND	ND	7.8	ND	ND	ND	ND	ND	ND	NS	ND	ND	NS	NS	ND	0.67	12	10	125	YES	NO	6	6	16	76	21%	23	YES	YES
Cadmium	7440-43-9	ug/L	5	9.2	HQ	MCL	5		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00015	1.1	0.0005	1.1	NO	NO	5	0.075	1	79	1%	1.2	NO	YES
Chlorobenzene	108-90-7	ug/L	100	78	HQ	MCL	100		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.82	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.8	ND	ND	NS	NS	ND	0.093	1	0.09	2	NO	NO	100	1	3	77	4%	0.82	NO	NO
Chromium	7440-47-3	ug/L	100			MCL	100		3	ND	ND	2.1	ND	ND	1.6	1.6	ND	ND	ND	ND	ND	1.7	1.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3	8.9	ND	0.001	1.2	0.0025	1.2	NO	NO	100	16	28	79	35%	16	NO	NO
Chromium, Hexavalent	18540-29-9	ug/L		3.5		RSL	3.5	g	1.4	ND	ND	ND	ND	ND	ND	ND	ND	1.3	ND	ND	ND	ND	ND	ND	ND	0.31	ND	0.56	ND	1.1	ND	ND	ND	NS	NS	ND	0.0002	0.031	0.001	0.03	NO	NO	3.5	0.1	15	77	19%	2.3	NO	YES
Chrysene	218-01-9	ug/L		2500		RSL	2500	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.018	4.2	0.02	4.2	NO	NO	2500	0.2	1	73	1%	0.11	NO	NO
Cobalt	7440-48-4	ug/L		6	HQ	Background	11.9	i	ND	1.6	ND	ND	0.57	5.1	0.72	0.77	ND	ND	0.8	ND	ND	0.93	2.2	0.61	0.61	ND	0.71	ND	1.9	ND	0.91	ND	ND	ND	2.9	ND	0.00012	1.8	0.0005	1.8	NO	NO	11.9	11.9	35	79	44%	8.9	NO	NO
Copper	7440-50-8	ug/L	1300	800	HQ	MCL	1300		2.1	ND	ND	2	2.7	ND	ND	ND	3.8	ND	ND	ND	2.3	2.4	ND	1.6	1.4	1.9	ND	2.3	ND	ND	ND	ND	ND	3.4	7.2	1.3	0.001	1.2	0.0025	1.2	NO	NO	1300	31	37	79	47%	55	NO	YES
Cyanide	57-12-5	ug/L	200			MCL	200		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.0017	0.005	1.70E-03	0.005	NO	NO	200	2.5	2	73	3%	83	NO	YES
Dibenz(a,h)anthracene	53-70-3	ug/L		2.5		RSL	2.5	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.16	ND	0.18	ND	ND	0.17	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.012	16	0.03	16	NO	NO	2.5	0.2	5	73	7%	0.22	NO	YES
Diethyl phthalate	84-66-2	ug/L		15000	HQ	RSL	15000		ND	ND	ND	ND	ND	ND	ND	ND	ND	0.36	0.76	0.28	ND	ND	ND	ND	0.58	0.41	0.49	ND	ND	NS	NS	NS	NS	NS	NS	NS	0.058	3.5	0.35	13	NO	NO	15000	10	9	72	13%	0.76	NO	NO
Dimethyl phthalate	131-11-3	ug/L		1900	HQ, d	RSL	15000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS	NS	NS	0.041	4	0.4	13	NO	NO	15000	10	1	72	1%	0.36	NO	NO
Dinoseb	88-85-7	ug/L	7	15	HQ	MCL	7		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.034	0.094	0.03	1.1	NO	NO	7	1	2	73	3%	0.52	NO	NO
Endrin aldehyde	7421-93-4	ug/L		2.3	HQ, e	RSL	2.3		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.001	0.0039	3.90E-03	0.025	NO	NO	2.3	0.02	1	73	1%	0.002	NO	NO
Fluoranthene	206-44-0	ug/L		800	HQ	RSL	800		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.066	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.016	6.1	0.02	6.1	NO	NO	800	0.2	3	73	4%	0.25	NO	YES
Gross Alpha	GRA	pCi/L	15			MCL	15		ND	50.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.07	13.4	3	7.7	NO	NO	15	4.58	4	79	5%	50.3	YES	YES
Gross Beta	GRB	pCi/L	50			MCL	50	h	ND	5.83	4.31	ND	7.93	5.17	8.54	ND	3.69	1.81	7.28	3.74	ND	8.88	2.42	3.33	4.26	4.59	9.85	4.65	ND	1.94	7.67	3.61	ND	ND	ND	3.53	1.34	6.24	1.34	4	NO	NO	50	6.89	46	79	58%	13.2	NO	YES
Heptachlor epoxide	1024-57-3	ug/L	0.2	97		MCL	0.2		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0088	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.0012	0.0042	4.20E-03	0.025	NO	NO	0.2	0.02	1	73	1%	0.0088	NO	NO
RDX	121-82-4	ug/L		25		RSL	97	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.051	0.18	0.099	0.5	NO	NO	97	0.21	1	72	1%	0.13	NO	NO
Indeno(1,2,3-c,d)pyrene	193-39-5	ug/L				RSL	25	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.051	ND	ND	0.054	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.01	12	0.03	12	NO	NO	25	0.2	7	73	10%	0.2	NO	NO
Lead	7439-92-1	ug/L	15	15	HQ	MCL	15		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.57	ND	0.00029	3.5	0.0013	3.5	NO	NO	15	0.00074	3	79	4%	1	NO	YES
Mercury	7439-97-6	ug/L	2	5.7	HQ	MCL	2		ND	ND	ND	ND	0.085	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.00007	0.07	0.0002	0.2	NO	NO	2	0.035	5	73	7%	0.1	NO	YES
Methyl methanesulfonate	66-27-3	ug/L		79		RSL	79	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS	NS	NS	0.051	4.2	0.42	13	NO	NO	79	10	1	72	1%	0.4	NO	NO
Naphthalene	91-20-3	ug/L		12		RSL	12	g	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.021	2.7	0.02	2.7	NO	NO	12	0.2	3	73	4%	0.22	NO	YES
Nickel	7440-02-0	ug/L		390	HQ	RSL	390		3.1	22	2.8	ND	14	9.6	6.3	4.8	3.2	4.1	19	1.6	ND	17	5.7	5	3.2	ND	19	14	5.1	ND	20	3.1	ND	16	9.9	2.3	0.0015	2.3	0.0025	2.3	NO	NO	390	0.031	63	79	80%	22	NO	YES
o-Nitrotoluene	88-72-2	ug/L		31		RSL	31	g	ND	ND	ND	ND	0.32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.071	0.126	0.21	0.52	NO	NO	31	0.4	2	72	3%	0.32	NO	NO
Perchlorate	14797-73-0	ug/L		14	HQ	RSL	14		0.23	ND	ND	ND	ND	ND	ND	ND	ND	0.16	ND	ND	ND	ND	ND	0.064	ND	0.07	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	0.027	2	0.2	6	NO	NO	14	0.041	13	77	17%	0.28	NO	YES
Phenanthrene	85-01-8	ug/L		800	HQ, f	RSL	800		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.12	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	0.0087	5	0.02	5	NO	NO	800	0.2	2	73	3%	0.12	NO	NO
Pyrene	129-00-0	ug/L		120	HQ	RSL	120		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.043	NS	NS	NS	NS	NS	0.0097	4.5	0.02	4.5	NO	NO	120	0.2	3	73	4%	0.24	NO	YES
Radium-226	13982-63-3	pCi/L	5			MCL	5		ND	26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	37.5	ND	ND	ND	ND	ND	ND	ND	-0.064	101	0.443	139.5	NO	NO	5	41.9	10	79	13%	37.5	YES	NO
Radium-228	15262-20-1	pCi/L	5			MCL	5		ND	ND	ND	ND	ND	ND	ND	ND	ND	41.2	ND	ND	44.1	ND	ND	27.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5	54.1	0.5	53.6	NO	NO	5	18.65	7	79	9%	44.1	YES	YES
Selenium	7782-49-2	ug/L	50	100	HQ	Background	86	i	ND	ND	ND	ND	2.4	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00024	27	0.0013	27	NO	NO	86	86	16	79	20%	100	YES	YES
Sulfide	18496-25-8	ug/L	250			MCL	250		ND	ND	ND	ND	69	ND	ND	ND	ND	ND	ND	ND	ND	57	ND	ND	ND	ND	ND	77	ND	ND	ND	ND	ND	NS	NS	ND	0.05	0.057	0.05	0.1	NO	NO	250	100	5	77	6%	140	NO	YES
Tin	7440-31-5	ug/L		12000	HQ	RSL	12000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0011	5.5	0.0025	5.5	NO	NO	12000	77	21	79	27%	51	NO	NO
Toluene	108-88-3	ug/L	1000	1100	HQ	MCL	1000		ND	ND	ND	0.87	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	0.093	0.82	0.09	2	NO	NO	1000	1	2	77	3%	1	NO	NO
Uranium	7440-61-1	pCi/L	20	4	HQ	MCL	20	j	0.37	0.27	ND	ND	0.91	ND	ND	ND	ND	0.59	ND	ND	ND	0.46	ND	ND	0.35	ND	ND	0.41	ND	0.33	ND	ND	ND	0.42	ND	ND	0.067	0.46	0.06	4.6	NO	NO	20	0.135	29	79	37%	0.91	NO	YES
Vanadium	7440-62-2	ug/L		86	HQ	RSL	86000		30	ND	ND	ND	12	ND	ND	ND	10	35	ND	ND	2.8	17	ND	2.1	ND	9.1	ND	19	ND	32	ND	ND	ND	19	6.2	7.6	0.0014	2.8	0.0025	2.8	NO	NO	86000	0.036	42	79	53%	46	NO	YES
Xylenes, total	1330-20-7	ug/L	10000	190	HQ	MCL	10000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.27	ND	0.6	ND	ND	ND	NS	NS	ND	0.2	3.2	0.36	20	NO	NO	10000	2	2	77	3%	0.6	NO	NO
Zinc	7440-66-6	ug/L		600	HQ	RSL	6000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	740	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0065	9.5	0.02	9.5	NO	NO	6000	24	8	79	10%	740	NO	YES

Footnotes and Abbreviations:

µg/L - micrograms per liter
pg/L - picogram per liter
pCi/L - picocuries per liter
RSL - USEA Regional Screening Level
MCL - Maximum Contaminant Limit
ELCR - Excess lifteime cancer risk
HQ - Hazard Quotient
GWPS - Groundwater Protection Standard
Orange GWPS Exceedance

a Value for acenaphthene
b Value for endosulfan
c Value for alpha BHC
d Value for diethylphthalate
e Value for endrin
f Value for fluoranthene as a surrogate
g GWPS is set at a target ELCR of 1E-04
h GWPS is based on CA OEHHA conversion from 4 mrem/year. Lab results are reported in pCi/L.
i GWPS is set at background
j GWPS is based on conversion factor of 0.6757 pCi/L = 1 µg/L. Lab results are reported in pCi/L.

Attachment E: Statistical Analysis of Data

Prediction Limit

Ordot Closure Facility Client: GSWA Data: Ordot Printed 9/27/2019, 9:20 PM

Constituent	Well	Upper Lim.	Date	Observ.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
1,4-Dioxane (UG/L)	MW-10	1	6/12/2019	0.5ND	5	n/a	n/a	100	n/a	n/a	0.02278	NP Inter (NDs) 1 of 2
1,4-Dioxane (UG/L)	MW-12	1	6/5/2019	0.72	5	n/a	n/a	100	n/a	n/a	0.02278	NP Inter (NDs) 1 of 2
1,4-Dioxane (UG/L)	MW-13	1	6/3/2019	0.5ND	5	n/a	n/a	100	n/a	n/a	0.02278	NP Inter (NDs) 1 of 2
1,4-Dioxane (UG/L)	MW-5A	1	6/18/2019	0.56	5	n/a	n/a	100	n/a	n/a	0.02278	NP Inter (NDs) 1 of 2
1,4-Dioxane (UG/L)	MW-6	1	3/25/2019	0.5ND	5	n/a	n/a	100	n/a	n/a	0.02278	NP Inter (NDs) 1 of 2
1,4-Dioxane (UG/L)	MW-9	1	6/10/2019	0.5ND	5	n/a	n/a	100	n/a	n/a	0.02278	NP Inter (NDs) 1 of 2
2,3,7,8-TCDD (PG/L)	MW-10	4.9	6/12/2019	5ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
2,3,7,8-TCDD (PG/L)	MW-12	4.9	6/5/2019	4.75ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
2,3,7,8-TCDD (PG/L)	MW-13	4.9	6/3/2019	4.75ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
2,3,7,8-TCDD (PG/L)	MW-5A	4.9	6/18/2019	5ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
2,3,7,8-TCDD (PG/L)	MW-6	4.9	3/25/2019	4.75ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
2,3,7,8-TCDD (PG/L)	MW-9	4.9	6/10/2019	5.5ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
2,4,6-Trinitrotoluene [TNT] (UG/L)	MW-10	0.25	6/12/2019	0.225ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
2,4,6-Trinitrotoluene [TNT] (UG/L)	MW-12	0.25	6/4/2019	0.22ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
2,4,6-Trinitrotoluene [TNT] (UG/L)	MW-13	0.25	6/3/2019	0.21ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
2,4,6-Trinitrotoluene [TNT] (UG/L)	MW-5A	0.25	6/17/2019	0.22ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
2,4,6-Trinitrotoluene [TNT] (UG/L)	MW-6	0.25	3/25/2019	0.205ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
2,4,6-Trinitrotoluene [TNT] (UG/L)	MW-9	0.25	6/10/2019	0.215ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
2-Methylnaphthalene (UG/L)	MW-10	0.19	6/12/2019	0.105ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
2-Methylnaphthalene (UG/L)	MW-12	0.19	6/5/2019	0.095ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
2-Methylnaphthalene (UG/L)	MW-13	0.19	6/3/2019	0.11ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
2-Methylnaphthalene (UG/L)	MW-5A	0.19	6/18/2019	0.115ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
2-Methylnaphthalene (UG/L)	MW-6	0.19	3/25/2019	0.105ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
2-Methylnaphthalene (UG/L)	MW-9	0.19	6/10/2019	0.125ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
3,3`-Dichlorobenzidine (UG/L)	MW-10	11	6/12/2019	5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
3,3`-Dichlorobenzidine (UG/L)	MW-12	11	6/5/2019	4.7ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
3,3`-Dichlorobenzidine (UG/L)	MW-13	11	6/3/2019	5.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
3,3`-Dichlorobenzidine (UG/L)	MW-5A	11	6/18/2019	6ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
3,3`-Dichlorobenzidine (UG/L)	MW-6	11	3/25/2019	5.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
3,3`-Dichlorobenzidine (UG/L)	MW-9	11	6/10/2019	6.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
4,4`-DDD (UG/L)	MW-10	0.022	6/12/2019	0.0125ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
4,4`-DDD (UG/L)	MW-12	0.022	6/5/2019	0.0095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
4,4`-DDD (UG/L)	MW-13	0.022	6/3/2019	0.0105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
4,4`-DDD (UG/L)	MW-5A	0.022	6/18/2019	0.011ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
4,4`-DDD (UG/L)	MW-6	0.022	3/25/2019	0.0105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
4,4`-DDD (UG/L)	MW-9	0.022	6/10/2019	0.0095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
4,4`-DDT (UG/L)	MW-10	0.022	6/12/2019	0.0125ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
4,4`-DDT (UG/L)	MW-12	0.022	6/5/2019	0.0095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
4,4`-DDT (UG/L)	MW-13	0.022	6/3/2019	0.0105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
4,4`-DDT (UG/L)	MW-5A	0.022	6/18/2019	0.011ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
4,4`-DDT (UG/L)	MW-6	0.022	3/25/2019	0.0105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
4,4`-DDT (UG/L)	MW-9	0.022	6/10/2019	0.0095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Acenaphthene (UG/L)	MW-10	0.22	6/12/2019	0.105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Acenaphthene (UG/L)	MW-12	0.22	6/5/2019	0.095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Acenaphthene (UG/L)	MW-13	0.22	6/3/2019	0.11ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Acenaphthene (UG/L)	MW-5A	0.22	6/18/2019	0.115ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Acenaphthene (UG/L)	MW-6	0.22	3/25/2019	0.105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Acenaphthene (UG/L)	MW-9	0.22	6/10/2019	0.125ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Acenaphthylene (UG/L)	MW-10	0.22	6/12/2019	0.105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Acenaphthylene (UG/L)	MW-12	0.22	6/5/2019	0.095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2

Prediction Limit

Ordot Closure Facility Client: GSWA Data: Ordot Printed 9/27/2019, 9:20 PM

Constituent	Well	Upper Lim.	Date	Observ.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Acenaphthylene (UG/L)	MW-13	0.22	6/3/2019	0.11ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Acenaphthylene (UG/L)	MW-5A	0.22	6/18/2019	0.115ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Acenaphthylene (UG/L)	MW-6	0.22	3/25/2019	0.105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Acenaphthylene (UG/L)	MW-9	0.22	6/10/2019	0.125ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Aldrin (UG/L)	MW-10	0.022	6/12/2019	0.0125ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Aldrin (UG/L)	MW-12	0.022	6/5/2019	0.0095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Aldrin (UG/L)	MW-13	0.022	6/3/2019	0.0105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Aldrin (UG/L)	MW-5A	0.022	6/18/2019	0.011ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Aldrin (UG/L)	MW-6	0.022	3/25/2019	0.0105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Aldrin (UG/L)	MW-9	0.022	6/10/2019	0.0095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
alpha Endosulfan [Endosulfan I]...	MW-10	0.022	6/12/2019	0.0125ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
alpha Endosulfan [Endosulfan I]...	MW-12	0.022	6/5/2019	0.0095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
alpha Endosulfan [Endosulfan I]...	MW-13	0.022	6/3/2019	0.0105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
alpha Endosulfan [Endosulfan I]...	MW-5A	0.022	6/18/2019	0.011ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
alpha Endosulfan [Endosulfan I]...	MW-6	0.022	3/25/2019	0.0105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
alpha Endosulfan [Endosulfan I]...	MW-9	0.022	6/10/2019	0.0095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Aluminum (UG/L)	MW-10	6200	6/12/2019	260	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Aluminum (UG/L)	MW-12	6200	6/5/2019	33	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Aluminum (UG/L)	MW-13	6200	6/3/2019	110	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Aluminum (UG/L)	MW-5A	6200	6/18/2019	35	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Aluminum (UG/L)	MW-6	6200	3/25/2019	85	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Aluminum (UG/L)	MW-9	6200	6/10/2019	86	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Ammonia [as N] (MG/L)	MW-10	0.21	6/12/2019	0.025ND	9	n/a	n/a	66.67	n/a	n/a	0.01172	NP Inter (NDs) 1 of 2
Ammonia [as N] (MG/L)	MW-12	0.21	6/5/2019	0.037	9	n/a	n/a	66.67	n/a	n/a	0.01172	NP Inter (NDs) 1 of 2
Ammonia [as N] (MG/L)	MW-13	0.21	6/3/2019	0.025ND	9	n/a	n/a	66.67	n/a	n/a	0.01172	NP Inter (NDs) 1 of 2
Ammonia [as N] (MG/L)	MW-5A	0.21	6/18/2019	0.025ND	9	n/a	n/a	66.67	n/a	n/a	0.01172	NP Inter (NDs) 1 of 2
Ammonia [as N] (MG/L)	**MW-6**	**0.21**	**3/25/2019**	**1.6**	**9**	**n/a**	**n/a**	**66.67**	**n/a**	**n/a**	**0.01172**	**NP Inter (NDs) 1 of 2**
Ammonia [as N] (MG/L)	MW-9	0.21	6/10/2019	0.025ND	9	n/a	n/a	66.67	n/a	n/a	0.01172	NP Inter (NDs) 1 of 2
Anthracene (UG/L)	MW-10	0.22	6/12/2019	0.105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Anthracene (UG/L)	MW-12	0.22	6/5/2019	0.095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Anthracene (UG/L)	MW-13	0.22	6/3/2019	0.11ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Anthracene (UG/L)	MW-5A	0.22	6/18/2019	0.115ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Anthracene (UG/L)	MW-6	0.22	3/25/2019	0.105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Anthracene (UG/L)	MW-9	0.22	6/10/2019	0.125ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Antimony (UG/L)	MW-10	5	6/12/2019	2.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Antimony (UG/L)	MW-12	5	6/5/2019	2.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Antimony (UG/L)	MW-13	5	6/3/2019	2.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Antimony (UG/L)	MW-5A	5	6/18/2019	2.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Antimony (UG/L)	MW-6	5	3/25/2019	1.25ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Antimony (UG/L)	MW-9	5	6/10/2019	2.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Arsenic (UG/L)	MW-10	4.8	6/12/2019	1.5ND	10	n/a	n/a	60	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Arsenic (UG/L)	MW-12	4.8	6/5/2019	1.5ND	10	n/a	n/a	60	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Arsenic (UG/L)	MW-13	4.8	6/3/2019	1.5ND	10	n/a	n/a	60	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Arsenic (UG/L)	MW-5A	4.8	6/18/2019	1.5ND	10	n/a	n/a	60	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Arsenic (UG/L)	MW-6	4.8	3/25/2019	0.74	10	n/a	n/a	60	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Arsenic (UG/L)	MW-9	4.8	6/10/2019	1.5ND	10	n/a	n/a	60	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Barium (UG/L)	MW-10	274.6	6/12/2019	1.5	10	1.979	1.096	10	None	ln(x)	0.000231	Param Inter 1 of 2
Barium (UG/L)	MW-12	274.6	6/5/2019	14	10	1.979	1.096	10	None	ln(x)	0.000231	Param Inter 1 of 2
Barium (UG/L)	MW-13	274.6	6/3/2019	13	10	1.979	1.096	10	None	ln(x)	0.000231	Param Inter 1 of 2
Barium (UG/L)	MW-5A	274.6	6/18/2019	59	10	1.979	1.096	10	None	ln(x)	0.000231	Param Inter 1 of 2

Prediction Limit

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Constituent	Well	Upper Lim.	Date	Observ.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Barium (UG/L)	MW-6	274.6	3/25/2019	140	10	1.979	1.096	10	None	ln(x)	0.000231	Param Inter 1 of 2
Barium (UG/L)	MW-9	274.6	6/10/2019	2.5ND	10	1.979	1.096	10	None	ln(x)	0.000231	Param Inter 1 of 2
Benzo[a]anthracene (UG/L)	MW-10	0.185	6/12/2019	0.105ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzo[a]anthracene (UG/L)	MW-12	0.185	6/5/2019	0.095ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzo[a]anthracene (UG/L)	MW-13	0.185	6/3/2019	0.11ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzo[a]anthracene (UG/L)	MW-5A	0.185	6/18/2019	0.115ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzo[a]anthracene (UG/L)	MW-6	0.185	3/25/2019	0.105ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzo[a]anthracene (UG/L)	MW-9	0.185	6/10/2019	0.125ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzo[a]pyrene (UG/L)	MW-10	0.435	6/12/2019	0.105ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzo[a]pyrene (UG/L)	MW-12	0.435	6/5/2019	0.095ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzo[a]pyrene (UG/L)	MW-13	0.435	6/3/2019	0.11ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzo[a]pyrene (UG/L)	MW-5A	0.435	6/18/2019	0.115ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzo[a]pyrene (UG/L)	MW-6	0.435	3/25/2019	0.105ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzo[a]pyrene (UG/L)	MW-9	0.435	6/10/2019	0.125ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzo[b]fluoranthene (UG/L)	MW-10	0.44	6/12/2019	0.105ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzo[b]fluoranthene (UG/L)	MW-12	0.44	6/5/2019	0.095ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzo[b]fluoranthene (UG/L)	MW-13	0.44	6/3/2019	0.11ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzo[b]fluoranthene (UG/L)	MW-5A	0.44	6/18/2019	0.115ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzo[b]fluoranthene (UG/L)	MW-6	0.44	3/25/2019	0.051	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzo[b]fluoranthene (UG/L)	MW-9	0.44	6/10/2019	0.125ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzyl alcohol (UG/L)	MW-10	11	6/12/2019	5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzyl alcohol (UG/L)	MW-12	11	6/5/2019	4.7ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzyl alcohol (UG/L)	MW-13	11	6/3/2019	5.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzyl alcohol (UG/L)	MW-5A	11	6/18/2019	6ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzyl alcohol (UG/L)	MW-6	11	3/25/2019	5.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzyl alcohol (UG/L)	MW-9	11	6/10/2019	6.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzyl butyl phthalate (UG/L)	MW-10	11	6/12/2019	5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzyl butyl phthalate (UG/L)	MW-12	11	6/5/2019	4.7ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzyl butyl phthalate (UG/L)	MW-13	11	6/3/2019	5.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzyl butyl phthalate (UG/L)	MW-5A	11	6/18/2019	6ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzyl butyl phthalate (UG/L)	MW-6	11	3/25/2019	5.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Benzyl butyl phthalate (UG/L)	MW-9	11	6/10/2019	6.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Beryllium (UG/L)	MW-10	0.5	6/12/2019	0.25ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Beryllium (UG/L)	MW-12	0.5	6/5/2019	0.25ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Beryllium (UG/L)	MW-13	0.5	6/3/2019	0.25ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Beryllium (UG/L)	MW-5A	0.5	6/18/2019	0.25ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Beryllium (UG/L)	MW-6	0.5	3/25/2019	1.25ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Beryllium (UG/L)	MW-9	0.5	6/10/2019	0.25ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
BHC, alpha (UG/L)	MW-10	0.022	6/12/2019	0.0125ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
BHC, alpha (UG/L)	MW-12	0.022	6/5/2019	0.0095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
BHC, alpha (UG/L)	MW-13	0.022	6/3/2019	0.0105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
BHC, alpha (UG/L)	MW-5A	0.022	6/18/2019	0.011ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
BHC, alpha (UG/L)	MW-6	0.022	3/25/2019	0.0105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
BHC, alpha (UG/L)	MW-9	0.022	6/10/2019	0.0095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
BHC, delta (UG/L)	MW-10	0.022	6/12/2019	0.0125ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
BHC, delta (UG/L)	MW-12	0.022	6/5/2019	0.0095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
BHC, delta (UG/L)	MW-13	0.022	6/3/2019	0.0105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
BHC, delta (UG/L)	MW-5A	0.022	6/18/2019	0.011ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
BHC, delta (UG/L)	MW-6	0.022	3/25/2019	0.0105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
BHC, delta (UG/L)	MW-9	0.022	6/10/2019	0.0095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2

Prediction Limit

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Constituent	Well	Upper Lim.	Date	Observ.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
BHC, gamma [Lindane] (UG/L)	MW-10	0.022	6/12/2019	0.0125ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
BHC, gamma [Lindane] (UG/L)	MW-12	0.022	6/5/2019	0.0095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
BHC, gamma [Lindane] (UG/L)	MW-13	0.022	6/3/2019	0.0105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
BHC, gamma [Lindane] (UG/L)	MW-5A	0.022	6/18/2019	0.011ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
BHC, gamma [Lindane] (UG/L)	MW-6	0.022	3/25/2019	0.0105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
BHC, gamma [Lindane] (UG/L)	MW-9	0.022	6/10/2019	0.0095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
bis[2-Chloroethoxy]methane (UG/L)	MW-10	11	6/12/2019	5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
bis[2-Chloroethoxy]methane (UG/L)	MW-12	11	6/5/2019	4.7ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
bis[2-Chloroethoxy]methane (UG/L)	MW-13	11	6/3/2019	5.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
bis[2-Chloroethoxy]methane (UG/L)	MW-5A	11	6/18/2019	6ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
bis[2-Chloroethoxy]methane (UG/L)	MW-6	11	3/25/2019	5.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
bis[2-Chloroethoxy]methane (UG/L)	MW-9	11	6/10/2019	6.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
bis[2-Ethylhexyl]phthalate (UG/L)	MW-10	35.25	6/12/2019	19.25ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
bis[2-Ethylhexyl]phthalate (UG/L)	MW-12	35.25	6/5/2019	62.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
bis[2-Ethylhexyl]phthalate (UG/L)	MW-13	35.25	6/3/2019	5.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
bis[2-Ethylhexyl]phthalate (UG/L)	MW-5A	35.25	6/18/2019	6ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
bis[2-Ethylhexyl]phthalate (UG/L)	MW-6	35.25	3/25/2019	5.5	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
bis[2-Ethylhexyl]phthalate (UG/L)	MW-9	35.25	6/10/2019	6.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Cadmium (UG/L)	MW-10	0.5	6/12/2019	0.25ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Cadmium (UG/L)	MW-12	0.5	6/5/2019	0.25ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Cadmium (UG/L)	MW-13	0.5	6/3/2019	0.25ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Cadmium (UG/L)	MW-5A	0.5	6/18/2019	0.25ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Cadmium (UG/L)	MW-6	0.5	3/25/2019	1.25ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Cadmium (UG/L)	MW-9	0.5	6/10/2019	0.25ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Caprolactam (UG/L)	MW-10	110	6/12/2019	5ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Caprolactam (UG/L)	MW-12	110	6/5/2019	4.7ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Caprolactam (UG/L)	MW-13	110	6/3/2019	5.5ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Caprolactam (UG/L)	MW-5A	110	6/18/2019	6ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Caprolactam (UG/L)	MW-6	110	3/25/2019	5.5ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Caprolactam (UG/L)	MW-9	110	6/10/2019	6.5ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Chloride (MG/L)	**MW-10**	**25.95**	**6/12/2019**	**71**	**10**	**21**	**1.491**	**0**	**None**	**No**	**0.000231**	**Param Inter 1 of 2**
Chloride (MG/L)	**MW-12**	**25.95**	**6/5/2019**	**56**	**10**	**21**	**1.491**	**0**	**None**	**No**	**0.000231**	**Param Inter 1 of 2**
Chloride (MG/L)	**MW-13**	**25.95**	**6/3/2019**	**41**	**10**	**21**	**1.491**	**0**	**None**	**No**	**0.000231**	**Param Inter 1 of 2**
Chloride (MG/L)	**MW-5A**	**25.95**	**6/18/2019**	**140**	**10**	**21**	**1.491**	**0**	**None**	**No**	**0.000231**	**Param Inter 1 of 2**
Chloride (MG/L)	MW-6	25.95	3/25/2019	13	10	21	1.491	0	None	No	0.000231	Param Inter 1 of 2
Chloride (MG/L)	MW-9	25.95	6/10/2019	58	10	21	1.491	0	None	No	0.000231	Param Inter 1 of 2
Chlorobenzene (UG/L)	MW-10	0.5403	6/12/2019	0.5ND	10	0.02944	0.03867	50	Aitch...	x^3	0.000231	Param Inter 1 of 2
Chlorobenzene (UG/L)	MW-12	0.5403	6/5/2019	0.5ND	10	0.02944	0.03867	50	Aitch...	x^3	0.000231	Param Inter 1 of 2
Chlorobenzene (UG/L)	MW-13	0.5403	6/3/2019	0.5ND	10	0.02944	0.03867	50	Aitch...	x^3	0.000231	Param Inter 1 of 2
Chlorobenzene (UG/L)	MW-5A	0.5403	6/18/2019	0.5ND	10	0.02944	0.03867	50	Aitch...	x^3	0.000231	Param Inter 1 of 2
Chlorobenzene (UG/L)	MW-6	0.5403	3/25/2019	0.5ND	10	0.02944	0.03867	50	Aitch...	x^3	0.000231	Param Inter 1 of 2
Chlorobenzene (UG/L)	MW-9	0.5403	6/10/2019	0.5ND	10	0.02944	0.03867	50	Aitch...	x^3	0.000231	Param Inter 1 of 2
Chlorobenzilate (UG/L)	MW-10	11	6/12/2019	5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Chlorobenzilate (UG/L)	MW-12	11	6/5/2019	4.7ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Chlorobenzilate (UG/L)	MW-13	11	6/3/2019	5.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Chlorobenzilate (UG/L)	MW-5A	11	6/18/2019	6ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Chlorobenzilate (UG/L)	MW-6	11	3/25/2019	5.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Chlorobenzilate (UG/L)	MW-9	11	6/10/2019	6.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Chromium (UG/L)	MW-10	16	6/12/2019	5.6	10	n/a	n/a	60	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Chromium (UG/L)	MW-12	16	6/5/2019	2.5ND	10	n/a	n/a	60	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2

Prediction Limit

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Constituent	Well	Upper Lim.	Date	Observ.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Chromium (UG/L)	MW-13	16	6/3/2019	2.5ND	10	n/a	n/a	60	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Chromium (UG/L)	MW-5A	16	6/18/2019	2.5ND	10	n/a	n/a	60	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Chromium (UG/L)	MW-6	16	3/25/2019	1.25ND	10	n/a	n/a	60	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Chromium (UG/L)	MW-9	16	6/10/2019	2.5ND	10	n/a	n/a	60	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Chromium, Hexavalent (UG/L)	MW-10	1	6/12/2019	0.68	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Chromium, Hexavalent (UG/L)	MW-12	1	6/5/2019	0.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Chromium, Hexavalent (UG/L)	MW-13	1	6/3/2019	0.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Chromium, Hexavalent (UG/L)	MW-5A	1	6/18/2019	0.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Chromium, Hexavalent (UG/L)	MW-6	1	3/25/2019	0.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Chromium, Hexavalent (UG/L)	MW-9	1	6/10/2019	0.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Chrysene (UG/L)	MW-10	0.21	6/12/2019	0.105ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Chrysene (UG/L)	MW-12	0.21	6/5/2019	0.095ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Chrysene (UG/L)	MW-13	0.21	6/3/2019	0.11ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Chrysene (UG/L)	MW-5A	0.21	6/18/2019	0.115ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Chrysene (UG/L)	MW-6	0.21	3/25/2019	0.105ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Chrysene (UG/L)	MW-9	0.21	6/10/2019	0.125ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Cobalt (UG/L)	MW-10	11.45	6/12/2019	0.44	10	4.42	2.118	10	None	No	0.000231	Param Inter 1 of 2
Cobalt (UG/L)	MW-12	11.45	6/5/2019	0.14	10	4.42	2.118	10	None	No	0.000231	Param Inter 1 of 2
Cobalt (UG/L)	MW-13	11.45	6/3/2019	0.25ND	10	4.42	2.118	10	None	No	0.000231	Param Inter 1 of 2
Cobalt (UG/L)	MW-5A	11.45	6/18/2019	1.9	10	4.42	2.118	10	None	No	0.000231	Param Inter 1 of 2
Cobalt (UG/L)	MW-6	11.45	3/25/2019	1.8	10	4.42	2.118	10	None	No	0.000231	Param Inter 1 of 2
Cobalt (UG/L)	MW-9	11.45	6/10/2019	0.27	10	4.42	2.118	10	None	No	0.000231	Param Inter 1 of 2
Copper (UG/L)	MW-10	31	6/12/2019	6.1	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Copper (UG/L)	MW-12	31	6/5/2019	2.5ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Copper (UG/L)	MW-13	31	6/3/2019	2.5ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Copper (UG/L)	MW-5A	31	6/18/2019	2.5	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Copper (UG/L)	MW-6	31	3/25/2019	1.25ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Copper (UG/L)	MW-9	31	6/10/2019	7.1	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Cyanide, total (MG/L)	MW-10	0.005	6/12/2019	0.0025ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Cyanide, total (MG/L)	MW-12	0.005	6/5/2019	0.0025ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Cyanide, total (MG/L)	MW-13	0.005	6/3/2019	0.0025ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Cyanide, total (MG/L)	MW-5A	0.005	6/18/2019	0.0025ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Cyanide, total (MG/L)	MW-6	0.005	3/25/2019	0.0025ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Cyanide, total (MG/L)	MW-9	0.005	6/10/2019	0.0025ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Dibenz[a,h]anthracene (UG/L)	MW-10	0.22	6/12/2019	0.105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Dibenz[a,h]anthracene (UG/L)	MW-12	0.22	6/5/2019	0.095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Dibenz[a,h]anthracene (UG/L)	MW-13	0.22	6/3/2019	0.11ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Dibenz[a,h]anthracene (UG/L)	MW-5A	0.22	6/18/2019	0.115ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Dibenz[a,h]anthracene (UG/L)	MW-6	0.22	3/25/2019	0.105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Dibenz[a,h]anthracene (UG/L)	MW-9	0.22	6/10/2019	0.125ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Diethyl phthalate (UG/L)	MW-10	5.5	6/12/2019	5ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Diethyl phthalate (UG/L)	MW-12	5.5	6/5/2019	0.46	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Diethyl phthalate (UG/L)	MW-13	5.5	6/3/2019	5.5ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Diethyl phthalate (UG/L)	MW-5A	5.5	6/18/2019	6ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Diethyl phthalate (UG/L)	MW-6	5.5	3/25/2019	5.5ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Diethyl phthalate (UG/L)	MW-9	5.5	6/10/2019	6.5ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Dimethyl phthalate (UG/L)	MW-10	11	6/12/2019	5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Dimethyl phthalate (UG/L)	MW-12	11	6/5/2019	4.7ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Dimethyl phthalate (UG/L)	MW-13	11	6/3/2019	5.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Dimethyl phthalate (UG/L)	MW-5A	11	6/18/2019	6ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2

Prediction Limit

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Constituent	Well	Upper Lim.	Date	Observ.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Dimethyl phthalate (UG/L)	MW-6	11	3/25/2019	5.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Dimethyl phthalate (UG/L)	MW-9	11	6/10/2019	0.36	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Endrin aldehyde (UG/L)	MW-10	0.022	6/12/2019	0.0125ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Endrin aldehyde (UG/L)	MW-12	0.022	6/5/2019	0.0095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Endrin aldehyde (UG/L)	MW-13	0.022	6/3/2019	0.0105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Endrin aldehyde (UG/L)	MW-5A	0.022	6/18/2019	0.011ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Endrin aldehyde (UG/L)	MW-6	0.022	3/25/2019	0.0105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Endrin aldehyde (UG/L)	MW-9	0.022	6/10/2019	0.0095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Fluoranthene (UG/L)	MW-10	0.305	6/12/2019	0.105ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Fluoranthene (UG/L)	MW-12	0.305	6/5/2019	0.095ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Fluoranthene (UG/L)	MW-13	0.305	6/3/2019	0.11ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Fluoranthene (UG/L)	MW-5A	0.305	6/18/2019	0.115ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Fluoranthene (UG/L)	MW-6	0.305	3/25/2019	0.105ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Fluoranthene (UG/L)	MW-9	0.305	6/10/2019	0.125ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Fluorene (UG/L)	MW-10	0.22	6/12/2019	0.105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Fluorene (UG/L)	MW-12	0.22	6/5/2019	0.095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Fluorene (UG/L)	MW-13	0.22	6/3/2019	0.11ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Fluorene (UG/L)	MW-5A	0.22	6/18/2019	0.115ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Fluorene (UG/L)	MW-6	0.22	3/25/2019	0.105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Fluorene (UG/L)	MW-9	0.22	6/10/2019	0.125ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Gross Alpha (PCI/L)	MW-10	4.58	6/12/2019	3.355ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Gross Alpha (PCI/L)	MW-12	4.58	6/5/2019	2.06ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Gross Alpha (PCI/L)	MW-13	4.58	6/3/2019	1.96ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Gross Alpha (PCI/L)	MW-5A	4.58	6/18/2019	6.05ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Gross Alpha (PCI/L)	MW-6	4.58	3/25/2019	4.07ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Gross Alpha (PCI/L)	MW-9	4.58	6/10/2019	2.075ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Gross Beta (PCI/L)	MW-10	6.885	6/12/2019	1.81ND	10	1.344	1.67	50	Aitch...	No	0.000231	Param Inter 1 of 2
Gross Beta (PCI/L)	MW-12	6.885	6/5/2019	3.18	10	1.344	1.67	50	Aitch...	No	0.000231	Param Inter 1 of 2
Gross Beta (PCI/L)	MW-13	6.885	6/3/2019	0.91ND	10	1.344	1.67	50	Aitch...	No	0.000231	Param Inter 1 of 2
Gross Beta (PCI/L)	MW-5A	6.885	6/18/2019	3.12ND	10	1.344	1.67	50	Aitch...	No	0.000231	Param Inter 1 of 2
Gross Beta (PCI/L)	MW-6	6.885	3/25/2019	1.685ND	10	1.344	1.67	50	Aitch...	No	0.000231	Param Inter 1 of 2
Gross Beta (PCI/L)	MW-9	6.885	6/10/2019	4.16	10	1.344	1.67	50	Aitch...	No	0.000231	Param Inter 1 of 2
Heptachlor (UG/L)	MW-10	0.022	6/12/2019	0.0125ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Heptachlor (UG/L)	MW-12	0.022	6/5/2019	0.0095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Heptachlor (UG/L)	MW-13	0.022	6/3/2019	0.0105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Heptachlor (UG/L)	MW-5A	0.022	6/18/2019	0.011ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Heptachlor (UG/L)	MW-6	0.022	3/25/2019	0.0105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Heptachlor (UG/L)	MW-9	0.022	6/10/2019	0.0095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Hexahydro-1,3,5-trinitro-1,3,5-...	MW-10	0.25	6/12/2019	0.17ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Hexahydro-1,3,5-trinitro-1,3,5-...	MW-12	0.25	6/4/2019	0.165ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Hexahydro-1,3,5-trinitro-1,3,5-...	MW-13	0.25	6/3/2019	0.155ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Hexahydro-1,3,5-trinitro-1,3,5-...	MW-5A	0.25	6/17/2019	0.165ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Hexahydro-1,3,5-trinitro-1,3,5-...	MW-6	0.25	3/25/2019	0.155ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Hexahydro-1,3,5-trinitro-1,3,5-...	MW-9	0.25	6/10/2019	0.16ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Indeno[1,2,3-c,d]pyrene (UG/L)	MW-10	0.6	6/12/2019	0.105ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Indeno[1,2,3-c,d]pyrene (UG/L)	MW-12	0.6	6/5/2019	0.095ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Indeno[1,2,3-c,d]pyrene (UG/L)	MW-13	0.6	6/3/2019	0.11ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Indeno[1,2,3-c,d]pyrene (UG/L)	MW-5A	0.6	6/18/2019	0.115ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Indeno[1,2,3-c,d]pyrene (UG/L)	MW-6	0.6	3/25/2019	0.065	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Indeno[1,2,3-c,d]pyrene (UG/L)	MW-9	0.6	6/10/2019	0.125ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2

Prediction Limit

Ordot Closure Facility   Client: GSWA   Data: Ordot   Printed 9/27/2019, 9:20 PM

Constituent	Well	Upper Lim.	Date	Observ.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Iron (UG/L)	MW-10	7741	6/12/2019	280	10	2117	1695	0	None	No	0.000231	Param Inter 1 of 2
Iron (UG/L)	MW-12	7741	6/5/2019	2600	10	2117	1695	0	None	No	0.000231	Param Inter 1 of 2
Iron (UG/L)	MW-13	7741	6/3/2019	72	10	2117	1695	0	None	No	0.000231	Param Inter 1 of 2
Iron (UG/L)	MW-5A	7741	6/18/2019	350	10	2117	1695	0	None	No	0.000231	Param Inter 1 of 2
Iron (UG/L)	MW-6	7741	3/25/2019	83	10	2117	1695	0	None	No	0.000231	Param Inter 1 of 2
Iron (UG/L)	MW-9	7741	6/10/2019	76	10	2117	1695	0	None	No	0.000231	Param Inter 1 of 2
Lead (UG/L)	MW-10	1.75	6/12/2019	1.25ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Lead (UG/L)	MW-12	1.75	6/5/2019	1.25ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Lead (UG/L)	MW-13	1.75	6/3/2019	1.25ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Lead (UG/L)	MW-5A	1.75	6/18/2019	1.25ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Lead (UG/L)	MW-6	1.75	3/25/2019	0.65ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Lead (UG/L)	MW-9	1.75	6/10/2019	1.25ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Mercury (UG/L)	MW-10	0.2	6/12/2019	0.1ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Mercury (UG/L)	MW-12	0.2	6/5/2019	0.1ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Mercury (UG/L)	MW-13	0.2	6/3/2019	0.1ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Mercury (UG/L)	MW-5A	0.2	6/18/2019	0.077	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Mercury (UG/L)	MW-6	0.2	3/25/2019	0.1ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Mercury (UG/L)	MW-9	0.2	6/10/2019	0.1ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Methyl methanesulfonate (UG/L)	MW-10	11	6/12/2019	5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Methyl methanesulfonate (UG/L)	MW-12	11	6/5/2019	4.7ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Methyl methanesulfonate (UG/L)	MW-13	11	6/3/2019	5.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Methyl methanesulfonate (UG/L)	MW-5A	11	6/18/2019	6ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Methyl methanesulfonate (UG/L)	MW-6	11	3/25/2019	5.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Methyl methanesulfonate (UG/L)	MW-9	11	6/10/2019	6.5ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Naphthalene (UG/L)	MW-10	0.22	6/12/2019	0.105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Naphthalene (UG/L)	MW-12	0.22	6/5/2019	0.095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Naphthalene (UG/L)	MW-13	0.22	6/3/2019	0.11ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Naphthalene (UG/L)	MW-5A	0.22	6/18/2019	0.115ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Naphthalene (UG/L)	MW-6	0.22	3/25/2019	0.105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Naphthalene (UG/L)	MW-9	0.22	6/10/2019	0.125ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Nickel (UG/L)	MW-10	31.47	6/12/2019	11	10	11.57	5.998	0	None	No	0.000231	Param Inter 1 of 2
Nickel (UG/L)	MW-12	31.47	6/5/2019	3.2	10	11.57	5.998	0	None	No	0.000231	Param Inter 1 of 2
Nickel (UG/L)	MW-13	31.47	6/3/2019	2.5ND	10	11.57	5.998	0	None	No	0.000231	Param Inter 1 of 2
Nickel (UG/L)	MW-5A	31.47	6/18/2019	7.1	10	11.57	5.998	0	None	No	0.000231	Param Inter 1 of 2
Nickel (UG/L)	MW-6	31.47	3/25/2019	4.1	10	11.57	5.998	0	None	No	0.000231	Param Inter 1 of 2
Nickel (UG/L)	MW-9	31.47	6/10/2019	4.4	10	11.57	5.998	0	None	No	0.000231	Param Inter 1 of 2
NITRATE AS N (MG/L)	MW-10	0.092	6/12/2019	0.056	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
NITRATE AS N (MG/L)	MW-12	0.092	6/5/2019	0.005ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
NITRATE AS N (MG/L)	MW-13	0.092	6/4/2019	0.005ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
NITRATE AS N (MG/L)	MW-5A	0.092	6/18/2019	0.018	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
NITRATE AS N (MG/L)	MW-6	0.092	3/25/2019	0.005ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
NITRATE AS N (MG/L)	MW-9	0.092	6/10/2019	0.012	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
NITRITE AS N (MG/L)	MW-10	0.005	6/12/2019	0.0025ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
NITRITE AS N (MG/L)	MW-12	0.005	6/5/2019	0.0025ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
NITRITE AS N (MG/L)	MW-13	0.005	6/4/2019	0.0025ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
NITRITE AS N (MG/L)	MW-5A	0.005	6/18/2019	0.0025ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
NITRITE AS N (MG/L)	MW-6	0.005	3/25/2019	0.0025ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
NITRITE AS N (MG/L)	MW-9	0.005	6/10/2019	0.0025ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
o-Nitrotoluene (UG/L)	MW-10	0.5	6/12/2019	0.225ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
o-Nitrotoluene (UG/L)	MW-12	0.5	6/4/2019	0.22ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2

Prediction Limit

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Constituent	Well	Upper Lim.	Date	Observ.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
o-Nitrotoluene (UG/L)	MW-13	0.5	6/3/2019	0.21ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
o-Nitrotoluene (UG/L)	MW-5A	0.5	6/17/2019	0.22ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
o-Nitrotoluene (UG/L)	MW-6	0.5	3/25/2019	0.205ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
o-Nitrotoluene (UG/L)	MW-9	0.5	6/10/2019	0.215ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Perchlorate (UG/L)	MW-10	0.5	6/12/2019	0.25ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Perchlorate (UG/L)	MW-12	0.5	6/5/2019	0.25ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Perchlorate (UG/L)	MW-13	0.5	6/3/2019	0.25ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Perchlorate (UG/L)	MW-5A	0.5	6/18/2019	0.25ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Perchlorate (UG/L)	MW-6	0.5	3/25/2019	0.25ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Perchlorate (UG/L)	MW-9	0.5	6/10/2019	0.25ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Phenanthrene (UG/L)	MW-10	0.22	6/12/2019	0.105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Phenanthrene (UG/L)	MW-12	0.22	6/5/2019	0.095ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Phenanthrene (UG/L)	MW-13	0.22	6/3/2019	0.11ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Phenanthrene (UG/L)	MW-5A	0.22	6/18/2019	0.115ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Phenanthrene (UG/L)	MW-6	0.22	3/25/2019	0.105ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Phenanthrene (UG/L)	MW-9	0.22	6/10/2019	0.125ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Picric acid (UG/L)	MW-10	1	6/12/2019	0.225ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Picric acid (UG/L)	MW-12	1	6/4/2019	0.22ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Picric acid (UG/L)	MW-13	1	6/3/2019	0.21ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Picric acid (UG/L)	MW-5A	1	6/17/2019	0.22ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Picric acid (UG/L)	MW-6	1	3/25/2019	0.205ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Picric acid (UG/L)	MW-9	1	6/10/2019	0.215ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Pyrene (UG/L)	MW-10	0.225	6/12/2019	0.105ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Pyrene (UG/L)	MW-12	0.225	6/5/2019	0.095ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Pyrene (UG/L)	MW-13	0.225	6/3/2019	0.11ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Pyrene (UG/L)	MW-5A	0.225	6/18/2019	0.115ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Pyrene (UG/L)	MW-6	0.225	3/25/2019	0.105ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Pyrene (UG/L)	MW-9	0.225	6/10/2019	0.125ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Radium-226 (PCI/L)	MW-10	41.9	6/12/2019	20ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Radium-226 (PCI/L)	MW-12	41.9	6/5/2019	8.2ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Radium-226 (PCI/L)	MW-13	41.9	6/3/2019	18.8ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Radium-226 (PCI/L)	MW-5A	41.9	6/18/2019	18.4ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Radium-226 (PCI/L)	MW-6	41.9	3/25/2019	22.05ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Radium-226 (PCI/L)	MW-9	41.9	6/10/2019	15.85ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Radium-228 (PCI/L)	MW-10	18.65	6/12/2019	18.5ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Radium-228 (PCI/L)	MW-12	18.65	6/5/2019	14.7ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Radium-228 (PCI/L)	MW-13	18.65	6/3/2019	15.45ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Radium-228 (PCI/L)	MW-5A	18.65	6/18/2019	15ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Radium-228 (PCI/L)	MW-6	18.65	3/25/2019	18.5ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Radium-228 (PCI/L)	MW-9	18.65	6/10/2019	18.3ND	10	n/a	n/a	90	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Selenium (UG/L)	MW-10	86	6/12/2019	1.25ND	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Selenium (UG/L)	MW-12	86	6/5/2019	1.25ND	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Selenium (UG/L)	MW-13	86	6/3/2019	1.25ND	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Selenium (UG/L)	MW-5A	86	6/18/2019	1.25ND	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Selenium (UG/L)	MW-6	86	3/25/2019	0.65ND	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Selenium (UG/L)	MW-9	86	6/10/2019	1.25ND	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Styrene (UG/L)	MW-10	0.5	6/12/2019	0.5ND	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Styrene (UG/L)	MW-12	0.5	6/5/2019	0.5ND	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Styrene (UG/L)	MW-13	0.5	6/3/2019	0.5ND	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Styrene (UG/L)	MW-5A	0.5	6/18/2019	0.5ND	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2

Prediction Limit

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Constituent	Well	Upper Lim.	Date	Observ.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Styrene (UG/L)	MW-6	0.5	3/25/2019	0.5ND	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Styrene (UG/L)	MW-9	0.5	6/10/2019	0.5ND	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Sulfate (MG/L)	MW-10	13.5	6/12/2019	7.6	10	3.771	2.933	0	None	No	0.000231	Param Inter 1 of 2
Sulfate (MG/L)	**MW-12**	**13.5**	**6/5/2019**	**20**	**10**	**3.771**	**2.933**	**0**	**None**	**No**	**0.000231**	**Param Inter 1 of 2**
Sulfate (MG/L)	MW-13	13.5	6/3/2019	12	10	3.771	2.933	0	None	No	0.000231	Param Inter 1 of 2
Sulfate (MG/L)	**MW-5A**	**13.5**	**6/18/2019**	**44**	**10**	**3.771**	**2.933**	**0**	**None**	**No**	**0.000231**	**Param Inter 1 of 2**
Sulfate (MG/L)	**MW-6**	**13.5**	**3/25/2019**	**28**	**10**	**3.771**	**2.933**	**0**	**None**	**No**	**0.000231**	**Param Inter 1 of 2**
Sulfate (MG/L)	MW-9	13.5	6/10/2019	3.9	10	3.771	2.933	0	None	No	0.000231	Param Inter 1 of 2
Sulfide (MG/L)	MW-10	0.1	6/12/2019	0.05ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Sulfide (MG/L)	MW-12	0.1	6/5/2019	0.05ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Sulfide (MG/L)	MW-13	0.1	6/3/2019	0.05ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Sulfide (MG/L)	MW-5A	0.1	6/18/2019	0.05ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Sulfide (MG/L)	MW-6	0.1	3/25/2019	0.05ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Sulfide (MG/L)	MW-9	0.1	6/10/2019	0.05ND	10	n/a	n/a	100	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Tin (UG/L)	MW-10	76.75	6/12/2019	2.5ND	10	16.3	18.22	50	Aitch...	No	0.000231	Param Inter 1 of 2
Tin (UG/L)	MW-12	76.75	6/5/2019	2.5ND	10	16.3	18.22	50	Aitch...	No	0.000231	Param Inter 1 of 2
Tin (UG/L)	MW-13	76.75	6/3/2019	2.5ND	10	16.3	18.22	50	Aitch...	No	0.000231	Param Inter 1 of 2
Tin (UG/L)	MW-5A	76.75	6/18/2019	2.5ND	10	16.3	18.22	50	Aitch...	No	0.000231	Param Inter 1 of 2
Tin (UG/L)	MW-6	76.75	3/25/2019	1.25ND	10	16.3	18.22	50	Aitch...	No	0.000231	Param Inter 1 of 2
Tin (UG/L)	MW-9	76.75	6/10/2019	2.5ND	10	16.3	18.22	50	Aitch...	No	0.000231	Param Inter 1 of 2
Toluene (UG/L)	MW-10	0.5	6/12/2019	0.5ND	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Toluene (UG/L)	MW-12	0.5	6/5/2019	0.5ND	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Toluene (UG/L)	MW-13	0.5	6/3/2019	0.5ND	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Toluene (UG/L)	MW-5A	0.5	6/18/2019	0.5ND	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Toluene (UG/L)	MW-6	0.5	3/25/2019	0.5ND	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Toluene (UG/L)	MW-9	0.5	6/10/2019	0.5ND	10	n/a	n/a	70	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Total dissolved solids [TDS] (M...	MW-10	553	6/12/2019	480	10	423	39.17	0	None	No	0.000231	Param Inter 1 of 2
Total dissolved solids [TDS] (M...	MW-12	553	6/5/2019	500	10	423	39.17	0	None	No	0.000231	Param Inter 1 of 2
Total dissolved solids [TDS] (M...	MW-13	553	3/27/2019	460	10	423	39.17	0	None	No	0.000231	Param Inter 1 of 2
Total dissolved solids [TDS] (M...	MW-5A	553	6/18/2019	400	10	423	39.17	0	None	No	0.000231	Param Inter 1 of 2
Total dissolved solids [TDS] (M...	MW-6	553	3/25/2019	520	10	423	39.17	0	None	No	0.000231	Param Inter 1 of 2
Total dissolved solids [TDS] (M...	MW-9	553	6/10/2019	450	10	423	39.17	0	None	No	0.000231	Param Inter 1 of 2
Total Suspended Solids (MG/L)	MW-10	120	6/12/2019	2.5ND	10	n/a	n/a	40	n/a	n/a	0.01012	NP Inter (normality) ...
Total Suspended Solids (MG/L)	MW-12	120	6/5/2019	7	10	n/a	n/a	40	n/a	n/a	0.01012	NP Inter (normality) ...
Total Suspended Solids (MG/L)	MW-13	120	6/3/2019	2.5ND	10	n/a	n/a	40	n/a	n/a	0.01012	NP Inter (normality) ...
Total Suspended Solids (MG/L)	MW-5A	120	6/18/2019	2.5ND	10	n/a	n/a	40	n/a	n/a	0.01012	NP Inter (normality) ...
Total Suspended Solids (MG/L)	MW-6	120	3/25/2019	14	10	n/a	n/a	40	n/a	n/a	0.01012	NP Inter (normality) ...
Total Suspended Solids (MG/L)	MW-9	120	6/10/2019	2.5ND	10	n/a	n/a	40	n/a	n/a	0.01012	NP Inter (normality) ...
Uranium (UG/L)	MW-10	0.5	6/12/2019	0.77	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Uranium (UG/L)	MW-12	0.5	6/5/2019	0.5ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Uranium (UG/L)	MW-13	0.5	6/3/2019	0.5ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Uranium (UG/L)	MW-5A	0.5	6/18/2019	0.41	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Uranium (UG/L)	MW-6	0.5	3/25/2019	0.5ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Uranium (UG/L)	MW-9	0.5	6/10/2019	0.5ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Vanadium (UG/L)	MW-10	36	6/12/2019	33	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Vanadium (UG/L)	MW-12	36	6/5/2019	5ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Vanadium (UG/L)	MW-13	36	6/3/2019	5ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Vanadium (UG/L)	MW-5A	36	6/18/2019	5ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Vanadium (UG/L)	MW-6	36	3/25/2019	4.6	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Vanadium (UG/L)	MW-9	36	6/10/2019	10	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2

Prediction Limit

Ordot Closure Facility Client: GSWA Data: Ordot Printed 9/27/2019, 9:20 PM

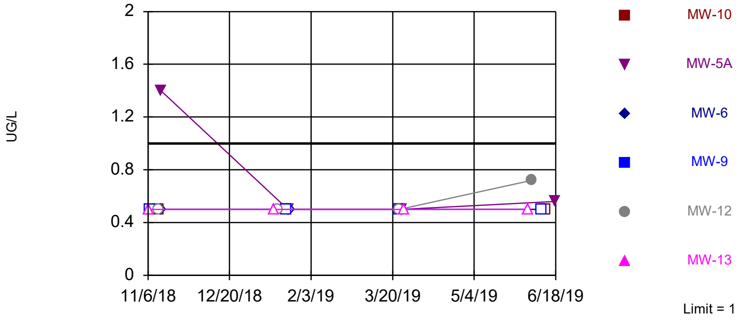
Constituent	Well	Upper Lim.	Date	Observ.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Zinc (UG/L)	MW-10	24	6/12/2019	10ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Zinc (UG/L)	MW-12	24	6/5/2019	10ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Zinc (UG/L)	MW-13	24	6/3/2019	10ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Zinc (UG/L)	MW-5A	24	6/18/2019	10ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Zinc (UG/L)	MW-6	24	3/25/2019	10ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2
Zinc (UG/L)	MW-9	24	6/10/2019	10ND	10	n/a	n/a	80	n/a	n/a	0.01012	NP Inter (NDs) 1 of 2

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 5) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.4248. Individual comparison alpha = 0.02278 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

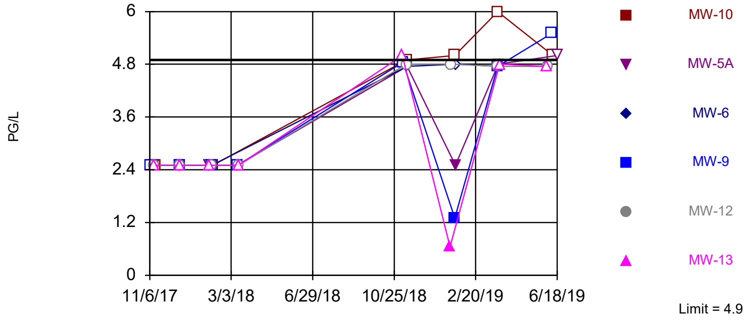
Constituent: 1,4-Dioxane Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 90% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

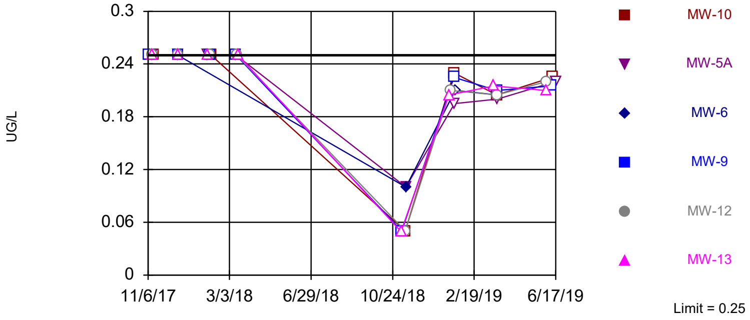
Constituent: 2,3,7,8-TCDD Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 90% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

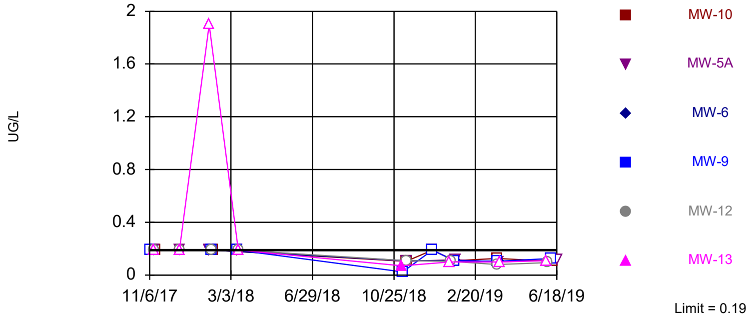
Constituent: 2,4,6-Trinitrotoluene [TNT] Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 90% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

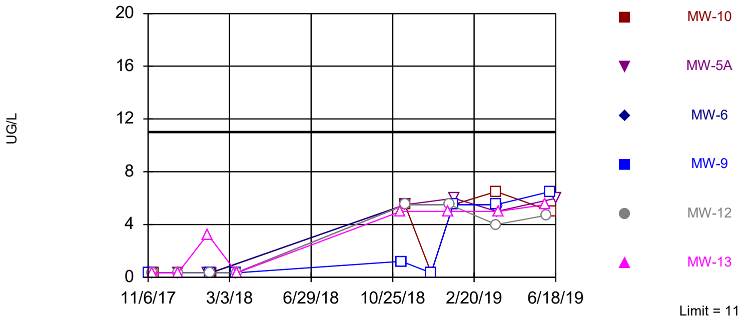
Constituent: 2-Methylnaphthalene Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

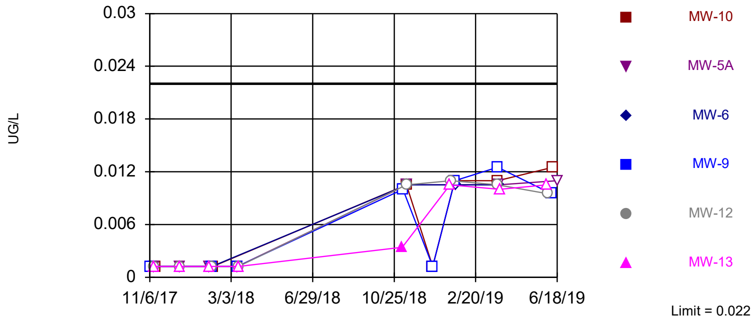
Constituent: 3,3`-Dichlorobenzidine Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

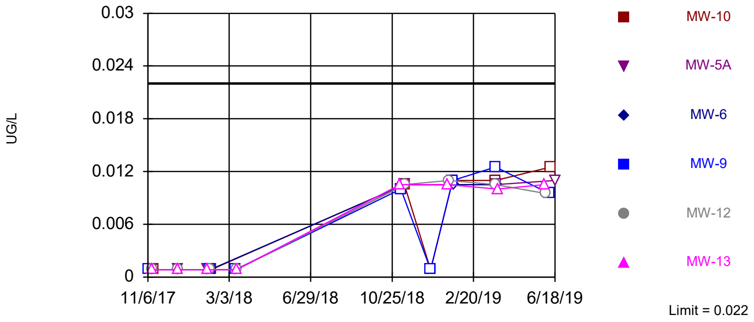
Constituent: 4,4`-DDD Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

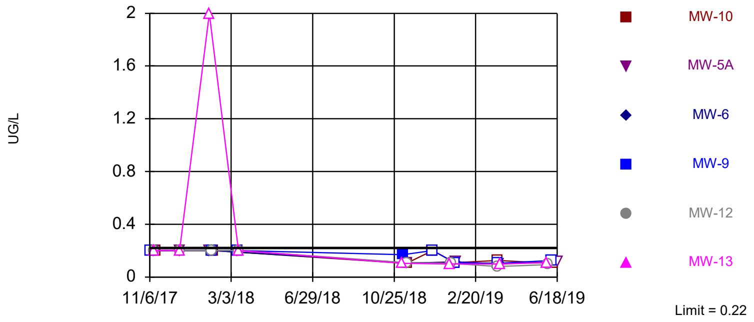
Constituent: 4,4`-DDT Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

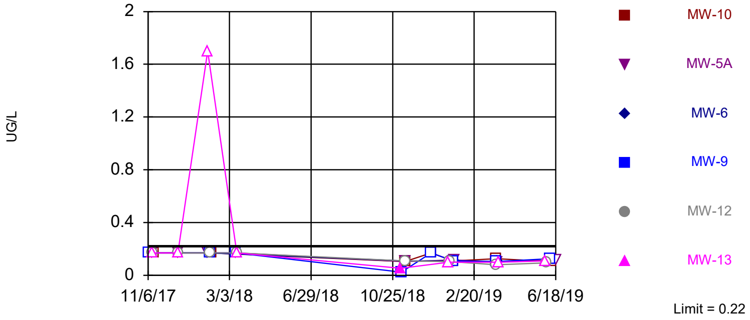
Constituent: Acenaphthene Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

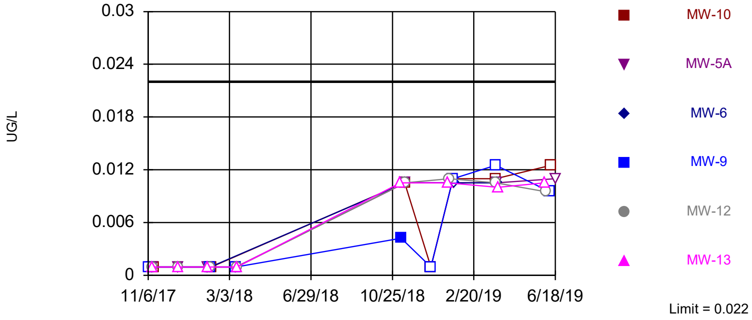
Constituent: Acenaphthylene Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

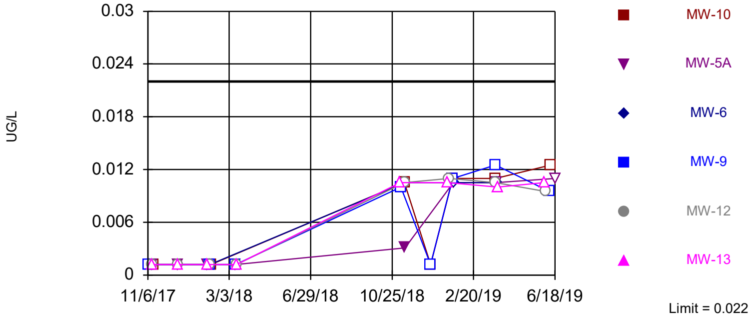
Constituent: Aldrin Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

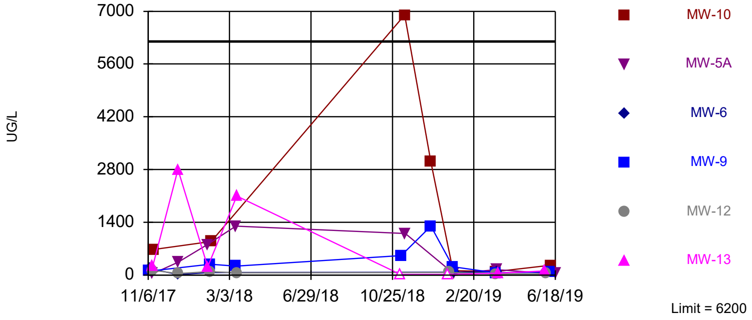
Constituent: alpha Endosulfan [Endosulfan I] Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



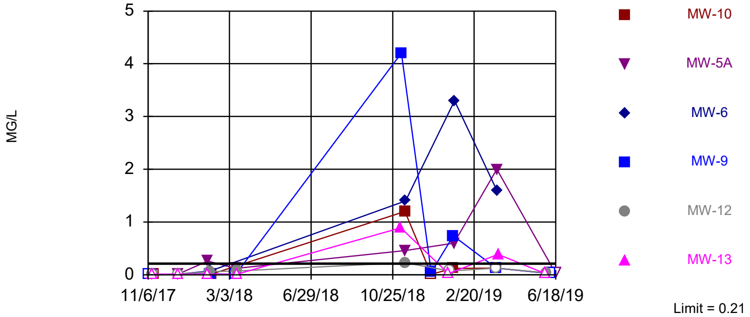
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 70% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Aluminum Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.
Exceeds Limit: MW-6

Prediction Limit

Interwell Non-parametric



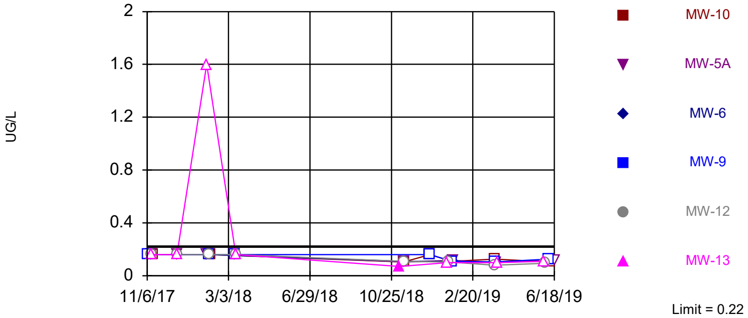
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 9 background values. 66.67% NDs. Annual per-constituent alpha = 0.2465. Individual comparison alpha = 0.01172 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Ammonia [as N] Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.
Within Limit

Prediction Limit

Interwell Non-parametric



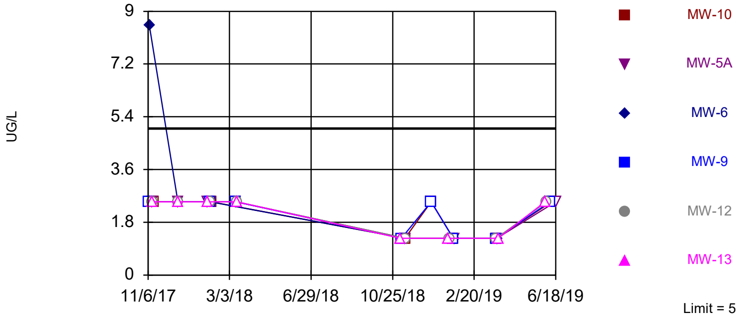
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Anthracene Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.
Within Limit

Prediction Limit

Interwell Non-parametric



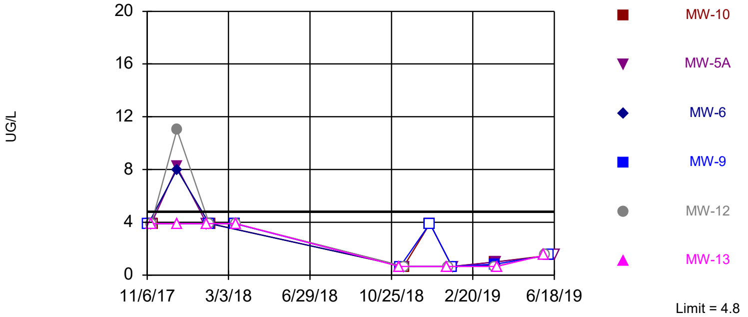
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Antimony Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.
Within Limit

Prediction Limit

Interwell Non-parametric



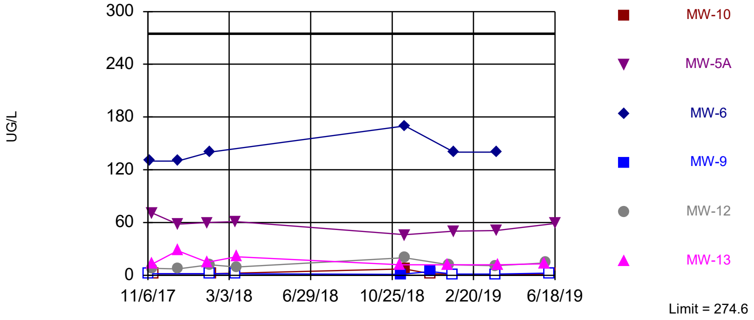
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 60% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Arsenic Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.
Within Limit

Prediction Limit

Interwell Parametric



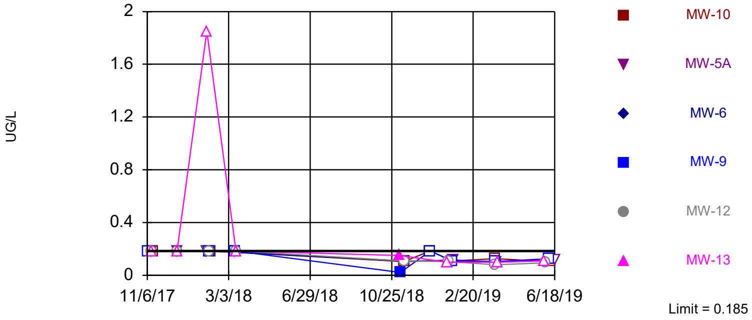
Background Data Summary (based on natural log transformation): Mean=1.979, Std. Dev.=1.096, n=10, 10% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7841, critical = 0.781. Kappa = 3.318 (c=19, w=6, 1 of 2, event alpha = 0.026). Report alpha = 0.001385. Individual comparison alpha = 0.000231. Comparing 6 points to limit.

Constituent: Barium Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.
Within Limit

Prediction Limit

Interwell Non-parametric



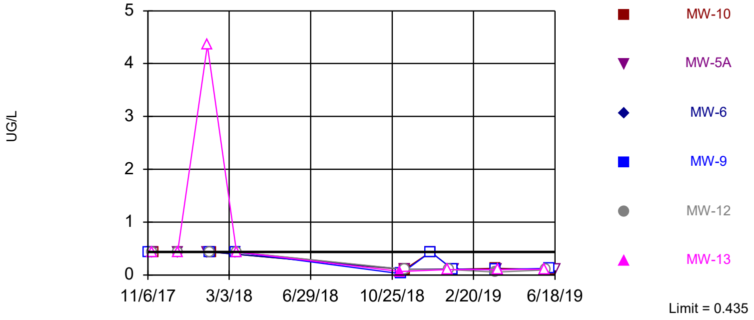
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 90% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Benzo[a]anthracene Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.
Within Limit

Prediction Limit

Interwell Non-parametric



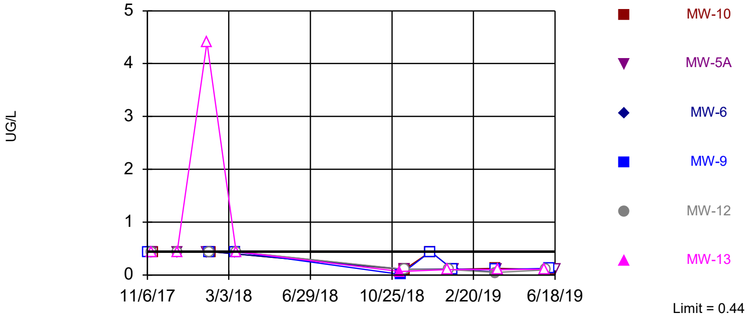
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 90% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Benzo[a]pyrene Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.
Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 90% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

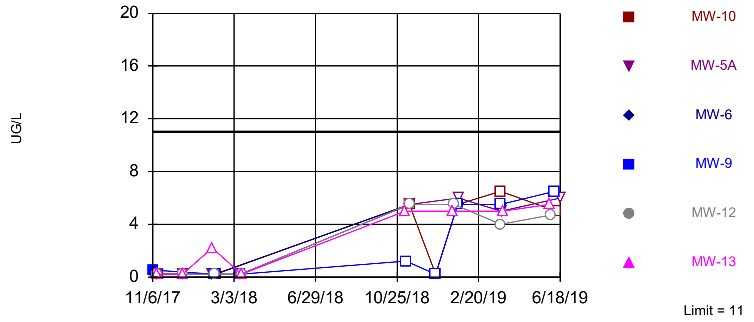
Constituent: Benzo[b]fluoranthene Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

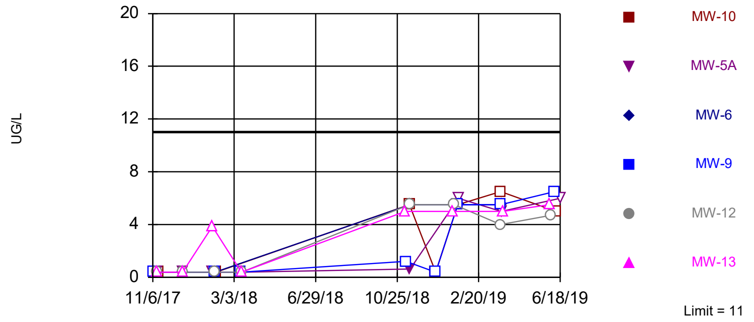
Constituent: Benzyl alcohol Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

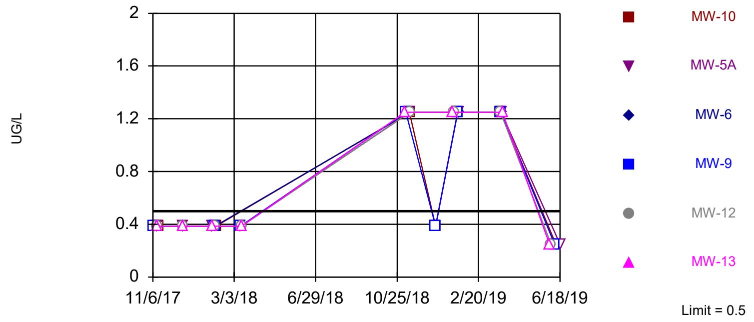
Constituent: Benzyl butyl phthalate Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

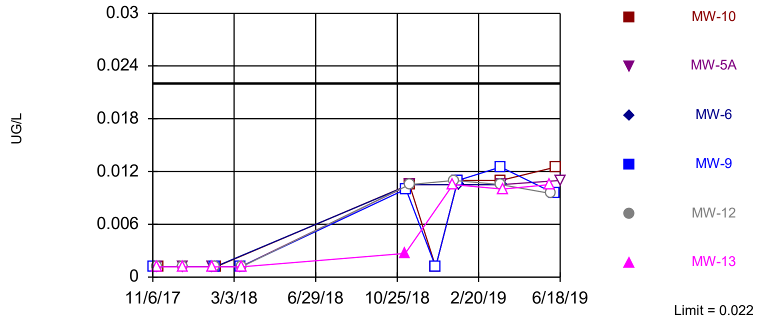
Constituent: Beryllium Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

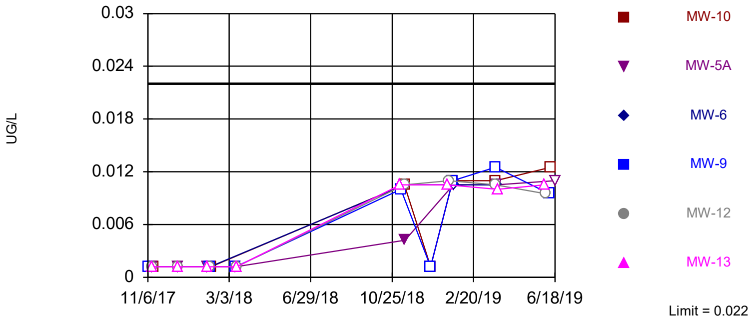
Constituent: BHC, alpha Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

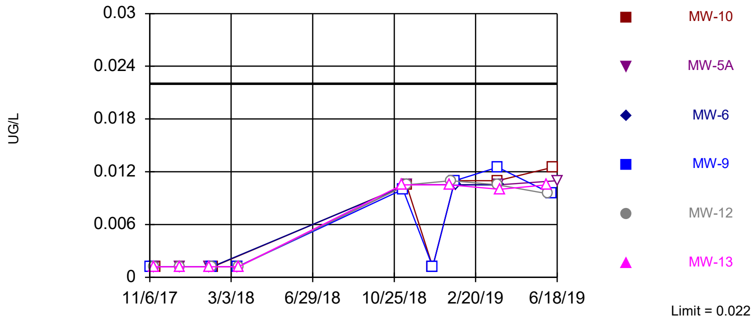
Constituent: BHC, delta Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

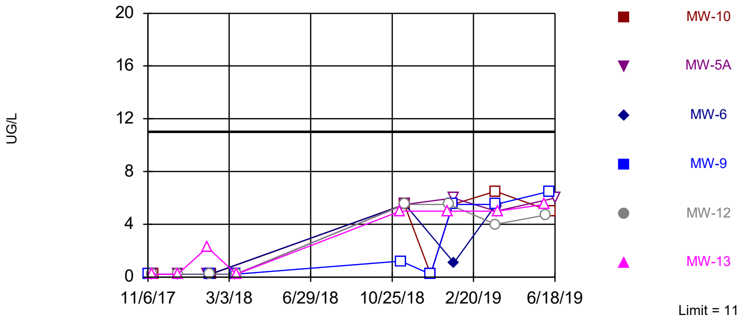
Constituent: BHC, gamma [Lindane] Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

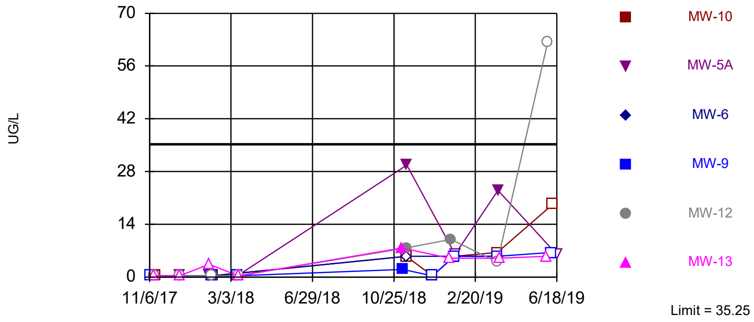
Constituent: bis[2-Chloroethoxy]methane Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

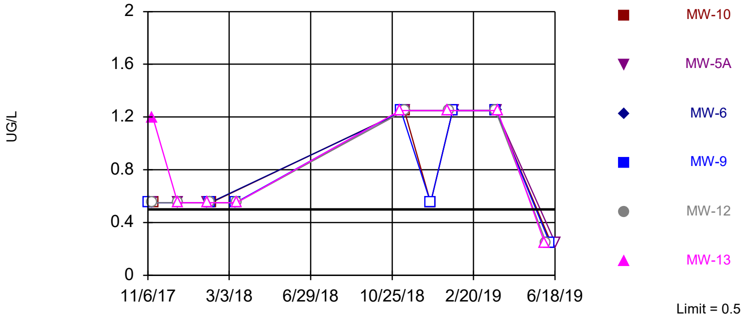
Constituent: bis[2-Ethylhexyl]phthalate Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

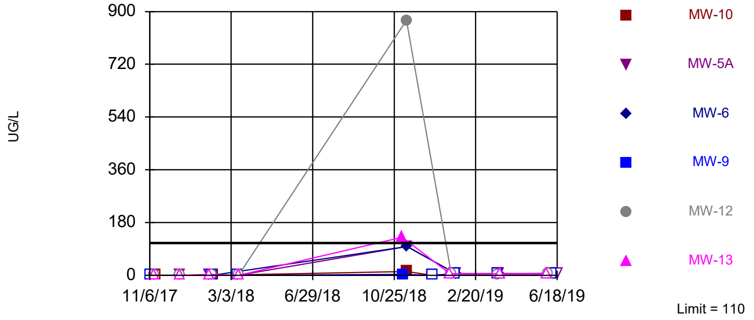
Constituent: Cadmium Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 90% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

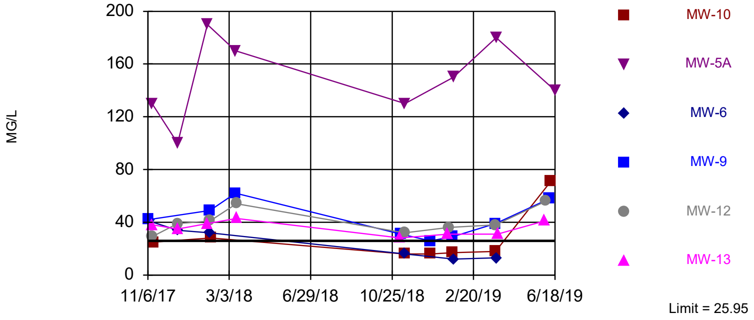
Constituent: Caprolactam Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG

Exceeds Limit: MW-10, MW-5A, MW-12, MW-13

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=21, Std. Dev.=1.491, n=10. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9181, critical = 0.781. Kappa = 3.318 (c=19, w=6, 1 of 2, event alpha = 0.026). Report alpha = 0.001385. Individual comparison alpha = 0.000231. Comparing 6 points to limit.

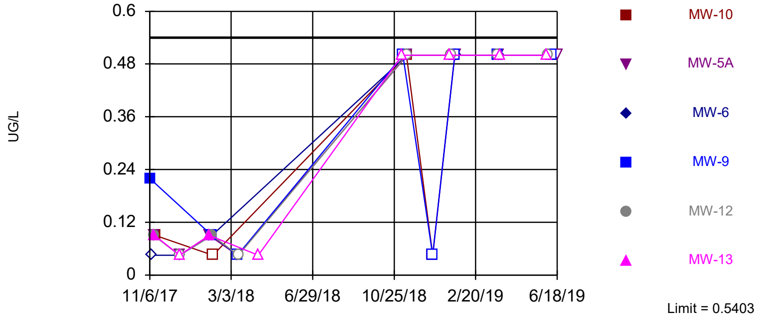
Constituent: Chloride Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Parametric



Background Data Summary (based on cube transformation) (after Aitchison`s Adjustment): Mean=0.02944, Std. Dev.=0.03867, n=10, 50% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8045, critical = 0.781. Kappa = 3.318 (c=19, w=6, 1 of 2, event alpha = 0.026). Report alpha = 0.001385. Individual comparison alpha = 0.000231. Comparing 6 points to limit.

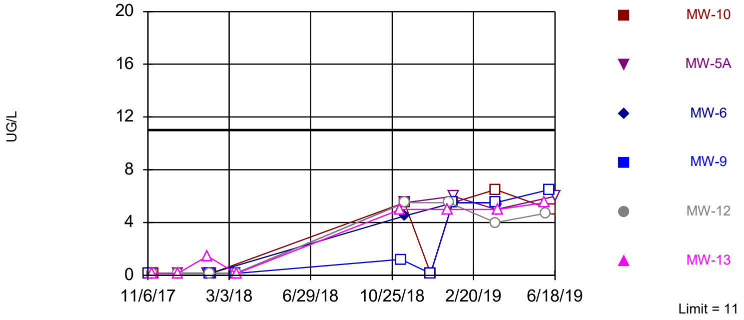
Constituent: Chlorobenzene Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

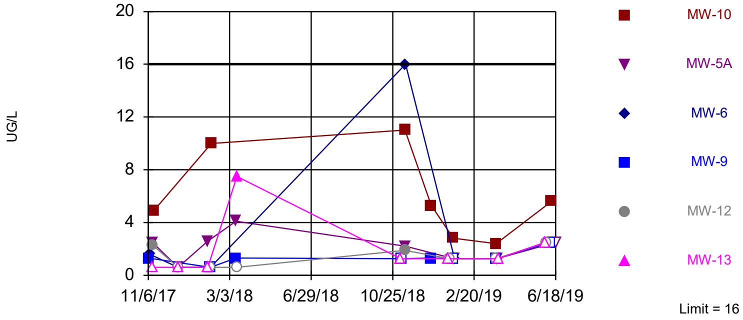
Constituent: Chlorobenzilate   Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility   Client: GSWA   Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 60% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

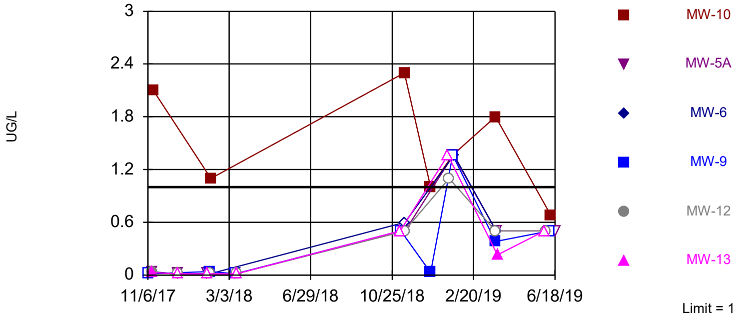
Constituent: Chromium   Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility   Client: GSWA   Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

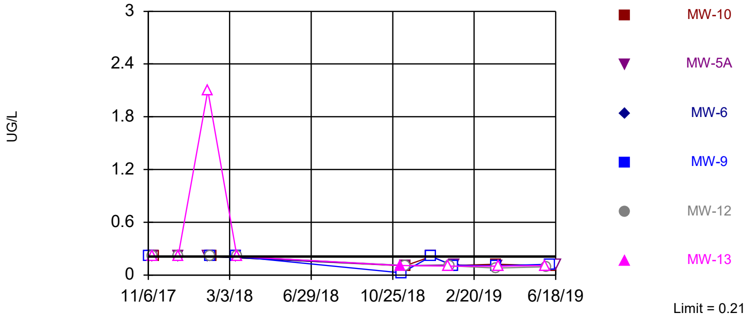
Constituent: Chromium, Hexavalent   Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility   Client: GSWA   Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 90% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

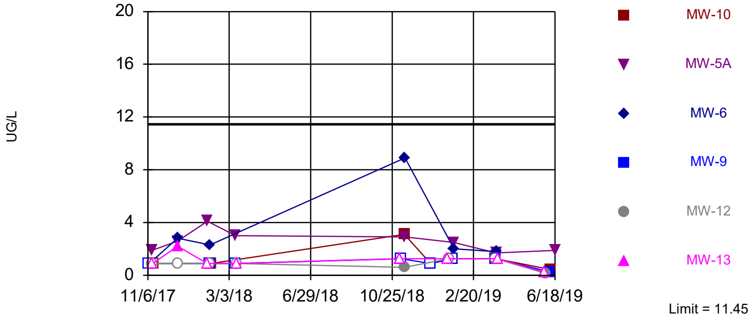
Constituent: Chrysene   Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility   Client: GSWA   Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=4.42, Std. Dev.=2.118, n=10, 10% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9473, critical = 0.781. Kappa = 3.318 (c=19, w=6, 1 of 2, event alpha = 0.026). Report alpha = 0.001385. Individual comparison alpha = 0.000231. Comparing 6 points to limit.

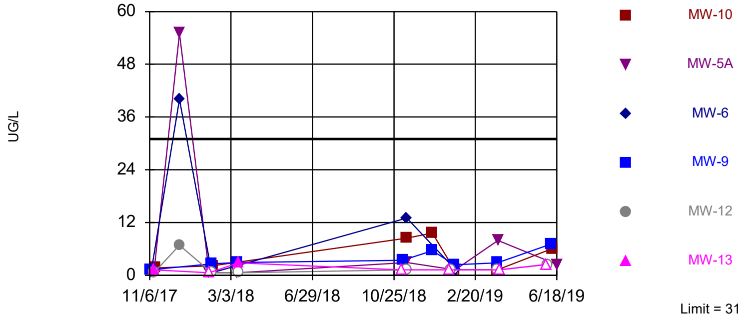
Constituent: Cobalt Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 80% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

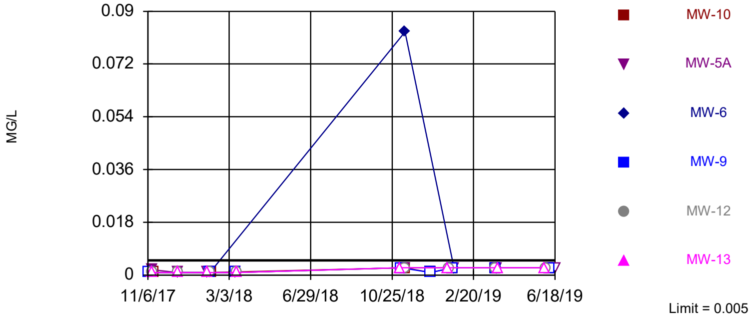
Constituent: Copper Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

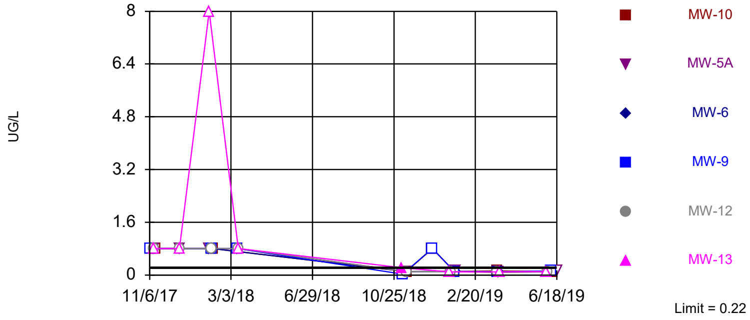
Constituent: Cyanide, total Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

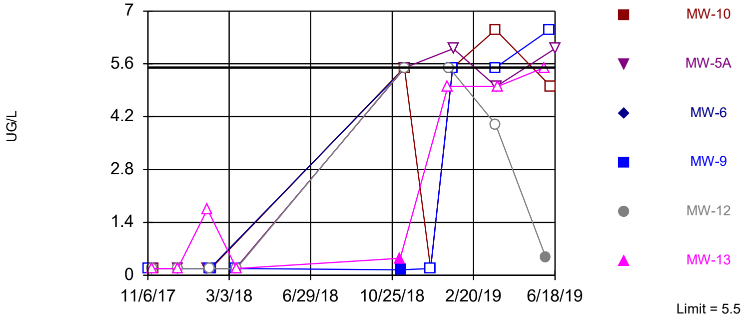
Constituent: Dibenz[a,h]anthracene Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 90% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

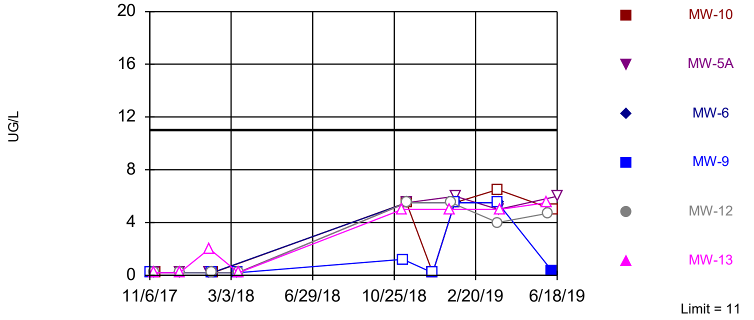
Constituent: Diethyl phthalate Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

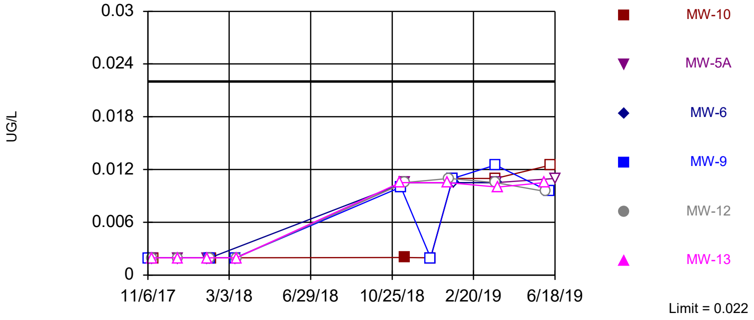
Constituent: Dimethyl phthalate Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

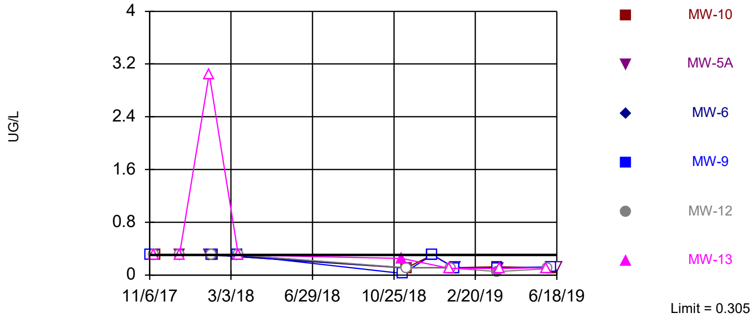
Constituent: Endrin aldehyde Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 90% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

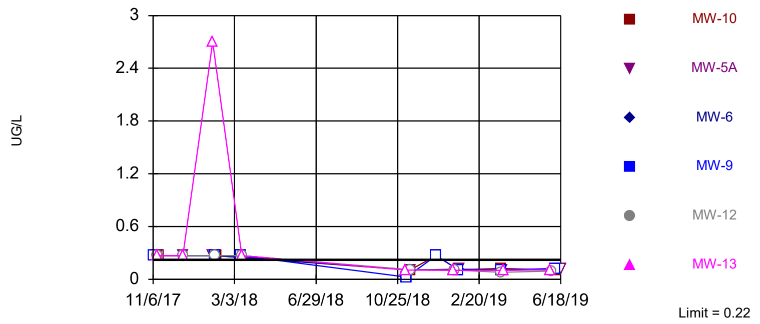
Constituent: Fluoranthene Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Fluorene Analysis Run 9/27/2019 9:19 PM

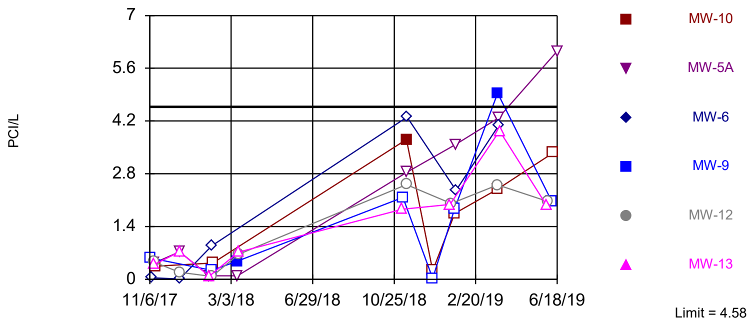
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Gross Alpha Analysis Run 9/27/2019 9:19 PM

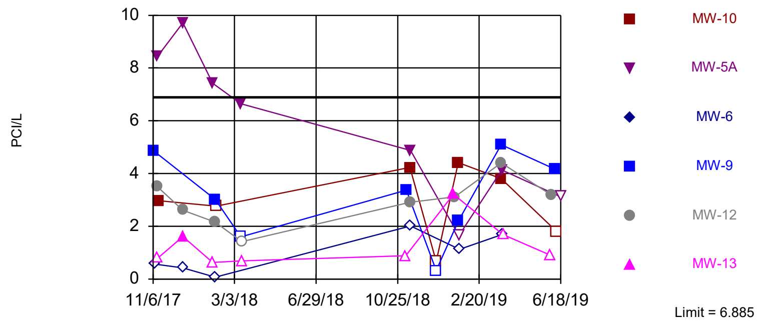
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Parametric



Background Data Summary (after Aitchison`s Adjustment): Mean=1.344, Std. Dev.=1.67, n=10, 50% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9614, critical = 0.781. Kappa = 3.318 (c=19, w=6, 1 of 2, event alpha = 0.026). Report alpha = 0.001385. Individual comparison alpha = 0.000231. Comparing 6 points to limit.

Constituent: Gross Beta Analysis Run 9/27/2019 9:19 PM

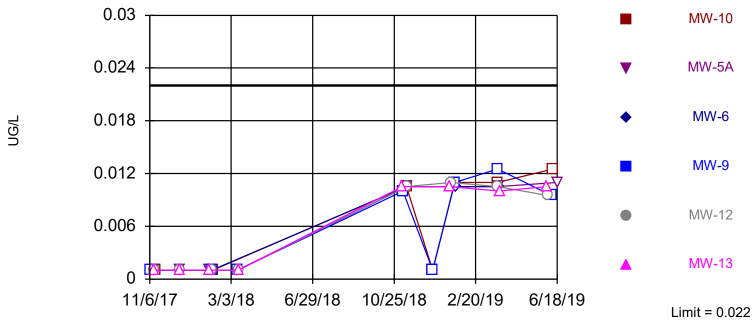
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Heptachlor Analysis Run 9/27/2019 9:19 PM

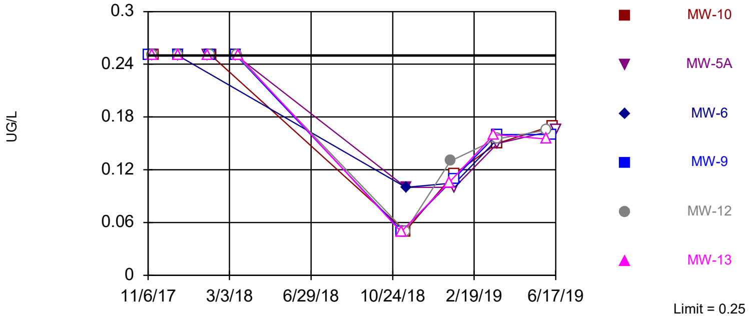
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 90% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Hexahydro-1,3,5-trinitro-1,3,5-triazine [RDX] Analysis Run 9/27/2019 9:19 PM

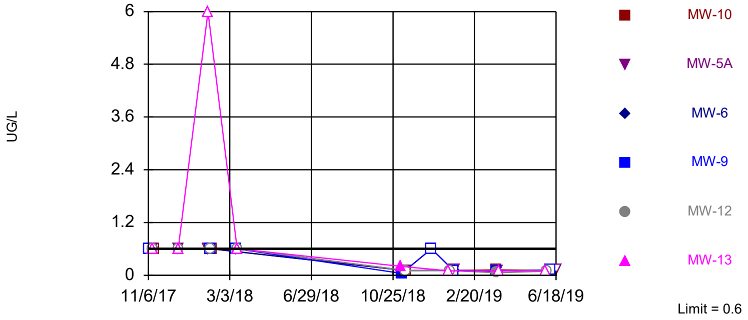
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 90% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Indeno[1,2,3-c,d]pyrene Analysis Run 9/27/2019 9:19 PM

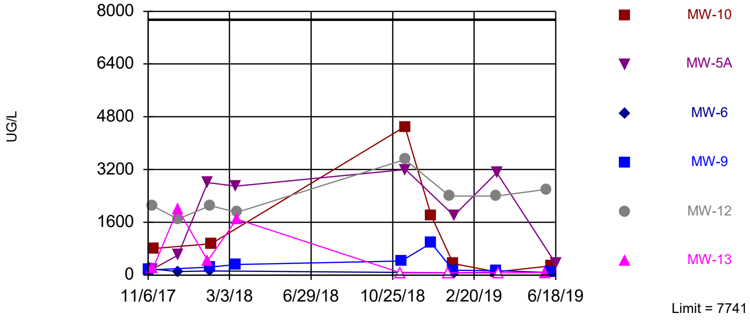
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=2117, Std. Dev.=1695, n=10. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9282, critical = 0.781. Kappa = 3.318 (c=19, w=6, 1 of 2, event alpha = 0.026). Report alpha = 0.001385. Individual comparison alpha = 0.000231. Comparing 6 points to limit.

Constituent: Iron Analysis Run 9/27/2019 9:19 PM

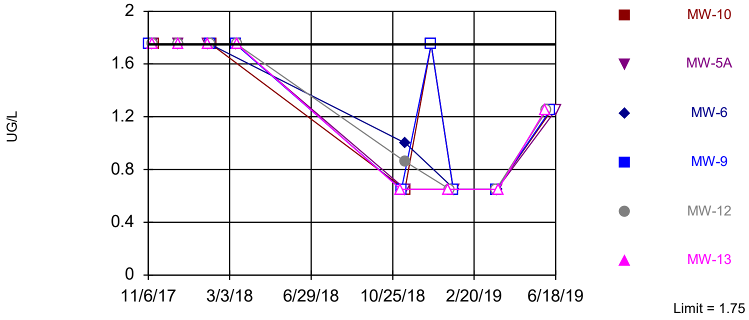
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 80% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Lead Analysis Run 9/27/2019 9:19 PM

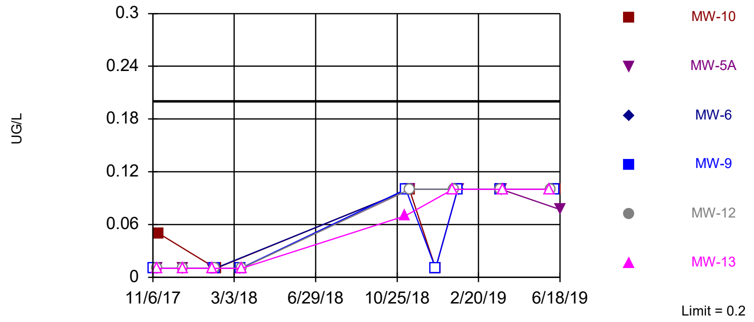
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

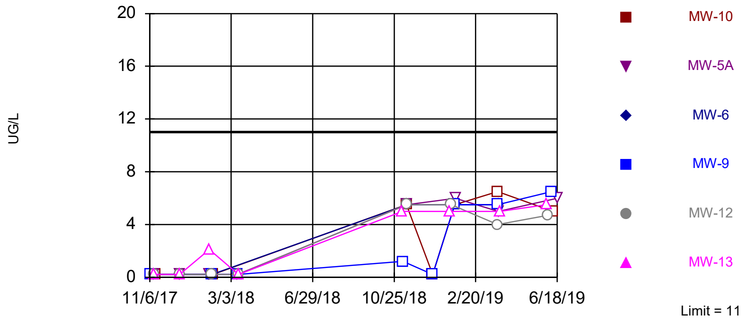
Constituent: Mercury Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

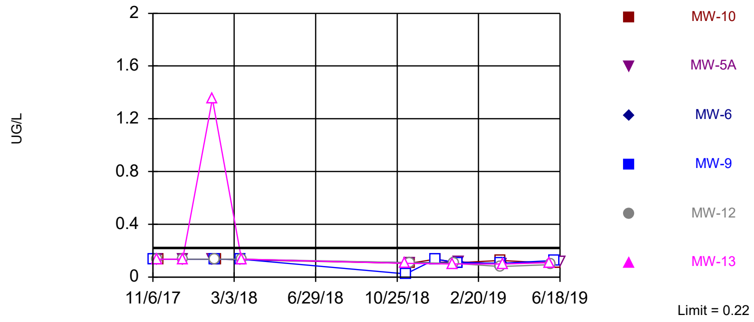
Constituent: Methyl methanesulfonate Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

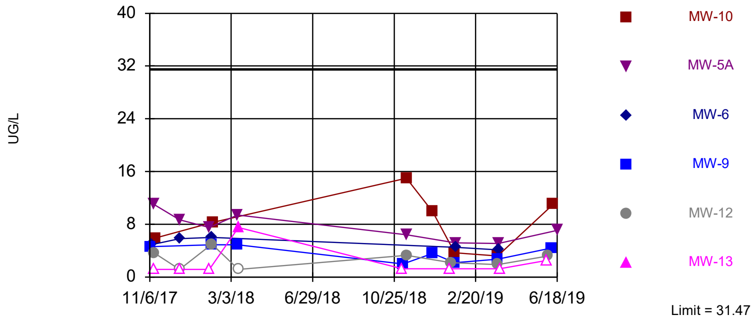
Constituent: Naphthalene Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=11.57, Std. Dev.=5.998, n=10. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9171, critical = 0.781. Kappa = 3.318 (c=19, w=6, 1 of 2, event alpha = 0.026). Report alpha = 0.001385. Individual comparison alpha = 0.000231. Comparing 6 points to limit.

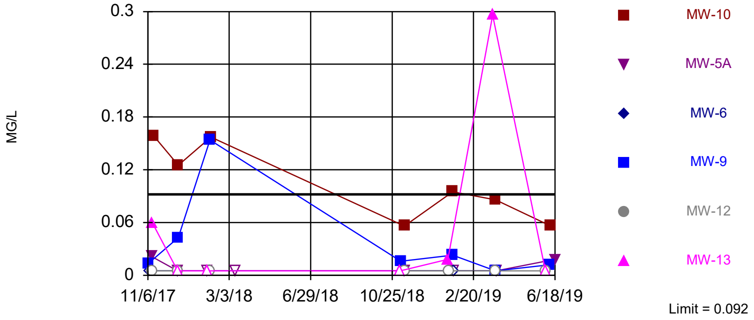
Constituent: Nickel Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 80% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

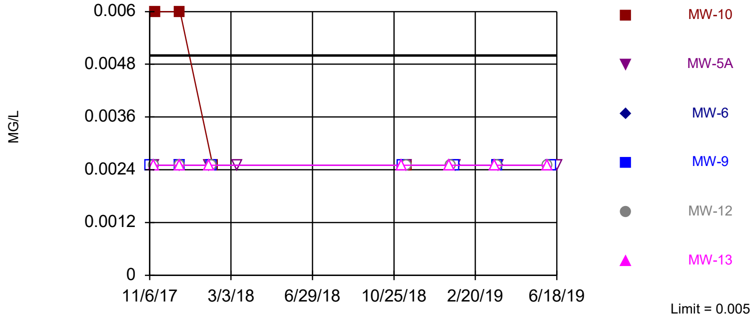
Constituent: NITRATE AS N Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

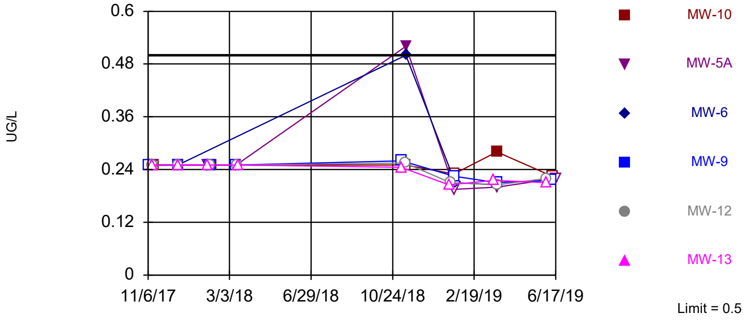
Constituent: NITRITE AS N Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 90% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

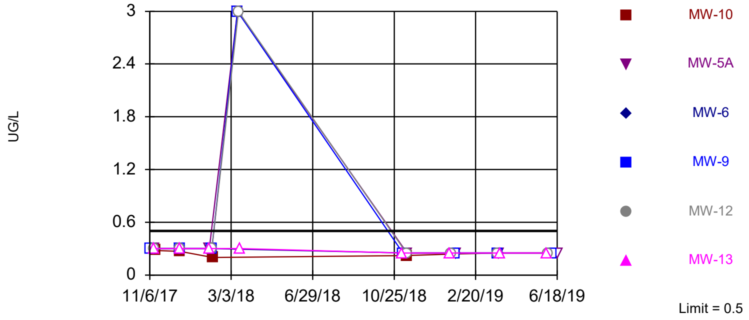
Constituent: o-Nitrotoluene Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

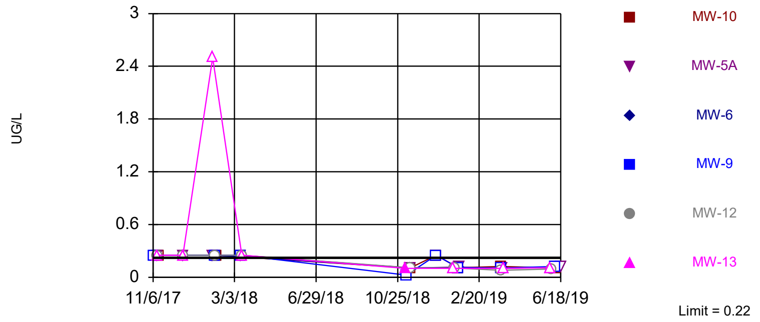
Constituent: Perchlorate Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

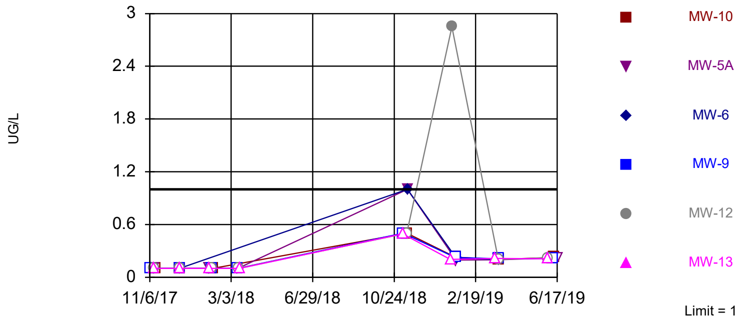
Constituent: Phenanthrene Analysis Run 9/27/2019 9:19 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 90% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

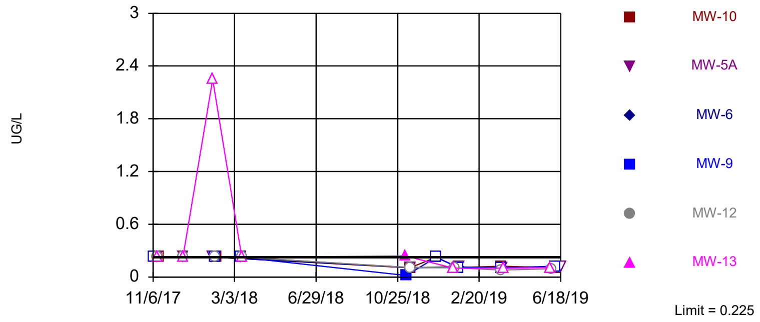
Constituent: Picric acid Analysis Run 9/27/2019 9:20 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 90% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

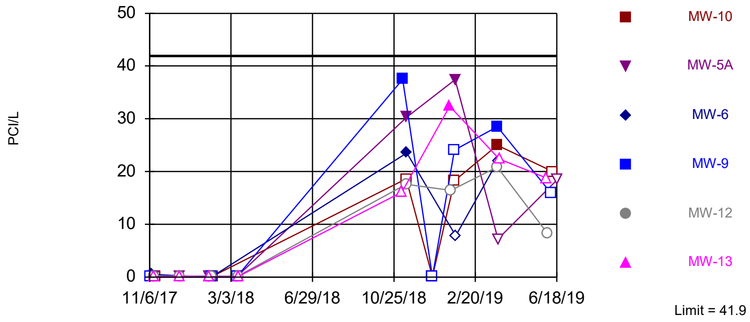
Constituent: Pyrene Analysis Run 9/27/2019 9:20 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 80% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

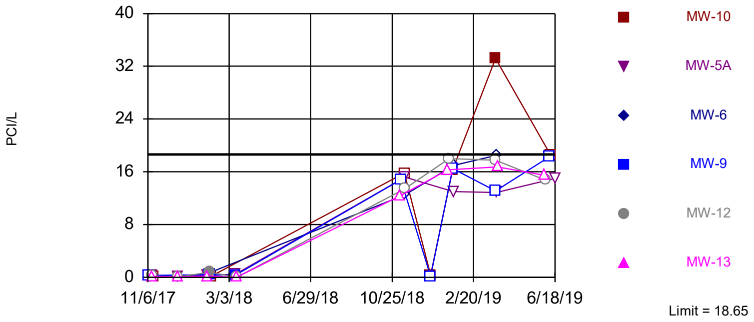
Constituent: Radium-226 Analysis Run 9/27/2019 9:20 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 90% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

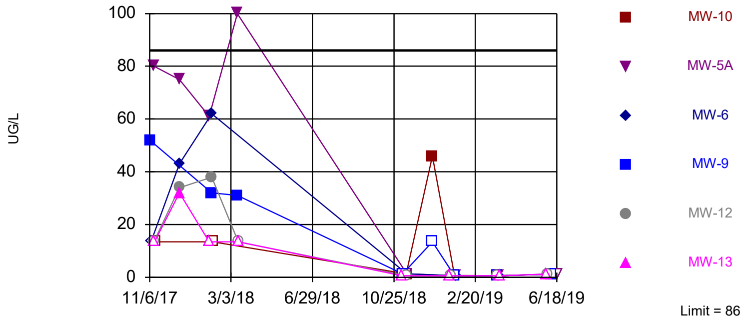
Constituent: Radium-228 Analysis Run 9/27/2019 9:20 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 70% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

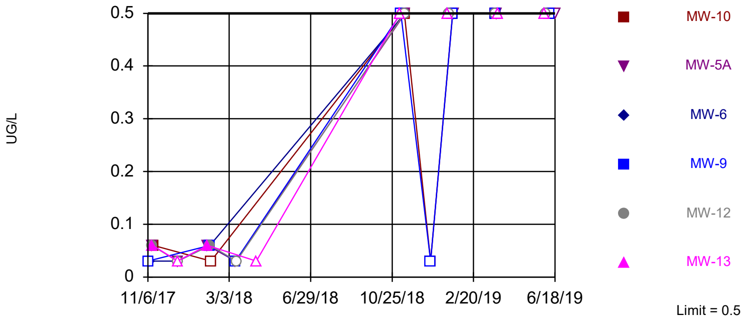
Constituent: Selenium Analysis Run 9/27/2019 9:20 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 70% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

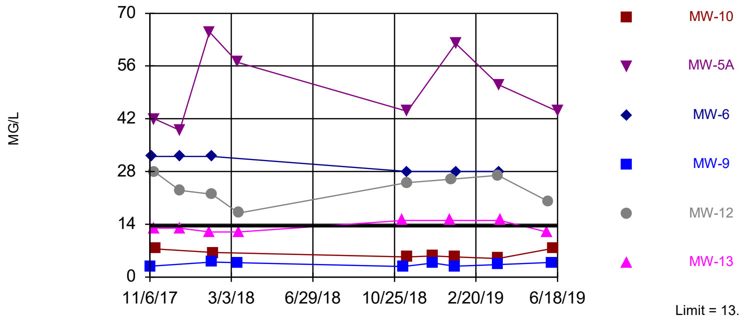
Constituent: Styrene Analysis Run 9/27/2019 9:20 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG

Exceeds Limit: MW-5A, MW-6, MW-12

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=3.771, Std. Dev.=2.933, n=10. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8899, critical = 0.781. Kappa = 3.318 (c=19, w=6, 1 of 2, event alpha = 0.026). Report alpha = 0.001385. Individual comparison alpha = 0.000231. Comparing 6 points to limit.

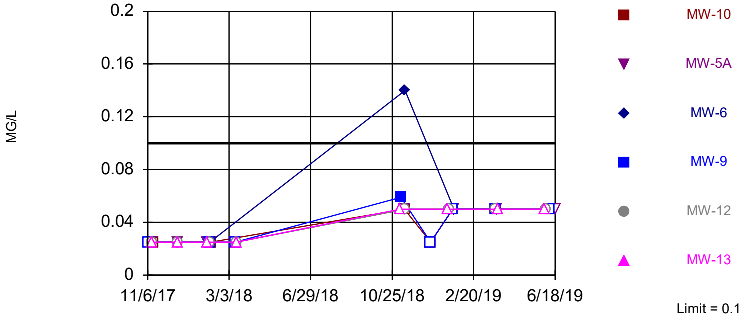
Constituent: Sulfate Analysis Run 9/27/2019 9:20 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

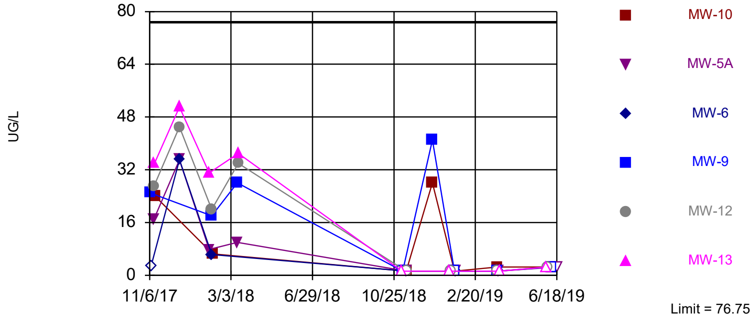
Constituent: Sulfide Analysis Run 9/27/2019 9:20 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Parametric



Background Data Summary (after Aitchison`s Adjustment): Mean=16.3, Std. Dev.=18.22, n=10, 50% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8216, critical = 0.781. Kappa = 3.318 (c=19, w=6, 1 of 2, event alpha = 0.026). Report alpha = 0.001385. Individual comparison alpha = 0.000231. Comparing 6 points to limit.

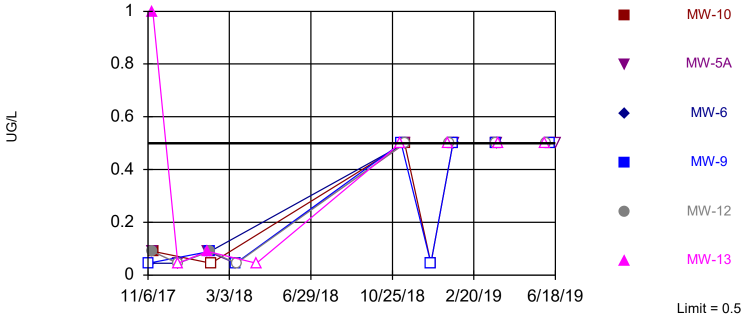
Constituent: Tin Analysis Run 9/27/2019 9:20 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 70% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

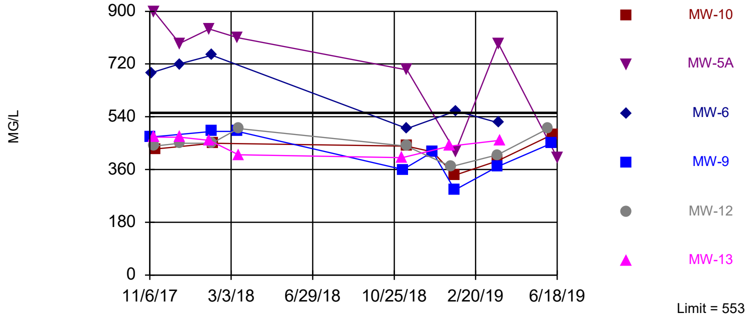
Constituent: Toluene Analysis Run 9/27/2019 9:20 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG

Within Limit

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=423, Std. Dev.=39.17, n=10. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9301, critical = 0.781. Kappa = 3.318 (c=19, w=6, 1 of 2, event alpha = 0.026). Report alpha = 0.001385. Individual comparison alpha = 0.000231. Comparing 6 points to limit.

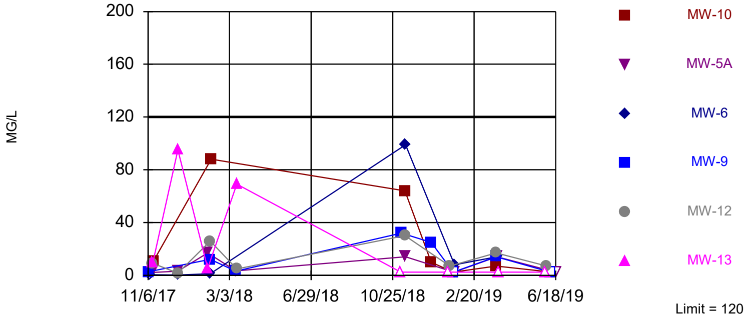
Constituent: Total dissolved solids [TDS] Analysis Run 9/27/2019 9:20 PM
Ordot Closure Facility Client: GSWA Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 10 background values. 40% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Total Suspended Solids   Analysis Run 9/27/2019 9:20 PM

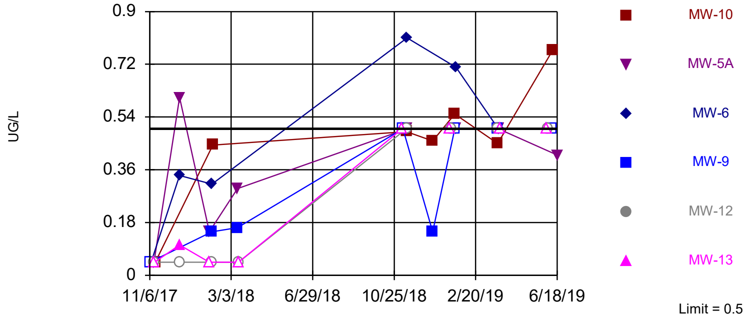
Ordot Closure Facility   Client: GSWA   Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 80% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Uranium   Analysis Run 9/27/2019 9:20 PM

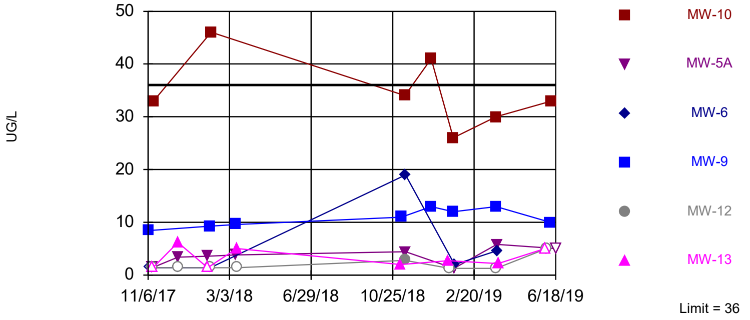
Ordot Closure Facility   Client: GSWA   Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 80% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Vanadium   Analysis Run 9/27/2019 9:20 PM

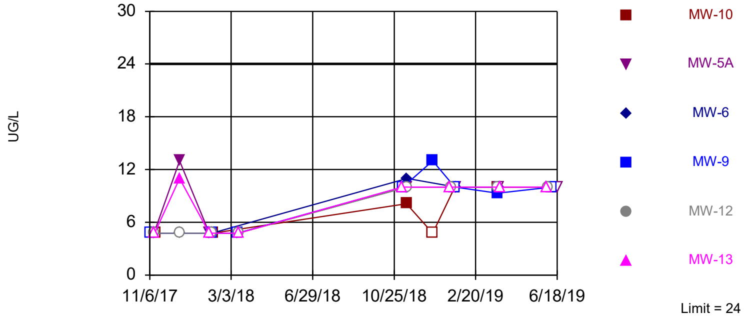
Ordot Closure Facility   Client: GSWA   Data: Ordot

Sanitas™ v.9.6.23 Software licensed to Brown and Caldwell. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



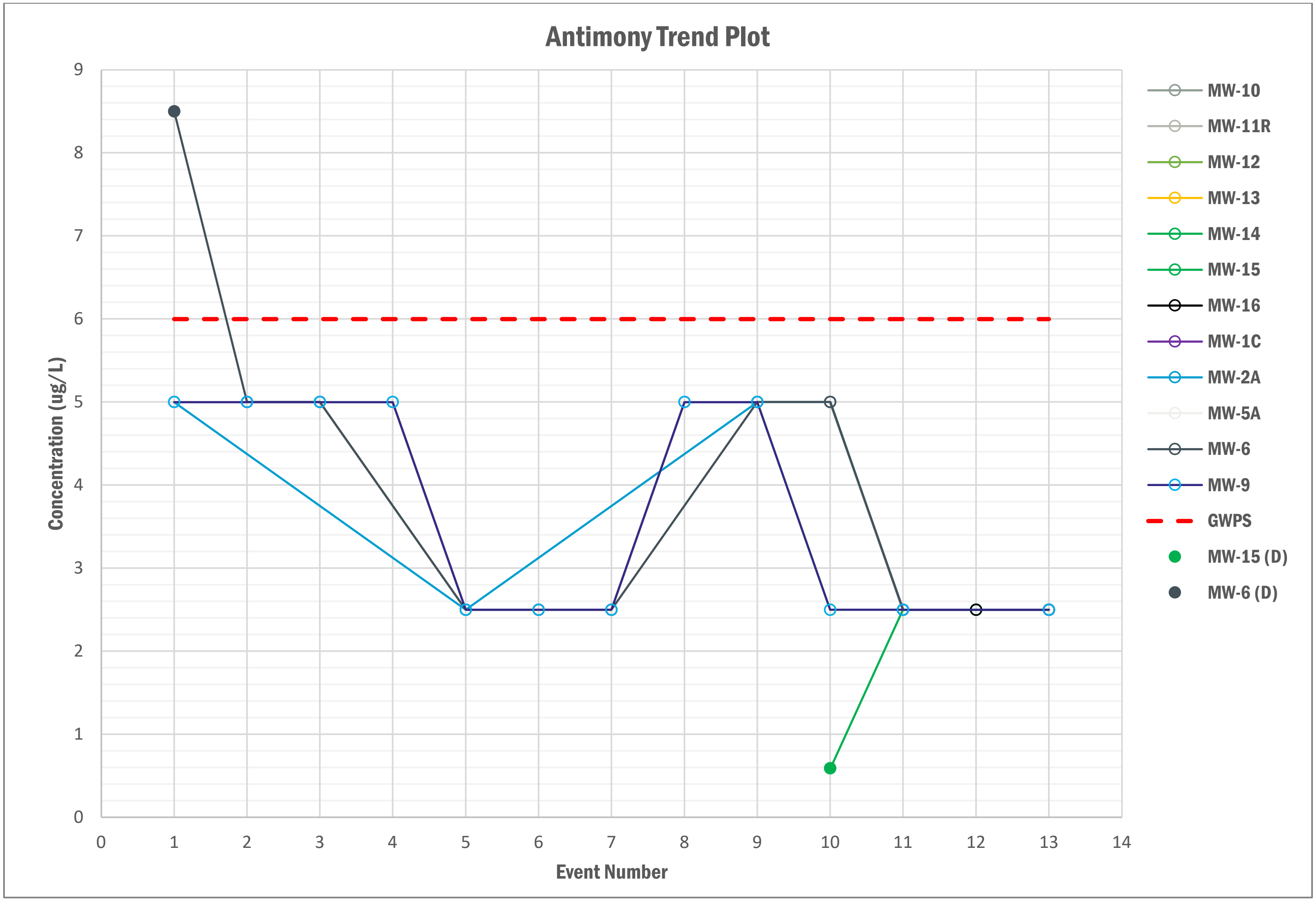
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 80% NDs. Annual per-constituent alpha = 0.2166. Individual comparison alpha = 0.01012 (1 of 2). Comparing 6 points to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Zinc   Analysis Run 9/27/2019 9:20 PM

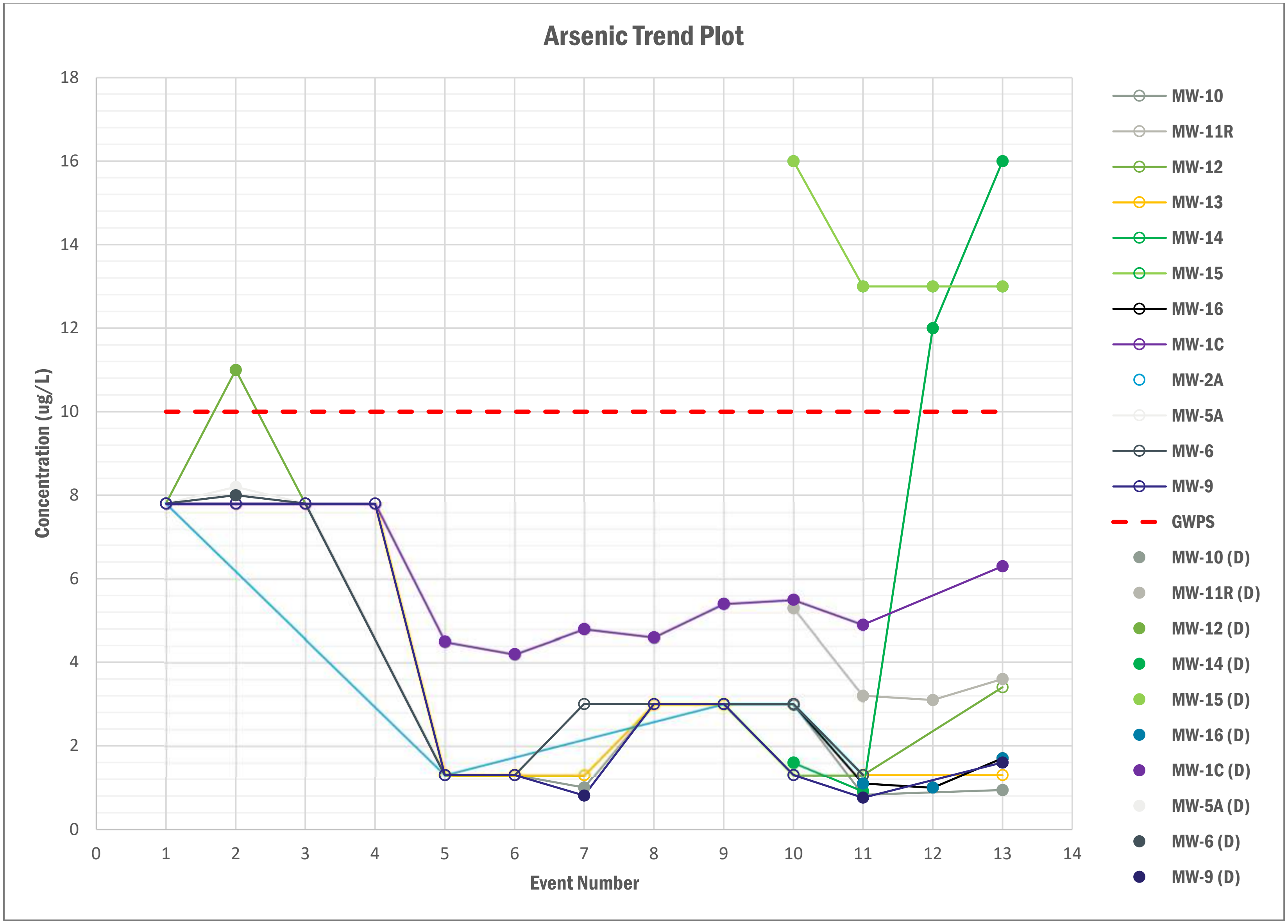
Ordot Closure Facility   Client: GSWA   Data: Ordot

Attachment F: Trend Plots for Interim GWPS Exceedance

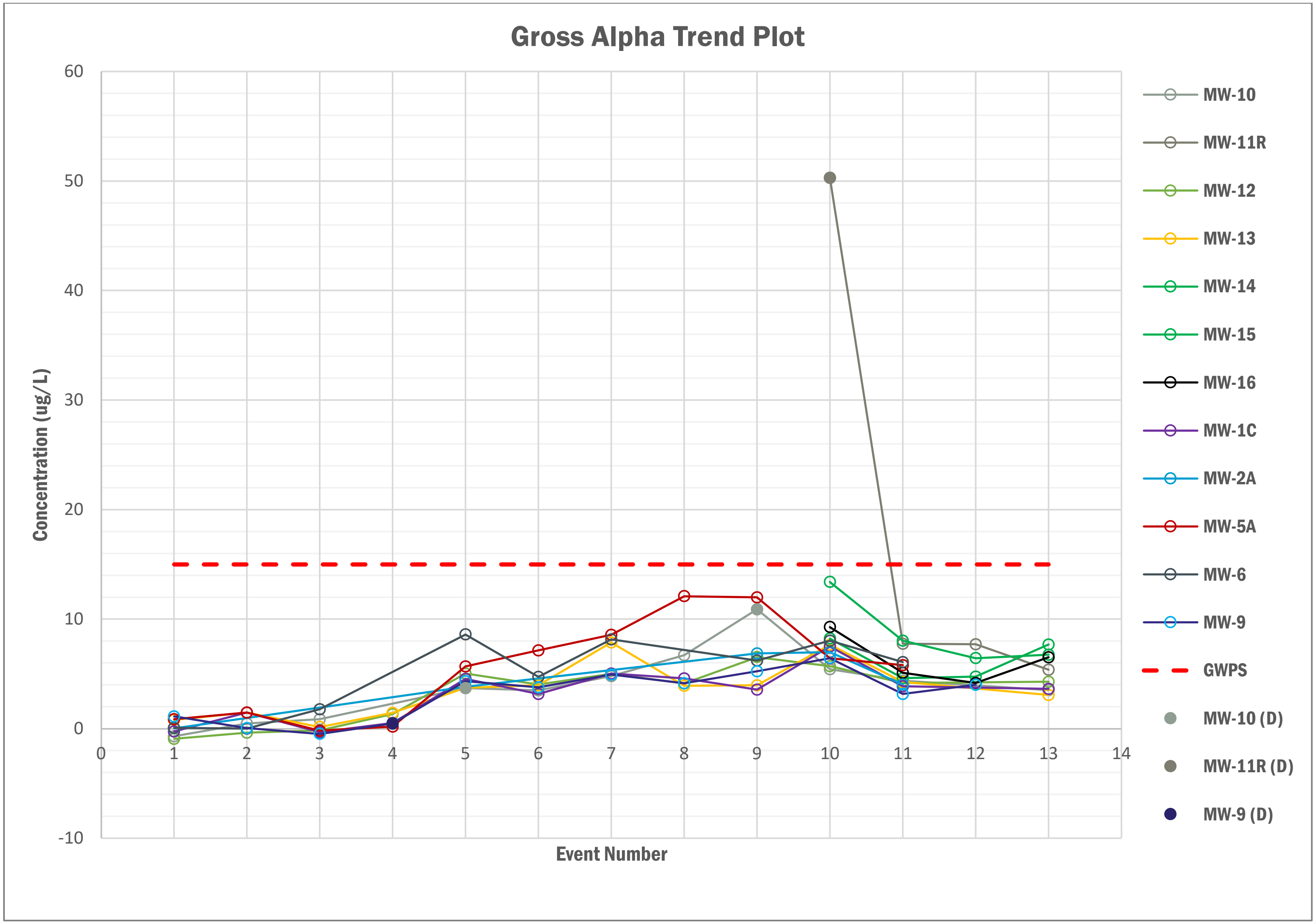
ATTACHMENT F
TREND PLOTS FOR INTERIM GWPS EXCEEDANCE
ORDOT DUMP POST-CLOSURE FACILITY
ORDOT-CHALAN PAGO, GUAM



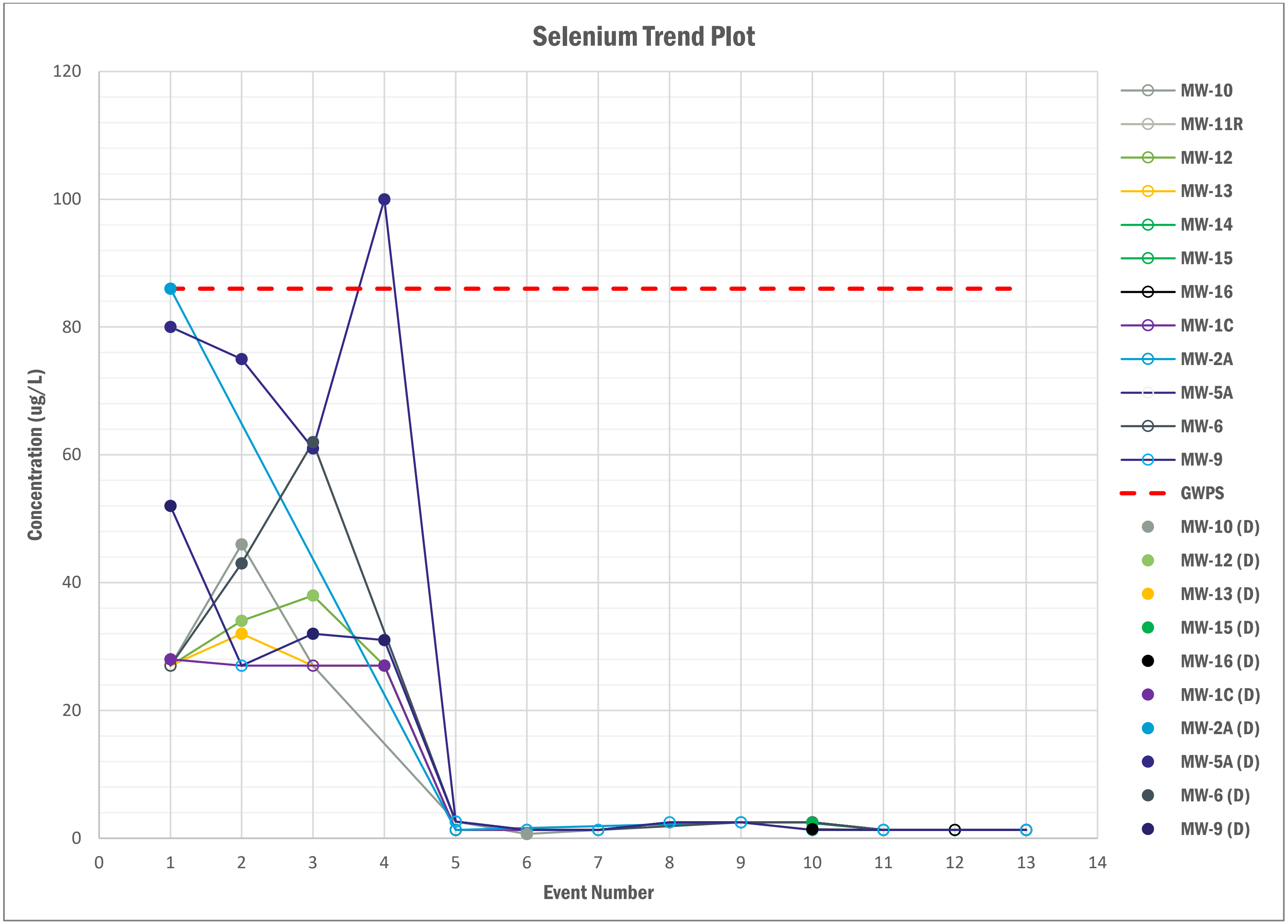
ATTACHMENT F
TREND PLOTS FOR INTERIM GWPS EXCEEDANCE
ORDOT DUMP POST-CLOSURE FACILITY
ORDOT-CHALAN PAGO, GUAM



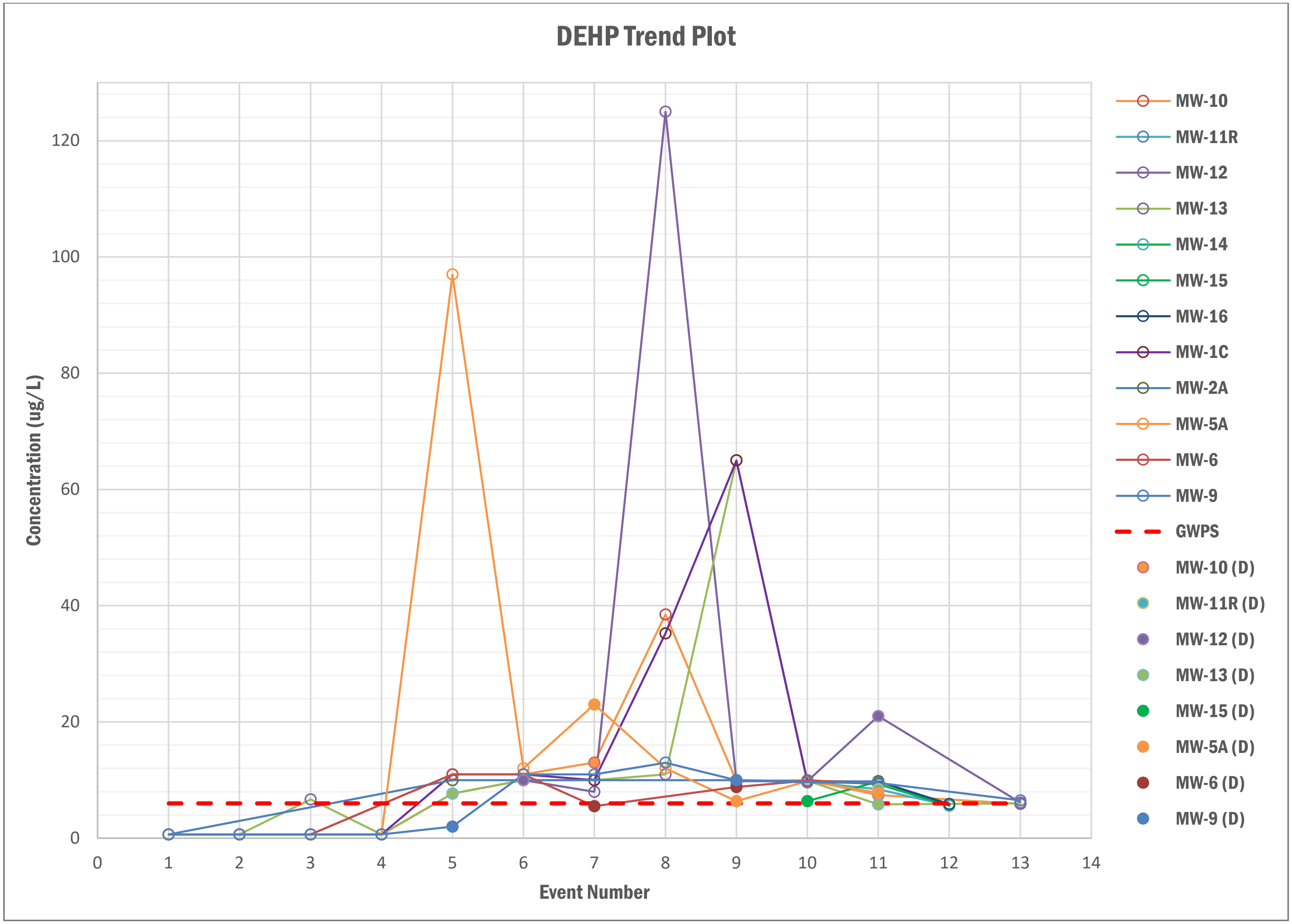
ATTACHMENT F
TREND PLOTS FOR INTERIM GWPS EXCEEDANCE
ORDOT DUMP POST-CLOSURE FACILITY
ORDOT-CHALAN PAGO, GUAM



ATTACHMENT F
TREND PLOTS FOR INTERIM GWPS EXCEEDANCE
ORDOT DUMP POST-CLOSURE FACILITY
ORDOT-CHALAN PAGO, GUAM



ATTACHMENT F
TREND PLOTS FOR INTERIM GWPS EXCEEDANCE
ORDOT DUMP POST-CLOSURE FACILITY
ORDOT-CHALAN PAGO, GUAM



LCRS As-Built Design Capacity Evaluation

Prepared for

Gershman, Brickner & Bratton, Inc.
Receiver for the Guam Solid Waste Authority

October 2021

LCRS As-Built Design Capacity Evaluation

Prepared for
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List of Abbreviations

CNMI	Commonwealth of Mariana Islands
Facility	Ordot Dump Post-Closure Facility
GBB	Gershman, Brickner & Bratton, Inc., Receiver for Guam Solid Waste Authority
gpd	gallons per day
GWA	Guam Waterworks Authority
HDPE	high-density polyethylene
LCRS	Leachate Collection and Removal System
NOW	NOAA Online Weather
PLCT	Perimeter Leachate Collection Trench
USEPA	United States Environmental Protection Agency
WLIT	Western Leachate Interceptor Trench

Executive Summary

This Report presents an evaluation of the total as designed and constructed capacity of the Leachate Collection and Removal System (LCRS) at the Ordot Dump Post-Closure Facility (Facility) compared to actual system performance data collected during major storm events. The United States Environmental Protection Agency (USEPA) requested the analysis in response to three uncontrolled leachate releases between September 2017 and September 2018.

The Facility is an unlined waste disposal facility (or dump) owned by the Government of Guam/Guam Solid Waste Authority and closed in accordance a Consent Decree between the Government of Guam and the United States Environmental Protection Agency (USEPA). Closure of the Facility included an engineered cover system, leachate collection and removal system and landfill gas collection and treatment. Closure construction was certified to be complete on March 1, 2016.

Leachate from the Facility is collected in a perimeter leachate collection trench surrounding the footprint of the cover system and a leachate interceptor trench that collects groundwater/leachate seepage along the western boundary of the Facility. All collected leachate flows from both systems by gravity into a three-tank storage system with a concrete secondary containment. Leachate is pumped from the tanks through a force-main to the Guam Waterworks Authority (GWA) sewer near the Facility entrance on Dero Road. Flow is recorded using a GWA flowmeter in the force-main.

The evaluation demonstrates that the LCRS has the design capacity to manage approximately 210,500 gallons per day of leachate. Leachate flow versus rainfall data were also collected to assess LCRS response after major storms. This analysis resulted in leachate flow predictions for the 1-year, 2-year, 10-year, and 25-year 24-hour storm events. The greatest predicted flow resulting from a 25-year 24-hour storm event was approximately 200,000 gallons per day. The highest recorded flow managed by the LCRS during the study period was approximately 189,000 gallons per day in October 2019 (representing the leachate flow from a greater than (>) 10-year 24-hour storm event).

Three uncontrolled releases of leachate from the LCRS have been reported since operation of the system began. The most recent event occurred in September 2018 following a typhoon. Review of reports on each of the three events revealed causes ranging from a loose pipe fitting to a pipe blockage and a power outage. The releases were not caused by a lack of LCRS design capacity, so system improvements were not recommended. Instead, management and maintenance enhancements were implemented to address the conditions related to the releases and minimize the potential for future releases.

Based on the evaluation, it is concluded the LCRS has sufficient design capacity to manage predicted leachate flows resulting from a 25-year, 24-hour storm. It was also concluded that the management and maintenance enhancements implemented after the three uncontrolled releases should continue and that the releases were not caused by an inadequate overall design capacity of the LCRS.

Section 1

Introduction

Beginning in August 2019, an enhanced leachate monitoring program was implemented to collect additional site-specific data to evaluate the Leachate Collection and Removal System (LCRS) at the Ordot Dump Post-Closure Facility (Facility)[1]. The program initially focused on characterizing the sources, volumes, and quality of leachate flow into the LCRS. The Western Leachate Interceptor Trench (WLIT) was of primary concern as it was believed to be the major contributor to the total LCRS flow. The western and eastern portions of the Perimeter Leachate Collection Trench (PLCT) were of secondary concern. However, initial evaluation of the collected data demonstrated that the eastern portion of the PLCT was a major contributor to the total leachate flow in the LCRS and not the WLIT and that the monitored leachate flows were easily handled by the existing system. Therefore, the focus of the enhanced leachate monitoring program was shifted to supporting an analysis and evaluation of the as-built leachate handling capacity of the LCRS and its ability to handle large storm events based on actual Facility performance data rather than design calculations.

This report presents the results of the evaluation and is based on historic leachate flow data compiled for the Facility and direct measurements of site rainfall, leachate flow, and tank levels taken under the enhanced leachate monitoring program from August to December 2020.

The LCRS was installed as a part of the closure of the Facility and includes the following components:

1. Perimeter Leachate Collection Trench (PLCT);
2. Western Leachate Interceptor Trench (WLIT);
3. Three above-ground leachate storage tanks;
4. Duplex pumping system with controls; and
5. Force-main that discharges into the Guam Waterworks Authority (GWA) sewer through a flow meter near the Facility entrance.

The LCRS has been collecting leachate since January 2015. Daily flow volume discharged to the GWA sewer has been recorded on weekdays since October 2015. Site rainfall data has been collected in 15 minute increments since August 2019. Both the daily discharges to the GWA sewer and site rainfall data are maintained in the Facility record. Daily rainfall data for the period prior to August 2019 was taken at the Guam International Airport.

This LCRS evaluation relied on several available documents related to the Facility including:

- Design Report Ordot Dump Closure Construction by the Brown and Caldwell Project Team dated March 2013;
- Ordot Dump Closure, Leachate and Force Main Design Memorandum by GHD dated May 2013; and
- Record (As-built) Drawings by GHD dated February 2016.

The following sections of this Technical Memorandum present the following:

Section 1 provides an introduction to this report.

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[1] See Post-Closure Care Plan for definition.

Section 2 provides a description of the LCRS as-built design capacity based on the tanks, pumps and force-main installed as a part of closure.

Section 3 provides an overview of the average daily leachate flows by month and highest daily flows managed by the LCRS since operation began in 2015. It also presents an analysis of the site-specific rainfall and leachate flow data taken since August 2019.

Section 4 summarizes three “overflow/release” events reported in 2017 and 2018, including likely causes, and the subsequent modifications made to the LCRS and its operating procedures to eliminate or minimize the potential for future releases.

Section 5 presents conclusions and recommendations.

Appendix A briefly discusses the overall Enhanced Leachate Monitoring Program, August 2019 to December 2020 (including other monitoring activities not used to evaluate the LCRS as-built design capacity) and presents an outline of the monitoring program plan and summary data tables of the collected data. Appendix A also includes the results of analytical tests performed on samples taken at three locations in the LCRS.

Section 2

LCRS Design/Installed Capacity

2.1 LCRS Description

Leachate is collected in the PLCT that encircles the entire closed Ordot Dump. A separate collection trench was installed along a portion of the western perimeter to manage groundwater/leachate seepage observed at a lower elevation. This separate system is referred to as the WLIT and consists of a perforated pipe placed in a trench enveloped by gravel and a geo-composite (drainage net between two layers of filter fabric). The WLIT is nearly 1,500 feet in length. Approximately 300 feet of the WLIT at its northern end has a perforated collection pipe installed at the former location of the Western Surface Drainage Channel (the closure design required the relocation of the Channel to the west of its original alignment). The locations of the Channel relocation, PLCT and the WLIT are shown on Figure 2-1 as well as other key components of the overall LCRS.

Both the PLCT and the WLIT flow by gravity into a three-tank storage system through an above-ground horizontal 12-inch diameter pipe which splits the flow into three inlets, one per tank and overflow lines between the tanks. Each tank is a glass-fused, bolted steel tank with a volume of approximately 19,000 gallons (each). All three tanks are inside a concrete secondary containment vault, approximately 31-feet by 87-feet. The height of the concrete perimeter wall which provides secondary containment vault was increased by 16-inches in late 2017 in response to an overflow in October 2017 (see Section 5). The secondary containment volume after the increase to the wall height is approximately 29,500 gallons. Figure 2-2 provides the record drawing plan view of the storage tanks. Figure 2-3 provides the record drawing sectional views of the storage tanks. The record drawings were prepared prior to the increase in the height of the secondary containment wall so this addition is not reflected on Figures 2-2 and 2-3.

Leachate is pumped from the tanks via a four-inch diameter force-main, through a flow meter owned by the GWA near the Facility entrance (see Figure 2-1), to a manhole of the GWA gravity sewer in Dero Road. Daily flow is recorded manually by reading the flow totalizer during week-day operations.

The duplex pumps were each sized to convey 80 gallons per minute (115,200 gpd) with one pump operating. With both pumps running, the combined pumping capacity is approximately 100 gpm (144,000 gpd) based on the pump performance curves. The pumps have been observed to pump (when operating together) more than 100 gpm. Operation of the pumps is controlled by adjustable liquid level transducers in the tank closest to the pumps (Tank 1, see Figure 2-2). The pumps function in a lead-lag operation with the lead pump alternating between pumping cycles. A supervisory control and data acquisition (SCADA) system was added in 2018 and is used to adjust pump controls and track tank liquid levels and pump on/off cycles.

A second flow meter is located in the force-main approximately 20-feet from the pumps. This flow meter is used to view instantaneous pumping rates for Facility operations. Neither this flow meter or the GWA flow meter are interfaced with the SCADA system.

A dedicated back-up generator located near the Facility entrance (see Figure 2-1) is available for periods of power loss. The generator automatically starts during a power outage.

2.2 System Capacity

The original liquid level transducer was set such that the tanks would be approximately two-thirds full before pump operation was initiated leaving only about 16,500 gallons of total available storage capacity (all three tanks combined) before the tanks would overflow. The pump control levels were adjusted lower in November 2018 (see Section 5) to increase available active storage volume to 37,000 gallons, allow automatic lag pump operation and allow pump operation 24 hours per day. With the combined rated pumping capacity of 100 gpm, the available active storage volume of 37,000 gallons and the secondary containment storage volume of 29,500 gallons, the system capacity is 210,500 gpd as summarized on Table 2-1. Pumping rates higher than the combined rated capacity of the pumps (100 gpm) have been observed on occasion. However, the rated pumping capacity is used to be conservative.

Table 2-1. LCRS Capacity

Pumping Rate	System Capacity – No Storage	Maximum Tank Storage Capacity	Secondary Containment Storage Capacity	System Capacity at Maximum Storage
100 gpm	144,000 gpd	37,000 gal	29,500 gal	210,500 gpd

The LCRS capacity is augmented, as needed, by employing contract on-call tanker trucks (available 24 hours per day, 7 days per week) to deliver leachate from the tanks to a point (Forcemain Riser Pipe, see Figure 2-1) in the force-main near the Facility entrance.

Section 3

LCRS Flows

3.1 Average Monthly Flows – 2015 to 2021

The LCRS has been collecting leachate since January 2015. Daily flow volume pumped from the storage tanks and discharged to the GWA sewer has been recorded on weekdays since October 2015. The daily average outflow (gpd) recorded for each month since October 2015 is listed on Table 3-1.

Table 3-1. Daily Average Flow by Month[1] (gpd)

Month	2015	2016	2017	2018	2019	2020	2021
January	-	20,229	16,109	27,483	47,265	57,018	66,227
February	-	18,271	16,574	28,027	40,770	64,124	54,817
March	-	9,398	15,070	28,376	43,881	56,171	65,125
April	-	2,698	15,037	33,819	42,757	55,569	64,609
May	-	14,917	14,273	33,116	40,527	59,554	65,409
June	-	9,717	13,949	34,642	39,413	65,037	65,887
July	-	11,533	15,403	59,606	42,457	66,117	73,013
August	-	19,990	17,030	76,883	79,105	79,340	95,126
September	-	25,514	26,621	87,022	104,512	93,524	-
October	37,535	44,365	53,977	83,593	104,598	114,887	-
November	38,244	47,934	37,442	58,813	67,942[2]	100,403	-
December	27,672	27,414	32,727	50,737	74,790	98,166	-
Annual Rainfall[3] (inches)	115.75[4]	93.94	97.17	107.69	91.92	89.21	54.03[5]

Notes:

1. *Daily average flow from GWA flow meter at Facility entrance.*
2. *November 2019 daily average flow includes the November 27, 2019 storm event (8.53-inches).*
3. *Annual rainfall data compiled from NOAA Online Weather (NOW) Data recorded at Guam International Airport.*
4. *Rainfall reported for the entire year (2015).*
5. *Rainfall reported for January through August (2021).*

The highest daily average flows have been recorded in the months of July through November which correspond with the historically wettest months of the year. A plot of daily average flow and monthly rainfall recorded at Guam International Airport is shown on Figure 3-1.

3.2 Highest Daily Flows – 2015 to 2021

Manual weekday recording of the quantity of leachate pumped from the storage tanks and discharged to the GWA sewer began in October 2015 as discussed above. Since that time, there have been only eight occasions when the recorded total daily flow volume was greater than the nominal combined capacity of the pumps (144,000 gpd at 100 gpm) thus requiring temporary utilization of some of the 66,500 gallon storage volume capacity built into the LCRS (37,000 gallon tank storage + 29,500 gallon secondary containment storage). The total daily flows for these eight events are listed on Table 3-2.

Table 3-2. Days with Flow >100 gpm

Date	Daily Flow (gpd) – Sorted High to Low
10/9/2019	188,991
9/16/2019	178,993
9/26/2018	169,772
11/27/2019	158,832
9/18/2020	151,700
10/12/2020	146,856
8/22/2018	146,207
8/11/2019	145,106

Recorded flows that exceeded the capacity of the pumps occurred only 0.4-percent of the time during the more than five years the LCRS has been in operation. In other words, the pumps alone are capable of handling more than 99-percent of the flows without the need to rely on the 66,500 gpd of the available system tank/secondary containment storage.

3.3 Leachate Flows vs. Rainfall

As discussed in Section 1, beginning in August 2019 an enhanced leachate monitoring program was implemented to collect additional site-specific data to evaluate the sources and volumes of leachate flow into the LCRS. Initial evaluation of the collected data demonstrated that the data could be used to validate the design/installed LCRS capacity using site specific rainfall and measured leachate flows.

Leachate flows versus rainfall were evaluated for all significant storm events at the Facility since August 2019. According to the Commonwealth of Mariana Islands (CNMI) and Guam Stormwater Management Manual (October 2006), a 1.5-inch rainfall is equal to or greater than 90-percent of the precipitation events on Guam. In order to capture additional data for this current evaluation, the 1-inch and greater rainfall event was selected as the basis for evaluating the LCRS capacity to handle high rainfall events.

Leachate flow monitoring data (see Appendix A) shows an increased flow volume on the day following a storm. Therefore, the leachate flow volume used for this evaluation was determined using flow meter readings at the discharge to the GWA sewer over the approximate 24-hour period following a storm event. Rainfall data was taken from a weather station at the Facility. A summary of 24-hour rain events 1-inch or greater and the recorded leachate flow the day after for the period of August 1, 2019 through August 30, 2021 (total of 47 events) is provided on Table 3-3 sorted from low to high for the 24-hour rainfall totals.

Table 3-3. Leachate Flow Following Rainfall Event > 1-inch

Date	24-hr Rainfall (inches) Sorted Low to High	Recorded Flow Day After Rainfall (gpd)
7/25/2021	1.01	82,252
8/18/2021	1.02	103,664
8/17/2019	1.03	84,438
4/5/2020	1.08	56,699
11/28/2019	1.1	88,416
7/20/2021	1.12	76,374
6/8/2020	1.15	73,045
3/9/2021	1.16	57,510
12/9/2020	1.17	110,614
11/26/2019	1.18	71,856
5/30/2020	1.19	75,756
8/16/2020	1.23	84,661
11/8/2019	1.29	67,238
2/2/2020	1.33	86,421
10/9/2020	1.35	121,123
8/29/2020	1.39	98,387
8/12/2020	1.4	96,437
10/6/2020	1.41	107,802
10/26/2020	1.45	143,005
11/5/2020	1.46	129,849
8/24/2019	1.5	82,988
5/11/2020	1.52	77,576
5/15/2021	1.57	71,300
10/2/2019	1.62	124,627
8/3/2021	1.64	119,854
8/28/2020	1.66	129,239
8/26/2021	1.67	105,783
8/2/2021	1.69	113,288
11/28/2020	1.74	99,828
9/14/2020	1.83	105,221
8/22/2021	1.91	94,285
10/7/2019	1.99	114,573
6/22/2021	2.08	99,500
1/21/2021	2.08	96,506
9/21/2020	2.13	122,602
5/31/2020	2.17	75,756
8/5/2019	2.26	116,810

Table 3-3. Leachate Flow Following Rainfall Event > 1-inch

Date	24-hr Rainfall (inches) Sorted Low to High	Recorded Flow Day After Rainfall (gpd)
9/26/2019	2.28	125,437
8/26/2019	2.3	99,157
8/24/2021	2.45	113,049
8/6/2019	2.49	108,715
10/11/2020	2.77	146,856
9/17/2020	2.9	151,700
8/4/2019	3.54	122,722
8/27/2020	4.65	115,188
9/15/2019	5.02	178,993
11/27/2019	8.53	158,863

The two highest rainfall events (shaded on Table 3-3) exceeded 5 inches in a 24-hour period and are further evaluated as described below.

November 27, 2019 Storm. The largest 24-hour storm (8.53-inches) during the enhanced leachate monitoring period occurred on this date generating a day-after leachate flow of 158,832 gpd. This event was preceded by 1.18-inches of rain on November 26 and followed by 1.1-inches of rain on November 28. A plot of rainfall (15-minute intervals) versus the liquid level in the leachate storage tanks is shown on Figure 3-2 for the period of November 26 to November 29. During the storm the liquid level in the storage tanks reached a maximum depth of 55.4-inches (tank overflow level is 58-inches) on November 27. The data for this storm event shows the LCRS handled a large storm (almost a 10-year, 24-hour storm as discussed in Section 3.3 below) without using any of the 29,500 gallon secondary containment storage volume.

September 15, 2019 Storm. On this date, 5.02-inches of rain was recorded generating a day-after leachate flow of 178,993 gpd. No rain was recorded on September 14 and 0.19-inches of rain was recorded on September 16. A plot of rainfall (15-minute intervals) versus the liquid level (see Figure 3-3) in the tanks shows a period of heavy rainfall in the morning hours resulting in a maximum liquid level of 55.2-inches in the tanks (tank overflow level is 58-inches). The data show the LCRS managed high flow conditions (178,993 gpd) without using any of the 29,500 gallon secondary containment storage volume. Note: Although the total 24-hour rainfall was less than the November 27 storm, the total volume of leachate measured the following day was greater than the November 27 total volume of leachate making this one of the highest flows in the monitoring period.

The data in Table 3-3 illustrates the as-built design capacity of the LCRS to manage significant rainfall events, high intensity rainfall and the resulting leachate flows without the use of any of the secondary containment storage.

Although a 1.35-inch rainfall on October 8, 2019 exceeded one-inch inclusion criterion, it was not included on Table 3-3 because the 188,991 gpd outflow on the day-after was a significant anomaly when plotted with other rainfall and flow data, and therefore was excluded from further analysis. The raw outflow meter readings and rainfall records were checked for number transpositions and consistency with preceding and following data and were found to be reasonable. The anomaly cannot be fully explained, however possible contributors to the anomalously high daily outflow total without corresponding high rainfall include: (1) an unquantified volume of rainwater was pumped from the secondary containment into the tanks adding to the total and (2) a decline in the tank liquid inventory of about 29,800 gallons between October 8 and October 9 also adding to the total.

3.4 An Estimation of Leachate Flow Corresponding to Storm Event Recurrence Intervals

Estimates of the leachate flows corresponding to the 24-hour storm event recurrence intervals published for Guam can be made by plotting the measured leachate flow verses the Facility measured 24-hour rainfall values on Table 3-3. The resulting plot is presented on Figure 3-4. A logarithmic trendline was fitted to the data because the leachate flow data is most likely log-normally distributed (as are many environmental measurements that range from zero to very large values). Table 3-4 summarizes the projected output flow results for the 1-year, 2-year, 10-year, and 25-year 24-hour storm events.

Table 3-4. Estimated Total Daily Flow Based on Rainfall

Storm Event	Rainfall[1] (inches)	Projected Flow (gpd)
1-year, 24-hour storm	3.2	128,853
2-year, 24-hour storm	6.3	156,641
10-year, 24-hour storm	9.0	171,273
25-year, 24-hour storm	18.0	199,707

Note:

1. *24-hour rainfall events were taken from the CNMI and Guam Stormwater Management Manual dated October 2006.*

Figure 3-4 and Table 3-4 demonstrate the LCRS is capable of managing leachate flows resulting from large storm events. As discussed above, the LCRS managed leachate flow following an 8.53-inch storm on November 27, 2019. This storm was nearly equivalent to a 10-year, 24-hour storm.

Figure 3-4 and Table 3-4 also show the LCRS has the projected capacity to manage flow resulting from the 25-year, 24-hour storm given the maximum LCRS leachate flow capacity shown in Table 2-1 is 210,500 gpd.

Section 4

Reported Leachate Releases

Three releases of leachate from the LCRS have been reported since operations began in 2015. An overview of each event is provided below including likely cause and structural and operational changes taken to minimize future releases.

Event #1: September 13, 2017

On September 13, 2017, a break in the 4-inch high-density polyethylene (HDPE) force-main was reported adjacent to the storage tank containment vault near the pump control panel (see Figures 2-2 and 2-3). The reason for the pipe break is not known. The pipe was repaired and has functioned without any additional problems since then. The amount of release could not be estimated. No spill, release, or incident report can be found in the Facility records.

The release was not caused by any lack of the LCRS as-built design capacity. No other corrective measures were taken.

Event #2: October 18, 2017

On October 18, 2017, during a period of heavy rainfall, the Facility operator noted at 8:55 a.m. local time that leachate was overflowing the top of the secondary containment (which surrounds the leachate storage tanks and pumps) and onto the ground adjacent to the secondary containment wall. An estimated 4,300 gallons overflowed until pumper trucks stopped the overflow by lowering the leachate level in the secondary containment area below the top of the wall. After control was established, an additional 3,000 gallons was released into Pond 3 through the valved secondary containment drain.

Pond 3 has a low flow discharge pipe that remains open at all times and outflows to a level spreader as a ground surface discharge. The ground surface in this area eventually slopes to wetlands adjacent to the Lonfit River.

An incident report dated October 23, 2017 provides a detailed description of events and responses related to the release.

The cause of the overflow was a power outage that interrupted power to the pumps. The fuel in the standby generator had been consumed and would not restart due to a low fuel level alarm preventing pump operation. It was also discovered that one of the pumps was in the “off” position which limited the throughput of the system.

The overflow/release was not caused by any lack of the LCRS as-built design capacity. Corrective measures are summarized below.

Event #3: September 11, 2018

On September 10, 2018, the island of Guam experienced Typhoon Mangkhut which resulted in 9.4-inches of rain recorded at the Guam International Airport. At approximately 2:30 am on September 11, 2018, the SCADA system controlling the operation of the pumps indicated flow into the tanks had stopped. It was later determined a blockage in the pipe carrying the combined leachate flows from the PLCT and WLIT entering the leachate storage tanks resulted in a backup in the pipe and an overflow at the WLIT riser (see Figures 2-1, 2-2, and 2-3). The mechanically-secured cap of the riser was found to have been unsecured allowing flow onto the ground. It was estimated that 40,000 to 50,000 gallons may have been released. The ground surface at the WLIT riser pipe slopes eastward towards the storage tanks and then further east to Pond 3.

An incident report dated September 11, 2018 provides a detailed description of events and responses related to the release.

The overflow/release was not caused by any lack the LCRS as-built design capacity. Corrective measures are summarized below.

Several response actions were implemented to address conditions related to the three releases. A summary of the actions and the desired outcomes is provided below.

1. Enhancement to LCRS SCADA. The original pump operations did not provide for automatic operation of two pumps at the same time. Also, the liquid levels governing pump operations resulted in high liquid volumes in the tanks before pump operation would commence so the system had little buffer storage.

   In response, the SCADA system was modified to allow both pumps to run at the same time during high flow periods. The pump-on levels in the tanks were changed to maintain lower liquid levels in the tanks which results in buffer storage capacity during high flow periods (see Section 2.2).

   Additionally, the SCADA system allows for remote monitoring using a computer or mobile device so real-time alarm notifications are provided.

2. Augmented routine Facility inspections. The routine inspection program was augmented to specifically record and assess conditions related to the operation of the LCRS. Each daily visit now includes checking the fuel level at the emergency generator and the addition of fuel as may be needed. The cap on the WLIT riser is routinely checked to make sure it is secure. Monthly maintenance and an operational check is conducted on the emergency generator.

3. An on-call contract has been established for regular flushing and cleaning the of the force-main between the pumps and the GWA flow meter near the Facility entrance. The force-main is a small diameter pipe (4-inches) and remains full of liquid between pumping cycles allowing time for possible sediment accumulation. It is also critical to removing liquid from the tanks. Accordingly, the force-main is cleaned and flushed based on observed pumping rates. When the pumping rate for a single pump is 65 gpm or less, the force-main is flushed. This allows the pumps to maintain their highest efficiency and pumping rates. The Facility operator also checks pumping rates prior to major storm events (i.e. typhoons) and conducts pipe cleaning as needed.

   The PLCT (12-inch diameter) operates by gravity flow so it only contains liquid when leachate is flowing. Thus, the PLCT requires less maintenance than the force-main. Every six months the PLCT manholes are opened for inspection. If excessive sediment is found to have accumulated, it is removed by pumper truck.

   The WLIT (12-inch diameter) also performs by gravity and is used to collect seepage in the ground. It is enveloped by gravel and a geocomposite drainage layer (covered with a geotextile filter fabric) so the leachate should not contain sediment. The WLIT does not have manholes that would allow access to the pipe.

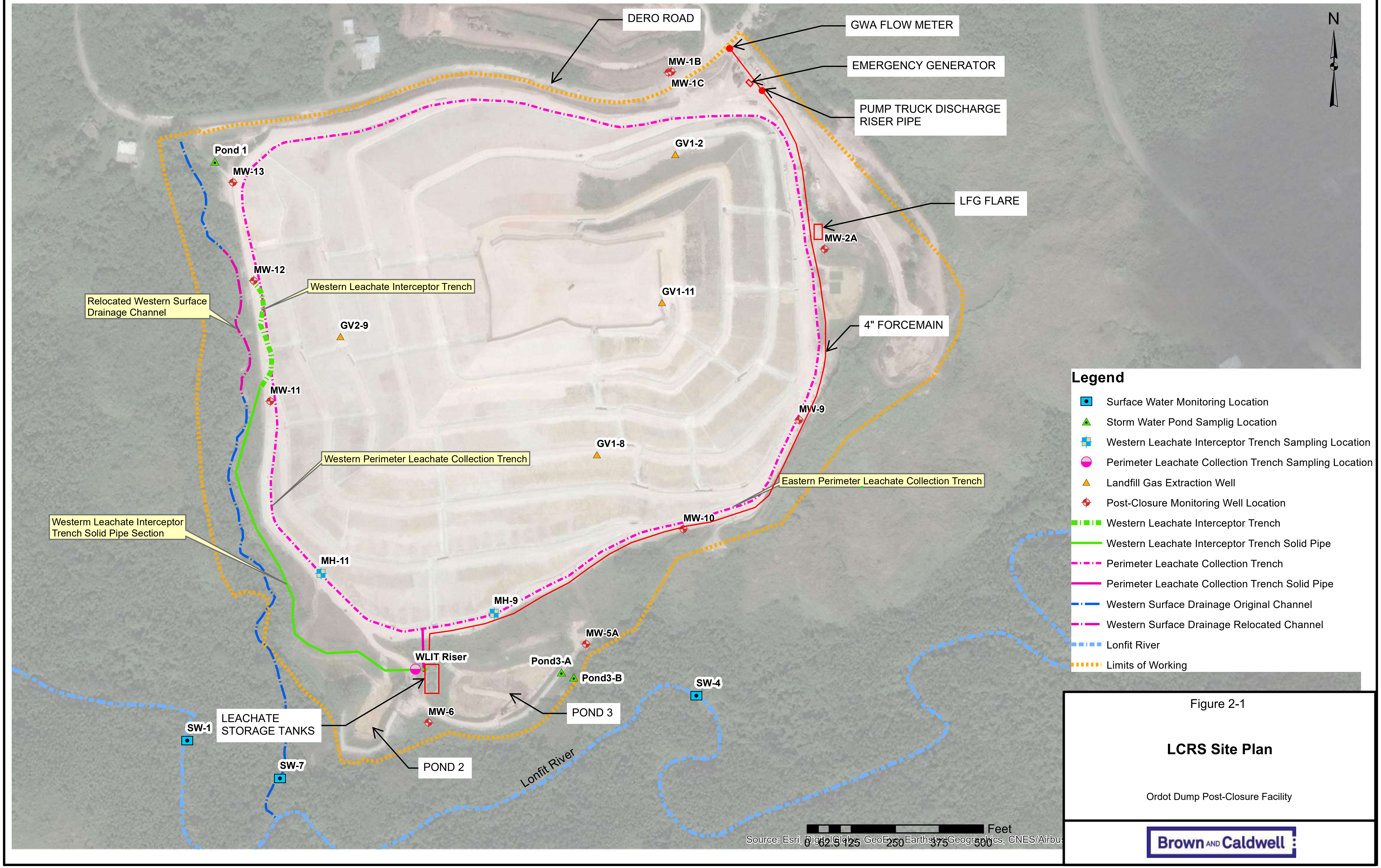
4. Pre-storm preparation planning. Pre-storm planning is now an integral part of routine Facility operations. This preparation is triggered by typhoon forecasts. Prior to storms the liquid level in the tanks is reduced to provide maximum system buffer storage volume. As noted above, the force-main between the pumps and the GWA flow meter is flushed as necessary. The fuel level in the emergency generator is confirmed and delivery coordinated as needed. In addition, the on-call tanker pumper-truck service is alerted that support may be needed.

Section 5

Conclusions and Recommendations

1. Based on the as-built pumps, tank storage volume, and secondary containment storage, the LCRS has the capacity to manage flows up to 210,500 gpd (see Table 2-1).
2. Since the LCRS began operating in 2015, it has the recorded capacity to handle a maximum flow of 188,991 gpd without release to the environment (see Table 3-2). This flow exceeded the estimated flow resulting from a 10-year, 24-hour storm (171,273 gpd, Table 3-4).
3. Recorded leachate flows since 2015 have exceeded the combined capacity of the pumps on only on eight occasions, thus relying on utilization of storage capacity of the tanks and secondary containment. In other words, the pumps are capable of handling more than 99-percent of the flows without relying on any system storage (see Table 3-2).
4. The LCRS has the capacity to manage the estimated 171,273 gpd leachate flow associated with the 10-year, 24-hour storm of 9 inches based on the measured 158,863 gpd leachate flow associated with the 8.53 inch storm event that occurred at the end of November 2019 (see Table 3-3 and Table 3-4). The LCRS is also predicted to be able to handle the estimated 199,707 gpd leachate flow associated with the 25-year, 24-hour storm of 18 inches (see Table 3-4 and Figure 3-4).
5. The three overflows/releases that occurred in 2017 and 2018 discussed in Section 4 were not caused by any lack of the LCRS as-built design capacity.
6. The conditions that contributed to the three releases at the Facility have been addressed (see Section 4). Current pump operation optimizes storage capacity. In addition, operations procedures have been implemented regarding system checks, pre-storm preparations, maintenance of the force-main and maintenance of the emergency generator.
7. The LCRS capacity is further augmented through the use of an on-call contract with a local tanker pumper-truck service (available 24 hours per day, 7 days per week). The pumper trucks are employed as needed to pump liquid from the tanks and discharge it into the force-main through a riser pipe adjacent to the GWA flow meter near the Facility entrance.
8. If necessary, the LCRS capacity may be further augmented through the use of portable tanks during periods of high flows. Such tanks could be deployed adjacent to the existing storage tanks or near the Facility entrance. Ample space is available at either location.
9. Continuation of the management and maintenance procedures implemented in response to the three releases is recommended and is included in the Facility operations plan.
10. It is recommended that future Facility operators continue to record site rainfall events and weekday outflows to the GWA sewer. For rainfall events greater than or equal to 3-inches in a day, the rainfall and day-after discharge to the GWA sewer should be added to Figure 3-4 to further characterize the leachate volume versus rainfall relationship. This information should be used to assess and identify potential adjustments to LCRS operating procedures or additional corrective measures as needed.

Figures



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

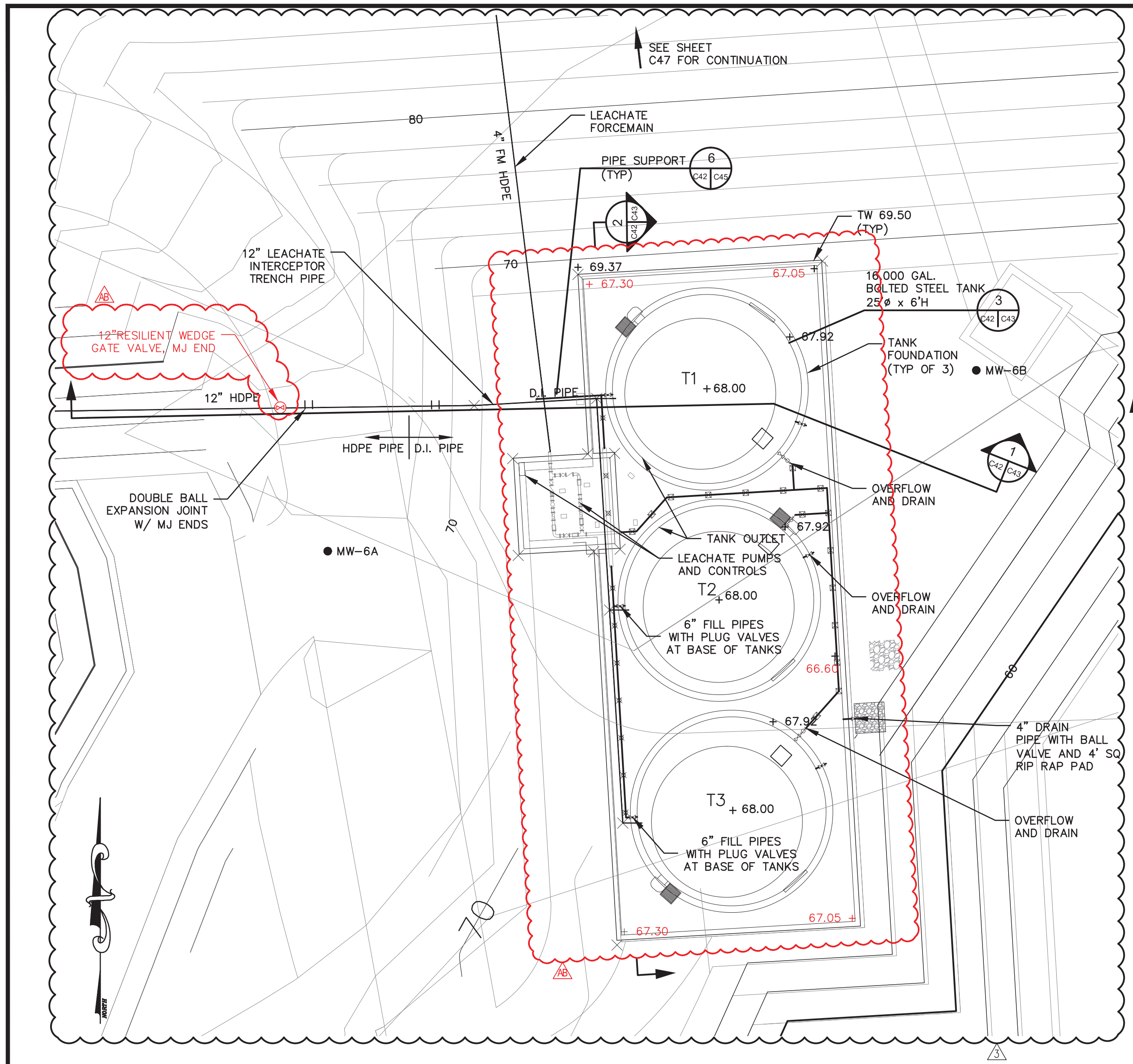
Figure 2-1

LCRS Site Plan

Ordot Dump Post-Closure Facility

Brown AND Caldwell

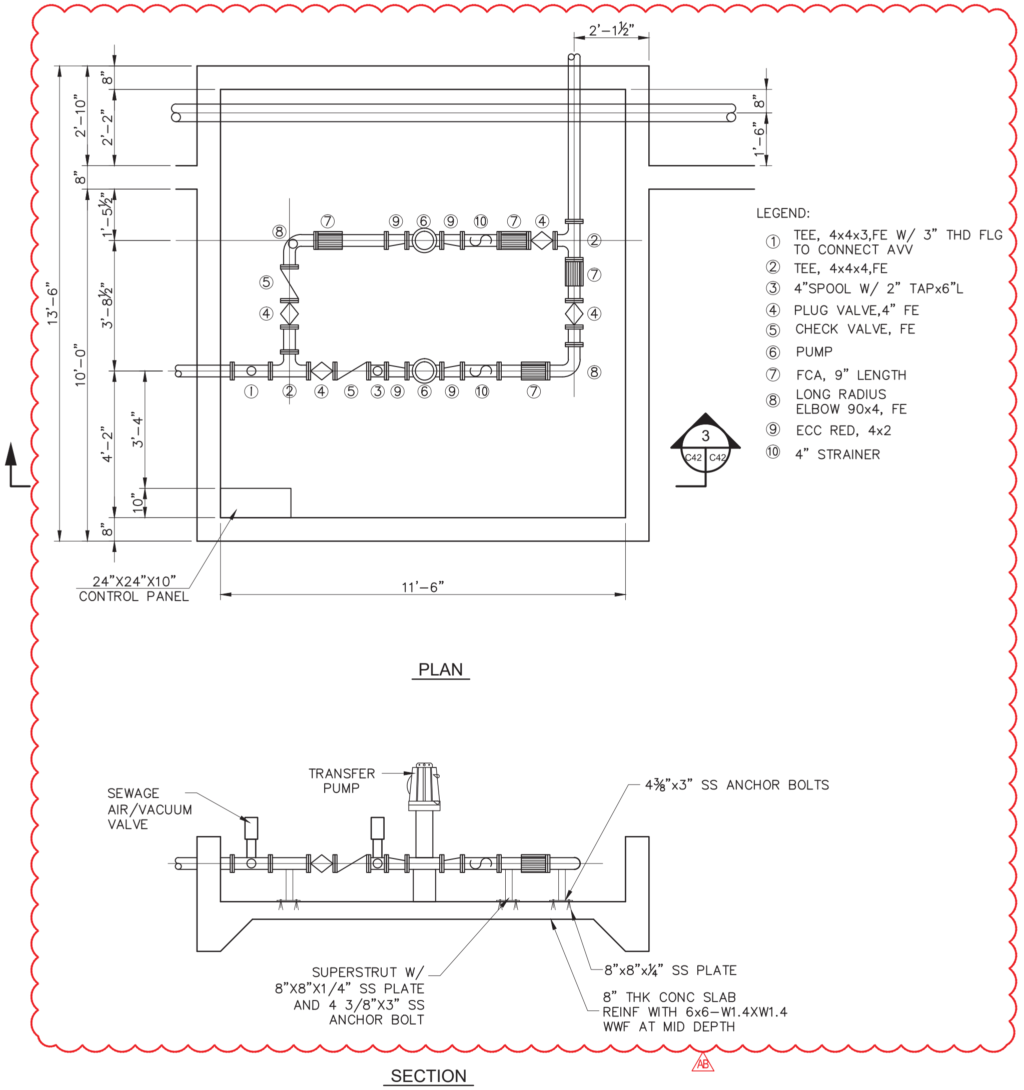
FIGURE 2-2 - STORAGE TANK AS-BUILT - PLAN VIEW



LEACHATE STORAGE SYSTEM

PLAN 1 C32 C42

1"=10"



SECTION

LEACHATE TRANSFER PUMP

DETAIL 3 C42 C42

1"=5"

LEGEND

345	*EXISTING 10 FT CONTOUR*
	EXISTING 2 FT CONTOUR
345	*NEW 10 FT CONTOUR*
	NEW 2 FT CONTOUR
	PROPERTY LINES
	CULTURAL AND HISTORICAL BOUNDARY(7)
	LIMITS OF WORK(5)
	PROPOSED ROADS/BENCH
	EXISTING UNPAVED ROADS
	EXISTING PAVED ROADS
▭	*EXISTING BUILDING/STRUCTURE*
x x	*PROPOSED FENCE*
	WETLANDS AREA
● MW-6B	*GROUNDWATER MONITORING WELL*
LFGMW-6	*LANDFILL GAS MONITORING WELL*
⊕ LFGW-3	*LANDFILL GAS WELL*
	CHANNEL SET BACK
	DERO ROAD EASEMENT
	LIMITS OF WASTE

NOTES:

1. *EXISTING TOPOGRAPHY BASED ON GROUND SURVEY PERFORMED BY PRUDENCIO R. BALAGTAS & ASSOC., INC. IN AUGUST, 2012.*
2. *TOPOGRAPHICAL INFORMATION MAY DEVIATE FROM THAT SHOWN ON THESE DRAWINGS. ALL COORDINATES AND ELEVATIONS ARE TO BE VERIFIED BY THE CONTRACTOR IN THE FIELD. DIGITAL FILES WILL BE AVAILABLE TO CONTRACTOR PRIOR TO CONSTRUCTION.*
3. *THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROCURING ALL SURVEYING SERVICES AS MAY BE REQUIRED FOR CONSTRUCTION. ALL CONSTRUCTION SURVEYING SERVICES SHALL BE PROVIDED BY A LAND SURVEYOR OR A REGISTERED CIVIL ENGINEER LICENSED IN GUAM TO PRACTICE LAND SURVEYING.*
4. *THE LEACHATE STORAGE TANKS SHALL BE A PRE-ENGINEERED SYSTEM CONFORMING TO SPECIFICATION SECTION 13211.*
5. *LOCATIONS OF TANKS, PUMPS, AND CONTROL ARE SHOWN GRAPHICALLY. CONTRACTOR SHALL STAKE AND FIELD ADJUST AS APPROVED BY THE ENGINEER.*
6. *THE LEACHATE TRANSFER PUMPS SHALL BE: MANUFACTURER: GRUNDFOS; MODEL: CRI 15-6, VERTICAL, NON-SELF-PRIMING, MULTISTAGE, IN-LINE, CENTRIFUGAL; OPERATING CONDITIONS: 80 GPM AT 276 FEET TDH; IMP: STAINLESS STEEL; PUMP HOUSING: STAINLESS STEEL; SPEED: 3470 RPM; PIPE CONNECTION SIZE: 2"; VOLTAGE: 480 V; HZ: 60; PHASE: 3; HP: 10.*
7. *THREE (3) FLOAT BACKUP FOR PUMP ON, PUMP OFF, HIGH LEVEL ALARM. ALTERNATE PUMP OPERATION.*

GHD

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REVISION			
No.	BY	DATE	DESCRIPTION
3	AS	03/20/14	REVISED LAYOUT
AB	JGV	02/12/16	LEACHATE STORAGE SYSTEM PLAN

GUAM

DESIGN: AS	DATE:
CHECKED: PB	SCALE: AS SHOWN
RECOMMENDED: PB	DRAWN: TB
APPROVED: AS	

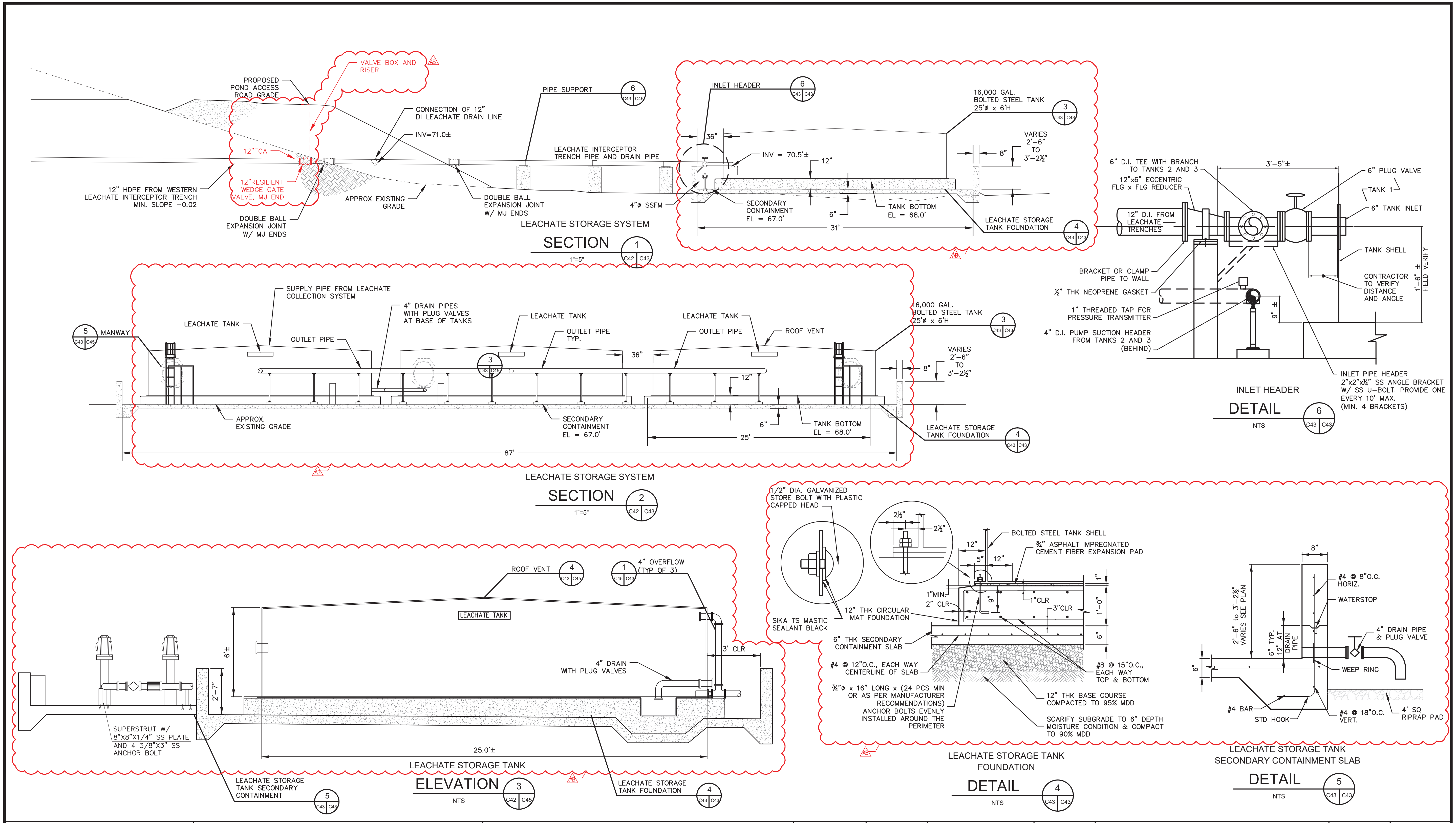
TERRITORY	PROJECT NAME	DWG. NO.	SHEET
GUAM	ORDOT DUMP CLOSURE CONSTRUCTION AND DERO ROAD SEWER IMPROVEMENTS LEACHATE STORAGE SYSTEM PLAN	C42	49 OF 111

PROJECT NO. – GSWA-002-13

CAD FILE: 04385-ODC-C42-45.dwg

AS-BUILT

FIGURE 2-3 - STORAGE TANK AS-BUILT - SECTIONS



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REVISION

No.	BY	DATE	DESCRIPTION
AB	JGV	02/12/16	LEACHATE STORAGE SYSTEM SECTIONS

GUAM

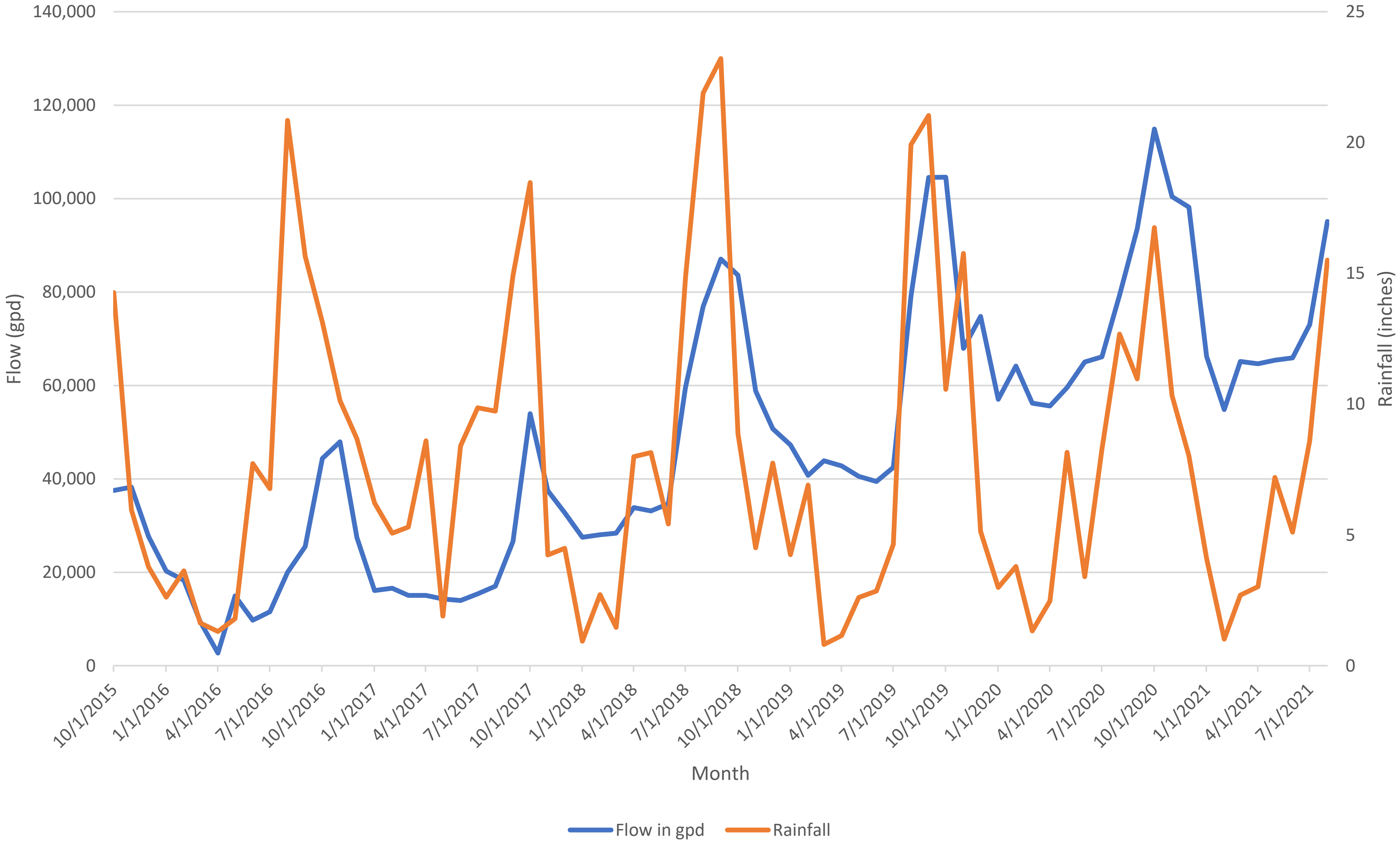
DESIGN: AS	DATE: 7/1/13
CHECKED: PB	SCALE: AS SHOWN
RECOMMENDED: PB	DRAWN: TB
APPROVED: AS	

TERRITORY	PROJECT NAME	DWG. NO.	SHEET
GUAM	ORDOT DUMP CLOSURE CONSTRUCTION AND DERO ROAD SEWER IMPROVEMENTS LEACHATE STORAGE SYSTEM SECTIONS	C43	50 OF 111

PROJECT NO. – GSWA−002−13

CAD FILE: 04385−ODC−C42−45.dwg

AS-BUILT



Brown AND Caldwell

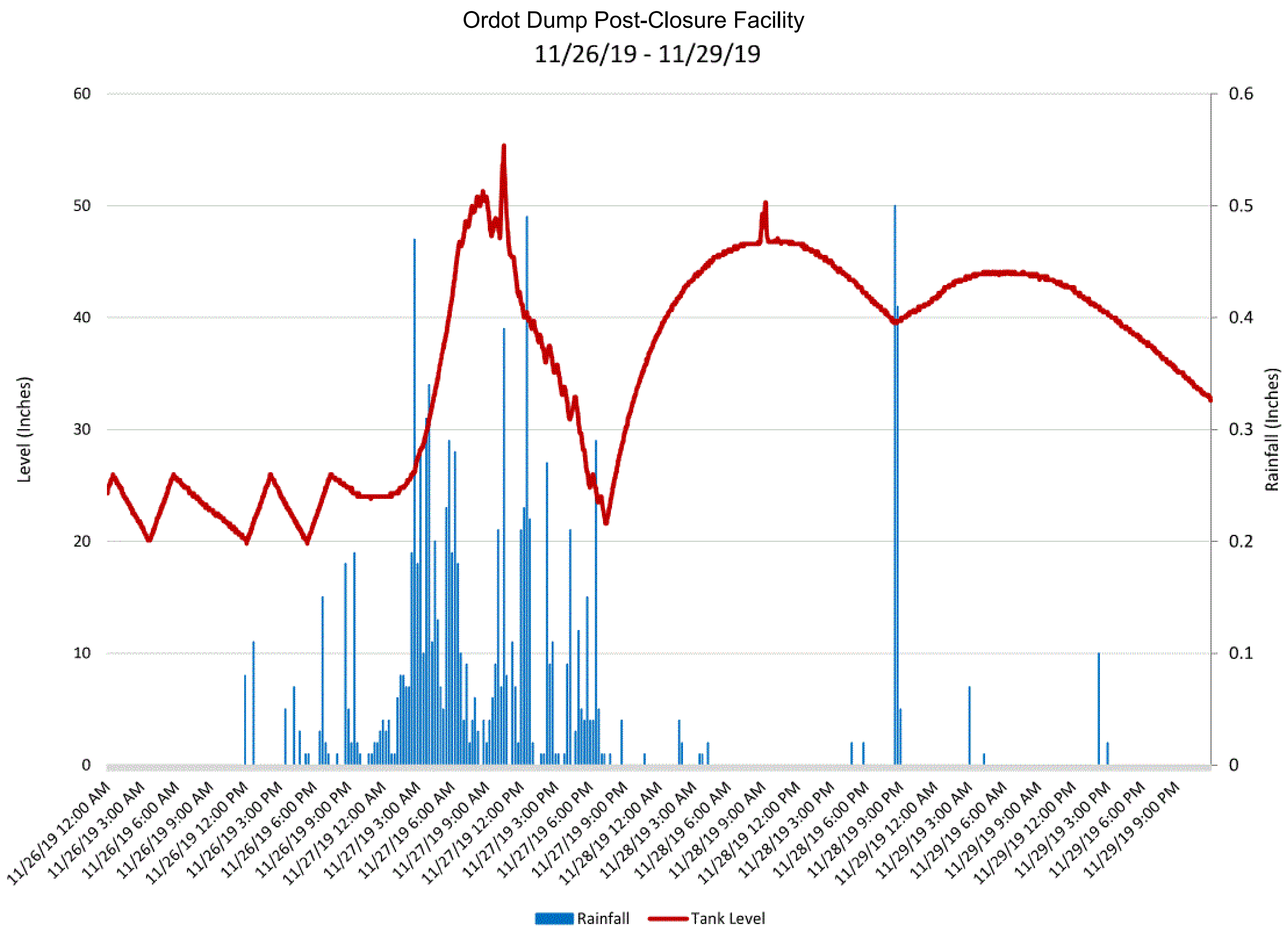
PROJECT: 151215

ORDOT DUMP POST-CLOSURE FACILITY

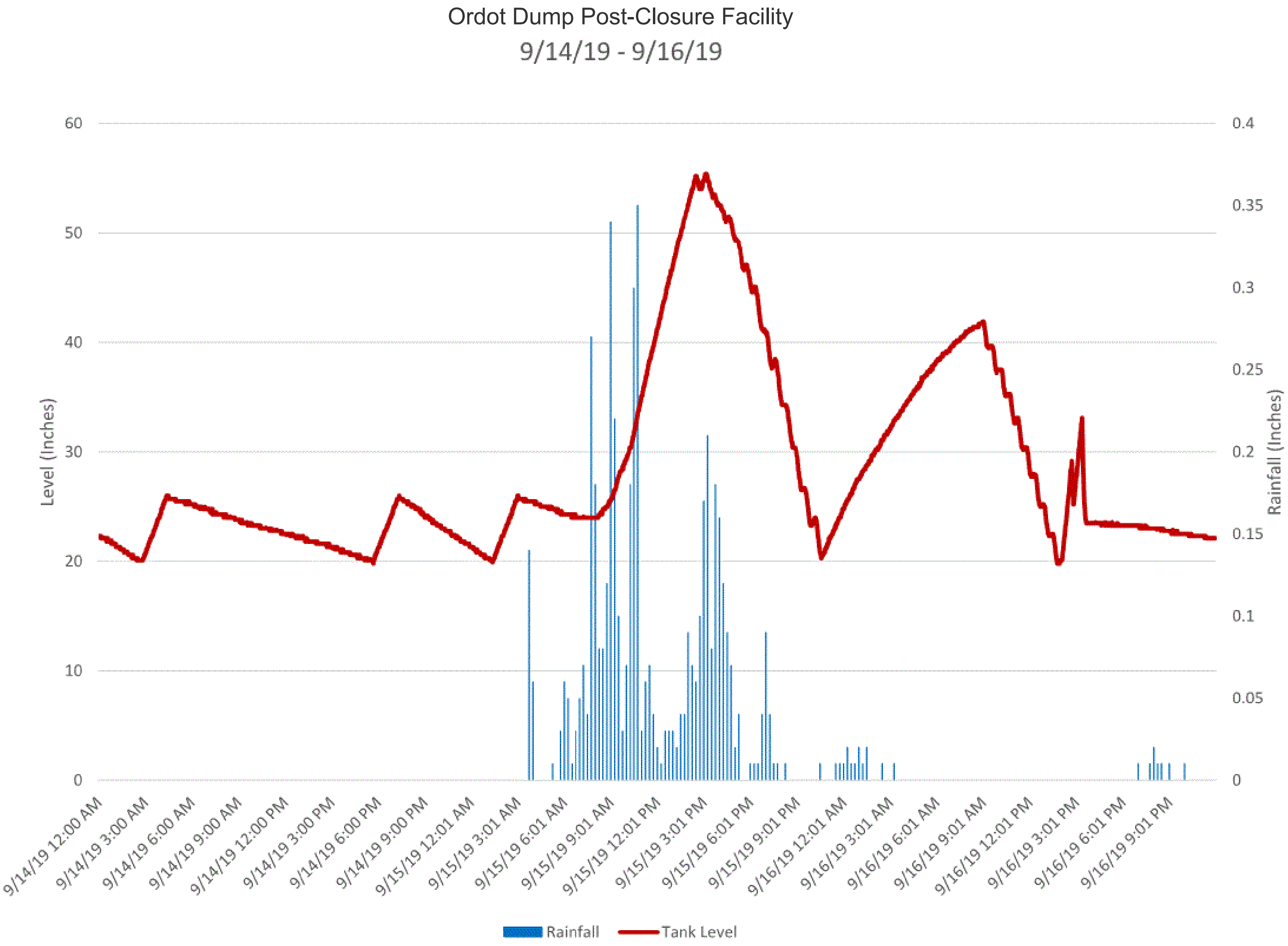
Daily Average Flow and Rainfall by Month

FIGURE

3-1



Brown AND Caldwell	PROJECT: 151215	ORDOT DUMP POST-CLOSURE FACILITY Tank Levels - 15 Minute Rainfall - 11/26 to 11/29/2019	FIGURE 3-2



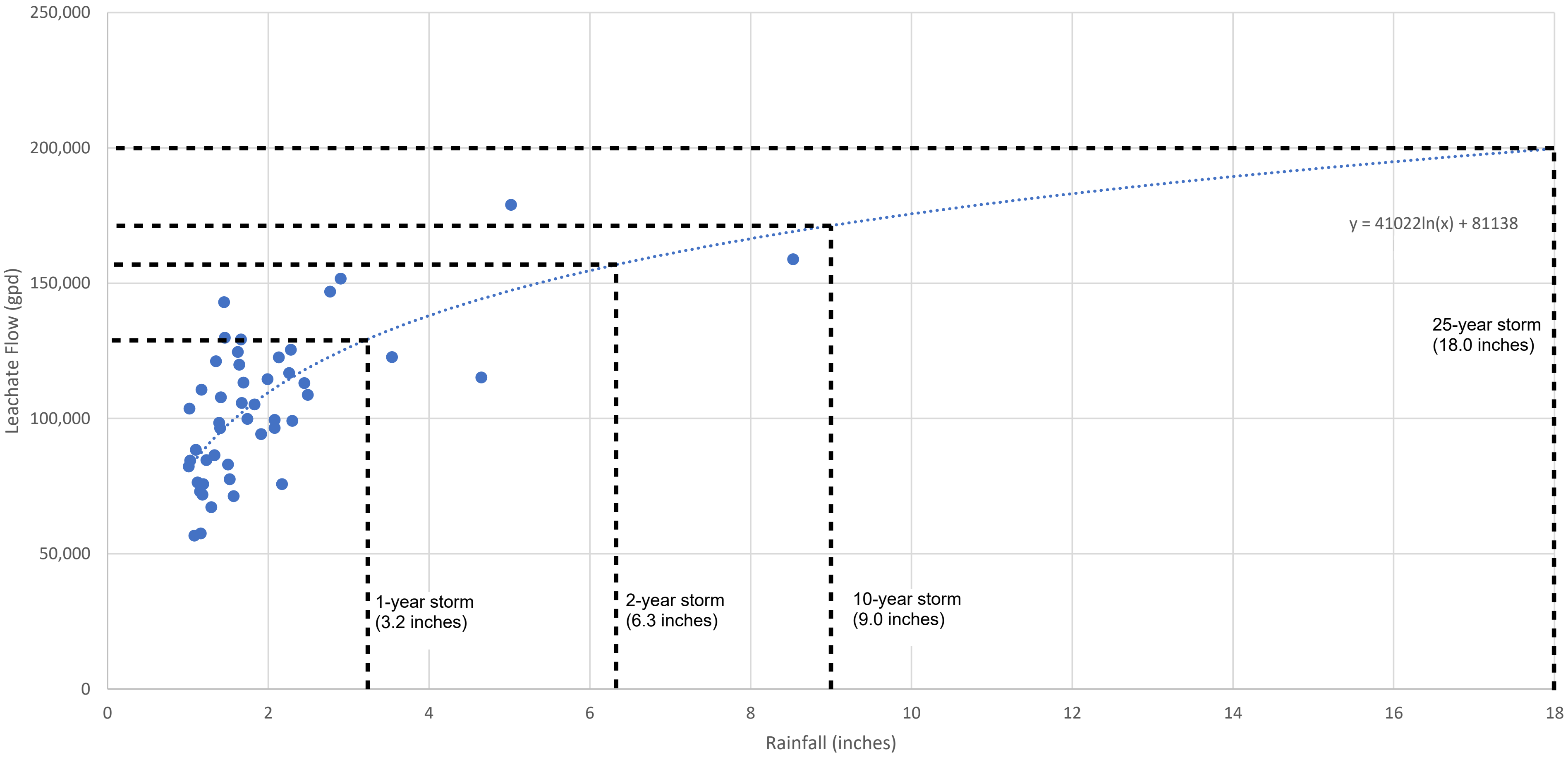
Brown AND Caldwell

PROJECT: 151215

ORDOT DUMP POST-CLOSURE FACILITY

Tank Levels - 15 Minute Rainfall - 9/14 to 9/16/2019

FIGURE
3-3



Brown AND Caldwell

PROJECT: 151215

DATE: September 2021

ORDOT DUMP POST-CLOSURE FACILITY

Leachate Flow vs. Rainfall

FIGURE
3-4

Appendix A: Enhanced Leachate Monitoring Program

August 2019 to December 2020

Exhibit 1

Ordot Closure Facility

Leachate Monitoring Program Outline – Interim Plan

August 2019

This Interim Plan outlines leachate monitoring to be conducted prior to the development of the Final Post Closure Maintenance Plan. Changes to the Plan require approval of the USEPA.

1. Leachate Monitoring Locations

    a. WLIT Riser (Field Parameters only)
    b. East PLCT at MH-9 (Flow and Field Parameters)
    c. West PLCT at MH-11 (Flow and Field Parameters)

    The WLIT Riser monitoring location is a vertical 6-inch diameter pipe connected to the 12-inch diameter WLIT upstream of the leachate storage tanks. Leachate samples will be collected using a bailer or sampling cup and transferred to sample bottles. A photograph of the WLIT Riser is provided on Attachment I.

    The PLCT monitoring locations are precast manholes with open inverts. East PLCT-MH-9 is located approximately 220 feet east of MH-10 and provides leachate flow from the eastern portion of the PLCT (east of MH-2). West PLCT-MH-11 is located approximately 330 feet west of MH-10 and provides leachate flow from the western portion of the PLCT (west of MH-2). All the PLCT pipe is 12 inches in diameter. Leachate samples will be collected at each location using a sampling cup and transferred to sample bottles. Photographs for the PLCT monitoring locations are provided on Attachment I.

2. Routine Monitoring/Reporting

    a. Rainfall is measured constantly at 15 minute intervals at a weather station at the Ordot Closure Facility. Data is available at https://www.wunderground.com/dashboard/pws/IHAGTA2 and https://www.weatherlink.com/embeddablePage/show/8701103d5a3c40fa9c8c35d656a9439e/fullscreen. Rainfall will be graphed on the same spreadsheet with the measured and calculated leachate flows over time.
    b. 2 times each week measure, record and calculate flow and test for field parameters (see Note i.) at the Leachate Monitoring Locations.
        i. Flow calculations and measurements at MH-9 and MH-11. The flow will be calculated based on direct measurement of the depth of flow in the channel at the center of the manhole. Measured flow depth will be used to calculate the cross-sectional area of flow, wetted perimeter and hydraulic radius. Manning's equation (see Note ii.) will be used to calculate flow using these parameters.
        ii. Flow calculations and measurements at the WLIT. At the WLIT Riser the flow is unable to be directly measured, therefore it will be measured at both the flow meter at the tanks and the change in tank level using the existing SCADA system

to determine a flow for a fixed period of time. A total leachate flow will be measured. The calculated flows for the East PLCT and West PLCT will be subtracted from the total flow to estimate the WLIT flow. Both weekly and monthly average flows may be calculated based on daily flow meter readings and tank level measurements.

c. Compile field data in a cumulative spreadsheet with columns for date of measurement, rainfall, flow and field quality parameters. Flow and each field quality parameter will be presented on a time graph (x-axis: date of measurement and y-axis: value of parameter). A running average flow of East PLCT MH-9 and West PLCT MH-11 will be calculated.
d. Data will be submitted to the Receiver every 2 weeks within 3 business days of the last measurements.

3. Post Storm Monitoring/Reporting

   a. For two storm events record flow and test for field parameters at the Leachate Monitoring Locations following (following – means start within 24 hours of the end of the storm event) a 1-year (~3.5-inches) or greater recurrence interval storm. Record flow and field parameters once a day for a period of 5 days after the storm.
   b. Measure water levels at Pond 1, MW-12 and MW-13 at the same frequency as the flow and field parameters (3.a. above). Each location to have an established elevation at the point of measurement (for Pond 1 a mark on the outfall riser at measurement location. For the wells a mark on the well casing).
   c. Incorporate field data into the routine monitoring/reporting spreadsheet (2.c. above).
   d. Data will be submitted to the Receiver within 3 business days of the last measurements.

4. Water Level Monitoring and Reporting

   a. Take weekly measurements of water levels at Pond 1, MW-12, MW-13, GV1-2, GV1-8, GV1-11 and GV2-9.
   b. Compile field data in a cumulative spreadsheet with columns for date of measurement and water/liquid elevation. Present data on a time graph (x-axis: date of measurement and y-axis: elevation).
   c. Data will be submitted to the Receiver with the routine monitoring data submitted every two weeks under 2.d. above.

5. Monitoring for Target Analyte List

   a. In August, collect one round of samples from the three Leachate Monitoring Locations and test for the target analyte list (see Note iii.). The quickest achievable lab turnaround time will be required.

NOTES:

i. Field parameters are: pH, Specific Conductivity, Temperature, Dissolved Oxygen, Color, Turbidity and Oxidation Reduction Potential.
ii. Manning's equation: $Q = (1.49/n)A(R_h^{2/3})S^{1/2}$
    - Q is the volumetric flow in cubic feet per second;
    - A is the cross-sectional area of flow in square feet;
    - S is the bottom slope of the pipe:
    - R_h is the hydraulic radius (= A/P);
    - P is the wetted perimeter in feet;
    - n is the Manning Roughness Coefficient, assumed as 0.012.
iii. See Attachment II for target analyte list. Field filter, if needed, and preserve samples for hexavalent chromium. Use EPA Method 8260B SIM for lower reporting limit for 1, 2, 3 – Trichloropropane.

Attachment I: Photographs of Monitoring Locations

Attachment II: Target Analyte List

Attachment I
Leachate Monitoring Locations

1. East PLCT MH-9 cover looking in a southwesterly direction.

2. East PLCT MH-9 invert.

3. West PLCT MH-11 cover looking in a southeasterly direction.

4. West PLCT MH-11 invert.

5. WLIT Riser.

ATTACHMENT II

Ordot Target Analyte List

Analyte	CAS No.	Source
(1) Antimony	(Total)	40 CFR 258 Appx I and II
(2) Arsenic	(Total)	40 CFR 258 Appx I and II
(3) Barium	(Total)	40 CFR 258 Appx I and II
(4) Beryllium	(Total)	40 CFR 258 Appx I and II
(5) Cadmium	(Total)	40 CFR 258 Appx I and II
(6) Chromium	(Total)	40 CFR 258 Appx I and II
(7) Cobalt	(Total)	40 CFR 258 Appx I and II
(8) Copper	(Total)	40 CFR 258 Appx I and II
(9) Lead	(Total)	40 CFR 258 Appx I and II
(10) Nickel	(Total)	40 CFR 258 Appx I and II
(11) Selenium	(Total)	40 CFR 258 Appx I and II
(12) Silver	(Total)	40 CFR 258 Appx I and II
(13) Thallium	(Total)	40 CFR 258 Appx I and II
(14) Vanadium	(Total)	40 CFR 258 Appx I and II
(15) Zinc	(Total)	40 CFR 258 Appx I and II
(16) Acetone	67-64-1	40 CFR 258 Appx I and II
(17) Acrylonitrile	107-13-1	40 CFR 258 Appx I and II
(18) Benzene	71-43-2	40 CFR 258 Appx I and II
(19) Bromochloromethane	74-97-5	40 CFR 258 Appx I and II
(20) Bromodichloromethane	75-27-4	40 CFR 258 Appx I and II
(21) Bromoform; Tribromomethane	75-25-2	40 CFR 258 Appx I and II
(22) Carbon disulfide	75-15-0	40 CFR 258 Appx I and II
(23) Carbon tetrachloride	56-23-5	40 CFR 258 Appx I and II
(24) Chlorobenzene	108-90-7	40 CFR 258 Appx I and II
(25) Chloroethane; Ethyl chloride	75-00-3	40 CFR 258 Appx I and II
(26) Chloroform; Trichloromethane	67-66-3	40 CFR 258 Appx I and II
(27) Dibromochloromethane; Chlorodibromomethane	124-48-1	40 CFR 258 Appx I and II
(28) 1,2-Dibromo-3-chloropropane; DBCP	96-12-8	40 CFR 258 Appx I and II
(29) 1,2-Dibromoethane; Ethylene dibromide; EDB	106-93-4	40 CFR 258 Appx I and II
(30) o-Dichlorobenzene; 1,2-Dichlorobenzene	95-50-1	40 CFR 258 Appx I and II
(31) p-Dichlorobenzene; 1,4-Dichlorobenzene	106-46-7	40 CFR 258 Appx I and II
(32) trans-1, 4-Dichloro-2-butene	110-57-6	40 CFR 258 Appx I and II
(33) 1,1-Dichlorethane; Ethylidene chloride	75-34-3	40 CFR 258 Appx I and II
(34) 1,2-Dichlorethane; Ethylene dichloride	107-06-2	40 CFR 258 Appx I and II
(35) 1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride	75-35-4	40 CFR 258 Appx I and II
(36) cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	156-59-2	40 CFR 258 Appx I and II
(37) trans-1, 2-Dichloroethylene; trans-1,2-Dichloroethene	156-60-5	40 CFR 258 Appx I and II

Analyte	CAS No.	Source
(38) 1,2-Dichloropropane; Propylene dichloride	78-87-5	40 CFR 258 Appx I and II
(39) cis-1,3-Dichloropropene	10061-01-5	40 CFR 258 Appx I and II
(40) trans-1,3-Dichloropropene	10061-02-6	40 CFR 258 Appx I and II
(41) Ethylbenzene	100-41-4	40 CFR 258 Appx I and II
(42) 2-Hexanone; Methyl butyl ketone	591-78-6	40 CFR 258 Appx I and II
(43) Methyl bromide; Bromomethane	74-83-9	40 CFR 258 Appx I and II
(44) Methyl chloride; Chloromethane	74-87-3	40 CFR 258 Appx I and II
(45) Methylene bromide; Dibromomethane	74-95-3	40 CFR 258 Appx I and II
(46) Methylene chloride; Dichloromethane	75-09-2	40 CFR 258 Appx I and II
(47) Methyl ethyl ketone; MEK; 2-Butanone	78-93-3	40 CFR 258 Appx I and II
(48) Methyl iodide; Idomethane	74-88-4	40 CFR 258 Appx I and II
(49) 4-Methyl-2-pentanone; Methyl isobutyl ketone	108-10-1	40 CFR 258 Appx I and II
(50) Styrene	100-42-5	40 CFR 258 Appx I and II
(51) 1,1,1,2-Tetrachloroethane	630-20-6	40 CFR 258 Appx I and II
(52) 1,1,2,2-Tetrachloroethane	79-34-5	40 CFR 258 Appx I and II
(53) Tetrachloroethylene; Tetrachloroethene; Perchloroethylene	127-18-4	40 CFR 258 Appx I and II
(54) Toluene	108-88-3	40 CFR 258 Appx I and II
(55) 1,1,1-Trichloroethane; Methylchloroform	71-55-6	40 CFR 258 Appx I and II
(56) 1,1,2-Trichloroethane	79-00-5	40 CFR 258 Appx I and II
(57) Trichloroethylene; Trichloroethene	79-01-6	40 CFR 258 Appx I and II
(58) Trichlorofluoromethane; CFC-11	75-69-4	40 CFR 258 Appx I and II
(59) 1,2,3-Trichloropropane	96-18-4	40 CFR 258 Appx I and II
(60) Vinyl acetate	108-05-4	40 CFR 258 Appx I and II
(61) Vinyl chloride	75-01-4	40 CFR 258 Appx I and II
(62) Xylenes	1330-20-7	40 CFR 258 Appx I and II
Acenaphthene	83-32-9	40 CFR 258 Appx II
Acenaphthylene	208-96-8	40 CFR 258 Appx II
Acetone	67-64-1	40 CFR 258 Appx II
Acetonitrile; Methyl cyanide	75-05-8	40 CFR 258 Appx II
Acetophenone	98-86-2	40 CFR 258 Appx II
2-Acetylaminofluorene; 2-AAF	53-96-3	40 CFR 258 Appx II
Acrolein	107-02-8	40 CFR 258 Appx II
Acrylonitrile	107-13-1	40 CFR 258 Appx II
Aldrin	309-00-2	40 CFR 258 Appx II
Allyl chloride	107-05-1	40 CFR 258 Appx II
4-Aminobiphenyl	92-67-1	40 CFR 258 Appx II
Anthracene	120-12-7	40 CFR 258 Appx II
Antimony	(Total)	40 CFR 258 Appx II
Arsenic	(Total)	40 CFR 258 Appx II

Ordot Target Analyte List

Analyte	CAS No.	Source
Barium	(Total)	40 CFR 258 Appx II
Benzene	71-43-2	40 CFR 258 Appx II
Benzo[a]anthracene; Benzanthracene	56-55-3	40 CFR 258 Appx II
Benzo[b]fluoranthene	205-99-2	40 CFR 258 Appx II
Benzo[k]fluoranthene	207-08-9	40 CFR 258 Appx II
Benzo[ghi]perylene	191-24-2	40 CFR 258 Appx II
Benzo[a]pyrene	50-32-8	40 CFR 258 Appx II
Benzyl alcohol	100-51-6	40 CFR 258 Appx II
Beryllium	(Total)	40 CFR 258 Appx II
alpha-BHC	319-84-6	40 CFR 258 Appx II
beta-BHC	319-85-7	40 CFR 258 Appx II
delta-BHC	319-86-8	40 CFR 258 Appx II
gamma-BHC; Lindane	58-89-9	40 CFR 258 Appx II
Bis(2-chloroethoxy)methane	111-91-1	40 CFR 258 Appx II
Bis(2-chloroethyl)ether; Dichloroethyl ether	111-44-4	40 CFR 258 Appx II
Bis(2-chloro-1-methylethyl) ether; 2,2'-Dichlorodiisopropyl ether; DCIP, See footnote 4	108-60-1	40 CFR 258 Appx II
Bis(2-ethylhexyl) phthalate	117-81-7	40 CFR 258 Appx II
Bromochloromethane; Chlorobromethane	74-97-5	40 CFR 258 Appx II
Bromodichloromethane; Dibromochloromethane	75-27-4	40 CFR 258 Appx II
Bromoform; Tribromomethane	75-25-2	40 CFR 258 Appx II
4-Bromophenyl phenyl ether	101-55-3	40 CFR 258 Appx II
Butyl benzyl phthalate; Benzyl butyl phthalate	85-68-7	40 CFR 258 Appx II
Cadmium	(Total)	40 CFR 258 Appx II
Carbon disulfide	75-15-0	40 CFR 258 Appx II
Carbon tetrachloride	56-23-5	40 CFR 258 Appx II
Chlordane	See footnote 5	40 CFR 258 Appx II
p-Chloroaniline	106-47-8	40 CFR 258 Appx II
Chlorobenzene	108-90-7	40 CFR 258 Appx II
Chlorobenzilate	510-15-6	40 CFR 258 Appx II
p-Chloro-m-cresol; 4-Chloro-3-methylphenol	59-50-7	40 CFR 258 Appx II
Chloroethane; Ethyl chloride	75-00-3	40 CFR 258 Appx II
Chloroform; Trichloromethane	67-66-3	40 CFR 258 Appx II
2-Chloronaphthalene	91-58-7	40 CFR 258 Appx II
2-Chlorophenol	95-57-8	40 CFR 258 Appx II
4-Chlorophenyl phenyl ether	7005-72-3	40 CFR 258 Appx II
Chloroprene	126-99-8	40 CFR 258 Appx II
Chromium	(Total)	40 CFR 258 Appx II
Chrysene	218-01-9	40 CFR 258 Appx II
Cobalt	(Total)	40 CFR 258 Appx II

Analyte	CAS No.	Source
Copper	(Total)	40 CFR 258 Appx II
m-Cresol; 3-Methylphenol	108-39-4	40 CFR 258 Appx II
o-Cresol; 2-Methylphenol	95-48-7	40 CFR 258 Appx II
p-Cresol; 4-Methylphenol	106-44-5	40 CFR 258 Appx II
Cyanide	57-12-5	40 CFR 258 Appx II
2,4-D; 2,4-Dichlorophenoxyacetic acid	94-75-7	40 CFR 258 Appx II
4,4′-DDD	72-54-8	40 CFR 258 Appx II
4,4′-DDE	72-55-9	40 CFR 258 Appx II
4,4′-DDT	50-29-3	40 CFR 258 Appx II
Diallate	2303-16-4	40 CFR 258 Appx II
Dibenz[a,h]anthracene	53-70-3	40 CFR 258 Appx II
Dibenzofuran	132-64-9	40 CFR 258 Appx II
Dibromochloromethane; Chlorodibromomethane	124-48-1	40 CFR 258 Appx II
1,2-Dibromo-3-chloropropane; DBCP	96-12-8	40 CFR 258 Appx II
1,2-Dibromoethane; Ethylene dibromide; EDB	106-93-4	40 CFR 258 Appx II
Di-n-butyl phthalate	84-74-2	40 CFR 258 Appx II
o-Dichlorobenzene; 1,2-Dichlorobenzene	95-50-1	40 CFR 258 Appx II
m-Dichlorobenzene; 1,3-Dichlorobenzene	541-73-1	40 CFR 258 Appx II
p-Dichlorobenzene; 1,4-Dichlorobenzene	106-46-7	40 CFR 258 Appx II
3,3′-Dichlorobenzidine	91-94-1	40 CFR 258 Appx II
trans-1,4-Dichloro-2-butene	110-57-6	40 CFR 258 Appx II
Dichlorodifluoromethane; CFC 12	75-71-8	40 CFR 258 Appx II
1,1-Dichloroethane; Ethyldidene chloride	75-34-3	40 CFR 258 Appx II
1,2-Dichloroethane; Ethylene dichloride	107-06-2	40 CFR 258 Appx II
1,1-Dichloroethylene; 1,1-Dichloroethene;	75-35-4	40 CFR 258 Appx II
Vinylidene chloride cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	156-59-2	40 CFR 258 Appx II
trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene	156-60-5	40 CFR 258 Appx II
2,4-Dichlorophenol	120-83-2	40 CFR 258 Appx II
2,6-Dichlorophenol	87-65-0	40 CFR 258 Appx II
1,2-Dichloropropane	78-87-5	40 CFR 258 Appx II
1,3-Dichloropropane; Trimethylene dichloride	142-28-9	40 CFR 258 Appx II
2,2-Dichloropropane; Isopropylidene chloride	594-20-7	40 CFR 258 Appx II
1,1-Dichloropropene	563-58-6	40 CFR 258 Appx II
cis-1,3-Dichloropropene	10061-01-5	40 CFR 258 Appx II
trans-1,3-Dichloropropene	10061-02-6	40 CFR 258 Appx II
Dieldrin	60-57-1	40 CFR 258 Appx II
Diethyl phthalate	84-66-2	40 CFR 258 Appx II

Analyte	CAS No.	Source
O,O-Diethyl O-2-pyrazinyl phosphorothioate; Thionazin	297-97-2	40 CFR 258 Appx II
Dimethoate	60-51-5	40 CFR 258 Appx II
p-(Dimethylamino)azobenzene	60-11-7	40 CFR 258 Appx II
7,12-Dimethylbenz[a]anthracene	57-97-6	40 CFR 258 Appx II
3,3’-Dimethylbenzidine	119-93-7	40 CFR 258 Appx II
alpha, alpha-Dimethylphenethylamine	122-09-8	40 CFR 258 Appx II
2,4-Dimethylphenol; m-Xylenol	105-67-9	40 CFR 258 Appx II
Dimethyl phthalate	131-11-3	40 CFR 258 Appx II
m-Dinitrobenzene	99-65-0	40 CFR 258 Appx II
4,6-Dinitro-o-cresol; 4,6-Dinitro-2-methylphenol	534-52-1	40 CFR 258 Appx II
2,4-Dinitrophenol	51-28-5	40 CFR 258 Appx II
2,4-Dinitrotoluene	121-14-2	40 CFR 258 Appx II
2,6-Dinitrotoluene	606-20-2	40 CFR 258 Appx II
Dinoseb; DNBP; 2-sec-Butyl-4,6-dinitrophenol	88-85-7	40 CFR 258 Appx II
Di-n-octyl phthalate	117-84-0	40 CFR 258 Appx II
Diphenylamine	122-39-4	40 CFR 258 Appx II
Disulfoton	298-04-4	40 CFR 258 Appx II
Endosulfan I	959-98-8	40 CFR 258 Appx II
Endosulfan II	33213-65-9	40 CFR 258 Appx II
Endosulfan sulfate	1031-07-8	40 CFR 258 Appx II
Endrin	72-20-8	40 CFR 258 Appx II
Endrin aldehyde	7421-93-4	40 CFR 258 Appx II
Ethylbenzene	100-41-4	40 CFR 258 Appx II
Ethyl methacrylate	97-63-2	40 CFR 258 Appx II
Ethyl methanesulfonate	62-50-0	40 CFR 258 Appx II
Famphur	52-85-7	40 CFR 258 Appx II
Fluoranthene	206-44-0	40 CFR 258 Appx II
Fluorene	86-73-7	40 CFR 258 Appx II
Heptachlor	76-44-8	40 CFR 258 Appx II
Heptachlor epoxide	1024-57-3	40 CFR 258 Appx II
Hexachlorobenzene	118-74-1	40 CFR 258 Appx II
Hexachlorobutadiene	87-68-3	40 CFR 258 Appx II
Hexachlorocyclopentadiene	77-47-4	40 CFR 258 Appx II
Hexachloroethane	67-72-1	40 CFR 258 Appx II
Hexachloropropene	1888-71-7	40 CFR 258 Appx II
2-Hexanone; Methyl butyl ketone	591-78-6	40 CFR 258 Appx II
Indeno(1,2,3-cd)pyrene	193-39-5	40 CFR 258 Appx II
Isobutyl alcohol	78-83-1	40 CFR 258 Appx II
Isodrin	465-73-6	40 CFR 258 Appx II
Isophorone	78-59-1	40 CFR 258 Appx II
Isosafrole	120-58-1	40 CFR 258 Appx II
Kepone	143-50-0	40 CFR 258 Appx II
Lead	(Total)	40 CFR 258 Appx II

Analyte	CAS No.	Source
Mercury	(Total)	40 CFR 258 Appx II
Methacrylonitrile	126-98-7	40 CFR 258 Appx II
Methapyrilene	91-80-5	40 CFR 258 Appx II
Methoxychlor	72-43-5	40 CFR 258 Appx II
Methyl bromide; Bromomethane	74-83-9	40 CFR 258 Appx II
Methyl chloride; Chloromethane	74-87-3	40 CFR 258 Appx II
3-Methylcholanthrene	56-49-5	40 CFR 258 Appx II
Methyl ethyl ketone; MEK; 2-Butanone	78-93-3	40 CFR 258 Appx II
Methyl iodide; Iodomethane	74-88-4	40 CFR 258 Appx II
Methyl methacrylate	80-62-6	40 CFR 258 Appx II
Methyl methanesulfonate	66-27-3	40 CFR 258 Appx II
2-Methylnaphthalene	91-57-6	40 CFR 258 Appx II
Methyl parathion; Parathion methyl	298-00-0	40 CFR 258 Appx II
4-Methyl-2-pentanone; Methyl isobutyl ketone	108-10-1	40 CFR 258 Appx II
Methylene bromide; Dibromomethane	74-95-3	40 CFR 258 Appx II
Methylene chloride; Dichloromethane	75-09-2	40 CFR 258 Appx II
Naphthalene	91-20-3	40 CFR 258 Appx II
1,4-Naphthoquinone	130-15-4	40 CFR 258 Appx II
1-Naphthylamine	134-32-7	40 CFR 258 Appx II
2-Naphthylamine	91-59-8	40 CFR 258 Appx II
Nickel	(Total)	40 CFR 258 Appx II
o-Nitroaniline; 2-Nitroaniline	88-74-4	40 CFR 258 Appx II
m-Nitroaniline; 3-Nitroaniline	99-09-2	40 CFR 258 Appx II
p-Nitroaniline; 4-Nitroaniline	100-01-6	40 CFR 258 Appx II
Nitrobenzene	98-95-3	40 CFR 258 Appx II
o-Nitrophenol; 2-Nitrophenol	88-75-5	40 CFR 258 Appx II
p-Nitrophenol; 4-Nitrophenol	100-02-7	40 CFR 258 Appx II
N-Nitrosodi-n-butylamine	924-16-3	40 CFR 258 Appx II
N-Nitrosodiethylamine	55-18-5	40 CFR 258 Appx II
N-Nitrosodimethylamine	62-75-9	40 CFR 258 Appx II
N-Nitrosodiphenylamine	86-30-6	40 CFR 258 Appx II
N-Nitrosodipropylamine; N-Nitroso-N-dipropylamine; Di-n-propylnitrosamine	621-64-7	40 CFR 258 Appx II
N-Nitrosomethylethalamine	10595-95-6	40 CFR 258 Appx II
N-Nitrosopiperidine	100-75-4	40 CFR 258 Appx II
N-Nitrosopyrrolidine	930-55-2	40 CFR 258 Appx II
5-Nitro-o-toluidine	99-55-8	40 CFR 258 Appx II
Parathion	56-38-2	40 CFR 258 Appx II
Pentachlorobenzene	608-93-5	40 CFR 258 Appx II
Pentachloronitrobenzene	82-68-8	40 CFR 258 Appx II
Pentachlorophenol	87-86-5	40 CFR 258 Appx II
Phenacetin	62-44-2	40 CFR 258 Appx II
Phenanthrene	85-01-8	40 CFR 258 Appx II
Phenol	108-95-2	40 CFR 258 Appx II
p-Phenylenediamine	106-50-3	40 CFR 258 Appx II

Ordot Target Analyte List

Analyte	CAS No.	Source
Phorate	298-02-2	40 CFR 258 Appx II
Polychlorinated biphenyls; PCBs	See footnote 6	40 CFR 258 Appx II
Pronamide	23950-58-5	40 CFR 258 Appx II
Propionitrile; Ethyl cyanide	107-12-0	40 CFR 258 Appx II
Pyrene	129-00-0	40 CFR 258 Appx II
Safrole	94-59-7	40 CFR 258 Appx II
Selenium	(Total)	40 CFR 258 Appx II
Silver	(Total)	40 CFR 258 Appx II
Silvex; 2,4,5-TP	93-72-1	40 CFR 258 Appx II
Styrene	100-42-5	40 CFR 258 Appx II
Sulfide	18496-25-8	40 CFR 258 Appx II
2,4,5-T; 2,4,5-Trichlorophenoxyacetic acid	93-76-5	40 CFR 258 Appx II
2,3,7,8-TCDD; 2,3,7,8-Tetrachlorodibenzo- p-dioxin	1746-01-6	40 CFR 258 Appx II
1,2,4,5-Tetrachlorobenzene	95-94-3	40 CFR 258 Appx II
1,1,1,2-Tetrachloroethane	630-20-6	40 CFR 258 Appx II
1,1,2,2-Tetrachloroethane	79-34-5	40 CFR 258 Appx II
Tetrachloroethylene; Tetrachloroethene; Perchloroethylene	127-18-4	40 CFR 258 Appx II
2,3,4,6-Tetrachlorophenol	58-90-2	40 CFR 258 Appx II
Thallium	(Total)	40 CFR 258 Appx II
Tin	(Total)	40 CFR 258 Appx II
Toluene	108-88-3	40 CFR 258 Appx II
o-Toluidine	95-53-4	40 CFR 258 Appx II
Toxaphene	See footnote 7	40 CFR 258 Appx II
1,2,4-Trichlorobenzene	120-82-1	40 CFR 258 Appx II
1,1,1-Trichloroethane; Methylchloroform	71-55-6	40 CFR 258 Appx II
1,1,2-Trichloroethane	79-00-5	40 CFR 258 Appx II
Trichloroethylene; Trichloroethene	79-01-6	40 CFR 258 Appx II
Trichlorofluoromethane; CFC-11	75-69-4	40 CFR 258 Appx II
2,4,5-Trichlorophenol	95-95-4	40 CFR 258 Appx II
2,4,6-Trichlorophenol	88-06-2	40 CFR 258 Appx II
1,2,3-Trichloropropane	96-18-4	40 CFR 258 Appx II
O,O,O-Triethyl phosphorothioate	126-68-1	40 CFR 258 Appx II
sym-Trinitrobenzene	99-35-4	40 CFR 258 Appx II
Vanadium	(Total)	40 CFR 258 Appx II
Vinyl acetate	108-05-4	40 CFR 258 Appx II
Vinyl chloride; Chloroethene	75-01-4	40 CFR 258 Appx II
Xylene (total)	See footnote 8	40 CFR 258 Appx II
Zinc	(Total)	40 CFR 258 Appx II
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	2691-41-0	Japanese munitions (EPA 8330B list)
Hexahydro-1,3,5-trinitro-1,3,5-triazine	121-82-4	Japanese munitions (EPA 8330B list)
1,3,5-Trinitrobenzene	99-35-4	Japanese munitions (EPA 8330B list)
1,3-Dinitrobenzene	99-65-0	Japanese munitions (EPA 8330B list)

Ordot Target Analyte List

Analyte	CAS No.	Source
Methyl-2,4,6-trinitrophenylnitramine	479-45-8	Japanese munitions (EPA 8330B list)
Nitrobenzene	98-95-3	Japanese munitions (EPA 8330B list)
2,4,6-Trinitrotoluene	118-96-7	Japanese munitions (EPA 8330B list)
4-Amino-2,6-dinitrotoluene	19406-51-0	Japanese munitions (EPA 8330B list)
2-Amino-4,6-dinitrotoluene	35572-78-2	Japanese munitions (EPA 8330B list)
2,4-Dinitrotoluene	121-14-2	Japanese munitions (EPA 8330B list)
2,6-Dinitrotoluene	606-20-2	Japanese munitions (EPA 8330B list)
2-Nitrotoluene	88-72-2	Japanese munitions (EPA 8330B list)
3-Nitrotoluene	99-08-1	Japanese munitions (EPA 8330B list)
4-Nitrotoluene	99-99-0	Japanese munitions (EPA 8330B list)
Nitroglycerin	55-63-0	Japanese munitions (EPA 8330B list)
Pentaerythritol tetranitrate	78-11-5	Japanese munitions (EPA 8330B list)
3,5-Dinitroaniline	618-87-1	Japanese munitions (EPA 8330B list)
Picric acid	88-89-1	Japanese munitions
Radionuclides	Multiple	Radioactive waste for military bases
Perchlorate	14797-73-0	Solid rocket propellant
Hexavalent chromium	18540-29-9	More toxic form of chromium
1,4-Dioxane	123-91-1	Found at MSWLFs

Ordot Closure Facility
Leachate Flow Monitoring

EXHIBIT 2A

Date	Rainfall (inches)	E-PLCT MH-9		W-PLCT MH-11		Measured Total PLCT Flow[2] (gpm)	Measured Total Flow[3] (gpm)	WLIT Flow[4] (gpm)	Leachate Flow to Sewer (gpm)
		Flow Depth (feet)	Calculated Flow[1] (gpm)	Flow Depth (feet)	Calculated Flow[1] (gpm)				
8/1/19	NA								34.0
8/2/19	0.04								40.9
8/3/19	0.57								47.5
8/4/19	3.54	0.14	217.4	0.13	59.9	119.5	146.6	27.1	44.4
8/5/19	2.26	0.11	151.9	0.08	25.6	101	122.5	21.5	85.2
8/6/19	2.42	0.08	78.6	0.09	32.8	100	108	8	81.1
8/7/19	0.28	0.05	28.9	0.07	16.5	60.2	67.4	7.2	75.5
8/8/19	0	0.02	4	0	0	35.9	39.9	4	51.3
8/9/19	0.01								40.6
8/10/19	0								40.6
8/11/19	0								100.8
8/12/19	0.15	0.04	18	0	0	53	53	0	27.1
8/13/19	0								27.1
8/14/19	0.41								50.2
8/15/19	0.89								54.8
8/16/19	0.02	0.03	9.7	0	0	53	55.9	2.9	64.0
8/17/19	1.03								58.6
8/18/19	0.02								58.6
8/19/19	0.05	0.02	4.1	0	0	47.9	52.1	4.2	50.8
8/20/19	0.05								54.2
8/21/19	0.01								48.7
8/22/19	0.03								50.9
8/23/19	0.87	0.04	17.4	0	0	44.9	47.5	2.6	47.1
8/24/19	1.5								57.6
8/25/19	0.01								57.6
8/26/19	2.3								57.6
8/27/19	0.14	0.04	17.4	0	0	55.1	57.1	2	68.9
8/28/19	0.14								53.2
8/29/19	0	0.04	17.4	0	0	55.1	57.1	2	53.1
8/30/19	0								64.0
8/31/19	0.48								54.8

Notes:
1. Calculated PLCT flow is based on Manning's Equation:

$Q = (1.49/n) A (R_h^{2/3})(S^{1/2})$
$n = 0.018$
$S = 0.052$ for E-PLCT MH-9

2. Measured Total Pl $S = 0.035$ for W-PLCT MH-11
3. Measured Total Flow is determined by shutting off pumps, isolating Tank 1 and recording liquid level change in Tank 1 over a recorded time period.
4. WLIT Flow is calculated as the difference between the Measured Total Flow and the Measured Total PLCT Flow.

Ordot Closure Facility
Leachate Flow Monitoring

Date	Rainfall (inches)	E-PLCT MH-9		W-PLCT MH-11		Measured Total PLCT Flow[2] (gpm)	Measured Total Flow[3] (gpm)	WLIT Flow[4] (gpm)	Leachate Flow to Sewer (gpm)
		Flow Depth (feet)	Calculated Flow[1] (gpm)	Flow Depth (feet)	Calculated Flow[1] (gpm)				
9/1/19	0.01								57.7
9/2/19	0.16								57.7
9/3/19	0.55	0.03	9.6	0	0	55.1	55.1	0	57.7
9/4/19	0.04								58.4
9/5/19	0.26	0.03	9.6	0	0	53.0	60.2	7.2	59.1
9/6/19	0.68								56.7
9/7/19	0.64								66.7
9/8/19	0.13								65.1
9/9/19	0.69		19.4	0	0	57.1	58.1	1	58.4
9/10/19	0.06								129.1
9/11/19	0.38								62.9
9/12/19	0.4	0.06	39.2	0.062	13.9	65.3	67.3	2	58.3
9/13/19	0.12								68.0
9/14/19	0								60.3
9/15/19	5.02	0.2	484.0	0.17	113.09				60.3
9/16/19	0.19	0.04	17.9	0.03	2.89	75.5	73.4	0	124.3
9/17/19	0.14	0.05	28.9	0	0	67.3	63.2	0	86.7
9/18/19	0.86	0.09	99.1	0	0	65.3	62.2	0	67.8
9/19/19	0.05	0.04	17.4	0	0	79.6	85.7	6.1	67.3
9/20/19	0.43	0.07	17.4	0	0	72.4	77.5	5.1	79.3
9/21/19	0.16								74.0
9/22/19	0.08								76.1
9/23/19	0.06								76.1
9/24/19	0.1	0.04	17.4	0	0	50	67.3	17.3	74.4
9/25/19	0.74								71.7
9/26/19	2.28					75.5	75.5	0	72.8
9/27/19	0.14	0.07	8.9	0.03	0				87.1
9/28/19	0								88.9
9/29/19	0.29								71.3
9/30/19	0.96								71.3

Notes:

1. Calculated PLCT flow is based on Manning's Equation:

$Q = (1.49/n) A (R_h^{2/3})(S^{1/2})$
$n = 0.018$
$S = 0.052$ for E-PLCT MH-9

2. Measured Total Pl $S = 0.035$ for W-PLCT MH-11
3. Measured Total Flow is determined by shutting off pumps, isolating Tank 1 and recording liquid level change in Tank 1 over a recorded time period.
4. WLIT Flow is calculated as the difference between the Measured Total Flow and the Measured Total PLCT Flow.

Ordot Closure Facility
Leachate Flow Monitoring

Date	Rainfall (inches)	E-PLCT MH-9		W-PLCT MH-11		Measured Total PLCT Flow[2] (gpm)	Measured Total Flow[3] (gpm)	WLIT Flow[4] (gpm)	Leachate Flow to Sewer (gpm)
		Flow Depth (feet)	Calculated Flow[1] (gpm)	Flow Depth (feet)	Calculated Flow[1] (gpm)				
10/1/19	0	0.04	8.9	0	0	72.4	75.5	3.1	82.2
10/2/19	1.62	0.09	92.5	0.03	0				69.6
10/3/19	0.02	0.04	17.4	0	0	74.5	79.6	5.1	86.5
10/4/19	0.01	0.04	8.9	0	0	75.3	70.9	0	76.1
10/5/19	0	0.04	3.7	0	0	66.3	67.3	1	67.0
10/6/19	0	0.03	8.9	0	0	72.4	70.4	0	70.0
10/7/19	1.99	0.03	8.9	0	0	68.3	65.3	0	70.0
10/8/19	1.35								79.6
10/9/19	0.78	0.073	54.4	0.06	12.75	55.6	104	48.4	131.2
10/10/19	0								39.9
10/11/19	0.08								39.9
10/12/19	0.03								37.1
10/13/19	0.35								37.1
10/14/19	0.37								82.6
10/15/19	0.27	0.03	8.9	0	0	84.5	90.3	5.8	79.9
10/16/19	0								76.5
10/17/19	0.48								35.1
10/18/19	0.28	0.04	16.5	0	0	70.5	71.4	0.9	35.1
10/19/19	0.57								37.8
10/20/19	0.01								37.8
10/21/19	0.14								75.7
10/22/19	0	0.04	8.9	0	0	57.1	61.2	4.1	69.2
10/23/19	0								64.7
10/24/19	0.11								62.3
10/25/19	0.47					59.7	59.7	0.0	60.9
10/26/19	0.01	0.03	8.9	0	0				58.0
10/27/19	0.21								58.0
10/28/19	0.04								58.0
10/29/19	0.3	0.04	3.7	0	0	53.0	53.0	0.0	56.1
10/30/19	0.36								54.1
10/31/19	0.15	0.03	8.9	0	0	60.2	55.1	0.0	50.7

Notes:

1. Calculated PLCT flow is based on Manning's Equation:

$Q = (1.49/n)\ A\ (R_h^{2/3})(S^{1/2})$

$n = 0.018$

$S = 0.052$ for E-PLCT MH-9

2. Measured Total Pl $S = 0.035$ for W-PLCT MH-11
3. Measured Total Flow is determined by shutting off pumps, isolating Tank 1 and recording liquid level change in Tank 1 over a recorded time period.
4. WLIT Flow is calculated as the difference between the Measured Total Flow and the Measured Total PLCT Flow.

Ordot Closure Facility
Leachate Flow Monitoring

Date	Rainfall (inches)	E-PLCT MH-9		W-PLCT MH-11		Measured Total PLCT Flow[2] (gpm)	Measured Total Flow[3] (gpm)	WLIT Flow[4] (gpm)	Leachate Flow to Sewer (gpm)
		Flow Depth (feet)	Calculated Flow[1] (gpm)	Flow Depth (feet)	Calculated Flow[1] (gpm)				
11/1/19	0.83								56.6
11/2/19	0.03								54.4
11/3/19	0								54.4
11/4/19	0								54.4
11/5/19	0	0.02	3.7	0	0	47.9	47.9	0	17.2
11/6/19	0.02								50.3
11/7/19	0								44.6
11/8/19	1.29	0.03	8.9	0	0	54.9	59.2	4.3	46.7
11/9/19	0								46.4
11/10/19	0.38								46.4
11/11/19	0.54								46.4
11/12/19	0	0.04	16.5	0	0	50.0	50.0	0	49.9
11/13/19	0								40.8
11/14/19	0.04								38.0
11/15/19	0.23	0.02	16.5	0	0	45.9	50.0	4.1	40.0
11/16/19	0								37.0
11/17/19	0.55								37.0
11/18/19	0.32								38.2
11/19/19	0.15	0.03	8.9	0	0	49.0	50.0	1.0	45.7
11/20/19	0.06								45.2
11/21/19	0.05	0.02	3.7	0	0	46.9	44.9	0.0	42.4
11/22/19	0.05								40.9
11/23/19	0.19								41.1
11/24/19	0.08								41.1
11/25/19	0.1	0.03	8.9	0	0	44.9	47.9	3.1	41.1
11/26/19	1.18								36.1
11/27/19	8.53	0.17	347.6	0.13	65.0	134.6	153	18.4	49.9
11/28/19	1.1	0.06	39.2	0.04	5.4	65.6	78.7	13.1	110.3
11/29/19	0.2								61.4
11/30/19	0.16								61.4

Notes:
1. Calculated PLCT flow is based on Manning's Equation:
   $Q = (1.49/n)\ A\ (R_h^{2/3})(S^{1/2})$
   n = 0.018
   S = 0.052 for E-PLCT MH-9
2. Measured Total Pl S = 0.035 for W-PLCT MH-11
3. Measured Total Flow is determined by shutting off pumps, isolating Tank 1 and recording liquid level change in Tank 1 over a recorded time period.
4. WLIT Flow is calculated as the difference between the Measured Total Flow and the Measured Total PLCT Flow.

Ordot Closure Facility
Leachate Flow Monitoring

Date	Rainfall (inches)	E-PLCT MH-9		W-PLCT MH-11		Measured Total PLCT Flow[2] (gpm)	Measured Total Flow[3] (gpm)	WLIT Flow[4] (gpm)	Leachate Flow to Sewer (gpm)
		Flow Depth (feet)	Calculated Flow[1] (gpm)	Flow Depth (feet)	Calculated Flow[1] (gpm)				
12/1/19	0.09								61.4
12/2/19	0.08								64.8
12/3/19	0.08	0.03	8.9	0	0	57.1	62.2	5.1	58.0
12/4/19	0.04								62.6
12/5/19	0	0.04	16.5	0	0	60.2	63.2	3.1	66.0
12/6/19	0.19								65.1
12/7/19	0.04								65.8
12/8/19	0.02								65.8
12/9/19	0								62.7
12/10/19	0.35								62.8
12/11/19	0.01	0.03	8.9	0	0	57.1	58.1	1.0	62.9
12/12/19	0.18								57.7
12/13/19	0.47	0.03	8.9	0	0	44.9	54.1	9.2	56.8
12/14/19	0.02								47.3
12/15/19	0.56								47.3
12/16/19	0								59.8
12/17/19	0.08	0.02	3.7	0	0	52.0	53.0	1.0	53.5
12/18/19	0								36.1
12/19/19	0.08	0.03	8.9	0	0	51.0	51.0	0	51.2
12/20/19	0.02								38.3
12/21/19	0								45.0
12/22/19	0.1								45.0
12/23/19	0	0.03	8.9	0	0	47.9	47.9	0	45.0
12/24/19	0								41.5
12/25/19	0.02								41.5
12/26/19	0								41.5
12/27/19	0	0.04	16.5	0	0	40.8	42.8	2.0	45.1
12/28/19	0.02								28.3
12/29/19	0								43.2
12/30/19	0.03					44.9	42.8	0	43.2
12/31/19	0.03								44.8

Notes:

1. Calculated PLCT flow is based on Manning's Equation:

$$Q = (1.49/n)\ A\ (R_h^{2/3})(S^{1/2})$$

$n = 0.018$

$S = 0.052$ for E-PLCT MH-9

2. Measured Total Pl S = 0.035 for W-PLCT MH-11
3. Measured Total Flow is determined by shutting off pumps, isolating Tank 1 and recording liquid level change in Tank 1 over a recorded time period.
4. WLIT Flow is calculated as the difference between the Measured Total Flow and the Measured Total PLCT Flow.

Brown AND Caldwell

Ordot Closure Facility
Leachate Flow Monitoring

Date	Rainfall (inches)	E-PLCT MH-9		W-PLCT MH-11		Measured Total PLCT Flow[2] (gpm)	Measured Total Flow[3] (gpm)	WLIT Flow[4] (gpm)	Leachate Flow to Sewer (gpm)
		Flow Depth (feet)	Calculated Flow[1] (gpm)	Flow Depth (feet)	Calculated Flow[1] (gpm)				
1/1/20	0.01								43.9
1/2/20	0.05	0.03	8.9	0	0	39.8	36.7	0	43.9
1/3/20	0.1								37.5
1/4/20	0.01								36.1
1/5/20	0								31.1
1/6/20	0.05								31.1
1/7/20	0	0.02	3.7	0	0	37.7	41.8	4.1	35.6
1/8/20	0								35.3
1/9/20	0.33								37.7
1/10/20	0.2	0.03	8.9	0	0	37.7	42.8	5.1	36.4
1/11/20	0.29								40.1
1/12/20	0.18								40.1
1/13/20	0.03	0.02	3.7	0	0	41.8	42.8	1.0	40.1
1/14/20	0.01								38.0
1/15/20	0.16								39.4
1/16/20	0					36.7	39.8	3.1	41.7
1/17/20	0.04	0.02	3.7		0				40.2
1/18/20	0.08								41.8
1/19/20	0.17								41.8
1/20/20	0								41.8
1/21/20	0.21	0.03	8.9	0	0	38.8	40.8	2.0	40.7
1/22/20	0.25								42.5
1/23/20	0.14	0.03	8.9	0	0	39.3	39.8	0.4	40.2
1/24/20	0								42.8
1/25/20	0.06								39.9
1/26/20	0.43								39.9
1/27/20	0.14	0.03	16.5	0	0	34.4	39.8	5.4	39.9
1/28/20	0.11								44.3
1/29/20	0.27								38.6
1/30/20	0.15	0.03	26.6	0	0	44.9	44.9	0.0	43.5
1/31/20	0.17								41.5

Notes:

1. Calculated PLCT flow is based on Manning's Equation:

$Q = (1.49/n)\ A\ (R_h^{2/3})(S^{1/2})$

$n = 0.018$

$S = 0.052$ for E-PLCT MH-9

2. Measured Total Pl $S = 0.035$ for W-PLCT MH-11
3. Measured Total Flow is determined by shutting off pumps, isolating Tank 1 and recording liquid level change in Tank 1 over a recorded time period.
4. WLIT Flow is calculated as the difference between the Measured Total Flow and the Measured Total PLCT Flow.

Ordot Closure Facility
Leachate Flow Monitoring

Date	Rainfall (inches)	E-PLCT MH-9		W-PLCT MH-11		Measured Total PLCT Flow[2] (gpm)	Measured Total Flow[3] (gpm)	WLIT Flow[4] (gpm)	Leachate Flow to Sewer (gpm)
		Flow Depth (feet)	Calculated Flow[1] (gpm)	Flow Depth (feet)	Calculated Flow[1] (gpm)				
2/1/20	0								42.0
2/2/20	1.33								60.0
2/3/20	0.25								60.0
2/4/20	0.45	0.05	26.6	0.05	12.7	47.9	52.0	4.1	49.2
2/5/20	0.06								53.8
2/6/20	0					41.8	43.7	1.9	43.1
2/7/20	0	0.03	8.9	0	0				44.3
2/8/20	0.03								43.8
2/9/20	0.04								43.8
2/10/20	0								43.8
2/11/20	0.1	0.03	8.9	0	0	39.8	42.8	3.1	46.5
2/12/20	0								41.2
2/13/20	0								44.1
2/14/20	0.03	0.03	8.9	0	0	41.8	41.9	0.1	42.9
2/15/20	0.16								44.0
2/16/20	0								44.0
2/17/20	0								42.1
2/18/20	0	0.03	8.9	0	0	37.7	39.8	2	42.1
2/19/20	0.06								42.4
2/20/20	0.01								39.2
2/21/20	0.01	0.03	8.9	0	0	38.8	37.7	0	42.4
2/22/20	0								41.7
2/23/20	0.02								41.7
2/24/20	0								41.7
2/25/20	0.37								43.8
2/26/20	0.01	0.03	8.9	0	0	40.8	42.8	2.0	41.4
2/27/20	0								42.9
2/28/20	0	0.02	3.7	0	0	40.8	38.8	0	39.6
2/29/20	0								44.0

Notes:

1. Calculated PLCT flow is based on Manning's Equation:

$Q = (1.49/n)\ A\ (R_h^{2/3})(S^{1/2})$

$n = 0.018$

$S = 0.052$ for E-PLCT MH-9

2. Measured Total Pl $S = 0.035$ for W-PLCT MH-11
3. Measured Total Flow is determined by shutting off pumps, isolating Tank 1 and recording liquid level change in Tank 1 over a recorded time period.
4. WLIT Flow is calculated as the difference between the Measured Total Flow and the Measured Total PLCT Flow.

Ordot Closure Facility
Leachate Flow Monitoring

Date	Rainfall (inches)	E-PLCT MH-9		W-PLCT MH-11		Measured Total PLCT Flow[2] (gpm)	Measured Total Flow[3] (gpm)	WLIT Flow[4] (gpm)	Leachate Flow to Sewer (gpm)
		Flow Depth (feet)	Calculated Flow[1] (gpm)	Flow Depth (feet)	Calculated Flow[1] (gpm)				
3/1/20	0								39.9
3/2/20	0.01								39.9
3/3/20	0	0.03	8.9	0	0	39.8	47.9	8.2	43.3
3/4/20	0								39.7
3/5/20	0								40.5
3/6/20	0	0.03	8.9	0	0	37.7	37.7	0.0	38.6
3/7/20	0								38.6
3/8/20	0								38.6
3/9/20	0								38.6
3/10/20	0	0.03	8.9	0	0	36.7	37.7	1.0	42.1
3/11/20	0								38.4
3/12/20	0.01	0.03	8.9	0	0	37.2	35.7	0.0	40.4
3/13/20	0.12								37.2
3/14/20	0								39.1
3/15/20	0								39.1
3/16/20	0.03								39.1
3/17/20	0	0.03	8.9	0	0	37.7	36.7	0.0	37.3
3/18/20	0								38.7
3/19/20	0.01								39.0
3/20/20	0	0.03	8.9	0	0	37.7	37.7	0.0	36.1
3/21/20	0.06								38.7
3/22/20	0								38.7
3/23/20	0					34.7	36.7	2.0	39.7
3/24/20	0	0.03	8.9	0	0				36.1
3/25/20	0								39.3
3/26/20	0	0.03	8.9	0	0	34.1	39.8	5.7	40.3
3/27/20	0.16								39.4
3/28/20	0.09								38.9
3/29/20	0.05								38.9
3/30/20	0.13								38.9
3/31/20	0.35	0.03	8.9	0	0	38.8	40.8	2.0	36.1

Notes:

1. Calculated PLCT flow is based on Manning's Equation:

$Q = (1.49/n)\ A\ (R_h^{2/3})(S^{1/2})$

$n = 0.018$

$S = 0.052$ for E-PLCT MH-9

2. Measured Total Pl $S = 0.035$ for W-PLCT MH-11
3. Measured Total Flow is determined by shutting off pumps, isolating Tank 1 and recording liquid level change in Tank 1 over a recorded time period.
4. WLIT Flow is calculated as the difference between the Measured Total Flow and the Measured Total PLCT Flow.

Ordot Closure Facility
Leachate Flow Monitoring

Date	Rainfall (inches)	E-PLCT MH-9		W-PLCT MH-11		Measured Total PLCT Flow[2] (gpm)	Measured Total Flow[3] (gpm)	WLIT Flow[4] (gpm)	Leachate Flow to Sewer (gpm)
		Flow Depth (feet)	Calculated Flow[1] (gpm)	Flow Depth (feet)	Calculated Flow[1] (gpm)				
4/1/20	0								34.5
4/2/20	0.04	0.03	8.9	0	0	36.7	37.7	1.0	48.4
4/3/20	0.03								36.2
4/4/20	0								39.4
4/5/20	1.08								39.4
4/6/20	0	0.04	16.5	0	0	Not measured due to malfuntioning valve			39.4
4/7/20	0								37.5
4/8/20	0.02								40.8
4/9/20	0.05	0.04	8.9	0	0	Not measured due to malfuntioning valve			38.5
4/10/20	0								37.6
4/11/20	0								38.5
4/12/20	0								38.5
4/13/20	0								38.5
4/14/20	0	0.03	8.9	0	0				41.3
4/15/20	0								37.2
4/16/20	0.01	0.03	8.9	0	0	Not measured due to malfuntioning valve			37.9
4/17/20	0.11								40.5
4/18/20	0.19								38.4
4/19/20	0.31								38.4
4/20/20	0.06								38.4
4/21/20	0.29	0.03	8.9	0	0	Not measured due to malfuntioning valve			37.9
4/22/20	0								35.5
4/23/20	0.05	0.02	3.7	0	0	Not measured due to malfuntioning valve			40.0
4/24/20	0								34.1
4/25/20	0.13								38.0
4/26/20	0.42								38.0
4/27/20	0.11								38.0
4/28/20	0	0.02	8.9	0	0	Not measured due to malfuntioning valve			40.7
4/29/20	0.04								38.6
4/30/20	0.01	0.03	8.9	0	0	Not measured due to malfuntioning valve			37.6

Notes:

1. Calculated PLCT flow is based on Manning's Equation:

$$Q = (1.49/n)\ A\ (R_h^{2/3})(S^{1/2})$$

$n = 0.018$

$S = 0.052$ for E-PLCT MH-9

2. Measured Total Pl $S = 0.035$ for W-PLCT MH-11
3. Measured Total Flow is determined by shutting off pumps, isolating Tank 1 and recording liquid level change in Tank 1 over a recorded time period.
4. WLIT Flow is calculated as the difference between the Measured Total Flow and the Measured Total PLCT Flow.

Ordot Closure Facility
Leachate Flow Monitoring

Date	Rainfall (inches)	E-PLCT MH-9		W-PLCT MH-11		Measured Total PLCT Flow[2] (gpm)	Measured Total Flow[3] (gpm)	WLIT Flow[4] (gpm)	Leachate Flow to Sewer (gpm)
		Flow Depth (feet)	Calculated Flow[1] (gpm)	Flow Depth (feet)	Calculated Flow[1] (gpm)				
5/1/20	0								35.5
5/2/20	0.99								41.8
5/3/20	0								41.8
5/4/20	0.02								41.8
5/5/20	0.26	0.04	16.5	0	0	Not measured due to malfuntioning valve			38.9
5/6/20	0								39.7
5/7/20	0.04	0.03	8.9	0	0	Not measured due to malfuntioning valve			40.3
5/8/20	0.02								31.4
5/9/20	0								41.5
5/10/20	0.01								41.5
5/11/20	1.52								41.5
5/12/20	0.01	0.04	16.5	0	0	Not measured due to malfuntioning valve			53.9
5/13/20	0.08								43.0
5/14/20	0.07	0.04	8.9	0	0	Not measured due to malfuntioning valve			39.4
5/15/20	0.02								43.1
5/16/20	0.26								41.7
5/17/20	0.64								41.7
5/18/20	0								41.7
5/19/20	0	0.03	8.9	0	0	Not measured due to malfuntioning valve			40.8
5/20/20	0								39.6
5/21/20	0	0.03	8.9	0	0	Not measured due to malfuntioning valve			42.5
5/22/20	0								43.3
5/23/20	0.02								38.1
5/24/20	0.09								38.1
5/25/20	0.01								38.1
5/26/20	0	0.02	8.9	0	0	Not measured due to malfuntioning valve			38.1
5/27/20	0								40.9
5/28/20	0.01	0.02	3.7	0	0	Not measured due to malfuntioning valve			39.2
5/29/20	0								38.0
5/30/20	1.19								52.6
5/31/20	2.17								52.6

Notes:
1. Calculated PLCT flow is based on Manning's Equation:

$$Q = (1.49/n)\ A\ (R_h^{2/3})(S^{1/2})$$

$n = 0.018$

$S = 0.052$ for E-PLCT MH-9

2. Measured Total Pl $S = 0.035$ for W-PLCT MH-11
3. Measured Total Flow is determined by shutting off pumps, isolating Tank 1 and recording liquid level change in Tank 1 over a recorded time period.
4. WLIT Flow is calculated as the difference between the Measured Total Flow and the Measured Total PLCT Flow.

Ordot Closure Facility
Leachate Flow Monitoring

Date	Rainfall (inches)	E-PLCT MH-9		W-PLCT MH-11		Measured Total PLCT Flow[2] (gpm)	Measured Total Flow[3] (gpm)	WLIT Flow[4] (gpm)	Leachate Flow to Sewer (gpm)
		Flow Depth (feet)	Calculated Flow[1] (gpm)	Flow Depth (feet)	Calculated Flow[1] (gpm)				
6/1/20	0								52.6
6/2/20	0	0.02	8.9	0	0	Not measured due to malfuntioning valve			44.9
6/3/20	0.01								40.0
6/4/20	0.08								43.8
6/5/20	0.69								41.1
6/6/20	0.18								48.0
6/7/20	0								48.0
6/8/20	1.15								48.0
6/9/20	0.02	0.03	16.4	0	0	Not measured due to malfuntioning valve			50.7
6/10/20	0.05								50.2
6/11/20	0.56	0.03	8.9	0	0	Not measured due to malfuntioning valve			44.2
6/12/20	0.03								48.9
6/13/20	0								46.1
6/14/20	0.04								46.1
6/15/20	0.07								46.1
6/16/20	0.16	0.03	8.9	0	0	Not measured due to malfuntioning valve			47.7
6/17/20	0								43.7
6/18/20	0	0.03	3.7	0	0	Not measured due to malfuntioning valve			42.6
6/19/20	0.11								43.3
6/20/20	0								44.4
6/21/20	0.01								44.4
6/22/20	0.14								44.4
6/23/20	0.23	0.03	8.9	0	0	Not measured due to malfuntioning valve			42.7
6/24/20	0.49								39.5
6/25/20	0	0.03	8.9	0	0	Not measured due to malfuntioning valve			46.4
6/26/20	0.07								43.2
6/27/20	0.01								43.4
6/28/20	0.03								43.4
6/29/20	0.1								43.4
6/30/20	0.04	0.03	8.9	0	0	Not measured due to malfuntioning valve			44.0

Notes:

1. Calculated PLCT flow is based on Manning's Equation:

$$Q = (1.49/n)\ A\ (R_h^{2/3})(S^{1/2})$$

$n = 0.018$

$S = 0.052$ for E-PLCT MH-9

2. Measured Total Pl $S = 0.035$ for W-PLCT MH-11
3. Measured Total Flow is determined by shutting off pumps, isolating Tank 1 and recording liquid level change in Tank 1 over a recorded time period.
4. WLIT Flow is calculated as the difference between the Measured Total Flow and the Measured Total PLCT Flow.

Ordot Closure Facility
Leachate Flow Monitoring

Date	Rainfall (inches)	E-PLCT MH-9		W-PLCT MH-11		Measured Total PLCT Flow^2 (gpm)	Measured Total Flow^3 (gpm)	WLIT Flow^4 (gpm)	Leachate Flow to Sewer (gpm)
		Flow Depth (feet)	Calculated Flow^1 (gpm)	Flow Depth (feet)	Calculated Flow^1 (gpm)				
7/1/20	0.09								40.8
7/2/20	0.2	0.03	8.9	0	0	Not measured due to malfuntioning valve			43.8
7/3/20	0.09								41.8
7/4/20	0.05								41.8
7/5/20	0								41.8
7/6/20	0.01								43.1
7/7/20	0								48.5
7/8/20	0								22.0
7/9/20	0.03	0.02	8.9	0	0				39.5
7/10/20	0.25	0.03	8.9	0	0	32.7	38.8	6.1	43.0
7/11/20	0.57								41.9
7/12/20	0.09								48.1
7/13/20	0.99								40.0
7/14/20	0.24	0.04	16.5	0	0	37.7	47.9	10.2	53.7
7/15/20	0.12								46.1
7/16/20	0.17								48.4
7/17/20	0.32	0.03	8.9	0	0	31.8	44.9	13.1	30.8
7/18/20	0.49								49.6
7/19/20	0.26								49.6
7/20/20	0.15								49.6
7/21/20	0.28								38.8
7/22/20	0.08	0.03	8.9	0	0				57.0
7/23/20	0.2								48.8
7/24/20	0.09	0.03	8.9	0	0				46.3
7/25/20	0.22								51.7
7/26/20	0.4								51.7
7/27/20	0.56								57.2
7/28/20	0.02	0.04	16.5	0	0				61.1
7/29/20	0.13								50.7
7/30/20	0.09	0.03	8.9	0	0	32.6	46.9	14.3	47.5
7/31/20	0.02								48.4

Notes:

1. Calculated PLCT flow is based on Manning's Equation:

$Q = (1.49/n)\ A\ (R_h^{2/3})(S^{1/2})$

$n = 0.018$

$S = 0.052$ for E-PLCT MH-9

2. Measured Total Pl $S = 0.035$ for W-PLCT MH-11
3. Measured Total Flow is determined by shutting off pumps, isolating Tank 1 and recording liquid level change in Tank 1 over a recorded time period.
4. WLIT Flow is calculated as the difference between the Measured Total Flow and the Measured Total PLCT Flow.

Ordot Closure Facility
Leachate Flow Monitoring

		E-PLCT MH-9		W-PLCT MH-11					
Date	Rainfall (inches)	Flow Depth (feet)	Calculated Flow[1] (gpm)	Flow Depth (feet)	Calculated Flow[1] (gpm)	Measured Total PLCT Flow[2] (gpm)	Measured Total Flow[3] (gpm)	WLIT Flow[4] (gpm)	Leachate Flow to Sewer (gpm)
8/1/20	0								48.7
8/2/20	0.02								48.7
8/3/20	0.75								45.6
8/4/20	0.16	0.04	16.5	0	0	24.5	52.0	27.5	52.7
8/5/20	0.23								50.0
8/6/20	0.05	0.03	8.9	0	0	37.7	47.9	10.2	50.6
8/7/20	0.1								48.2
8/8/20	0.05								46.9
8/9/20	0.98								46.9
8/10/20	0.19								46.9
8/11/20	0.21	0.03	8.9	0	0	32.6	49.0	16.4	50.4
8/12/20	1.4								44.8
8/13/20	0.45	0.05	26.6	0.03	2.9	55.1	53.0	0.0	67.0
8/14/20	0								64.8
8/15/20	0.55								58.8
8/16/20	1.23								58.8
8/17/20	0.01								58.8
8/18/20	0.2	0.03	16.5	0	0	36.9	53.0	16.2	54.1
8/19/20	0.62								37.2
8/20/20	0.26	0.03	8.9	0	0	39.2	55.1	15.9	58.8
8/21/20	0.01								48.9
8/22/20	0.15								50.2
8/23/20	0.75								50.2
8/24/20	0.75								50.2
8/25/20	0	0.04	16.5	0	0	24.3	50.0	25.7	58.2
8/26/20	0.02								55.6
8/27/20	4.65	0.03	8.9	0	0	15.3	44.9	29.6	49.7
8/28/20	1.66	0.10	92.5	0.09	30.1	40.8	108.5	67.7	80.0
8/29/20	1.39								89.7
8/30/20	0.01								68.3
8/31/20	0.09								68.3

Notes:

1. Calculated PLCT flow is based on Manning's Equation:

$Q = (1.49/n)\ A\ (R_h^{2/3})(S^{1/2})$

$n = 0.018$

$S = 0.052$ for E-PLCT MH-9

2. Measured Total Pl $S = 0.035$ for W-PLCT MH-11
3. Measured Total Flow is determined by shutting off pumps, isolating Tank 1 and recording liquid level change in Tank 1 over a recorded time period.
4. WLIT Flow is calculated as the difference between the Measured Total Flow and the Measured Total PLCT Flow.

Ordot Closure Facility
Leachate Flow Monitoring

Date	Rainfall (inches)	E-PLCT MH-9		W-PLCT MH-11		Measured Total PLCT Flow[2] (gpm)	Measured Total Flow[3] (gpm)	WLIT Flow[4] (gpm)	Leachate Flow to Sewer (gpm)
		Flow Depth (feet)	Calculated Flow[1] (gpm)	Flow Depth (feet)	Calculated Flow[1] (gpm)				
9/1/20	0	0.04	16.5	0	0				56.0
9/2/20	0					27.5	64.3	36.8	55.7
9/3/20	0.03	0.03	8.9	0	0	56.6	53.5	0.0	61.0
9/4/20	0.46								58.6
9/5/20	0.01								61.0
9/6/20	0.47								61.0
9/7/20	0.09								61.0
9/8/20	0.01								41.4
9/9/20	0.1	0.03	8.9	0	0	38.2	49.0	10.8	71.8
9/10/20	0.68								59.2
9/11/20	0.05	0.04	16.5	0	0	34.7	41.3	6.6	56.0
9/12/20	0.13								56.3
9/13/20	0.07								56.3
9/14/20	1.83								56.3
9/15/20	0.07								73.1
9/16/20	0.91	0.1	115.4	0.09	30.09	53.0	60.2	7.2	56.9
9/17/20	2.9	0.09	92.5	0.08	23.47	61.2	100.5	39.3	76.6
9/18/20	0.06								105.3
9/19/20	0.44								59.6
9/20/20	0.18								59.6
9/21/20	2.13								59.1
9/22/20	0.02	0.05	26.6	0	0				85.1
9/23/20	0.48								82.2
9/24/20	0.09	0.03	16.5	0	0	58.1	64.3	6.2	72.1
9/25/20	0.03								66.0
9/26/20	0								68.4
9/27/20	0.23								68.4
9/28/20	0.04								68.4
9/29/20	0.26	0.04	16.5	0	0	73.4	69.4	0.0	67.8
9/30/20	0.89								68.1

Notes:

1. Calculated PLCT flow is based on Manning's Equation:

$$Q = (1.49/n)\ A\ (R_h^{2/3})(S^{1/2})$$

$n = 0.018$

$S = 0.052$ for E-PLCT MH-9

2. Measured Total Pl $S = 0.035$ for W-PLCT MH-11
3. Measured Total Flow is determined by shutting off pumps, isolating Tank 1 and recording liquid level change in Tank 1 over a recorded time period.
4. WLIT Flow is calculated as the difference between the Measured Total Flow and the Measured Total PLCT Flow.

Ordot Closure Facility
Leachate Flow Monitoring

Date	Rainfall (inches)	E-PLCT MH-9		W-PLCT MH-11		Measured Total PLCT Flow[2] (gpm)	Measured Total Flow[3] (gpm)	WLIT Flow[4] (gpm)	Leachate Flow to Sewer (gpm)
		Flow Depth (feet)	Calculated Flow[1] (gpm)	Flow Depth (feet)	Calculated Flow[1] (gpm)				
10/1/20	0.02	0.05	26.6	0	0	61.2	74.7	13.5	74.3
10/2/20	0.12								74.6
10/3/20	0.43								67.7
10/4/20	0.01								67.7
10/5/20	0								67.7
10/6/20	1.41	0.06	39.2	0	0	74.3	75.0	0.7	70.2
10/7/20	0.61								74.9
10/8/20	0.3	0.04	16.5	0	0	71.0	69.5	0.0	84.0
10/9/20	1.35								67.6
10/10/20	0.45								84.1
10/11/20	2.77								84.1
10/12/20	0.01								102.0
10/13/20	0	0.05	26.6	0	0	50.0	71.4	21.4	88.0
10/14/20	0.33								74.4
10/15/20	0.19								73.8
10/16/20	0.13	0.04	16.5	0	0	52.0	73.4	21.4	73.2
10/17/20	0.47								79.6
10/18/20	0.47								79.6
10/19/20	0.71								82.1
10/20/20	0.33	0.05	26.6	0.02	2.9	71.4	82.6	11.2	82.1
10/21/20	0.36								80.3
10/22/20	0.91	0.04	16.5	0.03	2.9	67.3	90.8	23.5	77.8
10/23/20	0.06								86.9
10/24/20	0.93								83.0
10/25/20	0.18								83.0
10/26/20	1.45								82.3
10/27/20	0.4	0.06	39.2	0.04	8.64	73.4	95.9	22.5	99.3
10/28/20	0.01								89.5
10/29/20	0.34	0.04	16.5	0.01	1.21	61.2	77.5	16.3	79.4
10/30/20	0.66								78.5
10/31/20	0.02								81.4

Notes:
1. Calculated PLCT flow is based on Manning's Equation:

$$Q = (1.49/n)\ A\ (R_h^{2/3})(S^{1/2})$$

$n = 0.018$

$S = 0.052$ for E-PLCT MH-9

2. Measured Total Pl $S = 0.035$ for W-PLCT MH-11
3. Measured Total Flow is determined by shutting off pumps, isolating Tank 1 and recording liquid level change in Tank 1 over a recorded time period.
4. WLIT Flow is calculated as the difference between the Measured Total Flow and the Measured Total PLCT Flow.

Ordot Closure Facility
Leachate Flow Monitoring

Date	Rainfall (inches)	E-PLCT MH-9		W-PLCT MH-11		Measured Total PLCT Flow[2] (gpm)	Measured Total Flow[3] (gpm)	WLIT Flow[4] (gpm)	Leachate Flow to Sewer (gpm)
		Flow Depth (feet)	Calculated Flow[1] (gpm)	Flow Depth (feet)	Calculated Flow[1] (gpm)				
11/1/20	0.03								81.4
11/2/20	0.11								81.4
11/3/20	0.01	0.03	8.9	0	0	54.9	77.5	22.6	77.0
11/4/20	0.27								75.7
11/5/20	1.46								75.4
11/6/20	0.19	0.04	16.5	0.01	0	54.8	79.9	25.1	90.2
11/7/20	0.20								74.1
11/8/20	0.14								74.1
11/9/20	0.23								74.1
11/10/20	0.01	0.03	8.9	0	0	50	69.4	19.4	67.9
11/11/20	0.85								72.6
11/12/20	0.15	0.03	8.9	0	0	51.4	68.5	17.1	74.9
11/13/20	0.06								71.2
11/14/20	0.02								67.2
11/15/20	0.54								67.2
11/16/20	0.03								68.7
11/17/20	0.90	0.04	16.5	0.02	1.21	53	72.4	19.4	63.3
11/18/20	0.08								73.0
11/19/20	0.00	0.03	8.9	0	0	49.3	55.1	5.8	63.7
11/20/20	0.00								60.2
11/21/20	0.14								62.7
11/22/20	0.09								62.7
11/23/20	0.26								58.2
11/24/20	0.61	0.03	8.9	0	0	52	60.2	8.2	61.6
11/25/20	0.66								62.6
11/26/20	0.03								64.0
11/27/20	0.79								64.0
11/28/20	1.74								64.0
11/29/20	0.24								69.3
11/30/20	0.61								69.3

Notes:
1. Calculated PLCT flow is based on Manning's Equation:

$$Q = (1.49/n)\ A\ (R_h^{2/3})(S^{1/2})$$

$n = 0.018$

$S = 0.052$ for E-PLCT MH-9

2. Measured Total Pl S = 0.035 for W-PLCT MH-11
3. Measured Total Flow is determined by shutting off pumps, isolating Tank 1 and recording liquid level change in Tank 1 over a recorded time period.
4. WLIT Flow is calculated as the difference between the Measured Total Flow and the Measured Total PLCT Flow.

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Ordot Closure Facility
Leachate Flow Monitoring

Date	Rainfall (inches)	E-PLCT MH-9		W-PLCT MH-11		Measured Total PLCT Flow[2] (gpm)	Measured Total Flow[3] (gpm)	WLIT Flow[4] (gpm)	Leachate Flow to Sewer (gpm)
		Flow Depth (feet)	Calculated Flow[1] (gpm)	Flow Depth (feet)	Calculated Flow[1] (gpm)				
12/1/20	0.16	0.05	26.6	0	0				61.0
12/2/20	0.00								67.1
12/3/20	0.67	0.05	26.6	0	0				89.2
12/4/20	0.15								91.1
12/5/20	0.01								69.1
12/6/20	0.25								69.1
12/7/20	0.71								69.1
12/8/20	0.34	0.06	39.2	0.03	2.9	63.2	80.6	17.4	76.7
12/9/20	1.17								79.3
12/10/20	0.06	0.06	39.2	0.02	1.2	63.2	77.5	14.3	76.8
12/11/20	0.00								79.4
12/12/20	0.08								73.8
12/13/20	0.36								73.8
12/14/20	0.74								71.3
12/15/20	0.19	0.04	16.5	0	0	50	75.1	25.1	85.0
12/16/20	0.00								69.6
12/17/20	0.05	0.03	8.9	0	0	54.1	67.3	13.2	68.6
12/18/20	0.14								67.3
12/19/20	0.00								67.5
12/20/20	0.42								67.5
12/21/20	0.00	0.03	8.9	0	0	60.2	66.3	6.1	67.5
12/22/20	0.00								63.9
12/23/20	0.42								61.8
12/24/20	0.03								57.8
12/25/20	0.00								57.8
12/26/20	0.05								57.8
12/27/20	0.11								57.8
12/28/20	0.27								57.8
12/29/20	0.00	0.02	3.7	0	0	60.2	53.5	0.0	55.3
12/30/20	0.00								51.5
12/31/20	0.00								52.3

Notes:

1. Calculated PLCT flow is based on Manning's Equation:

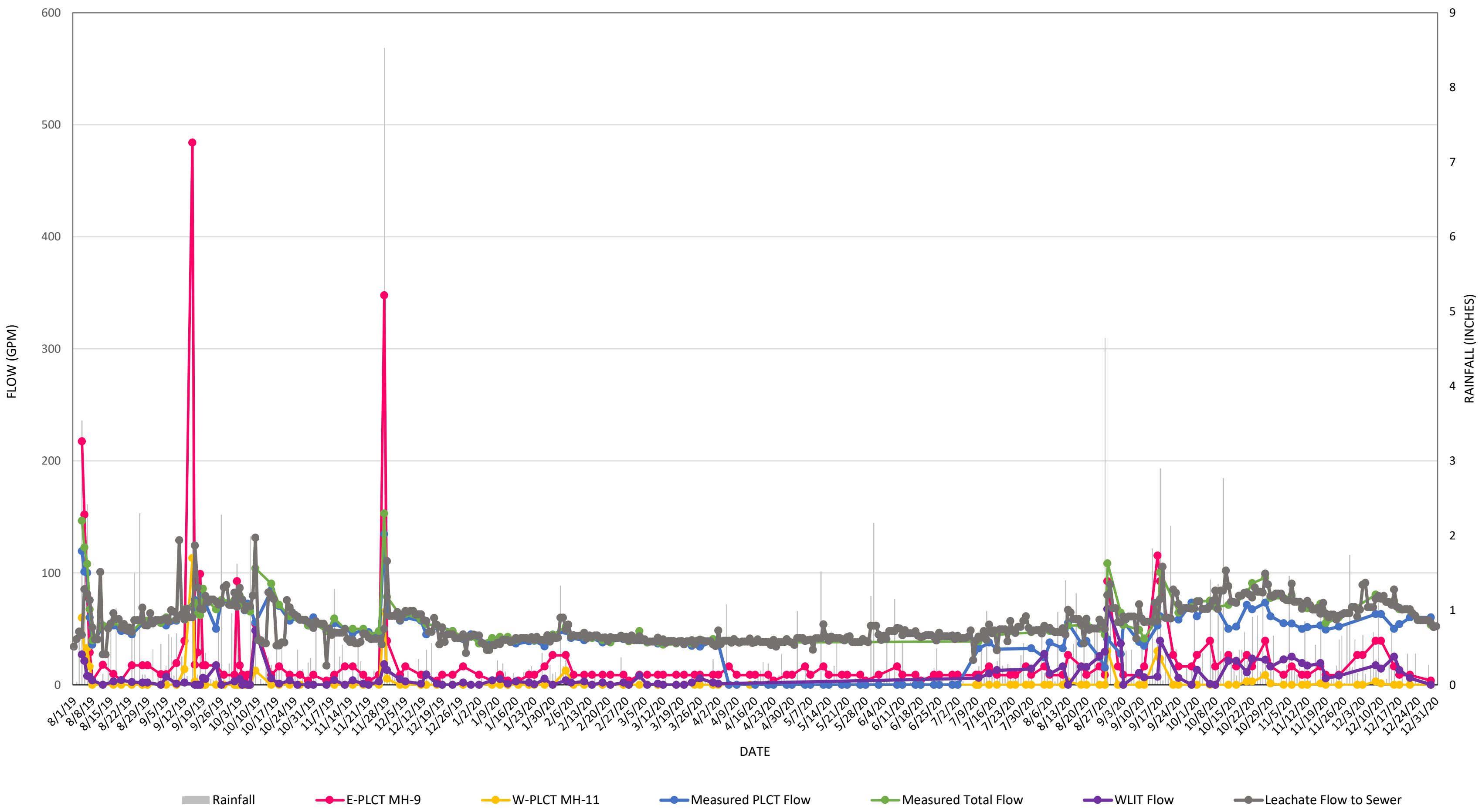
$Q = (1.49/n)\ A\ (R_h^{2/3})(S^{1/2})$

$n = 0.018$

$S = 0.052$ for E-PLCT MH-9

2. Measured Total Pl S = 0.035 for W-PLCT MH-11
3. Measured Total Flow is determined by shutting off pumps, isolating Tank 1 and recording liquid level change in Tank 1 over a recorded time period.
4. WLIT Flow is calculated as the difference between the Measured Total Flow and the Measured Total PLCT Flow.

Ordot Closure Facility
Leachate Flow Monitoring



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Ordot Closure Facility

EXHIBIT 2B

Depth of flow in Manholes (ft)

Date	MH-2	MH-3	MH-4	MH-5	MH-6	MH-7	MH-8	MH-9	MH-10 east	MH-10 west	MH-11	MH-12	MH-13	MH-14	MH-15	MH-16	MH-17	MH-1
8/12/2019				no flow	0.02	0.01	0.03	0.04		no flow								
8/16/2019			no flow	0.01	0.03	0.03	0.03	0.03	0.03	no flow								
8/19/2019			no flow	0.01	0.02	0.01	0.03	0.02	0.03	no flow								
8/23/2019			no flow	0.01	0.02	0.03	0.03	0.04	0.04	no flow								
8/27/2019			no flow	0.02	0.02	0.03	0.04	0.04	0.05	no flow								
8/29/2019				no flow	0.02	0.02	0.03	0.04	0.05	no flow								
9/3/2019				no flow	0.01	0.02	0.03	0.03	0.04	no flow								
9/5/2019			no flow	0.01	0.01	0.02	0.03	0.03	0.05	no flow								
9/12/2019	no flow	0.01	0.07	0.04	0.05	0.05	0.07	0.06	0.10	0.06	0.06	0.03	0.03	0.02	no flow			
9/15/2019	0.02	0.02	0.06	0.10	0.11	0.11	0.14	0.20	0.24	0.20	0.17	0.10	0.10	0.07	0.10	0.09	0.08	0.03
9/16/2019	no flow	0.02	0.04	0.04	0.04	0.06	0.08	0.04	0.09	0.08	0.03	0.02	0.01	0.01	no flow			
9/17/2019		no flow	0.03	0.04	0.03	0.05	0.05	0.05	0.08	no flow								
9/18/2019			no flow	0.02	0.05	0.07	0.08	0.09	0.10	no flow								
9/19/2019		no flow	0.02	0.03	0.03	0.05	0.06	0.04	0.05	no flow								
9/20/2019			no flow	0.04	0.04	0.04	0.06	0.07	0.07	no flow								
9/24/2019			no flow	0.02	0.02	0.03	0.04	0.04	0.07	no flow								
9/27/2019		no flow	0.04	0.05	0.05	0.05	0.07	0.07	0.08	0.06	0.03	0.03	0.01	no flow				
10/1/2019		no flow	0.01	0.02	0.03	0.04	0.04	0.04	0.05	no flow								
10/2/2019	0.02	0.03	0.05	0.09	0.09	0.09	0.09	0.09	0.15	0.10	n/a	0.04	0.04	0.03	0.03	0.03	0.02	0.01
10/3/2019			no flow	0.03	0.03	0.04	0.04	0.04	0.06	no flow								
10/4/2019		no flow	0.03	0.03	0.04	0.04	0.04	0.04	0.04	no flow								
10/5/2019			no flow	0.02	0.02	0.03	0.04	0.04	0.05	no flow								0.01
10/6/2019		no flow	0.01	0.01	0.01	0.01	0.03	0.03	0.03	no flow								
10/7/2019			no flow	0.02	0.02	0.03	0.03	0.03	0.03	no flow								
10/9/2019		no flow	0.06	0.08	0.08	0.08	0.09	0.07	0.10	0.08	0.06	0.05	0.04	0.03	0.02	0.03	0.03	no flow
10/15/2019		no flow	0.02	0.03	0.04	0.04	0.05	0.03	0.05	no flow								
10/18/2019		no flow	0.02	0.02	0.03	0.03	0.04	0.04	0.04	no flow								
10/22/2019		no flow	0.01	0.02	0.03	0.03	0.04	0.04	0.04	no flow								
10/25/2019			no flow	0.02	0.02	0.03	0.03	0.03	0.04	no flow								
10/29/2019			no flow	0.02	0.02	0.02	0.03	0.04	0.04	no flow								
10/31/2019			no flow	0.02	0.02	0.03	0.03	0.03	0.04	no flow								
11/5/2019			no flow	0.01	0.01	0.02	0.02	0.02	0.04	no flow								
11/8/2019			no flow	0.02	0.02	0.03	0.04	0.03	0.05	no flow								
11/12/2019			no flow	0.02	0.02	0.03	0.03	0.04	0.05	no flow								
11/15/2019			no flow	0.01	0.01	0.02	0.02	0.02	0.04	no flow								
11/19/2019				no flow	0.01	0.01	0.03	0.03	0.04	no flow								
11/21/2019				no flow	0.01	0.02	0.02	0.02	0.03	no flow								
11/25/2019			no flow	0.01	0.02	0.02	0.03	0.03	0.04	no flow								
11/27/2019		no flow	0.04	0.08	0.08	0.09	0.09	0.17	0.25	0.25	0.13	0.06	0.07	0.05	0.04	0.05	0.04	0.03
11/28/2019		no flow	0.03	0.04	0.03	0.05	0.07	0.06	0.05	0.11	0.04	0.03	0.03	0.03	0.02	0.03	no flow	
12/3/2019			no flow	0.02	0.02	0.03	0.03	0.03	0.06	no flow								
12/5/2019			no flow	0.02	0.03	0.04	0.04	0.04	0.04	no flow								
12/11/2019				no flow	0.02	0.02	0.03	0.03	0.04	no flow								
12/13/2019			no flow	0.02	0.02	0.03	0.04	0.03	0.04	no flow								
12/17/2019				no flow	0.02	0.02	0.03	0.02	0.03	no flow								
12/19/2019			no flow	0.01	0.02	0.02	0.03	0.03	0.04	no flow								
12/23/2019			no flow	0.01	0.02	0.02	0.02	0.03	0.03	no flow								
12/27/2019			no flow	0.02	0.03	0.03	0.03	0.04	0.04	no flow								

Depth of flow in Manholes (ft)

Date	MH-2	MH-3	MH-4	MH-5	MH-6	MH-7	MH-8	MH-9	MH-10 east	MH-10 west	MH-11	MH-12	MH-13	MH-14	MH-15	MH-16	MH-17	MH-1
1/2/2020			no flow	0.01	0.02	0.03	0.02	0.03	0.04	no flow								
1/7/2020			no flow	0.01	0.02	0.02	0.02	0.02	0.03	no flow								
1/10/2020			no flow	0.02	0.02	0.03	0.04	0.03	0.04	no flow								
1/13/2020				no flow	0.02	0.03	0.03	0.02	0.04	no flow								
1/17/2020				no flow	0.01	0.02	0.02	0.02	0.03	no flow								
1/21/2020			no flow	0.01	0.02	0.03	0.03	0.03	0.04	no flow								
1/23/2020			no flow	0.01	0.02	0.02	0.03	0.03	0.04	no flow								
1/27/2020				no flow	.02.01	0.02	0.03	0.03	0.04	no flow								
1/30/2020			no flow	0.01	0.02	0.03	0.03	0.03	0.05	no flow								
2/4/2020	no flow	0.01	0.02	0.03	0.03	0.04	0.04	0.05	0.08	0.06	0.05	0.03	0.03	no flow				
2/7/2020				no flow	0.01	0.02	0.03	0.03	0.04	no flow								
2/11/2020				no flow	0.02	0.03	0.03	0.03	0.04	no flow								
2/14/2020					no flow	0.02	0.03	0.03	0.04	no flow								
2/18/2020				no flow	0.01	0.01	0.02	0.03	0.04	no flow								
2/21/2020					no flow	0.02	0.03	0.03	0.04	no flow								
2/26/2020				no flow	0.01	0.02	0.02	0.03	0.04	no flow								
2/28/2020					no flow	0.01	0.02	0.02	0.03	no flow								
3/3/2020					no flow	0.01	0.02	0.03	0.03	no flow								
3/6/2020					no flow	0.01	0.02	0.03	0.03	no flow								
3/10/2020				no flow	0.01	0.02	0.03	0.03	0.03	no flow								
3/12/2020				no flow	0.01	0.02	0.03	0.03	0.03	no flow								
3/17/2020				no flow	0.01	0.01	0.02	0.03	0.03	no flow								
3/20/2020				no flow	0.01	0.02	0.02	0.03	0.03	no flow								
3/24/2020					no flow	0.01	0.02	0.03	0.03	no flow								
3/26/2020				no flow	0.01	0.02	0.02	0.03	0.03	no flow								
3/31/2020			no flow	0.01	0.02	0.02	0.03	0.03	0.04	no flow								
4/2/2020			no flow	0.01	0.01	0.02	0.03	0.03	0.04	no flow								
4/6/2020				no flow	0.02	0.02	0.03	0.04	0.04	no flow								
4/9/2020					no flow	0.02	0.02	0.03	0.03	no flow								
4/14/2020					no flow	0.02	0.02	0.03	0.03	no flow								
4/16/2020				no flow	0.01	0.02	0.03	0.03	0.04	no flow								
4/21/2020					no flow	0.02	0.02	0.03	0.03	no flow								
4/23/2020					no flow	0.01	0.02	0.02	0.03	no flow								
4/28/2020					no flow	0.01	0.02	0.02	0.03	no flow								
4/30/2020				no flow	0.01	0.01	0.02	0.03	0.04	no flow								
5/5/2020				no flow	0.02	0.03	0.03	0.04	0.04	no flow								
5/7/2020					no flow	0.02	0.02	0.03	0.03	no flow								
5/12/2020			no flow	0.01	0.02	0.02	0.03	0.04	0.04	no flow								
5/14/2020			no flow	0.01	0.02	0.02	0.03	0.04	0.04	no flow								
5/19/2020			no flow	0.01	0.02	0.02	0.03	0.03	0.04	no flow								
5/21/2020				no flow	0.01	0.02	0.02	0.03	0.03	no flow								
5/26/2020				no flow	0.01	0.02	0.02	0.02	0.03	no flow								
5/28/2020				no flow	0.01	0.01	0.02	0.02	0.03	no flow								
6/2/2020			no flow	0.01	0.01	0.02	0.02	0.02	0.03	no flow								
6/9/2020			no flow	0.01	0.02	0.02	0.03	0.03	0.04	no flow								
6/11/2020				no flow	0.01	0.02	0.02	0.03	0.03	no flow								
6/16/2020				no flow	0.01	0.02	0.02	0.03	0.03	no flow								
6/18/2020				no flow	0.01	0.02	0.02	0.03	0.03	no flow								
6/23/2020				no flow	0.01	0.02	0.02	0.03	0.03	no flow								
6/25/2020				no flow	0.01	0.02	0.02	0.03	0.03	no flow								
6/30/2020				no flow	0.01	0.02	0.02	0.03	0.03	no flow								

Depth of flow in Manholes (ft)

Date	MH-2	MH-3	MH-4	MH-5	MH-6	MH-7	MH-8	MH-9	MH-10 east	MH-10 west	MH-11	MH-12	MH-13	MH-14	MH-15	MH-16	MH-17	MH-1
7/2/2020				no flow	0.01	0.02	0.02	0.03	0.03	no flow								
7/9/2020					no flow	0.01	0.02	0.02	0.03	no flow								
7/10/2020				no flow	0.01	0.02	0.02	0.03	0.03	no flow								
7/14/2020			no flow	0.01	0.02	0.02	0.03	0.04	0.04	no flow								
7/17/2020				no flow	0.01	0.02	0.02	0.03	0.03	no flow								
7/22/2020				no flow	0.01	0.02	0.02	0.03	0.03	no flow								
7/24/2020				no flow	0.01	0.02	0.02	0.03	0.03	no flow								
7/28/2020			no flow	0.02	0.02	0.03	0.03	0.04	0.04	no flow								
7/30/2020				no flow	0.01	0.02	0.02	0.03	0.03	no flow								
8/4/2020			no flow	0.02	0.02	0.02	0.03	0.04	0.04	no flow								
8/6/2020				no flow	0.01	0.02	0.02	0.03	0.03	no flow								
8/11/2020				no flow	0.02	0.03	0.03	0.03	0.04	no flow								
8/13/2020		no flow	0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.05	0.03	0.02	0.02	0.02	no flow			
8/18/2020			no flow	0.01	0.02	0.02	0.03	0.03	0.04	no flow								
8/20/2020			no flow	0.01	0.02	0.02	0.03	0.03	0.04	no flow								
8/25/2020			no flow	0.02	0.02	0.03	0.03	0.04	0.04	no flow								
8/27/2020			no flow	0.01	0.02	0.02	0.03	0.03	0.03	no flow								
8/28/2020	no flow	0.01	0.02	0.06	0.7	0.7	0.9	0.1	0.12	0.12	0.09	0.04	0.04	0.04	0.03	0.03	0.02	
9/1/2020			no flow	0.01	0.02	0.03	0.03	0.04	0.05	no flow								
9/3/2020				no flow	0.01	0.02	0.02	0.03	0.03	no flow								
9/9/2020			no flow	0.01	0.02	0.02	0.03	0.03	0.04	no flow								
9/11/2020			no flow	0.02	0.02	0.03	0.03	0.04	0.05	no flow								
9/16/2020		no flow	0.03	0.05	0.07	0.07	0.08	0.1	0.13	0.12	0.09	0.07	0.06	0.04	0.04	0.03	0.02	
9/17/2020		no flow	0.02	0.04	0.06	0.06	0.07	0.09	0.12	0.1	0.08	0.05	0.05	0.04	0.04	0.02	0.01	
9/22/2020		no flow	0.01	0.02	0.03	0.04	0.04	0.05	0.07	no flow								
9/24/2020		no flow	0.01	0.02	0.02	0.02	0.03	0.03	0.03	no flow								
9/29/2020				no flow	0.02	0.02	0.03	0.04	0.04	no flow								
10/1/2020			no flow	0.02	0.03	0.04	0.04	0.05	0.06	no flow								
10/6/2020			no flow	0.02	0.03	0.05	0.05	0.06	0.09	no flow								
10/8/2020			no flow	0.02	0.02	0.03	0.03	0.04	0.05	no flow								
10/13/2020			no flow	0.02	0.03	0.04	0.04	0.05	0.05	no flow								
10/16/2020			no flow	0.02	0.02	0.03	0.03	0.04	0.05	no flow								
10/20/2020		no flow	0.01	0.02	0.03	0.03	0.04	0.05	0.07	0.03	0.02	0.02	0.01	no flow				
10/22/2020		no flow	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.03	0.03	0.02	0.02	no flow				
10/27/2020			0.01	0.02	0.03	0.03	0.05	0.06	0.06	0.05	0.04	0.03	0.02	0.02	0.01	0.01	0.01	
10/29/2020		no flow	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.02	0.01	0.01	no flow					
11/3/2020			no flow	0.01	0.02	0.02	0.03	0.03	0.04	no flow								
11/6/2020			no flow	0.01	0.02	0.03	0.03	0.04	0.05	0.02	0.01	0.01	no flow					
11/10/2020				no flow	0.01	0.02	0.02	0.03	0.03	no flow								
11/12/2020			no flow	0.01	0.02	0.02	0.02	0.03	0.03	no flow								
11/17/2020			no flow	0.02	0.02	0.03	0.03	0.04	0.04	0.3	0.02	0.02	no flow					
11/19/2020				no flow	0.01	0.02	0.02	0.03	0.04	no flow								
11/24/2020			no flow	0.01	0.02	0.02	0.02	0.03	0.04	no flow								
12/1/2020			no flow	0.02	0.03	0.04	0.04	0.05	0.07	no flow								
12/3/2020		no flow	0.02	0.03	0.04	0.05	0.05	0.05	0.07	no flow								
12/8/2020		no flow	0.02	0.03	0.04	0.04	0.05	0.06	0.07	0.03	0.03	0.02	0.02	0.02	no flow			
12/10/2020		no flow	0.01	0.02	0.04	0.04	0.05	0.06	0.06	0.02	0.02	0.02	0.02	0.01	no flow			
12/15/2020			no flow	0.01	0.02	0.03	0.03	0.04	0.05	no flow								
12/17/2020			no flow	0.01	0.02	0.02	0.03	0.03	0.04	no flow								
12/21/2020			no flow	0.01	0.02	0.02	0.03	0.03	0.04	no flow								
12/29/2020			no flow	0.01	0.01	0.02	0.02	0.02	0.03	no flow								

Ordot Closure Facility

EXHIBIT 2C

Leachate Elevations (ft)

Date	GV 1-2 Elevation	GV 1-8 Elevation	GV 1-11 Elevation	GV 2-9 Elevation
8/12/2019	261.47	209.21	334.08	186.28
8/16/2019	261.37	209.37	319.03	186.37
8/19/2019	261.37	209.18	319.05	186.28
8/27/2019	262.31	209.21	329.02	186.82
9/3/2019	261.47	210.67	318.78	186.26
9/9/2019	261.57	209.57	319.08	186.03
9/17/2019	261.42	210.58	319.08	186.21
9/24/2019	261.55	208.09	319.09	185.96
10/1/2019	261.42	210.57	319.07	186.22
10/7/2019	261.49	210.59	319.09	185.77
10/18/2019	261.42	210.51	318.83	185.98
10/22/2019	261.38	210.57	318.50	186.26
10/29/2019	261.42	210.88	318.93	185.68
11/5/2019	261.22	210.49	318.48	186.19
11/12/2019	261.37	210.54	318.60	181.88
11/21/2019	261.37	210.50	318.48	Dry
11/25/2019	261.53	210.53	320.08	Dry
12/3/2019	261.35	210.58	318.73	179.48
12/13/2019	261.39	210.54	319.23	179.63
12/17/2019	261.40	210.18	318.73	186.26
12/27/2019	261.45	210.54	318.82	188.08
1/2/2020	261.07	210.57	318.81	Dry
1/7/2020	261.12	210.58	318.83	186.02
1/17/2020	261.45	210.75	318.63	186.24
1/23/2020	261.09	210.56	318.69	186.28
1/30/2020	261.47	210.55	318.72	186.13
2/4/2020	261.48	210.61	319.37	186.08
2/14/2020	261.42	210.82	318.61	186.28
2/18/2020	262.02	210.60	318.73	186.28
2/26/2020	261.79	210.65	318.82	186.37

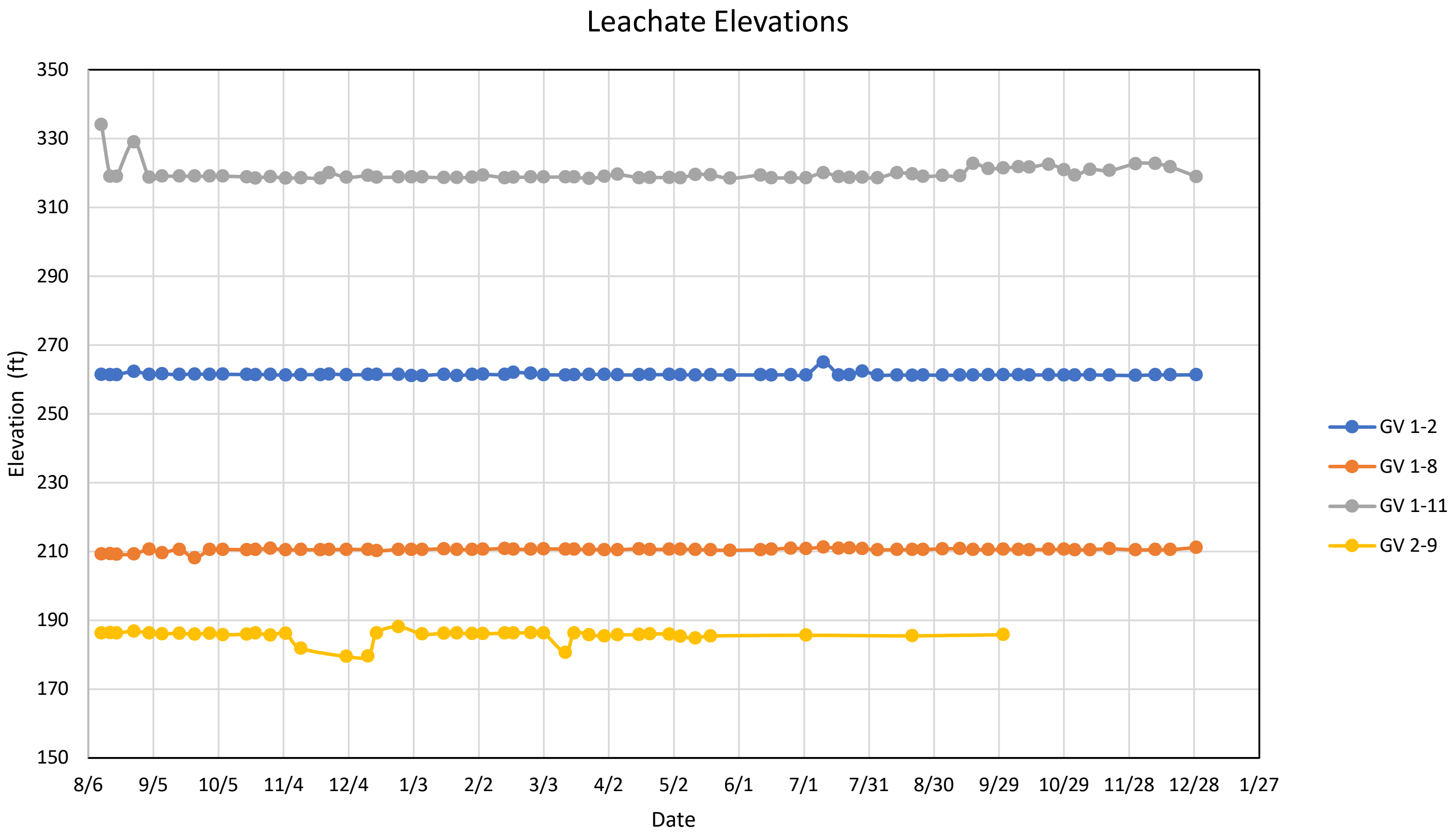
Leachate Elevations (ft)

Date	GV 1-2 Elevation	GV 1-8 Elevation	GV 1-11 Elevation	GV 2-9 Elevation
3/3/2020	261.35	210.73	318.82	186.28
3/13/2020	261.28	210.64	318.83	180.66
3/17/2020	261.35	210.61	318.80	186.30
3/24/2020	261.45	210.58	318.44	185.75
3/31/2020	261.40	210.50	318.97	185.41
4/6/2020	261.31	210.47	319.58	185.74
4/16/2020	261.31	210.77	318.61	185.84
4/21/2020	261.40	210.59	318.69	186.01
4/30/2020	261.39	210.60	318.64	185.98
5/5/2020	261.37	210.68	318.54	185.31
5/12/2020	261.30	210.52	319.54	184.83
5/19/2020	261.33	210.43	319.44	185.45
5/28/2020	261.30	210.31	318.47	Dry
6/11/2020	261.33	210.51	319.36	Dry
6/16/2020	261.26	210.61	318.58	Dry
6/25/2020	261.37	210.94	318.65	Dry
7/2/2020	261.27	210.82	318.58	185.67
7/10/2020	264.98	211.22	320.04	Dry
7/17/2020	261.26	210.88	318.88	Dry
7/22/2020	261.32	210.96	318.67	Dry
7/28/2020	262.37	210.80	318.74	Dry
8/4/2020	261.26	210.50	318.58	Dry
8/13/2020	261.27	210.52	320.03	Dry
8/20/2020	261.20	210.53	319.66	185.48
8/25/2020	261.25	210.58	318.98	Dry
9/3/2020	261.25	210.73	319.23	Dry
9/11/2020	261.24	210.81	319.22	Dry
9/17/2020	261.27	210.59	322.73	Dry
9/24/2020	261.31	210.53	321.30	Dry

Ordot Closure Facility

Leachate Elevations (ft)

Date	GV 1-2 Elevation	GV 1-8 Elevation	GV 1-11 Elevation	GV 2-9 Elevation
10/1/2020	261.32	210.60	321.44	185.83
10/8/2020	261.32	210.59	321.79	Dry
10/13/2020	261.27	210.49	321.66	Dry
10/22/2020	261.32	210.61	322.46	Dry
10/29/2020	261.25	210.60	320.93	Dry
11/3/2020	261.29	210.49	319.33	Dry
11/10/2020	261.35	210.51	321.02	Dry
11/19/2020	261.22	210.78	320.71	Dry
12/1/2020	261.16	210.44	322.70	Dry
12/10/2020	261.32	210.53	322.73	Dry
12/17/2020	261.32	210.54	321.75	Dry
12/29/2020	261.35	211.15	318.94	Dry



Note: GV 2-9 was dry on 11/21/19, 11/25/19, 1/2/20, 5/28/20, 6/11/20, 6/16/20, 6/25/20, 7/10/20, 7/17/20, 7/22/20, 7/28/20, 8/4/20, 8/13/20, 8/25/20, 9/3/20, 9/11/20, 9/17/20, 9/24/20, 10/8/20, 10/13/20, 10/22/20, 10/29/20, 11/3/20, 11/10/20, 11/19/20, 12/1/20, 12/10/20, 12/17/20, and 12/19/20.

Brown AND Caldwell

Ordot Closure Facility
Water Elevations

EXHIBIT 2D

Date	MW-13 Water Elevation (ft)	MW-12 Water Elevation (ft)	Pond 1 Elevation (ft)
8/1/19			
8/2/19			
8/3/19			
8/4/19	189.0	134.8	
8/5/19	190.1	134.9	
8/6/19	190.9	135.0	
8/7/19	191.3	134.7	194.8
8/8/19	191.2	134.2	194.8
8/9/19			
8/10/19			
8/11/19			
8/12/19	190.5	134.1	194.8
8/13/19			
8/14/19			
8/15/19			
8/16/19	190.6	134.2	194.8
8/17/19			
8/18/19			
8/19/19	190.7	134.2	194.8
8/20/19			
8/21/19			
8/22/19			
8/23/19			
8/24/19			
8/25/19			
8/26/19			
8/27/19	192.1	134.6	194.8
8/28/19			
8/29/19			
8/30/19			
8/31/19			

Ordot Closure Facility
Water Elevations

Date	MW-13 Water Elevation (ft)	MW-12 Water Elevation (ft)	Pond 1 Elevation (ft)
9/1/19			
9/2/19			
9/3/19	191.4	134.3	194.8
9/4/19			
9/5/19			
9/6/19			
9/7/19			
9/8/19			
9/9/19	191.8	134.4	194.8
9/10/19			
9/11/19			
9/12/19			
9/13/19			
9/14/19			
9/15/19			
9/16/19			
9/17/19	192.6	134.7	194.8
9/18/19			
9/19/19			
9/20/19			
9/21/19			
9/22/19			
9/23/19			
9/24/19	191.9	134.5	194.9
9/25/19			
9/26/19			
9/27/19			
9/28/19			
9/29/19			
9/30/19			

Ordot Closure Facility
Water Elevations

Date	MW-13 Water Elevation (ft)	MW-12 Water Elevation (ft)	Pond 1 Elevation (ft)	
10/1/19	192.3	134.8	194.8	
10/2/19				
10/3/19				
10/4/19				
10/5/19				
10/6/19				
10/7/19	191.9	134.6	194.9	
10/8/19				
10/9/19				
10/10/19				
10/11/19				
10/12/19				
10/13/19				
10/14/19				
10/15/19				
10/16/19				
10/17/19				
10/18/19	191.5	134.6		*Pond 1 drained for embankment work
10/19/19				
10/20/19				
10/21/19				
10/22/19	191.5	134.6		*Pond 1 drained for embankment work
10/23/19				
10/24/19				
10/25/19				
10/26/19				
10/27/19				
10/28/19				
10/29/19	190.7	134.5		*Pond 1 drained for embankment work
10/30/19				
10/31/19				

Ordot Closure Facility
Water Elevations

Date	MW-13 Water Elevation (ft)	MW-12 Water Elevation (ft)	Pond 1 Elevation (ft)	
11/1/19				
11/2/19				
11/3/19				
11/4/19				
11/5/19	190.7	134.5		*Pond 1 drained for embankment work
11/6/19				
11/7/19				
11/8/19				
11/9/19				
11/10/19				
11/11/19				
11/12/19	191.0	134.5		*Pond 1 drained for embankment work
11/13/19				
11/14/19				
11/15/19				
11/16/19				
11/17/19				
11/18/19				
11/19/19				
11/20/19				
11/21/19	190.7	134.5		*Pond 1 drained for embankment work
11/22/19				
11/23/19				
11/24/19				
11/25/19	190.1	134.4		*Pond 1 drained for embankment work
11/26/19				
11/27/19				
11/28/19				
11/29/19				
11/30/19				

Ordot Closure Facility
Water Elevations

Date	MW-13 Water Elevation (ft)	MW-12 Water Elevation (ft)	Pond 1 Elevation (ft)	
12/1/19				
12/2/19				
12/3/19	192.4	134.6		*Pond 1 drained for embankment work
12/4/19				
12/5/19				
12/6/19				
12/7/19				
12/8/19				
12/9/19				
12/10/19				
12/11/19				
12/12/19				
12/13/19	191.3	134.5	193.1	*New level since it was drained and low flow unclogged
12/14/19				
12/15/19				
12/16/19				
12/17/19	191.1	134.5	190.6	
12/18/19				
12/19/19				
12/20/19				
12/21/19				
12/22/19				
12/23/19				
12/24/19				
12/25/19				
12/26/19				
12/27/19	189.1	134.4	190.6	
12/28/19				
12/29/19				
12/30/19				
12/31/19				

Ordot Closure Facility
Water Elevations

Date	MW-13 Water Elevation (ft)	MW-12 Water Elevation (ft)	Pond 1 Elevation (ft)
1/1/20			
1/2/20	187.5	134.4	190.3
1/3/20			
1/4/20			
1/5/20			
1/6/20			
1/7/20	186.6	134.4	190.2
1/8/20			
1/9/20			
1/10/20			
1/11/20			
1/12/20			
1/13/20			
1/14/20			
1/15/20			
1/16/20			
1/17/20	185.5	134.4	190.1
1/18/20			
1/19/20			
1/20/20			
1/21/20			
1/22/20			
1/23/20	185.1	134.4	190.1
1/24/20			
1/25/20			
1/26/20			
1/27/20			
1/28/20			
1/29/20			
1/30/20	185.3	134.4	190.1
1/31/20			

Ordot Closure Facility
Water Elevations

Date	MW-13 Water Elevation (ft)	MW-12 Water Elevation (ft)	Pond 1 Elevation (ft)
2/1/20			
2/2/20			
2/3/20			
2/4/20	188.4	134.5	191.1
2/5/20			
2/6/20			
2/7/20			
2/8/20			
2/9/20			
2/10/20			
2/11/20			
2/12/20			
2/13/20			
2/14/20	187.1	134.4	191.1
2/15/20			
2/16/20			
2/17/20			
2/18/20	186.2	134.4	190.9
2/19/20			
2/20/20			
2/21/20			
2/22/20			
2/23/20			
2/24/20			
2/25/20			
2/26/20	184.4	134.3	191.3
2/27/20			
2/28/20			
2/29/20			

Ordot Closure Facility
Water Elevations

Date	MW-13 Water Elevation (ft)	MW-12 Water Elevation (ft)	Pond 1 Elevation (ft)
3/1/20			
3/2/20			
3/3/20	185.0	135.1	191.3
3/4/20			
3/5/20			
3/6/20			
3/7/20			
3/8/20			
3/9/20			
3/10/20			
3/11/20			
3/12/20			
3/13/20	183.6	133.6	191.1
3/14/20			
3/15/20			
3/16/20			
3/17/20	183.4	133.4	191.1
3/18/20			
3/19/20			
3/20/20			
3/21/20			
3/22/20			
3/23/20			
3/24/20	183.2	133.1	191.0
3/25/20			
3/26/20			
3/27/20			
3/28/20			
3/29/20			
3/30/20			
3/31/20	183.0	132.9	191.0

Ordot Closure Facility
Water Elevations

Date	MW-13 Water Elevation (ft)	MW-12 Water Elevation (ft)	Pond 1 Elevation (ft)
4/1/20			
4/2/20			
4/3/20			
4/4/20			
4/5/20			
4/6/20	183.0	134.0	191.0
4/7/20			
4/8/20			
4/9/20			
4/10/20			
4/11/20			
4/12/20			
4/13/20			
4/14/20	182.7	132.8	191.0
4/15/20			
4/16/20			
4/17/20			
4/18/20			
4/19/20			
4/20/20			
4/21/20	182.5	132.7	191.0
4/22/20			
4/23/20			
4/24/20			
4/25/20			
4/26/20			
4/27/20			
4/28/20			
4/29/20			
4/30/20	182.3	132.7	190.9

Ordot Closure Facility
Water Elevations

Date	MW-13 Water Elevation (ft)	MW-12 Water Elevation (ft)	Pond 1 Elevation (ft)
5/1/20			
5/2/20			
5/3/20			
5/4/20			
5/5/20	182.6	133.4	190.9
5/6/20			
5/7/20			
5/8/20			
5/9/20			
5/10/20			
5/11/20			
5/12/20			
5/13/20			
5/14/20	183.4	133.5	191.2
5/15/20			
5/16/20			
5/17/20			
5/18/20			
5/19/20	183.8	133.7	191.2
5/20/20			
5/21/20			
5/22/20			
5/23/20			
5/24/20			
5/25/20			
5/26/20			
5/27/20			
5/28/20	182.9	132.8	190.9
5/29/20			
5/30/20			
5/31/20			

Brown AND Caldwell

Ordot Closure Facility
Water Elevations

Date	MW-13 Water Elevation (ft)	MW-12 Water Elevation (ft)	Pond 1 Elevation (ft)
6/1/20			
6/2/20			
6/3/20			
6/4/20			
6/5/20			
6/6/20			
6/7/20			
6/8/20			
6/9/20			
6/10/20			
6/11/20	186.6	133.8	190.4
6/12/20			
6/13/20			
6/14/20			
6/15/20			
6/16/20	186.6	139.5	191.2
6/17/20			
6/18/20			
6/19/20			
6/20/20			
6/21/20			
6/22/20			
6/23/20			
6/24/20			
6/25/20	184.4	133.8	191.1
6/26/20			
6/27/20			
6/28/20			
6/29/20			
6/30/20			

Brown AND Caldwell

Ordot Closure Facility
Water Elevations

Date	MW-13 Water Elevation (ft)	MW-12 Water Elevation (ft)	Pond 1 Elevation (ft)
7/1/20			
7/2/20	183.7	133.0	191.3
7/3/20			
7/4/20			
7/5/20			
7/6/20			
7/7/20			
7/8/20			
7/9/20			
7/10/20	183.1	132.8	191.4
7/11/20			
7/12/20			
7/13/20			
7/14/20			
7/15/20			
7/16/20			
7/17/20	185.8	133.8	191.5
7/18/20			
7/19/20			
7/20/20			
7/21/20			
7/22/20	187.0	133.9	191.7
7/23/20			
7/24/20			
7/25/20			
7/26/20			
7/27/20			
7/28/20	188.0	134.0	191.8
7/29/20			
7/30/20			
7/31/20			

Ordot Closure Facility
Water Elevations

Date	MW-13 Water Elevation (ft)	MW-12 Water Elevation (ft)	Pond 1 Elevation (ft)
8/1/20			
8/2/20			
8/3/20			
8/4/20	186.9	133.5	192.0
8/5/20			
8/6/20			
8/7/20			
8/8/20			
8/9/20			
8/10/20			
8/11/20			
8/12/20			
8/13/20	188.7	134.5	192.1
8/14/20			
8/15/20			
8/16/20			
8/17/20			
8/18/20			
8/19/20			
8/20/20	189.3	134.2	192.1
8/21/20			
8/22/20			
8/23/20			
8/24/20			
8/25/20	189.3	134.2	192.1
8/26/20			
8/27/20			
8/28/20			
8/29/20			
8/30/20			
8/31/20			

Ordot Closure Facility
Water Elevations

Date	MW-13 Water Elevation (ft)	MW-12 Water Elevation (ft)	Pond 1 Elevation (ft)
9/1/20			
9/2/20			
9/3/20	191.0	134.3	191.1
9/4/20			
9/5/20			
9/6/20			
9/7/20			
9/8/20			
9/9/20			
9/10/20			
9/11/20	190.2	134.3	192.1
9/12/20			
9/13/20			
9/14/20			
9/15/20			
9/16/20			
9/17/20	191.3	135.5	193.2
9/18/20			
9/19/20			
9/20/20			
9/21/20			
9/22/20			
9/23/20			
9/24/20	192.0	134.4	192.3
9/25/20			
9/26/20			
9/27/20			
9/28/20			
9/29/20			
9/30/20			

Ordot Closure Facility
Water Elevations

Date	MW-13 Water Elevation (ft)	MW-12 Water Elevation (ft)	Pond 1 Elevation (ft)
10/1/20	191.7	134.7	192.3
10/2/20			
10/3/20			
10/4/20			
10/5/20			
10/6/20			
10/7/20			
10/8/20	192.1	134.7	192.3
10/9/20			
10/10/20			
10/11/20			
10/12/20			
10/13/20	192.3	134.6	192.3
10/14/20			
10/15/20			
10/16/20			
10/17/20			
10/18/20			
10/19/20			
10/20/20			
10/21/20			
10/22/20	193.6	134.8	192.3
10/23/20			
10/24/20			
10/25/20			
10/26/20			
10/27/20			
10/28/20			
10/29/20	192.0	134.6	192.6
10/30/20			
10/31/20			

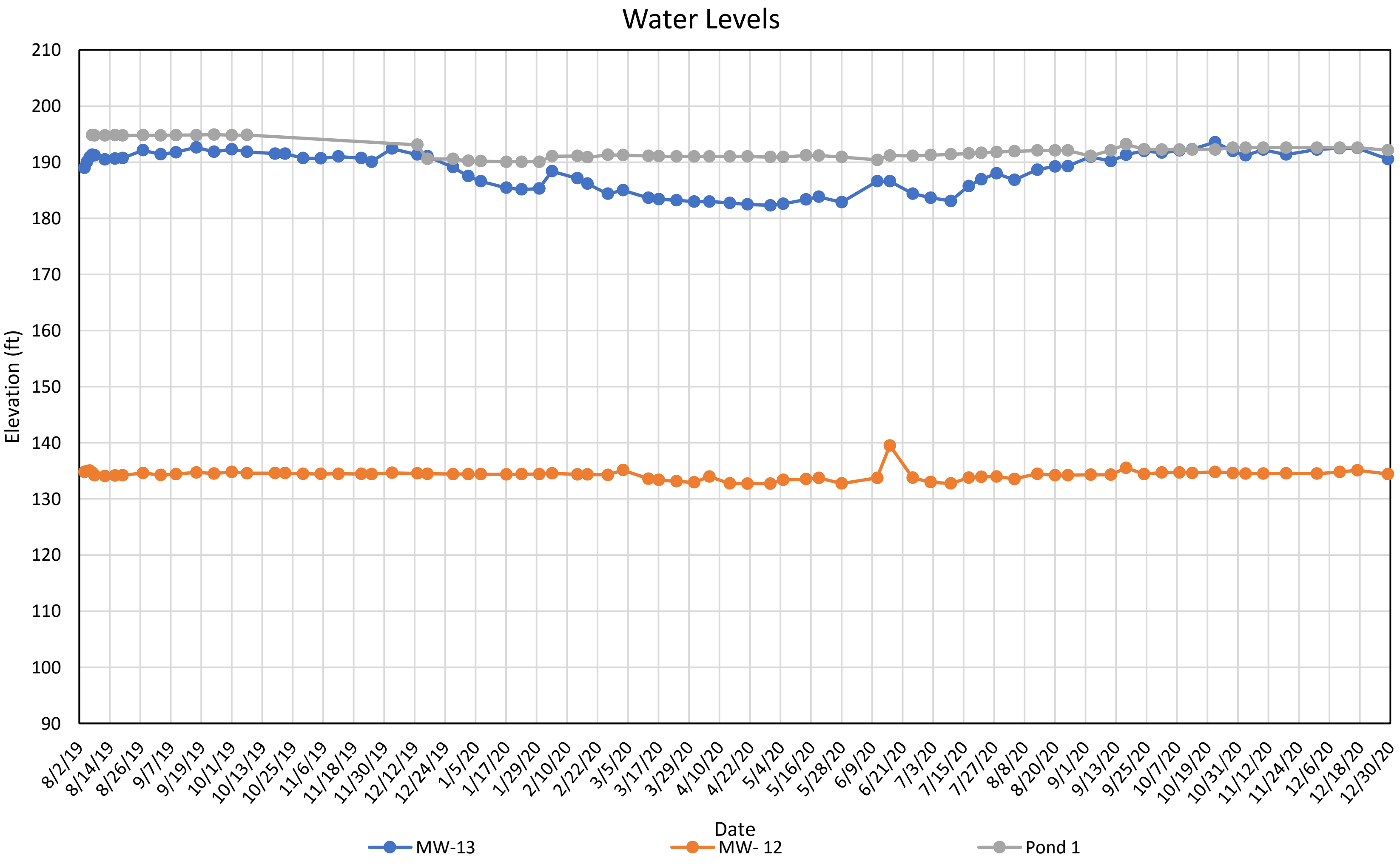
Ordot Closure Facility
Water Elevations

Date	MW-13 Water Elevation (ft)	MW-12 Water Elevation (ft)	Pond 1 Elevation (ft)
11/1/20			
11/2/20			
11/3/20	191.2	134.5	192.6
11/4/20			
11/5/20			
11/6/20			
11/7/20			
11/8/20			
11/9/20			
11/10/20	192.3	134.5	192.6
11/11/20			
11/12/20			
11/13/20			
11/14/20			
11/15/20			
11/16/20			
11/17/20			
11/18/20			
11/19/20	191.4	134.6	192.6
11/20/20			
11/21/20			
11/22/20			
11/23/20			
11/24/20			
11/25/20			
11/26/20			
11/27/20			
11/28/20			
11/29/20			
11/30/20			

Ordot Closure Facility
Water Elevations

Date	MW-13 Water Elevation (ft)	MW-12 Water Elevation (ft)	Pond 1 Elevation (ft)
12/1/20	192.3	134.5	192.6
12/2/20			
12/3/20			
12/4/20			
12/5/20			
12/6/20			
12/7/20			
12/8/20			
12/9/20			
12/10/20	192.5	134.8	192.6
12/11/20			
12/12/20			
12/13/20			
12/14/20			
12/15/20			
12/16/20			
12/17/20	192.5	135.1	192.6
12/18/20			
12/19/20			
12/20/20			
12/21/20			
12/22/20			
12/23/20			
12/24/20			
12/25/20			
12/26/20			
12/27/20			
12/28/20			
12/29/20	190.6	134.4	192.1
12/30/20			
12/31/20			

Ordot Closure Facility
Water Elevations



Ordot Closure Facility
Leachate Field Parameters

EXHIBIT 2E

Location: E-PLCT MH-9

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
8/1/19							
8/2/19							
8/3/19							
8/4/19	7.9	1.6	31.5	4.3	tinted	35.7	15
8/5/19	8	0.8	29.7	4.6	clear	38.2	40
8/6/19	8.1	0.5	28.9	5.4	clear	2.7	99
8/7/19	7.6	0.5	28.6	5.3	clear	41.2	96
8/8/19	7.9	0.5	29.2	5.5	clear	41.5	29
8/9/19							
8/10/19							
8/11/19							
8/12/19	8.3	2.7	31.6	4.1	tinted	42.4	90
8/13/19							
8/14/19							
8/15/19							
8/16/19	7.8	1.5	32.4	4.3	clear	28.7	14
8/17/19							
8/18/19							
8/19/19	7.6	2.4	30.3	3.5	tinted	0.8	41
8/20/19							
8/21/19							
8/22/19							
8/23/19	8.2	3.2	29.8	4.3	tinted	38.5	-11
8/24/19							
8/25/19							
8/26/19							
8/27/19	8	1.2	29.4	5.1	light tint	34.8	42
8/28/19							
8/29/19	8.1	1.4	30.3	4.3	light tint	60.5	8
8/30/19							
8/31/19							

Ordot Closure Facility
Leachate Field Parameters

Location: E-PLCT MH-9

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
9/1/19							
9/2/19							
9/3/19	7.8	2.9	30.4	4.4	light tint	43.2	0
9/4/19							
9/5/19	7.9	2.3	29.9	4.4	light tint	43.7	14
9/6/19							
9/7/19							
9/8/19							
9/9/19	7.9	1.4	30.0	3.5	light tint	34.4	76
9/10/19							
9/11/19							
9/12/19	8.2	1.0	30.3	5.1	tinted	22.7	101
9/13/19							
9/14/19							
9/15/19							
9/16/19	8.0	0.4	27.8	7.2	clear	76.2	118
9/17/19	8.0	1.1	29.8	5.2	tinted	45.6	71
9/18/19	7.8	1.4	31.3	4.6	light tint	22.2	47
9/19/19	7.9	1.0	30.2	3.6	light tint	38.0	84
9/20/19	7.7	1.0	29.7	3.9	light tint	27.5	-33
9/21/19							
9/22/19							
9/23/19							
9/24/19	8.1	2.2	32.6	3.3	tinted	54.2	40
9/25/19							
9/26/19							
9/27/19	8.4	0.8	30.4	5.5	clear	26.2	47
9/28/19							
9/29/19							
9/30/19							

Location: E-PLCT MH-9

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
10/1/19	8.0	1.4	31.4	3.5	light tint	24.7	93
10/2/19	7.6	0.6	29.0	4.4	tinted	60.4	28
10/3/19	8.1	1.1	31.2	5.1	tinted	45.6	23
10/4/19	7.9	1.7	31.6	4.0	tinted	30.0	-34
10/5/19	8.5	2.0	31.7	4.6	tinted	25.9	-91
10/6/19	8.7	2.3	27.3	4.1	tinted	65.4	-20
10/7/19	8.1	2.4	29.6	3.6	tinted	35.8	71
10/8/19							
10/9/19	7.9	0.7	29.5	7.8	tinted	119	29
10/10/19							
10/11/19							
10/12/19							
10/13/19							
10/14/19							
10/15/19	8.0	1.1	29.0	4.4	tinted	25.6	-35
10/16/19							
10/17/19							
10/18/19	7.9	1.9	31.0	3.6	tinted	21.8	66
10/19/19							
10/20/19							
10/21/19							
10/22/19	8.2	2.2	30.5	4.5	yellow tint	26.4	-35
10/23/19							
10/24/19							
10/25/19	8.3	1.9	30.3	4.3	tinted	22.8	-15
10/26/19							
10/27/19							
10/28/19							
10/29/19	8.3	2.1	30.7	3.8	tinted	77.7	7
10/30/19							
10/31/19	8.1	1.6	30.3	4.6	tinted	39.8	1

Location: E-PLCT MH-9

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
11/1/19							
11/2/19							
11/3/19							
11/4/19							
11/5/19	8.3	2.4	33.0	4.1	tinted	199	5
11/6/19							
11/7/19							
11/8/19	7.9	1.1	30.1	4.4	tinted	22.8	-33
11/9/19							
11/10/19							
11/11/19							
11/12/19	8.2	1.8	31.5	3.2	tinted	38.1	33
11/13/19							
11/14/19							
11/15/19	8.4	2.6	32.4	4.2	tinted	39.7	-6
11/16/19							
11/17/19							
11/18/19							
11/19/19	8.0	1.4	30.0	3.6	tinted	122	45
11/20/19							
11/21/19	8.2	2.4	31.5	3.8	tinted	38.5	57
11/22/19							
11/23/19							
11/24/19							
11/25/19	8.3	2.5	31.2	4.1	tinted	43.2	-14
11/26/19							
11/27/19	7.8	0.4	28.6	5.2	clear	61.0	50
11/28/19	8.1	0.6	30.0	5.1	slight tint	19.7	8
11/29/19							
11/30/19							

Ordot Closure Facility
Leachate Field Parameters

Location: E-PLCT MH-9

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
12/1/19							
12/2/19							
12/3/19	8.3	1.9	29.8	3.8	tinted	24.0	75
12/4/19							
12/5/19	8.4	2.2	30.5	4.1	tinted	29.5	-13
12/6/19							
12/7/19							
12/8/19							
12/9/19							
12/10/19							
12/11/19	8.0	2.4	30.6	3.9	tinted	44.7	21
12/12/19							
12/13/19	8.0	1.8	30.5	4.4	tinted	140	-47
12/14/19							
12/15/19							
12/16/19							
12/17/19	7.7	2.3	28.5	4.8	tinted	35.0	72
12/18/19							
12/19/19	8.4	2.5	29.9	4.1	tinted	45.2	-33
12/20/19							
12/21/19							
12/22/19							
12/23/19	8.5	2.6	30.5	3.5	tinted	35.2	-6
12/24/19							
12/25/19							
12/26/19							
12/27/19	8.6	2.1	31.1	4.9	tinted	54.5	3
12/28/19							
12/29/19							
12/30/19							
12/31/19							

Ordot Closure Facility
Leachate Field Parameters

Location: E-PLCT MH-9

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
1/1/20							
1/2/20	8.7	2.8	29.8	4.6	tinted	25.3	33
1/3/20							
1/4/20							
1/5/20							
1/6/20							
1/7/20	8.6	2.8	29.1	6.1	tinted	62.0	-31
1/8/20							
1/9/20							
1/10/20	7.9	2.8	29.6	4.8	tinted	226	-34
1/11/20							
1/12/20							
1/13/20	8.7	2.9	32.0	3.8	tinted	23.7	-18
1/14/20							
1/15/20							
1/16/20							
1/17/20	8.0	2.9	30.1	4.6	light tint	155	85
1/18/20							
1/19/20							
1/20/20							
1/21/20	8.1	2.9	29.5	4.3	light tint	30.1	-41
1/22/20							
1/23/20	8.3	2.9	29.3	4.4	tinted	30.9	-2
1/24/20							
1/25/20							
1/26/20							
1/27/20	8.2	2.6	29.1	6.1	tinted	28.4	-14
1/28/20							
1/29/20							
1/30/20	8.3	1.7	31.1	3.7	tinted	290	54
1/31/20							

Ordot Closure Facility
Leachate Field Parameters

Location: E-PLCT MH-9

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
2/1/20							
2/2/20							
2/3/20							
2/4/20	7.1	1.0	29.9	5.3	light tint	18.9	25
2/5/20							
2/6/20							
2/7/20	8.2	2.6	30.6	4.0	tinted	28.6	-53
2/8/20							
2/9/20							
2/10/20							
2/11/20	8.6	2.6	29.4	3.8	tinted	23.3	16
2/12/20							
2/13/20							
2/14/20	8.6	2.8	30.3	3.7	tinted	28.0	8
2/15/20							
2/16/20							
2/17/20							
2/18/20	8.3	2.9	31.5	4.1	tinted	21.5	21
2/19/20							
2/20/20							
2/21/20	8.4	2.5	30.9	5.5	tinted	31.8	-29
2/22/20							
2/23/20							
2/24/20							
2/25/20							
2/26/20	8.5	2.9	28.5	4.6	tinted	35.5	-10
2/27/20							
2/28/20	8.5	3.0	29.1	5.6	tinted	27.3	2
2/29/20							

Ordot Closure Facility
Leachate Field Parameters

Location: E-PLCT MH-9

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
3/1/20							
3/2/20							
3/3/20	8.4	3.0	31.4	3.8	tinted	30.7	22
3/4/20							
3/5/20							
3/6/20	8.6	2.9	29.3	4.3	tinted	41.4	70
3/7/20							
3/8/20							
3/9/20							
3/10/20	8.4	3.0	31.9	4.3	tinted yellow	18.4	-75
3/11/20							
3/12/20	8.3	3.0	31.9	4.2	tinted	40.9	-65
3/13/20							
3/14/20							
3/15/20							
3/16/20							
3/17/20	8.7	3.0	29.7	4.4	tinted yellow	59.3	-1
3/18/20							
3/19/20							
3/20/20	8.6	3.1	30.2	4.5	tinted	24.2	-14
3/21/20							
3/22/20							
3/23/20							
3/24/20	8.4	3.1	29.6	4.7	tinted	28.4	-69
3/25/20							
3/26/20	8.7	3.1	29.4	4.2	tinted	45.3	-44
3/27/20							
3/28/20							
3/29/20							
3/30/20							
3/31/20	8.3	2.0	30.2	4.8	tinted	35.1	28

Ordot Closure Facility
Leachate Field Parameters

Location: E-PLCT MH-9

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
4/1/20							
4/2/20	8.7	3.2	29.6	4.2	tinted	29.3	68
4/3/20							
4/4/20							
4/5/20							
4/6/20	8.6	3.1	31.0	4.3	tinted	37.3	-40
4/7/20							
4/8/20							
4/9/20	8.6	3.1	29.6	4.0	tinted	33.9	7
4/10/20							
4/11/20							
4/12/20							
4/13/20							
4/14/20	8.6	3.1	29.5	4.2	tinted	28.2	32
4/15/20							
4/16/20	8.7	3.0	30.8	6.2	tinted	23.4	104
4/17/20							
4/18/20							
4/19/20							
4/20/20							
4/21/20	8.4	3.0	30.5	3.9	tinted	26.1	43
4/22/20							
4/23/20	8.4	3.1	30.7	4.1	tinted	21.1	81
4/24/20							
4/25/20							
4/26/20							
4/27/20							
4/28/20	8.4	3.0	30.8	4.8	tinted	22.7	79
4/29/20							
4/30/20	8.4	3.0	31.0	4.9	tinted	23.2	19

Ordot Closure Facility
Leachate Field Parameters

Location: E-PLCT MH-9

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
5/1/20							
5/2/20							
5/3/20							
5/4/20							
5/5/20	7.9	1.8	32.0	3.7	tinted	19.2	33
5/6/20							
5/7/20	8.9	2.9	30.2	3.9	tinted	27.7	96
5/8/20							
5/9/20							
5/10/20							
5/11/20							
5/12/20	7.6	1.8	31.1	3.9	tinted	48.9	23
5/13/20							
5/14/20	7.8	2.5	32.2	4.9	tinted	242	3
5/15/20							
5/16/20							
5/17/20							
5/18/20							
5/19/20	8.2	2.6	30.9	2.6	tinted	25.9	8
5/20/20							
5/21/20	8.4	2.9	31.5	2.9	tinted	16.5	-74
5/22/20							
5/23/20							
5/24/20							
5/25/20							
5/26/20	6.8	0.3	30.7	9.6	tinted	263	-18
5/27/20							
5/28/20	8.0	4.0	32.8	4.2	tinted	72.3	88
5/29/20							
5/30/20							
5/31/20							

Ordot Closure Facility
Leachate Field Parameters

Location: E-PLCT MH-9

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
6/1/20							
6/2/20	8.1	2.6	30.8	4.0	tinted	43.6	57
6/3/20							
6/4/20							
6/5/20							
6/6/20							
6/7/20							
6/8/20							
6/9/20	7.9	1.3	30.6	4.4	tinted	38.7	66
6/10/20							
6/11/20	8.2	2.6	33.0	5.6	tinted	243	-108
6/12/20							
6/13/20							
6/14/20							
6/15/20							
6/16/20	8.2	2.7	32.8	4.7	tinted	35.7	3
6/17/20							
6/18/20	8.0	2.5	31.9	4.9	tinted	39.6	57
6/19/20							
6/20/20							
6/21/20							
6/22/20							
6/23/20	8.4	2.8	31.7	4.8	tinted	67.2	45
6/24/20							
6/25/20	8.3	2.7	32.2	3.5	tinted	49.7	35
6/26/20							
6/27/20							
6/28/20							
6/29/20							
6/30/20	8.3	2.7	31.8	3.8	tinted	56.7	70

Ordot Closure Facility
Leachate Field Parameters

Location: E-PLCT MH-9

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
7/1/20							
7/2/20	7.8	2.8	31.3	4.1	tinted	60.0	30
7/3/20							
7/4/20							
7/5/20							
7/6/20							
7/7/20							
7/8/20							
7/9/20	7.8	3.0	30.9	6.1	tinted	61.2	22
7/10/20	8.4	2.6	32.9	3.4	tinted	50.4	53
7/11/20							
7/12/20							
7/13/20							
7/14/20	7.9	1.4	31.1	5.2	tinted	59.0	30
7/15/20							
7/16/20							
7/17/20	8.1	1.6	32.7	4.1	tinted	55.9	-20
7/18/20							
7/19/20							
7/20/20							
7/21/20							
7/22/20	7.3	1.6	31.7	4.9	tinted	49.5	87
7/23/20							
7/24/20	8.2	1.8	29.5	4.3	tinted	73.4	111
7/25/20							
7/26/20							
7/27/20							
7/28/20	8.2	1.1	33.0	3.7	tinted	27.8	88
7/29/20							
7/30/20	8.4	2.4	31.9	4.3	tinted	31.2	46
7/31/20							

Ordot Closure Facility
Leachate Field Parameters

Location: E-PLCT MH-9

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
8/1/20							
8/2/20							
8/3/20							
8/4/20	8.1	1.3	31.4	4.5	tinted	44.1	29
8/5/20							
8/6/20	8.8	1.8	32.3	4.4	tinted	80.0	67
8/7/20							
8/8/20							
8/9/20							
8/10/20							
8/11/20	8.3	2.0	32.4	3.8	tinted	22.9	86
8/12/20							
8/13/20	8.7	0.8	30.2	4.4	tinted	68.0	30
8/14/20							
8/15/20							
8/16/20							
8/17/20							
8/18/20	7.8	1.5	29.9	4.4	tinted	52.9	85
8/19/20							
8/20/20	8.2	1.1	30.4	4.6	tinted	38.3	129
8/21/20							
8/22/20							
8/23/20							
8/24/20							
8/25/20	8.2	1.5	31.3	3.6	tinted	28.5	105
8/26/20							
8/27/20	8.0	2.3	30.7	3.1	tinted	38.7	117
8/28/20	7.8	0.5	29.4	5.7	clear	58.3	64
8/29/20							
8/30/20							
8/31/20							

Ordot Closure Facility
Leachate Field Parameters

Location: E-PLCT MH-9

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
9/1/20	8.2	1.9	29.3	6.1	clear	58.1	53
9/2/20							
9/3/20	7.9	2.0	28.6	5.4	clear	66.2	7
9/4/20							
9/5/20							
9/6/20							
9/7/20							
9/8/20							
9/9/20	7.8	2.3	27.1	7.5	clear	48.6	-8
9/10/20							
9/11/20	8.2	1.4	30.3	4.0	clear	51.3	78
9/12/20							
9/13/20							
9/14/20							
9/15/20							
9/16/20	7.3	0.6	29.0	5.4	clear	54.8	67
9/17/20	8.0	0.5	29.7	4.4	clear	56.9	74
9/18/20							
9/19/20							
9/20/20							
9/21/20							
9/22/20	8.2	0.8	29.3	4.8	clear	58.8	-34
9/23/20							
9/24/20	8.1	1.1	29.4	4.7	clear	45.4	-41
9/25/20							
9/26/20							
9/27/20							
9/28/20							
9/29/20	8.1	2.1	29.7	4.0	clear	64.2	-8
9/30/20							

Ordot Closure Facility
Leachate Field Parameters

Location: E-PLCT MH-9

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
10/1/20	8.2	1.0	29.6	4.2	light tint	52.2	102
10/2/20							
10/3/20							
10/4/20							
10/5/20							
10/6/20	7.9	0.7	30.2	4.4	light tint	51.1	79
10/7/20							
10/8/20	8.4	1.3	29.9	4.1	clear	55.1	19
10/9/20							
10/10/20							
10/11/20							
10/12/20							
10/13/20	8.0	1.4	31.4	2.9	light tint	32.9	98
10/14/20							
10/15/20							
10/16/20	8.1	1.5	29.1	4.3	light tint	54.3	139
10/17/20							
10/18/20							
10/19/20							
10/20/20	8.1	1.1	30.4	4.0	light tint	73.7	-3
10/21/20							
10/22/20	7.3	0.9	30.2	2.9	light tint	84.0	79
10/23/20							
10/24/20							
10/25/20							
10/26/20							
10/27/20	7.4	0.8	30.2	4.0	clear	89.0	92
10/28/20							
10/29/20	8.8	1.5	30.1	3.5	clear	69.9	47
10/30/20							
10/31/20							

Ordot Closure Facility
Leachate Field Parameters

Location: E-PLCT MH-9

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
11/1/20							
11/2/20							
11/3/20	8.5	2.1	30.2	3.8	clear	81.6	28
11/4/20							
11/5/20							
11/6/20	8.1	1.0	30.4	5.0	clear	87.4	106
11/7/20							
11/8/20							
11/9/20							
11/10/20	7.5	2.0	31.4	2.9	tinted	52.0	101
11/11/20							
11/12/20	7.7	1.5	30.3	2.6	tinted	63.0	63
11/13/20							
11/14/20							
11/15/20							
11/16/20							
11/17/20	8.1	1.0	30.4	3.0	clear	59.6	84
11/18/20							
11/19/20	8.3	2.0	31.7	3.0	clear	61.9	61
11/20/20							
11/21/20							
11/22/20							
11/23/20							
11/24/20	8.9	2.2	29.6	5.3	tinted	59.0	92
11/25/20							
11/26/20							
11/27/20							
11/28/20							
11/29/20							
11/30/20							

Location: E-PLCT MH-9

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
12/1/20	7.9	1.1	30.4	3.1	clear	69.9	116
12/2/20							
12/3/20	8.0	1.2	29.4	2.8	clear	65.0	110
12/4/20							
12/5/20							
12/6/20							
12/7/20							
12/8/20	7.9	1.0	30.7	4.2	clear	69.5	-53
12/9/20							
12/10/20	8.3	0.9	28.4	5.0	clear	73.4	57
12/11/20							
12/12/20							
12/13/20							
12/14/20							
12/15/20	8.3	1.3	30.0	3.7	clear	55.7	-67
12/16/20							
12/17/20	8.3	1.9	30.8	3.4	clear	57.4	7
12/18/20							
12/19/20							
12/20/20							
12/21/20	8.6	1.9	29.4	4.3	clear	92.6	50
12/22/20							
12/23/20							
12/24/20							
12/25/20							
12/26/20							
12/27/20							
12/28/20							
12/29/20	7.7	2.4	29.9	4.5	clear	68.7	-53
12/30/20							
12/31/20	8.4	2.5	29.9	4.1	clear	45.2	-33

Ordot Closure Facility
Leachate Field Parameters

Location: W-PLCT MH-11

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
8/1/19							
8/2/19							
8/3/19							
8/4/19							
8/5/19	8.4	0.4	29.4	5.7	clear	113	69
8/6/19	7.9	0.3	28.7	6	clear	60.6	89
8/7/19	8.2	0.3	28.7	6	clear	77.8	116
8/8/19	8.2	0.4	29.4	5.4	clear	31.4	88
8/9/19							
8/10/19							
8/11/19							
8/12/19							
8/13/19							
8/14/19							
8/15/19							
8/16/19							
8/17/19							
8/18/19							
8/19/19							
8/20/19							
8/21/19							
8/22/19							
8/23/19							
8/24/19							
8/25/19							
8/26/19							
8/27/19							
8/28/19							
8/29/19							
8/30/19							
8/31/19							

Highlighted cell indicates no flow condition observed

Ordot Closure Facility
Leachate Field Parameters

Location: W-PLCT MH-11

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
9/1/19							
9/2/19							
9/3/19							
9/4/19							
9/5/19							
9/6/19							
9/7/19							
9/8/19							
9/9/19							
9/10/19							
9/11/19							
9/12/19	8.26	0.4	29.7	5.9	clear	72.4	89
9/13/19	7.61	0.8	29.7	2.9	clear	100	-144
9/14/19							
9/15/19							
9/16/19							
9/17/19							
9/18/19							
9/19/19							
9/20/19							
9/21/19							
9/22/19							
9/23/19							
9/24/19							
9/25/19							
9/26/19							
9/27/19	8.6	0.6	31.6	6.3	clear	84.3	68
9/28/19							
9/29/19							
9/30/19							

Highlighted cell indicates no flow condition observed

Ordot Closure Facility
Leachate Field Parameters

Location: W-PLCT MH-11

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
10/1/19							
10/2/19	8	0.7	29.5	4.5	clear	89.6	98
10/3/19							
10/4/19							
10/5/19							
10/6/19							
10/7/19							
10/8/19							
10/9/19	8.11	0.388	29.1	5.77	clear	58.8	29
10/10/19							
10/11/19							
10/12/19							
10/13/19							
10/14/19							
10/15/19							
10/16/19							
10/17/19							
10/18/19							
10/19/19							
10/20/19							
10/21/19							
10/22/19							
10/23/19							
10/24/19							
10/25/19							
10/26/19							
10/27/19							
10/28/19							
10/29/19							
10/30/19							
10/31/19							

Highlighted cell indicates no flow condition observed

Ordot Closure Facility
Leachate Field Parameters

Location: W-PLCT MH-11

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
11/1/19							
11/2/19							
11/3/19							
11/4/19							
11/5/19							
11/6/19							
11/7/19							
11/8/19							
11/9/19							
11/10/19							
11/11/19							
11/12/19							
11/13/19							
11/14/19							
11/15/19							
11/16/19							
11/17/19							
11/18/19							
11/19/19							
11/20/19							
11/21/19							
11/22/19							
11/23/19							
11/24/19							
11/25/19							
11/26/19							
11/27/19	8.4	0.3	28.9	6.2	clear	31.8	39.0
11/28/19	8.2	0.4	29.5	5.5	clear	35.5	8.0
11/29/19							
11/30/19							

Highlighted cell indicates no flow condition observed

Ordot Closure Facility
Leachate Field Parameters

Location: W-PLCT MH-11

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
12/1/19							
12/2/19							
12/3/19							
12/4/19							
12/5/19							
12/6/19							
12/7/19							
12/8/19							
12/9/19							
12/10/19							
12/11/19							
12/12/19							
12/13/19							
12/14/19							
12/15/19							
12/16/19							
12/17/19							
12/18/19							
12/19/19							
12/20/19							
12/21/19							
12/22/19							
12/23/19							
12/24/19							
12/25/19							
12/26/19							
12/27/19							
12/28/19							
12/29/19							
12/30/19							
12/31/19							

Highlighted cell indicates no flow condition observed

Ordot Closure Facility
Leachate Field Parameters

Location: W-PLCT MH-11

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
1/1/20							
1/2/20							
1/3/20							
1/4/20							
1/5/20							
1/6/20							
1/7/20							
1/8/20							
1/9/20							
1/10/20							
1/11/20							
1/12/20							
1/13/20							
1/14/20							
1/15/20							
1/16/20							
1/17/20							
1/18/20							
1/19/20							
1/20/20							
1/21/20							
1/22/20							
1/23/20							
1/24/20							
1/25/20							
1/26/20							
1/27/20							
1/28/20							
1/29/20							
1/30/20							
1/31/20							

Highlighted cell indicates no flow condition observed

Brown AND Caldwell

Ordot Closure Facility
Leachate Field Parameters

Location: W-PLCT MH-11

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
2/1/20							
2/2/20							
2/3/20							
2/4/20	7.54	0.368	29.69	5.58	light tint	40	63
2/5/20							
2/6/20							
2/7/20							
2/8/20							
2/9/20							
2/10/20							
2/11/20							
2/12/20							
2/13/20							
2/14/20							
2/15/20							
2/16/20							
2/17/20							
2/18/20							
2/19/20							
2/20/20							
2/21/20							
2/22/20							
2/23/20							
2/24/20							
2/25/20							
2/26/20							
2/27/20							
2/28/20							
2/29/20							

Highlighted cell indicates no flow condition observed

Ordot Closure Facility
Leachate Field Parameters

Location: W-PLCT MH-11

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
3/1/20							
3/2/20							
3/3/20							
3/4/20							
3/5/20							
3/6/20							
3/7/20							
3/8/20							
3/9/20							
3/10/20							
3/11/20							
3/12/20							
3/13/20							
3/14/20							
3/15/20							
3/16/20							
3/17/20							
3/18/20							
3/19/20							
3/20/20							
3/21/20							
3/22/20							
3/23/20							
3/24/20							
3/25/20							
3/26/20							
3/27/20							
3/28/20							
3/29/20							
3/30/20							
3/31/20							

Highlighted cell indicates no flow condition observed

Ordot Closure Facility
Leachate Field Parameters

Location: W-PLCT MH-11

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
4/1/20							
4/2/20							
4/3/20							
4/4/20							
4/5/20							
4/6/20							
4/7/20							
4/8/20							
4/9/20							
4/10/20							
4/11/20							
4/12/20							
4/13/20							
4/14/20							
4/15/20							
4/16/20							
4/17/20							
4/18/20							
4/19/20							
4/20/20							
4/21/20							
4/22/20							
4/23/20							
4/24/20							
4/25/20							
4/26/20							
4/27/20							
4/28/20							
4/29/20							
4/30/20							

Highlighted cell indicates no flow condition observed

Ordot Closure Facility
Leachate Field Parameters

Location: W-PLCT MH-11

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
5/1/20							
5/2/20							
5/3/20							
5/4/20							
5/5/20							
5/6/20							
5/7/20							
5/8/20							
5/9/20							
5/10/20							
5/11/20							
5/12/20							
5/13/20							
5/14/20							
5/15/20							
5/16/20							
5/17/20							
5/18/20							
5/19/20							
5/20/20							
5/21/20							
5/22/20							
5/23/20							
5/24/20							
5/25/20							
5/26/20							
5/27/20							
5/28/20							
5/29/20							
5/30/20							
5/31/20							

Highlighted cell indicates no flow condition observed

Ordot Closure Facility
Leachate Field Parameters

Location: W-PLCT MH-11

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
6/1/20							
6/2/20							
6/3/20							
6/4/20							
6/5/20							
6/6/20							
6/7/20							
6/8/20							
6/9/20							
6/10/20							
6/11/20							
6/12/20							
6/13/20							
6/14/20							
6/15/20							
6/16/20							
6/17/20							
6/18/20							
6/19/20							
6/20/20							
6/21/20							
6/22/20							
6/23/20							
6/24/20							
6/25/20							
6/26/20							
6/27/20							
6/28/20							
6/29/20							
6/30/20							

Highlighted cell indicates no flow condition observed

Ordot Closure Facility
Leachate Field Parameters

Location: W-PLCT MH-11

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
7/1/20							
7/2/20							
7/3/20							
7/4/20							
7/5/20							
7/6/20							
7/7/20							
7/8/20							
7/9/20							
7/10/20							
7/11/20							
7/12/20							
7/13/20							
7/14/20							
7/15/20							
7/16/20							
7/17/20							
7/18/20							
7/19/20							
7/20/20							
7/21/20							
7/22/20							
7/23/20							
7/24/20							
7/25/20							
7/26/20							
7/27/20							
7/28/20							
7/29/20							
7/30/20							
7/31/20							

Highlighted cell indicates no flow condition observed

Ordot Closure Facility
Leachate Field Parameters

Location: W-PLCT MH-11

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
8/1/20							
8/2/20							
8/3/20							
8/4/20							
8/5/20							
8/6/20							
8/7/20							
8/8/20							
8/9/20							
8/10/20							
8/11/20	8.54	0.366	30.08	5.56	tinted	72.4	49
8/12/20							
8/13/20							
8/14/20							
8/15/20							
8/16/20							
8/17/20							
8/18/20							
8/19/20							
8/20/20							
8/21/20							
8/22/20							
8/23/20							
8/24/20							
8/25/20							
8/26/20							
8/27/20							
8/28/20							
8/29/20							
8/30/20							
8/31/20							

Highlighted cell indicates no flow condition observed

Ordot Closure Facility
Leachate Field Parameters

Location: W-PLCT MH-11

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
9/1/20							
9/2/20							
9/3/20							
9/4/20							
9/5/20							
9/6/20							
9/7/20							
9/8/20							
9/9/20							
9/10/20							
9/11/20							
9/12/20							
9/13/20							
9/14/20							
9/15/20							
9/16/20	7.5	0.3	29.8	5.0	clear	89.3	210
9/17/20	8.2	0.3	29.3	5.5	clear	54.6	146
9/18/20							
9/19/20							
9/20/20							
9/21/20							
9/22/20							
9/23/20							
9/24/20							
9/25/20							
9/26/20							
9/27/20							
9/28/20							
9/29/20							
9/30/20							

Highlighted cell indicates no flow condition observed

Ordot Closure Facility
Leachate Field Parameters

Location: W-PLCT MH-11

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
10/1/20							
10/2/20							
10/3/20							
10/4/20							
10/5/20							
10/6/20							
10/7/20							
10/8/20							
10/9/20							
10/10/20							
10/11/20							
10/12/20							
10/13/20							
10/14/20							
10/15/20							
10/16/20							
10/17/20							
10/18/20							
10/19/20							
10/20/20	8.9	1.1	31.4	4.8	clear	43.7	60
10/21/20							
10/22/20	7.7	0.6	30.2	5.6	clear	94.6	109
10/23/20							
10/24/20							
10/25/20							
10/26/20							
10/27/20	7.8	0.5	30.7	5.9	clear	157.0	91
10/28/20							
10/29/20	8.8	1.2	29.1	6.0	clear	94.0	87
10/30/20							
10/31/20							

Highlighted cell indicates no flow condition observed

Ordot Closure Facility
Leachate Field Parameters

Location: W-PLCT MH-11

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
11/1/20							
11/2/20							
11/3/20							
11/4/20							
11/5/20							
11/6/20	8.7	0.6	29.3	5.6	clear	108.0	60
11/7/20							
11/8/20							
11/9/20							
11/10/20							
11/11/20							
11/12/20							
11/13/20							
11/14/20							
11/15/20							
11/16/20							
11/17/20	8.5	0.8	28.4	5.3	clear	97.2	63
11/18/20							
11/19/20							
11/20/20							
11/21/20							
11/22/20							
11/23/20							
11/24/20							
11/25/20							
11/26/20							
11/27/20							
11/28/20							
11/29/20							
11/30/20							

Highlighted cell indicates no flow condition observed

Ordot Closure Facility
Leachate Field Parameters

Location: W-PLCT MH-11

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
12/1/20							
12/2/20							
12/3/20							
12/4/20							
12/5/20							
12/6/20							
12/7/20							
12/8/20	7.9	0.5	30.7	6.1	clear	84.9	39
12/9/20							
12/10/20	8.2	0.5	28.9	5.6	clear	189.0	37
12/11/20							
12/12/20							
12/13/20							
12/14/20							
12/15/20							
12/16/20							
12/17/20							
12/18/20							
12/19/20							
12/20/20							
12/21/20							
12/22/20							
12/23/20							
12/24/20							
12/25/20							
12/26/20							
12/27/20							
12/28/20							
12/29/20							
12/30/20							
12/31/20							

Highlighted cell indicates no flow condition observed

Location: WLIT

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
8/1/19							
8/2/19							
8/3/19							
8/4/19	7.6	0.9	30.1	2.2	murky	78.8	-131
8/5/19	7.8	0.8	29.3	3.7	red murky	32.6	-104
8/6/19	7.6	0.6	29	4.1	dark red murky		-28
8/7/19	7.4	0.6	27.9	3.9	dark red murky	264	-58
8/8/19	7.5	0.7	27.7	2.2	dark red murky		-50
8/9/19							
8/10/19							
8/11/19							
8/12/19	7.7	1	30.8	2.4	red murky	84.5	-84
8/13/19							
8/14/19							
8/15/19							
8/16/19	7.6	1	34.2	3.7	tinted	62.4	-109
8/17/19							
8/18/19							
8/19/19	7.5	1	31	3.1	tinted	87.7	-103
8/20/19							
8/21/19							
8/22/19							
8/23/19	7.6	1	31.4	3.2	tinted	138	-108
8/24/19							
8/25/19							
8/26/19							
8/27/19	7.7	0.9	30.2	4.3	tinted	109	-109
8/28/19							
8/29/19	7.5	0.9	30.9	3.5	dark reddish	223	-107
8/30/19							
8/31/19							

Ordot Closure Facility
Leachate Field Parameters

Location: WLIT

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
9/1/19							
9/2/19							
9/3/19	7.6	1.0	30.5	3.1	tinted	333	-110
9/4/19							
9/5/19	7.6	1.0	31.2	3.5	tinted	116	-105
9/6/19							
9/7/19							
9/8/19							
9/9/19	7.5	1.0	28.7	3.6	light reddish	170	-118
9/10/19							
9/11/19							
9/12/19	7.7	0.8	30.8	2.9	light reddish	147	-138
9/13/19							
9/14/19							
9/15/19							
9/16/19	8.1	0.7	29.1	6.0	dark red	27	137
9/17/19	7.8	0.9	31.1	2.4	reddish	110	-133
9/18/19	7.8	0.9	31.6	3.3	light red	64	-138
9/19/19	7.9	0.9	32.5	2.4	light red	39	-148
9/20/19	7.7	1.0	29.9	3.3	tinted red	171	-169
9/21/19							
9/22/19							
9/23/19							
9/24/19	7.8	1.0	32.2	3.3	clear/foam	46	-158
9/25/19							
9/26/19							
9/27/19	7.9	0.9	32.1	3.0	clear	121	-167
9/28/19							
9/29/19							
9/30/19							

Ordot Closure Facility
Leachate Field Parameters

Location: WLIT

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
10/1/19	7.8	1.0	31.3	3.4	murky/foam	227	-179
10/2/19	7.8	1.0	28.8	3.8	reddish/foam	276	-172
10/3/19	7.9	0.9	32.1	3.7	reddish	224	-171
10/4/19	7.9	1.0	32.3	6.2	red murky	296	-164
10/5/19	7.8	1.0	31.6	2.9	reddish	190	-165
10/6/19	7.8	1.0	28.8	3.2	tinted foam	102	-170
10/7/19	7.6	1.0	29.5	4.4	tinted foam	194	-169
10/8/19							
10/9/19	7.7	0.8	29.2	4.4	foamy	317	-141
10/10/19							
10/11/19							
10/12/19							
10/13/19							
10/14/19							
10/15/19	7.8	0.9	30.9	2.6	foamy	147	-168
10/16/19							
10/17/19							
10/18/19	7.7	1.0	31.0	3.9	foamy	85	-159
10/19/19							
10/20/19							
10/21/19							
10/22/19	7.8	0.9	30.5	3.4	foamy	332	-150
10/23/19							
10/24/19							
10/25/19	7.6	0.9	30.0	5.4	reddish foam	385	-149
10/26/19							
10/27/19							
10/28/19							
10/29/19	7.7	0.9	31.7	4.4	murky	535	-155
10/30/19							
10/31/19	7.7	0.9	31.3	5.0	foam tinted	295	-158

Location: WLIT

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
11/1/19							
11/2/19							
11/3/19							
11/4/19							
11/5/19	7.9	0.8	32.4	4.7	foamy dark	390	-157
11/6/19							
11/7/19							
11/8/19	7.7	0.8	30.9	2.7	foamy dark	485	-157
11/9/19							
11/10/19							
11/11/19							
11/12/19	7.7	0.8	30.4	2.4	foamy dark	164	-182
11/13/19							
11/14/19							
11/15/19	7.8	0.9	30.4	4.0	foamy dark	468	-172
11/16/19							
11/17/19							
11/18/19							
11/19/19	7.8	0.9	28.0	3.1	tinted	190	-187
11/20/19							
11/21/19	7.8	0.8	32.2	3.3	tinted	141	-189
11/22/19							
11/23/19							
11/24/19							
11/25/19	7.8	0.9	28.9	3.7	tinted	74	-171
11/26/19							
11/27/19	7.6	0.6	27.8	3.9	tinted	291	-132
11/28/19	7.7	0.7	29.4	3.9	murky red	199	-167
11/29/19							
11/30/19							

Ordot Closure Facility
Leachate Field Parameters

Location: WLIT

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
12/1/19							
12/2/19							
12/3/19	8.0	0.8	29.3	3.9	tinted	283	-115
12/4/19							
12/5/19	7.9	0.9	30.9	2.3	tinted	493	-179
12/6/19							
12/7/19							
12/8/19							
12/9/19							
12/10/19							
12/11/19	7.7	0.9	30.0	2.3	murky tint	134	-161
12/12/19							
12/13/19	7.4	0.9	30.7	3.8	tinted	250	-157
12/14/19							
12/15/19							
12/16/19							
12/17/19	7.4	0.9	29.9	5.1	red tint	211	-166
12/18/19							
12/19/19	7.8	0.9	30.6	3.7	tinted	192	-157
12/20/19							
12/21/19							
12/22/19							
12/23/19	7.8	0.9	29.7	3.4	reddish	276	-186
12/24/19							
12/25/19							
12/26/19							
12/27/19	8.0	0.8	31.5	6.1	tinted	242	-171
12/28/19							
12/29/19							
12/30/19							
12/31/19							

Ordot Closure Facility
Leachate Field Parameters

Location: WLIT

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
1/1/20							
1/2/20	7.8	0.8	29.9	4.5	tinted	375	-188
1/3/20							
1/4/20							
1/5/20							
1/6/20							
1/7/20	7.9	0.8	30.1	5.1	tinted	256	-187
1/8/20							
1/9/20							
1/10/20	7.4	0.8	30.1	3.4	tinted	167	-124
1/11/20							
1/12/20							
1/13/20	7.7	0.8	30.7	2.0	tinted	106	-145
1/14/20							
1/15/20							
1/16/20							
1/17/20	7.3	0.8	29.6	3.4	light tint	107	-107
1/18/20							
1/19/20							
1/20/20							
1/21/20	7.7	0.8	29.2	2.8	light tint	83	-151
1/22/20							
1/23/20	7.7	0.8	29.5	3.3	light tint	41	-142
1/24/20							
1/25/20							
1/26/20							
1/27/20	7.8	0.8	29.4	3.3	tinted	252	-125
1/28/20							
1/29/20							
1/30/20	7.6	0.8	30.2	5.4	tinted	187	-135
1/31/20							

Brown AND Caldwell

Ordot Closure Facility
Leachate Field Parameters

Location: WLIT

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
2/1/20							
2/2/20							
2/3/20							
2/4/20	7.4	0.7	30.1	2.2	light tint	50	-119
2/5/20							
2/6/20							
2/7/20	7.7	0.8	30.1	2.2	tinted	55	-143
2/8/20							
2/9/20							
2/10/20							
2/11/20	7.7	0.8	30.5	2.9	light foam tint	63	-150
2/12/20							
2/13/20							
2/14/20	7.9	0.8	29.8	2.7	red tint	125	-148
2/15/20							
2/16/20							
2/17/20							
2/18/20	7.7	0.8	32.9	3.3	red tint	237	-150
2/19/20							
2/20/20							
2/21/20	7.8	0.8	30.4	4.0	red tint	328	-138
2/22/20							
2/23/20							
2/24/20							
2/25/20							
2/26/20	7.8	0.8	29.4	3.4	brownish	234	-138
2/27/20							
2/28/20	7.8	0.8	31.1	5.4	tinted	122	-133
2/29/20							

Ordot Closure Facility
Leachate Field Parameters

Location: WLIT

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
3/1/20							
3/2/20							
3/3/20	7.9	0.8	31.3	4.3	tinted	82	-134
3/4/20							
3/5/20							
3/6/20	7.5	0.8	29.9	3.8	tinted	116	-109
3/7/20							
3/8/20							
3/9/20							
3/10/20	7.9	0.8	31.4	2.3	tinted red	271	-149
3/11/20							
3/12/20	7.8	0.8	31.8	2.8	tinted red	164	-156
3/13/20							
3/14/20							
3/15/20							
3/16/20							
3/17/20	7.9	0.8	30.5	2.8	tinted	164	-147
3/18/20							
3/19/20							
3/20/20	7.9	0.8	30.8	4.5	tinted	127	-127
3/21/20							
3/22/20							
3/23/20							
3/24/20	7.6	0.8	29.7	3.9	tinted	190	-124
3/25/20							
3/26/20	7.8	0.8	30.9	2.8	tinted	419	-130
3/27/20							
3/28/20							
3/29/20							
3/30/20							
3/31/20	7.8	0.8	31.1	2.6	tinted	108	-117

Ordot Closure Facility
Leachate Field Parameters

Location: WLIT

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
4/1/20							
4/2/20	7.6	0.9	28.8	6.1	tinted	346	-127
4/3/20							
4/4/20							
4/5/20							
4/6/20	7.9	0.8	33.0	2.3	tinted	140	-126
4/7/20							
4/8/20							
4/9/20	7.8	0.8	29.4	3.2	tinted	205	-132
4/10/20							
4/11/20							
4/12/20							
4/13/20							
4/14/20	7.7	0.9	29.2	4.2	tinted	143	-138
4/15/20							
4/16/20	7.7	0.8	29.3	5.3	tinted	221	-136
4/17/20							
4/18/20							
4/19/20							
4/20/20							
4/21/20	7.4	0.8	30.8	3.2	tinted	143	-99
4/22/20							
4/23/20	7.8	0.9	29.5	4.5	tinted	351	-132
4/24/20							
4/25/20							
4/26/20							
4/27/20							
4/28/20	7.7	0.9	29.8	4.3	tinted	338	-117
4/29/20							
4/30/20	7.7	0.8	30.0	4.1	tinted	344	-110

Ordot Closure Facility
Leachate Field Parameters

Location: WLIT

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
5/1/20							
5/2/20							
5/3/20							
5/4/20							
5/5/20	7.3	0.8	29.8	3.8	tinted	788	-79
5/6/20							
5/7/20	7.6	0.8	28.9	4.2	tinted	92	-118
5/8/20							
5/9/20							
5/10/20							
5/11/20							
5/12/20	7.3	0.8	30.4	2.9	tinted	1000	-81
5/13/20							
5/14/20	7.3	0.8	32.2	3.2	tinted	306	-120
5/15/20							
5/16/20							
5/17/20							
5/18/20							
5/19/20	7.5	0.8	29.7	3.5	tinted	129	-116
5/20/20							
5/21/20	7.2	0.8	29.3	4.0	tinted	149	-107
5/22/20							
5/23/20							
5/24/20							
5/25/20							
5/26/20	7.5	0.8	31.3	3.8	tinted	82	-141
5/27/20							
5/28/20	7.7	0.8	32.9	3.6	tinted	298	-132
5/29/20							
5/30/20							
5/31/20							

Ordot Closure Facility
Leachate Field Parameters

Location: WLIT

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
6/1/20							
6/2/20	7.4	0.8	29.1	3.5	tinted	850	-118
6/3/20							
6/4/20							
6/5/20							
6/6/20							
6/7/20							
6/8/20							
6/9/20	7.6	0.7	30.9	4.1	tinted	122	-129
6/10/20							
6/11/20	7.7	0.8	29.4	4.0	tinted	134	-147
6/12/20							
6/13/20							
6/14/20							
6/15/20							
6/16/20	7.7	0.8	31.0	3.7	tinted	160	-148
6/17/20							
6/18/20	7.7	0.8	30.2	3.8	tinted	157	-143
6/19/20							
6/20/20							
6/21/20							
6/22/20							
6/23/20	Dry - unable to collect sample						
6/24/20							
6/25/20	7.9	0.8	31.2	2.7	tinted	154	-147
6/26/20							
6/27/20							
6/28/20							
6/29/20							
6/30/20	7.7	0.9	30.3	3.5	tinted	224	-165

Location: WLIT

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
7/1/20							
7/2/20	7.8	0.9	31.3	3.3	tinted	250	-160
7/3/20							
7/4/20							
7/5/20							
7/6/20							
7/7/20							
7/8/20							
7/9/20	8.0	0.9	31.5	3.2	tinted	322	-170
7/10/20	7.9	0.8	32.2	3.1	tinted	196	-180
7/11/20							
7/12/20							
7/13/20							
7/14/20	7.5	0.8	31.1	3.6	tinted	105	-138
7/15/20							
7/16/20							
7/17/20	7.9	0.8	32.0	3.5	tinted	130	-162
7/18/20							
7/19/20							
7/20/20							
7/21/20							
7/22/20	6.9	0.8	31.1	1.8	tinted	166	-109
7/23/20							
7/24/20	7.8	0.8	29.8	2.6	tinted	236	-143
7/25/20							
7/26/20							
7/27/20							
7/28/20	7.8	0.8	31.7	2.2	tinted	98	-151
7/29/20							
7/30/20	7.9	0.8	30.6	2.7	tinted	80	-160
7/31/20							

Ordot Closure Facility
Leachate Field Parameters

Location: WLIT

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
8/1/20							
8/2/20							
8/3/20							
8/4/20	7.8	0.8	30.7	2.8	tinted	121	-171
8/5/20							
8/6/20	7.8	0.8	30.6	4.5	tinted	71	-167
8/7/20							
8/8/20							
8/9/20							
8/10/20							
8/11/20	7.8	0.8	32.0	3.4	tinted	145	-174
8/12/20							
8/13/20	7.7	0.7	29.0	3.2	tinted	74	-140
8/14/20							
8/15/20							
8/16/20							
8/17/20							
8/18/20	7.4	0.8	30.5	4.6	tinted	54	-143
8/19/20							
8/20/20	7.8	0.8	29.8	2.6	tinted	100	-164
8/21/20							
8/22/20							
8/23/20							
8/24/20							
8/25/20	7.8	0.8	30.8	2.7	tinted	51	-109
8/26/20							
8/27/20	7.8	0.8	30.1	3.0	tinted	167	-176
8/28/20	7.8	0.6	29.3	3.1	tinted	259	-146
8/29/20							
8/30/20							
8/31/20							

Ordot Closure Facility
Leachate Field Parameters

Location: WLIT

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
9/1/20	7.8	0.8	29.8	3.1	tinted	44.6	-165
9/2/20							
9/3/20	7.2	0.8	28.7	2.7	clear	70.7	-132
9/4/20							
9/5/20							
9/6/20							
9/7/20							
9/8/20							
9/9/20	7.2	0.9	31.2	2.7	clear	32.8	-145
9/10/20							
9/11/20	7.3	0.9	29.5	4.3	clear	63.2	-182
9/12/20							
9/13/20							
9/14/20							
9/15/20							
9/16/20	7.3	0.7	28.7	2.9	clear	94.9	-135
9/17/20	7.8	0.6	28.1	2.2	tinted	249.0	-141
9/18/20							
9/19/20							
9/20/20							
9/21/20							
9/22/20	8.3	0.7	30.1	3.5	tinted	183.0	-209
9/23/20							
9/24/20	8.0	0.8	31.9	3.4	clear	40.3	-194
9/25/20							
9/26/20							
9/27/20							
9/28/20							
9/29/20	7.4	0.9	29.8	2.1	clear	80.7	-161
9/30/20							

Ordot Closure Facility
Leachate Field Parameters

Location: WLIT

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
10/1/20	7.6	0.8	28.9	3.8	light tint	155.0	-184
10/2/20							
10/3/20							
10/4/20							
10/5/20							
10/6/20	7.3	0.9	28.6	4.0	light tint	145.0	-174
10/7/20							
10/8/20	7.6	0.8	28.7	5.0	light tint	310.0	-153
10/9/20							
10/10/20							
10/11/20							
10/12/20							
10/13/20	7.7	0.8	30.7	2.8	light tint	39.9	-186
10/14/20							
10/15/20							
10/16/20	8.0	0.8	29.7	2.2	light tint	86.4	-176
10/17/20							
10/18/20							
10/19/20							
10/20/20	8.0	0.8	31.2	1.7	light tint	46.5	-191
10/21/20							
10/22/20	7.6	0.8	31.8	2.8	light tint	134.0	-172
10/23/20							
10/24/20							
10/25/20							
10/26/20							
10/27/20	7.5	0.8	30.9	2.7	tint foamy	120.0	-150
10/28/20							
10/29/20	7.8	0.8	29.1	2.7	tint foamy	129.0	-155
10/30/20							
10/31/20							

Ordot Closure Facility
Leachate Field Parameters

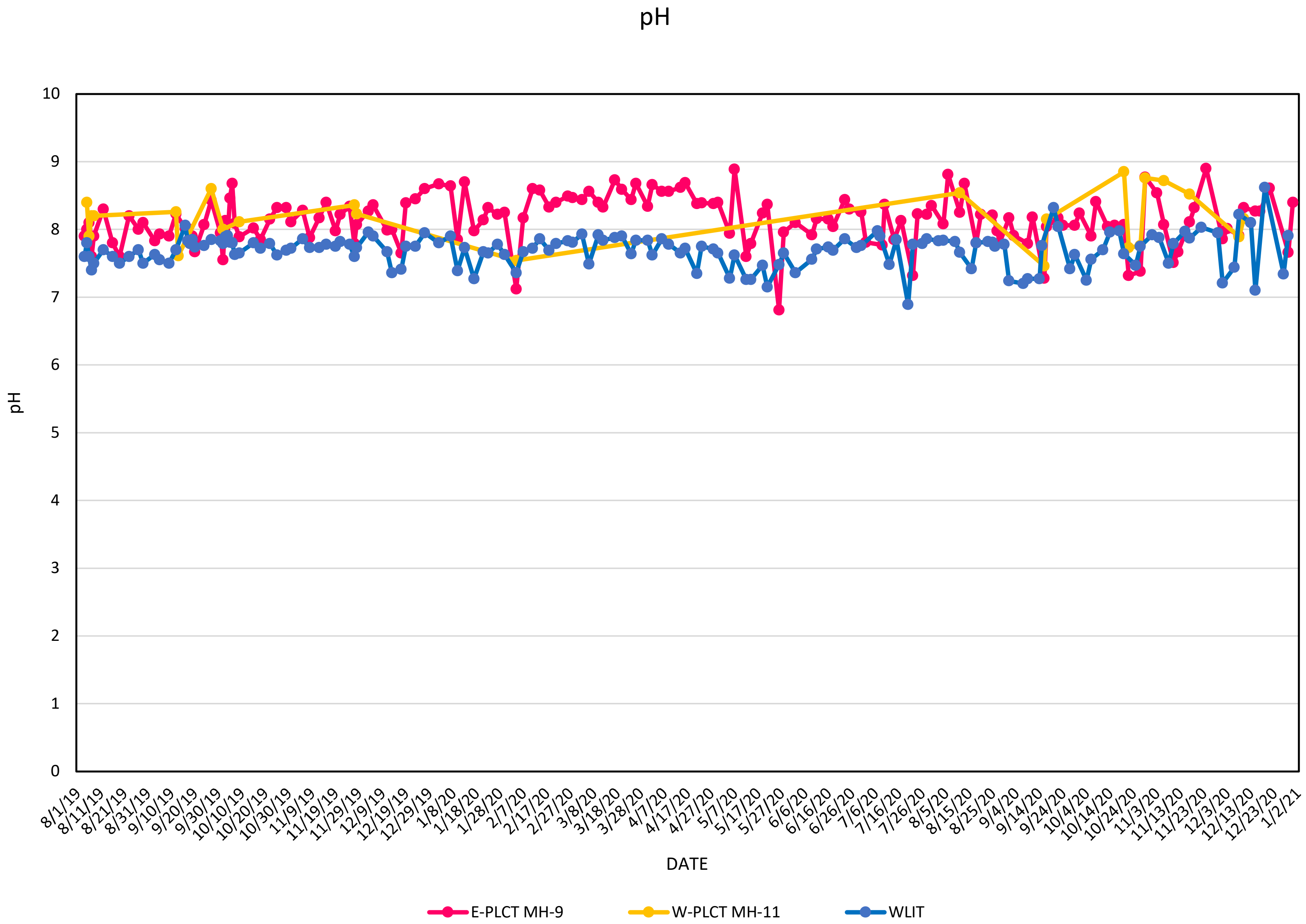
Location: WLIT

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
11/1/20							
11/2/20							
11/3/20	7.9	0.8	29.7	3.5	tint foamy	134.0	-177
11/4/20							
11/5/20							
11/6/20	7.9	0.8	29.6	3.0	tint foamy	149.0	-174
11/7/20							
11/8/20							
11/9/20							
11/10/20	7.5	0.8	31.0	2.2	foamy	122.0	-143
11/11/20							
11/12/20	7.8	0.8	29.6	2.1	tint foamy	325.0	-163
11/13/20							
11/14/20							
11/15/20							
11/16/20							
11/17/20	8.0	0.8	29.8	4.4	tint foamy	233.0	-167
11/18/20							
11/19/20	7.9	0.8	30.4	3.7	tint foamy	171.0	-168
11/20/20							
11/21/20							
11/22/20							
11/23/20							
11/24/20	8.0	0.8	29.6	5.9	tint foamy	406.0	-136
11/25/20							
11/26/20							
11/27/20							
11/28/20							
11/29/20							
11/30/20							

Ordot Closure Facility
Leachate Field Parameters

Location: WLIT

Date	pH	Specific Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/l)	Color	Turbidity (ntu)	ORP (mV)
12/1/20	8.0	0.8	29.5	2.1	brown	1000.0	-185
12/2/20							
12/3/20	7.2	0.7	29.1	3.7	brown	1000.0	-132
12/4/20							
12/5/20							
12/6/20							
12/7/20							
12/8/20	7.4	0.8	30.4	2.2	brown	184.0	-161
12/9/20							
12/10/20	8.2	0.5	29.7	2.6	brown/foamy	129.0	-209
12/11/20							
12/12/20							
12/13/20							
12/14/20							
12/15/20	8.1	0.8	30.8	2.7	brown/foamy	176.0	-174
12/16/20							
12/17/20	7.1	0.8	30.6	5.9	brown/foamy	352.0	-144
12/18/20							
12/19/20							
12/20/20							
12/21/20	8.6	0.8	29.8	4.7	red/foam	627.0	-210
12/22/20							
12/23/20							
12/24/20							
12/25/20							
12/26/20							
12/27/20							
12/28/20							
12/29/20	7.3	0.8	30.3	2.1	red/foam	129.0	-139
12/30/20							
12/31/20	7.9	0.8	30.1	5.1	red/foam	256.0	-187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10
9
8
7
6
5
4
3
2
1
0
pH
8/1/19
8/11/19
8/21/19
8/31/19
9/10/19
9/20/19
9/30/19
10/10/19
10/20/19
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9/24/20
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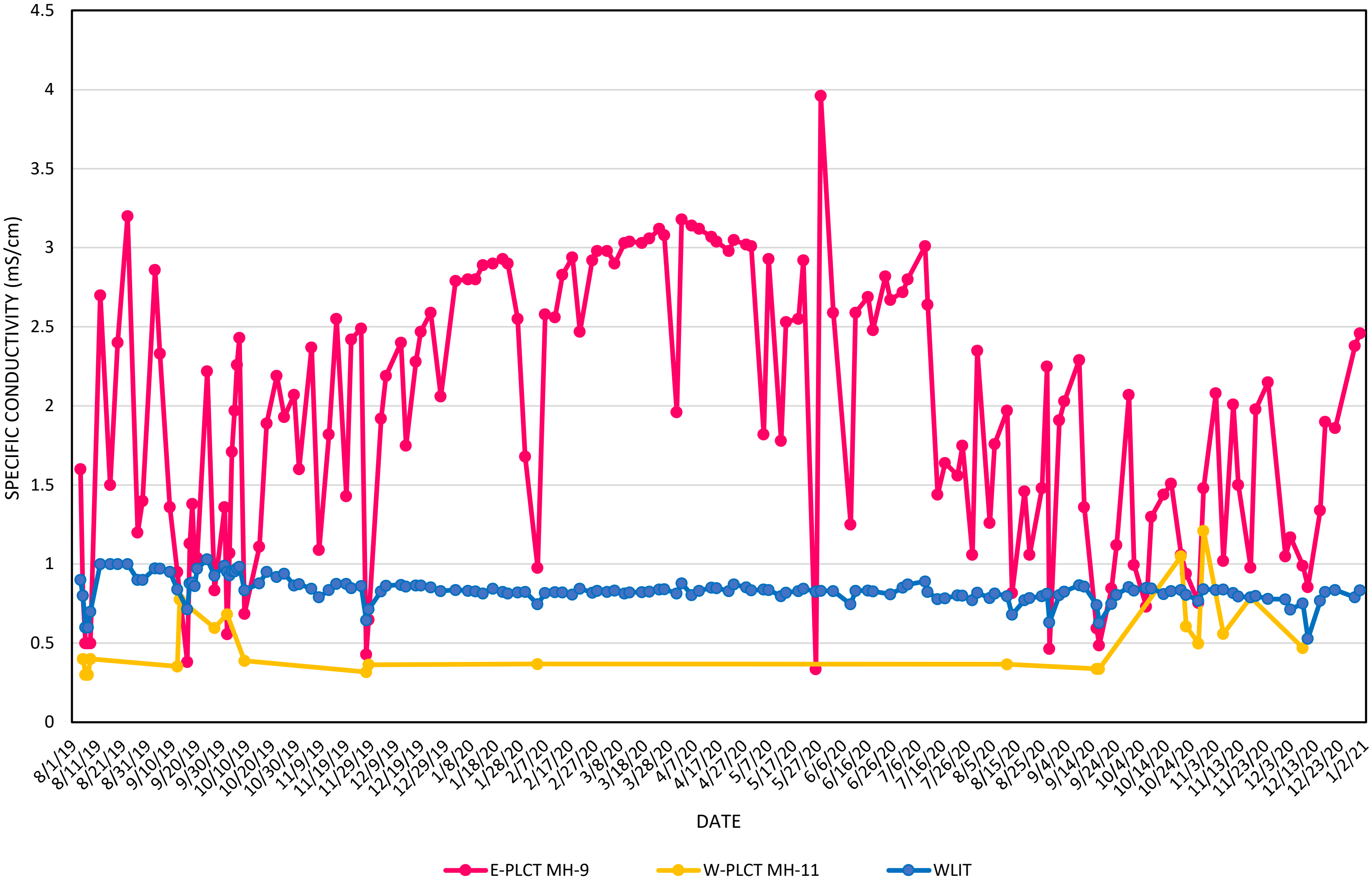
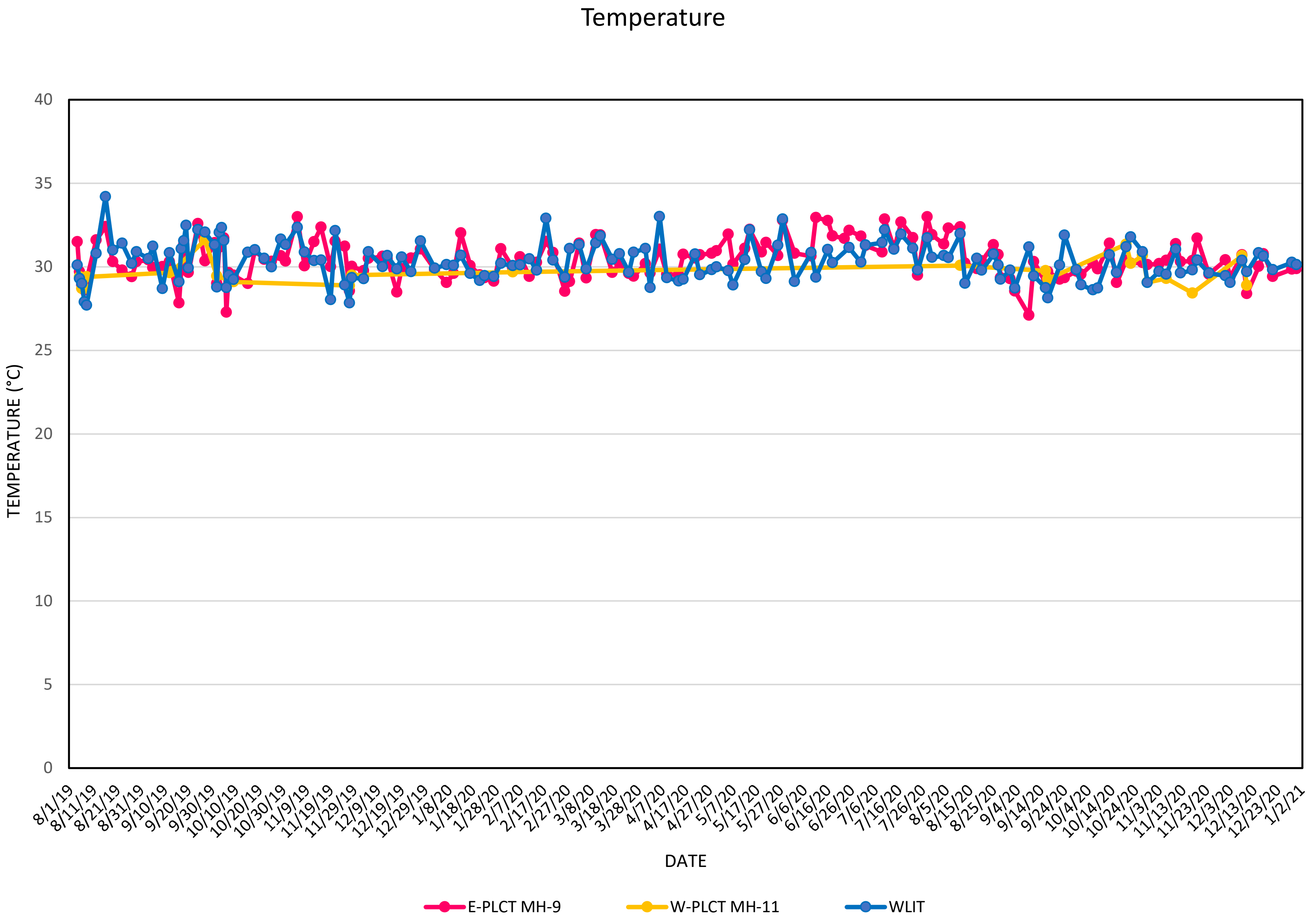
10/14/20
10/24/20
11/3/20
11/13/20
11/23/20
12/3/20
12/13/20
12/23/20
1/2/21
DATE
E-PLCT MH-9
W-PLCT MH-11
WLIT

Specific Conductivity




Temperature
TEMPERATURE (°C)
40
35
30
25
20
15
10
5
0
DATE
8/1/19
8/11/19
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8/31/19
9/10/19
9/20/19
9/30/19
10/10/19
10/20/19
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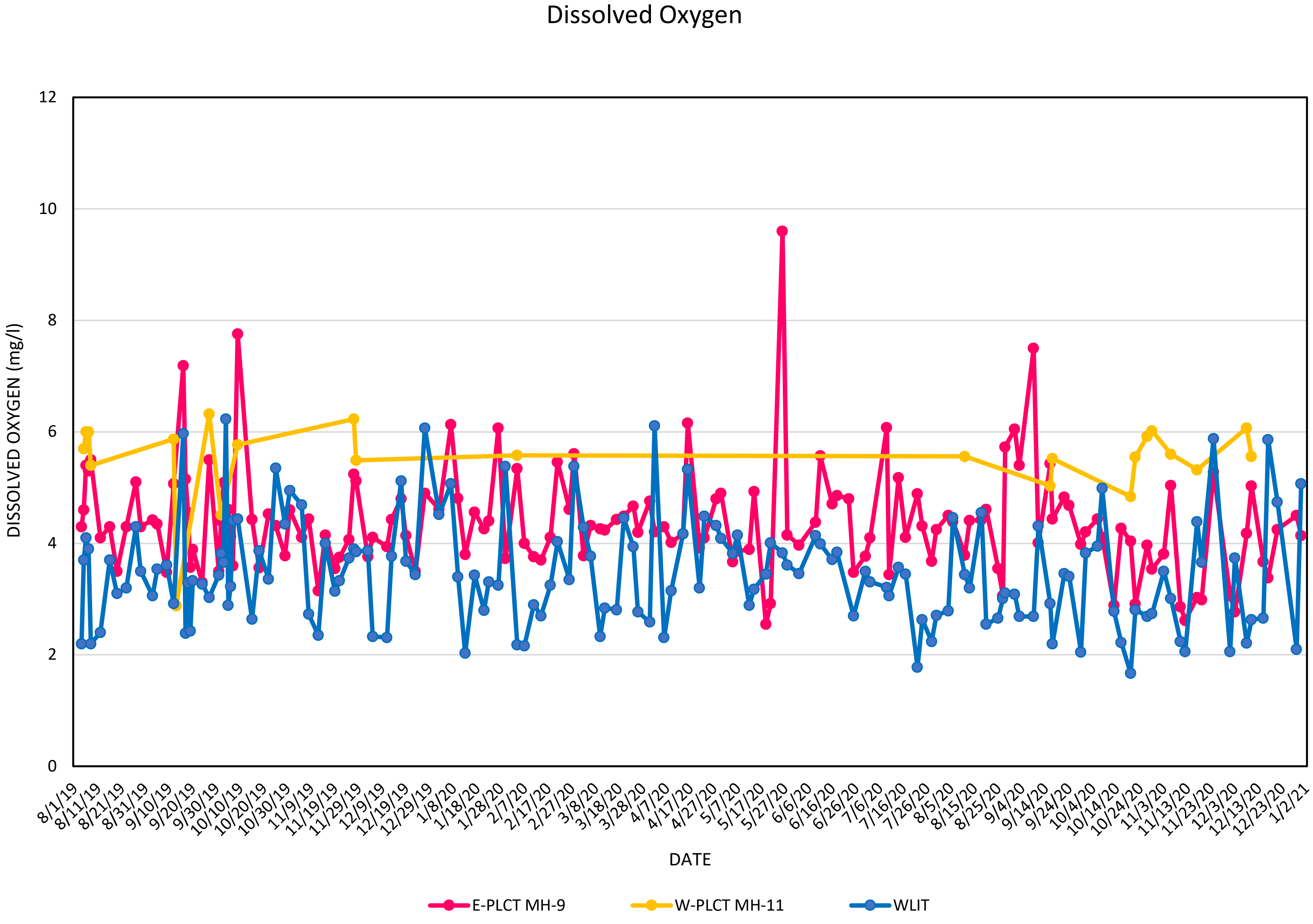
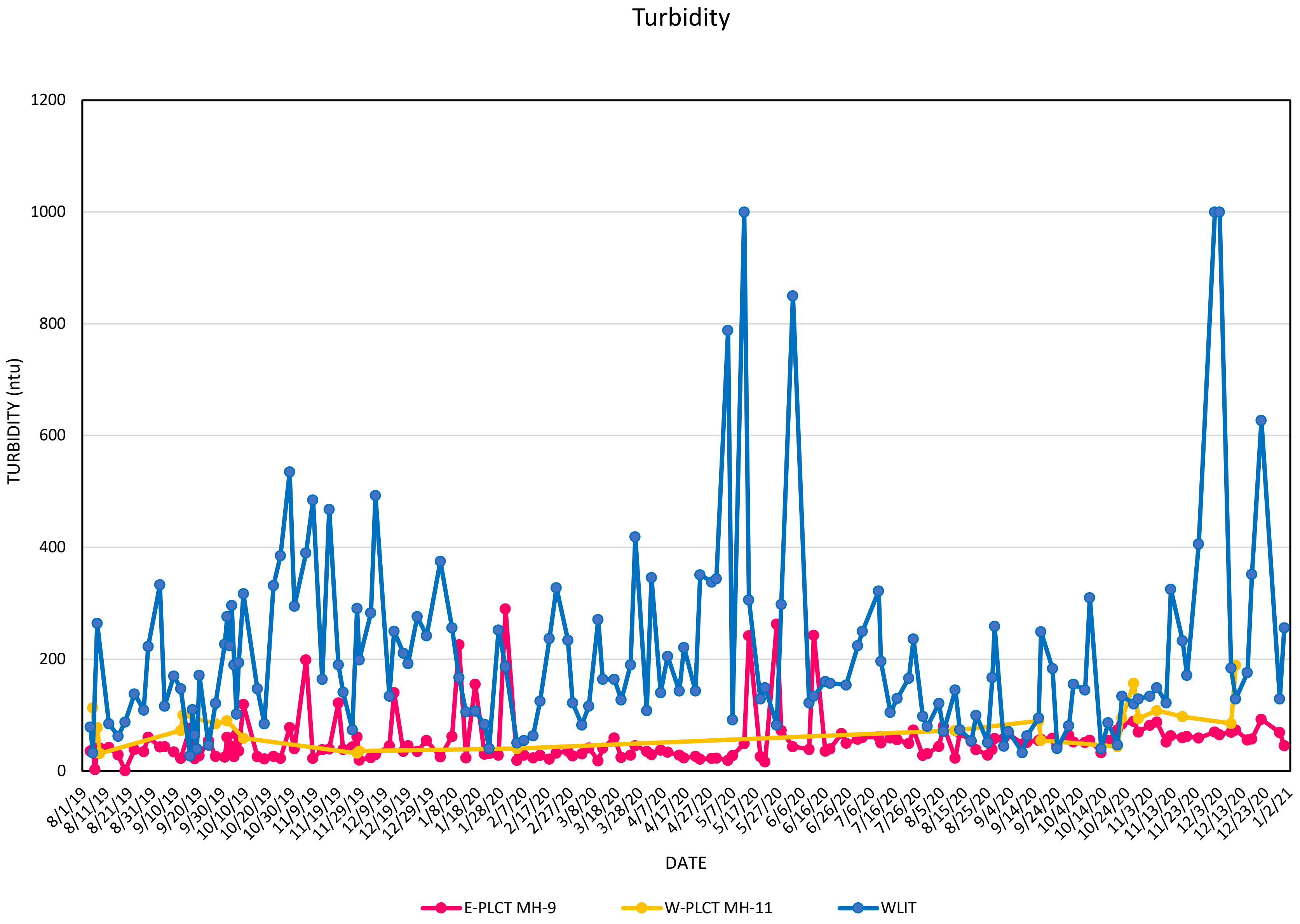
9/14/20
9/24/20
10/4/20
10/14/20
10/24/20
11/3/20
11/13/20
11/23/20
12/3/20
12/13/20
12/23/20
1/2/21
E-PLCT MH-9
W-PLCT MH-11
WLIT

Ordot Closure Facility
Leachate Field Parameters



Ordot Closure Facility
Leachate Field Parameters



Ordot Closure Facility
Leachate Field Parameters

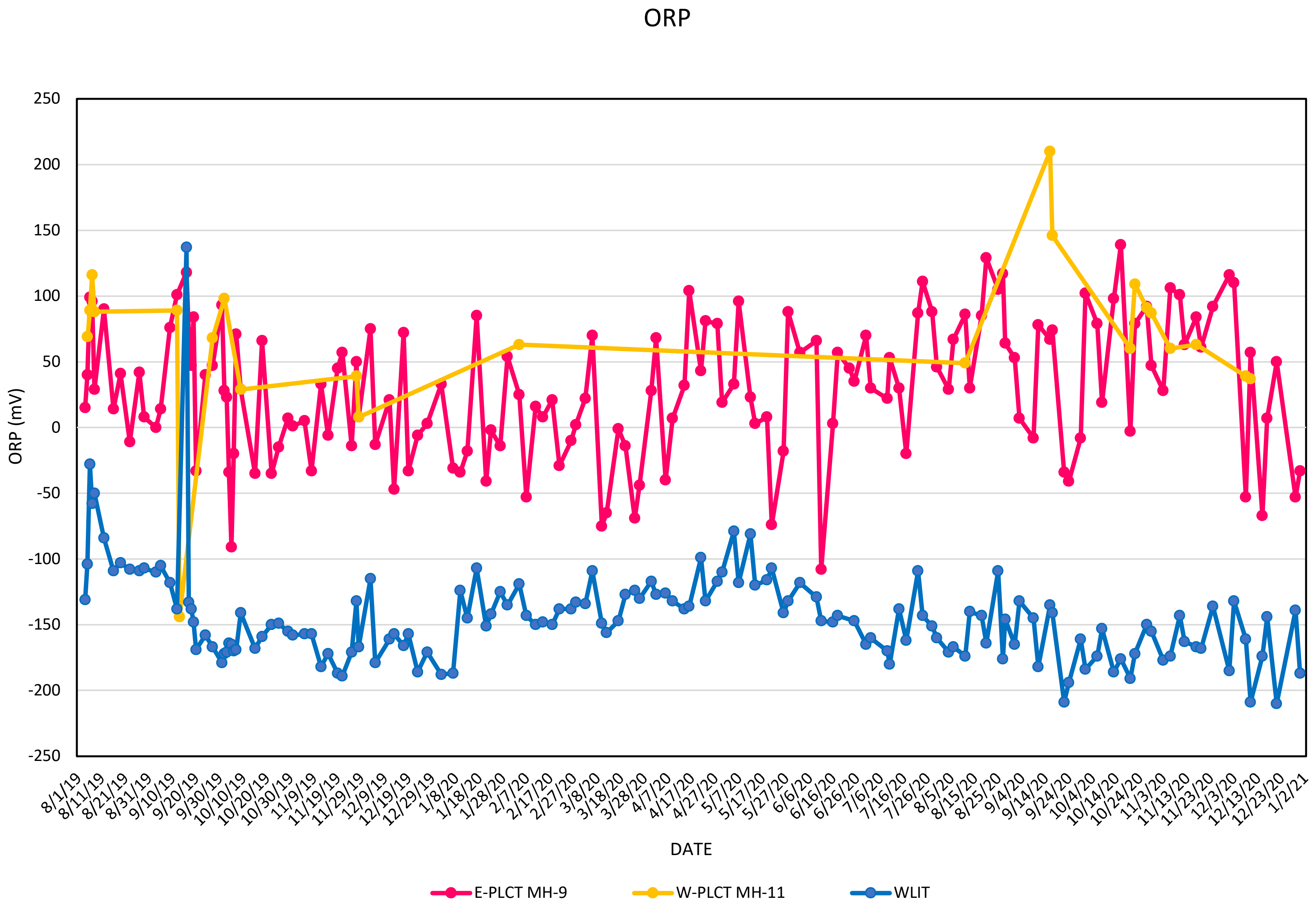


EXHIBIT 3.A
FALL 2019 LEACHATE DATA

Constituent	Location: Sample Date: Units	MH-9 09/16/19	MH-11 09/16/19	WLIT 09/16/19
General Chemistry				
Ammonia (as N)	MG/L	3.4 J	0.11 J	14 J
Cyanide, total	MG/L	0.005 UJ	0.005 UJ	0.005 UJ
Nitrate-nitrite (as N)	MG/L	7 J	0.4 J	0.27 J
Sulfide	MG/L	0.1 UJ	0.1 UJ	0.1 UJ
Total Phosphorus as P	MG/L	0.373 UJ	0.373 UJ	0.55 J
Metals				
Aluminum	MG/L	0.018 J	0.09 J	0.056 J
Antimony	MG/L	0.0013 J	0.005 U	0.00085 J
Arsenic	MG/L	0.003 U	0.003 U	0.023
Barium	MG/L	0.0069	0.0097	0.17
Beryllium	MG/L	0.0005 U	0.0005 U	0.0005 U
Cadmium	MG/L	0.0005 U	0.0005 U	0.0005 U
Calcium	MG/L	79	81	77
Chromium	MG/L	0.002 J	0.0019 J	0.0017 J
Chromium, Hexavalent	MG/L	0.001 UJ	0.00094 J	0.001 UJ
Cobalt	MG/L	0.0017 J	0.00014 J	0.0046 J
Copper	MG/L	0.0041 J	0.0024 J	0.014
Iron	MG/L	0.14	0.27	26
Lead	MG/L	0.0025 U	0.0025 U	0.0025 U
Magnesium	MG/L	20 J	7.9 J	19 J
Manganese	MG/L	0.042	0.0354 UJ	0.67
Mercury	MG/L	0.0002 U	0.00064 UJ	0.00064 UJ
Molybdenum	MG/L	0.005 U	0.005 U	0.003 J
Nickel	MG/L	0.0067	0.005 U	0.016
Potassium	MG/L	13	6	18
Selenium	MG/L	0.0025 U	0.0025 U	0.0025 U
Silver	MG/L	0.001 U	0.001 U	0.001 U
Sodium	MG/L	50	8.6	59
Thallium	MG/L	0.001 U	0.001 U	0.001 U
Tin	MG/L	0.005 U	0.005 U	0.005 U
Uranium	PCI/L	0.42 J	0.82	0.67 U
Vanadium	MG/L	0.01 U	0.01 U	0.01 U
Zinc	MG/L	0.087	0.038	0.044
Dioxins				
2,3,7,8-TCDD	PG/L	10 UJ	11 UJ	9.9 UJ

EXHIBIT 3.A
FALL 2019 LEACHATE DATA

Constituent	Location: Sample Date: Units	MH-9 09/16/19	MH-11 09/16/19	WLIT 09/16/19
Perchlorate				
Perchlorate	UG/L	0.26 J	0.21 J	0.073 J
Nitroaromatics/Nitramines				
2,4,6-Trinitrotoluene (TNT)	UG/L	0.43 U	0.42 U	0.42 U
2,4-Dinitrotoluene	UG/L	0.43 U	0.42 U	0.42 U
2,6-Dinitrotoluene	UG/L	0.21 U	0.21 U	0.21 U
2-Amino-4,6-dinitrotoluene	UG/L	0.21 U	0.21 U	0.21 U
3,5-Dinitroaniline	UG/L	0.43 U	0.42 U	0.42 U
4-Amino-2,6-dinitrotoluene	UG/L	0.21 U	0.21 U	0.21 U
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	UG/L	0.32 U	0.32 U	0.32 U
m-Nitrotoluene	UG/L	0.43 U	0.42 U	0.42 U
Nitroglycerin	UG/L	3.2 U	3.2 U	3.2 U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	UG/L	0.43 U	0.42 U	0.42 U
o-Nitrotoluene	UG/L	0.43 U	0.42 U	0.42 U
PETN	UG/L	2.1 U	2.1 U	2.1 U
Picric acid	UG/L	0.43 U	0.42 U	0.42 U
p-Nitrotoluene	UG/L	1.1 U	1.1 U	1.1 U
Tetryl	UG/L	0.26 U	0.25 U	0.25 U
PCBs				
Aroclor 1221	UG/L	0.5 UJ	0.46 UJ	0.47 UJ
Aroclor 1232	UG/L	0.5 UJ	0.46 UJ	0.47 UJ
Aroclor 1242	UG/L	0.5 UJ	0.46 UJ	0.47 UJ
Aroclor 1248	UG/L	0.5 UJ	0.46 UJ	0.47 UJ
Aroclor 1254	UG/L	0.5 UJ	0.46 UJ	0.47 UJ
Aroclor 1260	UG/L	0.5 UJ	0.46 UJ	0.47 UJ
Pesticides				
4,4'-DDD	UG/L	0.02 UJ	0.019 UJ	0.019 UJ
4,4'-DDE	UG/L	0.02 UJ	0.019 UJ	0.019 UJ
4,4'-DDT	UG/L	0.02 UJ	0.019 UJ	0.019 UJ
Aldrin	UG/L	0.02 UJ	0.019 UJ	0.019 UJ
alpha Endosulfan (Endosulfan I)	UG/L	0.02 UJ	0.019 UJ	0.019 UJ
beta Endosulfan (Endosulfan II)	UG/L	0.02 UJ	0.019 UJ	0.019 UJ
BHC, alpha	UG/L	0.02 UJ	0.019 UJ	0.019 UJ
BHC, beta	UG/L	0.02 UJ	0.019 UJ	0.019 UJ
BHC, delta	UG/L	0.02 UJ	0.019 UJ	0.019 UJ
BHC, gamma (Lindane)	UG/L	0.02 UJ	0.019 UJ	0.019 UJ

EXHIBIT 3.A
FALL 2019 LEACHATE DATA

Constituent	Location: Sample Date: Units	MH-9 09/16/19	MH-11 09/16/19	WLIT 09/16/19
Chlordane (technical)	UG/L	0.2 UJ	0.19 UJ	0.19 UJ
Chlordane, alpha	UG/L	0.02 UJ	0.019 UJ	0.019 UJ
Chlordane, beta	UG/L	0.02 UJ	0.019 UJ	0.019 UJ
Dieldrin	UG/L	0.02 UJ	0.0078 J	0.019 UJ
Dimethoate	UG/L	1.4 U	1.4 U	1.4 UJ
Endosulfan sulfate	UG/L	0.02 UJ	0.019 UJ	0.019 UJ
Endrin	UG/L	0.02 UJ	0.019 UJ	0.019 UJ
Endrin aldehyde	UG/L	0.02 UJ	0.019 UJ	0.019 UJ
Famphur	UG/L	0.95 U	0.95 U	0.96 UJ
Heptachlor	UG/L	0.02 UJ	0.019 UJ	0.019 UJ
Heptachlor epoxide	UG/L	0.02 UJ	0.019 UJ	0.019 UJ
Methyl parathion	UG/L	3.8 U	3.8 U	3.8 UJ
O,O,O-Triethyl phosphorothioate	UG/L	0.95 U	0.95 U	0.96 UJ
Phorate	UG/L	1.1 U	1.1 U	1.1 UJ
Thionazin	UG/L	0.95 U	0.95 U	0.96 UJ
Toxaphene	UG/L	1.2 UJ	1.1 UJ	1.1 UJ
Radiological				
Gross Alpha	PCI/L	7.16 UJ	4.64 UJ	4.82 UJ
Gross Beta	PCI/L	12.5 J	3.72	13.2 J
Radium-226	PCI/L	21.3	36.3 U	39.6 U
Radium-228	PCI/L	25.9	26 U	37.5 U
SVOCs				
1,2,4-Trichlorobenzene	UG/L	9.8 UJ	10 UJ	10 UJ
1,2-Dichlorobenzene	UG/L	9.8 UJ	10 UJ	10 UJ
1,3-Dichlorobenzene	UG/L	9.8 UJ	10 UJ	10 UJ
1,4-Dichlorobenzene	UG/L	9.8 UJ	10 UJ	10 UJ
2,4,6-Trichlorophenol	UG/L	9.8 UJ	10 UJ	10 UJ
2,4-Dichlorophenol	UG/L	9.8 UJ	10 UJ	10 UJ
2,4-Dimethylphenol	UG/L	9.8 UJ	10 UJ	10 UJ
2,4-Dinitrophenol	UG/L	30 UJ	31 UJ	30 UJ
2,4-Dinitrotoluene	UG/L	9.8 UJ	10 UJ	10 UJ
2,6-Dinitrotoluene	UG/L	9.8 UJ	10 UJ	10 UJ
2-Chloronaphthalene	UG/L	9.8 UJ	10 UJ	10 UJ
2-Chlorophenol	UG/L	9.8 UJ	10 UJ	10 UJ
2-Nitrophenol	UG/L	9.8 UJ	10 UJ	10 UJ
3,3'-Dichlorobenzidine	UG/L	9.8 UJ	10 UJ	10 UJ

EXHIBIT 3.A
FALL 2019 LEACHATE DATA

Constituent	Location: Sample Date: Units	MH-9 09/16/19	MH-11 09/16/19	WLIT 09/16/19
4,6-Dinitro-2-methylphenol	UG/L	9.8 UJ	10 UJ	10 UJ
4-Bromophenyl phenyl ether	UG/L	9.8 UJ	10 UJ	10 UJ
4-Chloro-3-methylphenol	UG/L	9.8 UJ	10 UJ	10 UJ
4-Chlorophenyl phenyl ether	UG/L	9.8 UJ	10 UJ	10 UJ
4-Nitrophenol	UG/L	9.8 UJ	10 UJ	10 UJ
Acenaphthene	UG/L	0.2 UJ	0.21 UJ	0.2 UJ
Acenaphthylene	UG/L	0.2 UJ	0.21 UJ	0.2 UJ
Anthracene	UG/L	0.2 UJ	0.21 UJ	0.2 UJ
Benzidine	UG/L	25 UJ	26 UJ	25 UJ
Benzo(a)anthracene	UG/L	0.2 UJ	0.21 UJ	0.2 UJ
Benzo(a)pyrene	UG/L	0.2 UJ	0.21 UJ	0.2 UJ
Benzo(b)fluoranthene	UG/L	0.2 UJ	0.21 UJ	0.2 UJ
Benzo(g,h,i)perylene	UG/L	0.2 UJ	0.21 UJ	0.2 UJ
Benzo(k)fluoranthene	UG/L	0.2 UJ	0.21 UJ	0.2 UJ
Benzyl butyl phthalate	UG/L	9.8 UJ	10 UJ	10 UJ
bis(2-Chloroethoxy)methane	UG/L	9.8 UJ	10 UJ	10 UJ
bis(2-Chloroethyl)ether	UG/L	9.8 UJ	10 UJ	10 UJ
bis(2-Chloroisopropyl)ether	UG/L	9.8	10	10
bis(2-Ethylhexyl)phthalate	UG/L	26 J	10 UJ	29 J
Chrysene	UG/L	0.2 UJ	0.21 UJ	0.2 UJ
Dibenz(a,h)anthracene	UG/L	0.2 UJ	0.21 UJ	0.2 UJ
Diethyl phthalate	UG/L	0.54 J	10 UJ	0.87 J
Dimethyl phthalate	UG/L	9.8 UJ	10 UJ	10 UJ
dI-n-Butyl phthalate	UG/L	9.8 UJ	10 UJ	10 UJ
dI-n-Octyl phthalate	UG/L	9.8 UJ	10 UJ	10 UJ
Fluoranthene	UG/L	0.13 J	0.21 UJ	0.2 UJ
Fluorene	UG/L	0.2 UJ	0.21 UJ	0.2 UJ
Hexachlorobenzene	UG/L	9.8 UJ	10 UJ	10 UJ
Hexachlorobutadiene	UG/L	9.8 UJ	10 UJ	10 UJ
Hexachlorocyclopentadiene	UG/L	20 UJ	21 UJ	20 UJ
Hexachloroethane	UG/L	9.8 UJ	10 UJ	10 UJ
Indeno(1,2,3-c,d)pyrene	UG/L	0.2 UJ	0.21 UJ	0.2 UJ
Isophorone	UG/L	9.8 UJ	10 UJ	10 UJ
Naphthalene	UG/L	0.2 UJ	0.21 UJ	0.2 UJ
Nitrobenzene	UG/L	9.8 UJ	10 UJ	10 UJ
n-Nitroso-dimethylamine	UG/L	9.8 UJ	10 UJ	10 UJ

EXHIBIT 3.A
FALL 2019 LEACHATE DATA

Constituent	Location: Sample Date: Units	MH-9 09/16/19	MH-11 09/16/19	WLIT 09/16/19
N-Nitroso-di-n-propylamine	UG/L	9.8 UJ	10 UJ	10 UJ
N-Nitrosodiphenylamine	UG/L	9.8 UJ	10 UJ	10 UJ
Pentachlorophenol	UG/L	20 UJ	21 UJ	20 UJ
Phenanthrene	UG/L	0.2 UJ	0.21 UJ	0.2 UJ
Phenol	UG/L	9.8 UJ	10 UJ	10 UJ
Pyrene	UG/L	0.2 UJ	0.21 UJ	0.2 UJ
VOCs				
1,1,1,2-Tetrachloroethane	UG/L	1 UJ	1 UJ	1 UJ
1,1,1-Trichloroethane	UG/L	1 UJ	1 UJ	1 UJ
1,1,2,2-Tetrachloroethane	UG/L	1 UJ	1 UJ	1 UJ
1,1,2-Trichloroethane	UG/L	5 UJ	5 UJ	5 UJ
1,1-Dichloroethane	UG/L	1 UJ	1 UJ	1 UJ
1,1-Dichloroethene	UG/L	1 UJ	1 UJ	1 UJ
1,2,3-Trichloropropane	UG/L	5 UJ	5 UJ	5 UJ
1,2-Dibromo-3-chloropropane (DBCP)	UG/L	5 UJ	5 UJ	5 UJ
1,2-Dibromoethane (EDB)	UG/L	1 UJ	1 UJ	1 UJ
1,2-Dichloroethane	UG/L	1 UJ	1 UJ	1 UJ
1,2-Dichloropropane	UG/L	1 UJ	1 UJ	1 UJ
1,4-Dioxane	UG/L	1 UJ	1 UJ	1 UJ
2-Butanone (MEK)	UG/L	25 UJ	25 UJ	25 UJ
2-Chloroethyl vinyl ether	UG/L	5 UJ	5 UJ	5 UJ
2-Hexanone	UG/L	25 UJ	25 UJ	25 UJ
4-Methyl-2-pentanone (MIBK)	UG/L	25 UJ	25 UJ	25 UJ
Acetone	UG/L	25 UJ	25 UJ	25 UJ
Acrolein	UG/L	20 UJ	20 UJ	20 UJ
Acrylonitrile	UG/L	10 UJ	10 UJ	10 UJ
Benzene	UG/L	1 UJ	1 UJ	1 UJ
Bromodichloromethane	UG/L	1 UJ	1 UJ	1 UJ
Bromoform	UG/L	5 UJ	5 UJ	5 UJ
Bromomethane	UG/L	1 UJ	1 UJ	1 UJ
Carbon disulfide	UG/L	1 UJ	1 UJ	1 UJ
Carbon tetrachloride	UG/L	1 UJ	1 UJ	1 UJ
Chlorobenzene	UG/L	1 UJ	1 UJ	1 UJ
Chloroethane	UG/L	1 UJ	1 UJ	1 UJ
Chloroform	UG/L	1 UJ	1 UJ	1 UJ
Chloromethane	UG/L	1 UJ	1 UJ	1 UJ

EXHIBIT 3.A
FALL 2019 LEACHATE DATA

Constituent	Location: Sample Date: Units	MH-9 09/16/19	MH-11 09/16/19	WLIT 09/16/19
cis-1,2-Dichloroethene	UG/L	1 UJ	1 UJ	1 UJ
cis-1,3-Dichloropropene	UG/L	5 UJ	5 UJ	5 UJ
Dibromochloromethane	UG/L	1 UJ	1 UJ	1 UJ
Ethylbenzene	UG/L	1 UJ	1 UJ	1 UJ
Iodomethane (methyl iodide)	UG/L	1 UJ	1 UJ	1 UJ
Methylene chloride	UG/L	5 UJ	5 UJ	5 UJ
Styrene	UG/L	1 UJ	1 UJ	1 UJ
Tetrachloroethene (PCE)	UG/L	1 UJ	1 UJ	1 UJ
Toluene	UG/L	1 UJ	1 UJ	1 UJ
trans-1,2-Dichloroethene	UG/L	1 UJ	1 UJ	1 UJ
trans-1,3-Dichloropropene	UG/L	5 UJ	5 UJ	5 UJ
trans-1,4-Dichloro-2-butene	UG/L	5 UJ	5 UJ	5 UJ
Trichloroethene (TCE)	UG/L	1 UJ	1 UJ	1 UJ
Trichlorofluoromethane (Freon 11)	UG/L	1 UJ	1 UJ	1 UJ
Vinyl acetate	UG/L	25 UJ	25 UJ	25 UJ
Vinyl chloride	UG/L	1 UJ	1 UJ	1 UJ
Xylenes, total	UG/L	10 UJ	10 UJ	10 UJ

Notes:
J - Result is estimated
U - Constituent not detected above the associated detection limit
UJ - Constituent not detected, associated detection limit is estimated.

EXHIBIT 3.B

DATA VALIDATION AND USABILITY SUMMARY REPORT
ORDOT CLOSURE FACILITY

Client: GBB, Inc. on behalf of the Guam Solid Waste Authority
SDGs: 280-128440-1 and 400-176507-1
Laboratory: TestAmerica Laboratories, Inc., Pensacola, Florida
Site: Ordot Closure Facility Date: November 22, 2019

Client Sample ID	Laboratory Sample ID	Matrix
MH-11	280-128440-1, 400-176507-1	Leachate Water
MH-9	280-128440-2, 400-176507-2	Leachate Water
WLIT	280-128440-3, 400-176507-3	Leachate Water

Data validation was performed on the analytical data for three (3) leachate water samples collected on September 16, 2019 by Brown and Caldwell at the Ordot Closure Facility in Guam. The samples were analyzed under the following USEPA Methods:

Method	*Description*	*Compound Category*
SW846 8260C	Volatile Organic Compounds	GC/MS
SW846 8260C SIM	Volatile Organic Compounds	GC/MS
SW846 8270D	Semi-volatile Organic Compounds	GC/MS
SW846 8270D LL	Semi-volatile Organic Compounds- Low Level	GC/MS
40CFR136A 1613B	Tetra Chlorinated Dioxins and Furans	GC/MS
EPA 6850	Perchlorate	LC/MS[a] (GC/MS)
SW846 8330B	Nitroaromatics and Nitramines	HPLC[bc] (GC/MS)
SW846 8081B	Organochlorine Pesticides	GC
SW846 8082A	Polychlorinated Biphenyls	GC
SW846 8141B	Organophosphorus Compounds	GC[c]
SW846 8151A	Herbicides	GC
MCAWW 350.1	Nitrogen, Ammonia	General Chemistry
MCAWW 353.2	Nitrogen, Nitrate-Nitrite	General Chemistry
EPA 365.4	Phosphorus, Total	General Chemistry
SM 4500 CN E	Cyanide, Total	General Chemistry
SM 4500 S2 D	Sulfide, Total	General Chemistry
EPA 200.8	Metals	Metals
EPA 245.1	Mercury	Metals
EPA 218.7	Hexavalent Chromium	Metals
EPA 900.0	Gross Alpha and Gross Beta Radioactivity	Radiochemistry
EPA 901.1	Radium-226 and Other Gamma Emitters	Radiochemistry

[a] Perchlorate is analyzed with Liquid Chromatography-mass Spectrometry (LC/MS) but is included in the Compound Category GC/MS for review.

[b] Nitroaromatics and Nitramines are analyzed with High Performance Liquid Chromatography (HPLC) but are included in the Compound Category GC/MS for review.

[c] Methods SW846 8330B and 8141B were reported on separate reports for leachate samples.

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the USEPA Region 9 Superfund Data Evaluation/Validation Guidance at Tier 3, and the reviewer's professional judgment.

Documents also used for reference:

- USEPA. National Functional Guidelines for Superfund Organics Methods Data Review. OSWER 9355.0-132, EPA-540-R-014-002, August 2014.
- USEPA. National Functional Guidelines for Superfund Inorganics Methods Data Review. OSWER 9355.0-135, EPA-540-R-2017-001, January 2017.
- USEPA. Guidance on Environmental Data Verification and Data Validation. EPA-240-R-02-004. November 2002.

Attachment A includes the Level 2 Leachate reports with qualifiers outlined in this report. The Tier 3 validation was performed on the Level 4 reports provided by the laboratory and are available upon request.

DATA VALIDATION SUMMARY REPORT

Overall Report Issues

Chain of Custody (COC)

Report 280-128440-1 and 400-176507-1

- The chain of custody arrived at the laboratory intact.

Preservation

Report 280-128440-1

- All samples arrived at the lab properly preserved and, where required, on ice under 4° C (±2° C).

Report 400-176507-2

- All samples arrived at the lab properly preserved; however, the temperatures were recorded at 12.9°, 13.8°, and 16.1° C. Methods requiring temperature preservation are qualified as estimated, J, for detections, and, UJ, for non-detections, reason code 9. If a sample is already qualified, no further qualification is required.
- Method 8260C: The preservative used in the sample containers provided is not compatible with three of the Method 8260 analytes requested. All samples were received preserved with hydrochloric acid. The requested target analyte list includes 2-chloroethyl vinyl ether, acrolein and acrylonitrile, which are acid-labile compounds that degrade in an acidic medium. Associated sample analytes were non-detect, and are qualified as estimated with limited detection, UJ, reason code 9.

Calculations

Relative Percent Difference (RPD) is a quantitative indicator of quality assurance and quality control (QA/QC) for repeated measurements (i.e. duplicates) where the outcome is expected to be the same. For samples with non-detections, the method detection limit (MDL) was used to calculate the RPD. It is calculated using the following equation:

$$RPD = \left| \frac{x_1 - x_2}{(x_1 + x_2)/2} \right| \times 100$$

GC/MS Compounds

Overall Usability Issues:

Report 280-128440-1
This section includes the review of method SW846 8330B. Method SW846 8330B was ran on HPLC and is included in this section for review. Overall, the data are acceptable for the intended purposes. No data are qualified.

Report 400-175607-1
This section includes the review of methods SW846 8260C, SW846 8260C SIM, SW846 8270D, SW846 8270D LL, 40CFR136A 1613B, and EPA 6850. Method EPA 6850 was analyzed on LC/MS and is included in this section for review. Overall, the data are acceptable for the intended purposes. Data are qualified as estimated due to preservation.

Holding Times

Report 280-128440-1

- All samples were analyzed within associated holding times.

Report 400-176507-1

- All samples were analyzed within associated holding times with the exception of the second analysis of hexachloroethane, 2,4-dinitrophenol, 4-nitrophenol, 2,4,6-trichlorophenol, 4,6-dinitro-2-methylphenol, pentachlorophenol, 1,4-dichlorobenzene, hexachlorobutadiene, 2-nitrophenol and 2-chlorophenol. These analytes were reanalyzed due to LCS issues. Both sets of data are identical, and the second set of data are not-reportable.

Case Narrative/Chain of Custody

Report 280-128440-1

- The laboratory noted quality issues with the following: CCV.
- The Chain of Custody was intact for all methods.

Report 400-176507-1

- The laboratory noted quality issues with the following: CCV, MS/MSD, preservation, surrogates, LCS, and retention time.
- The Chain of Custody was intact for all methods.

Matric Spike and Matrix Spike Duplicate (MS/MSD) Samples

Report 280-128440-1

- There were no MS/MSD samples for GS/MS compounds.

Report 400-176507-1

- The MS/MSD samples analyzed on samples in this dataset exhibited acceptable %REC.

Laboratory Control Samples and Duplicate (LCS/LCSD)

Report 280-128440-1

- All LCS/LCSD sample percent recoveries and RPDs exhibited acceptable QC ranges.

Report 400-176507-1

- The LCS/LCSD percent recovery for hexachloroethane, 2,4-dinitrophenol, 4-nitrophenol, 2,4,6-trichlorophenol, 4,6-dinitro-2-methylphenol, pentachlorophenol, 1,4-dichlorobenzene, hexachlorobutadiene, 2-nitrophenol and 2-chlorophenol were below control limits. The samples were reextracted and reanalyzed outside of the holding time confirming the results with LCS recoveries within control limits. No qualification is required.

Method Blank

Report 280-128440-1 and 400-176507-1

- The method blanks for associated samples were free of contamination.

Surrogates

Report 280-128440-1

- All samples exhibited acceptable surrogate QC ranges.

Report 400-176507-1

- All samples exhibited acceptable surrogate QC ranges with the following exception:
    - Method 8270LL: Sample MH-9 had one out of three surrogates above control limits. Since the other two surrogates are within control limits, no qualification is required.
    - Method 8270LL: Sample WLIT had two out of three surrogates above control limits. Since all samples were non-detect, no qualification is required.

Initial Calibration Verification (ICV)

Report 280-128440-1

- All samples exhibited acceptable ICV QC ranges for associated analytes.

Report 400-176507-1

- Method 1613B: EPA Method 1613B specifies a +/- 15 second retention time difference between the recovery standard in the ICAL and the CCV. The 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument 10D5 exceeded this criterion: all samples. This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification. No qualification is required.

Continuing Calibration Verification (CCV)

Report 280-128440-1

- Method 8330B: CCV on confirmation run failed low for 2,4,6-Trinitrotoluene, however analyst was not confirming this compound. All other analytes in QC were within control. CCV on primary run from which results were reported from was in control. No qualification is required.
- Method 8330B: The CCV's failed for Picric acid and PETN, samples not being reported for these compounds from the confirmation column. Results reported from the primary where the CCV is in control. No qualification is required.

Report 400-176507-1

- Method 8260C SIM: The CCV associated with batch 400-457818 recovered above the upper control limit for the 4-Bromofluorobenzene surrogate. The quality control samples and samples associated with this CCV were all within acceptance limits: therefore, the data have been reported. Since all sample analytes in the analytical batch were non-detected, no qualification is required, reason code SH.
- Method 8260C: The CCV associated with batch 400-459062 recovered outside acceptance criteria, low biased, for cis-1,3-Dichloropropene and 2-Chloroethyl vinyl ether. Since all sample analytes in the analytical batch were non-detected, no qualification is required, reason code SH.
- Method 8270D LL: The CCV associated with batch 400-458759 recovered above the upper control limit for benzo[k]fluoranthene. Since all sample analytes in the analytical batch were non-detected, no qualification is required, reason code SH.
- Method 8270D LL: The CCV associated with batch 400-461158 recovered above the upper control limit for indeno[1,2,3-cd]pyrene, benzo[g,h,i]perylene, fluorene and dibenz(a,h)anthracene. Since all sample analytes in the analytical batch were non-detected, no qualification is required, reason code SH.

Internal Standard Areas

Report 280-128440-1 and 400-176507-1

- All samples exhibited acceptable internal standard values.

Compound Quantitation

Report 280-128440-1

- No results were less than the RL but greater than or equal to the MDL.

Report 400-176507-1

- All results less than the RL but greater than or equal to the MDL are qualified as an approximate value, J, reason code T.

Instrument Tuning

Report 280-128440-1 and 400-176507-1

- All criteria were met.

Injection Logs

Report 280-128440-1 and 400-176507-1

- All criteria were met.

Extraction/Preparation Logs

Report 280-128440-1 and 400-176507-1

- All criteria were met.

GC Compounds

Overall Usability Issues:
Report 280-128440-1
This section includes the review of method SW846 8141B. Overall, the data are acceptable for the intended purposes. Data are qualified as estimated due to surrogate issues.

Report 400-176507-1
This section includes the review of methods SW846 8081B, SW846 8082A, and SW846 8151A. Overall, the data are acceptable for the intended purposes. Data are qualified as estimated due to preservation issues.

Holding Times
Report 280-128440-1 and 400-176507-1
- All samples were analyzed within associated holding times.

Case Narrative/Chain of Custody
Report 280-128440-1
- The laboratory noted quality issues with the following: CCV and surrogates.
- The Chain of Custody was intact for all methods.

Report 400-176507-1
- The laboratory noted quality issues with the following: CCV.
- The Chain of Custody was intact for all methods.
- Due to sampling error, method 8151A was not collected in this dataset.

Matric Spike and Matrix Spike Duplicate (MS/MSD) Samples
Report 280-128440-1 and 400-176507-1
- There were no MS/MSDs ran for this dataset.

Laboratory Control Samples and Duplicate (LCS/LCSD)
Report 280-128440-1 and 400-176507-1
- All LCS/LCSD sample percent recoveries and RPDs exhibited acceptable QC ranges.

Method Blank
Report 280-128440-1 and 400-176507-1
- The method blanks were free of contamination.

Surrogates
Report 280-128440-1
- All samples exhibited acceptable surrogate QC ranges with the following exception:
    - Method 8141B: Sample WLIT had both surrogates below control limits. Sample non-detections are qualified as estimated with limited detection, UJ, reason code 3L.

Report 400-176507-1
- All samples exhibited acceptable surrogate QC ranges.

Initial Calibration

Report 280-128440-1 and 400-176507-1

- All %RSD and/or correlation coefficient criteria were met for associated analytes.

Continuing Calibration Verification (CCV)

Report 280-128440-1

- Method 8141B: The CCV associated with batch 280-472042 recovered above the upper control limit for Thionazin. Thionazin is reported from the in-control column. Since all sample analytes in the analytical batch were non-detected, no qualification is required, reason code SH.

Report 400-176507-1

- Method 8081B: The CCV associated with batch 400-458257 recovered above the upper control limit for alpha and beta-BHC. Non-detections are not qualified, reason code SH.

Compound Quantitation

Report 280-128440-1

- No results were less than the RL but greater than or equal to the MDL.

Report 400-176507-1

- All results less than the RL but greater than or equal to the MDL are qualified as an approximate value, J, reason code T.

Internal Standards

Report 280-128440-1 and 400-176507-1

- All criteria were met.

Injection Logs

Report 280-128440-1 and 400-176507-1

- All criteria were met.

Extraction/Preparation Logs

Report 280-128440-1 and 400-176507-1

- All criteria were met.

General Chemistry Compounds

Overall Usability Issues:

Report 400-176507-1
This section includes the review of methods MCAWW 350.1, MCAWW 353.2, EPA 365.4, SM 4500 CN E, and SM 4500 S2 D. Overall, the data are acceptable for the intended purposes. Data are qualified as estimated due to holding times and blank issues.

Holding Times

Report 400-176507-1

- Method SM4500S2D: Sulfide for all samples was ran outside of the 7 day hold time due to lab analyst issues. Since the analyses occurred within less than 1.5 times the holding time, non-detections are qualified as estimated with limited detection, UJ, reason code 1.

Case Narrative/Chain of Custody

Report 400-176507-1

- The laboratory noted quality issues with the following: holding time, dilutions, blanks, and MS/MSD.
- The Chain of Custody was intact for all methods.

Matric Spike and Matrix Spike Duplicate (MS/MSD) Samples

Report 400-176507-1

- The MS/MSD samples analyzed on samples in this dataset exhibited acceptable %REC.

Laboratory Control Samples and Duplicate (LCS/LCSD)

Report 400-176507-1

- The LCS samples exhibited acceptable %REC.

Method Blank

Report 400-176507-1

- Method 365.4: The method blank contained total phosphorus in analytical batch 458500 above the method detection limit. Associated detections less than five times the blank detection are qualified as estimated with limited detection, UJ, reason code 2, the MDL is increased to the sample concentration, and the reporting limit is raised (never lowered) to five times the method blank detection. Associated non-detections and detections greater than five times the method blank detection are not qualified, reason code 2.

Initial Calibration

Report 400-176507-1

- All %RSD and/or correlation coefficient criteria were met.

Continuing Calibration

Report 400-176507-1

- All %Drift criteria were met.

Compound Quantitation

Report 400-176507-1

- No results were less than the RL but greater than or equal to the MDL.

Injection Logs

Report 400-176507-1

- All criteria were met.

Extraction/Preparation Logs

Report 400-176507-1

- All criteria were met.

Metals

Overall Usability Issues:

Report 400-176507-1

This section includes the review of methods EPA 200.8, EPA 245.1, and EPA 218.7. Overall, the data are acceptable for the intended purposes. Data are qualified as estimated due to blank, CCV, and LOD issues.

Holding Times

Report 400-176507-1

- All samples were analyzed within required holding times.

Case Narrative/Chain of Custody

Report 400-176507-1

- The laboratory noted quality issues with the following: limit of detection, blanks, and CCV.
- The Chain of Custody was intact for all methods.

Matric Spike and Matrix Spike Duplicate (MS/MSD) Samples

Report 400-176507-1

- There were no MS/MSD samples analyzed on these datasets.

Laboratory Control Samples and Duplicate (LCS/LCSD)

Report 400-176507-1

- The LCS samples exhibited acceptable %REC.

Method Blank

Report 400-176507-1

- Method 200.8: The method blank contained calcium and manganese in analytical batch 589844 above the method detection limit. Associated detections less than five times the blank detection are qualified as estimated with limited detection, UJ, reason code 2, the MDL is increased to the sample concentration, and the reporting limit is raised (never lowered) to five times the method blank detection. Associated non-detections and detections greater than five times the method blank detection are not qualified, reason code 2.
- Method 245.1: The method blank contained mercury in analytical batch 589862 above the method detection limit. Associated detections less than five times the blank detection are qualified as estimated with limited detection, UJ, reason code 2, the MDL is increased to the sample concentration, and the reporting limit is raised (never lowered) to five times the method blank detection. Associated non-detections and detections greater than five times the method blank detection are not qualified, reason code 2.

Instrument Blank

Report 400-176507-1

- The instrument blanks were free of contamination.

Initial Calibration

Report 400-176507-1

- All %RSD and/or correlation coefficient criteria were met.

Continuing Calibration

Report 400-176507-1

- Method 200.8: The CCV associated with batch 680-589844 recovered above the upper control limit for magnesium. All samples are qualified as estimated, J, reason code SH.

Compound Quantitation

Report 400-176507-1

- All results less than the RL but greater than or equal to the MDL are qualified as an approximate value, J, reason code T.

Injection Logs

Report 400-176507-1

- All criteria were met.

Extraction/Preparation Logs

Report 400-176507-1

- All criteria were met.

ICP Interference, Post Digestion, and Serial Dilution Results

Report 400-176507-1

- Method 200.8: The interference check standard solution (ICSA) associated with all samples showed results for Cobalt at a level greater than 2 times the limit of detection (LOD). It is believed that the solution contains trace impurities of this element / these elements and the results are not due to matrix interference. These results are consistent with those found by the manufacturer of the ICSA solution. All samples for cobalt are qualified as estimated, J, reason code M.

Radiochemistry

Overall Usability Issues:

Report 400-176507-1

This section includes the review of methods EPA 900.0 and EPA 901.1. Overall, the data is acceptable for the intended purposes. Data are qualified due to reporting limit and LCS issues.

Holding Times

Report 400-176507-1

- All samples were analyzed within required holding times.

Case Narrative/Chain of Custody

Report 400-176507-1

- The laboratory noted quality issues with the following: detection goals, LCS, and activity reference date.
- The Chain of Custody was intact for all methods.

Matric Spike and Matrix Spike Duplicate (MS/MSD) Samples

Report 400-176507-1

- There were no MS/MSD samples ran on Radiochemistry Compounds.

Laboratory Control Samples and Duplicate (LCS/LCSD)

Report 400-176507-1

- The LCS percent recovery for gross alpha was below control limits. Sample non-detections are qualified as estimated with limited detection, UJ, reason code 6L.

Method Blank

Report 400-176507-1

- The method blanks were free of contamination.

Background Checks

Report 400-176507-1

- The background checks are complete, and there are no issues to report.

Efficiency Checks, NIST traceable standards, Geometry, Calibration Range, and Laboratory Acceptance Limits

Report 400-176507-1

- All radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date for samples.
- Laboratory qualifier, G, indicates a sample with a Minimum Detectable Concentration greater than the requested RL. Associated samples are qualified as estimated, J, for detections, and, UJ, for non-detections, reason code G.
- All other radiochemistry QC data were within control limits.

DATA USABILITY SUMMARY REPORT

The data quality assessment identified analytical variances that did not meet the data of known quality protocols and could potentially affect the data usability. The purpose of this section is to evaluate how these variances affect the usability of the data.

All results less than the RL but greater than or equal to the MDL are qualified as an approximate value, J, reason code T. Samples have been properly qualified, and the analytical variances have no effect on data usability.

Report 400-176507-1 had all coolers arrive at the laboratory above control limits at 12.9°, 13.8°, and 16.1° C. The laboratory noted standing water in the cooler where ice once was present. Associated sample methods have been properly qualified, and the analytical variances have no effect on data usability.

GC/MS

The preservative used in the sample containers provided is not compatible with two of the Method 8260 analytes requested. All samples were received preserved with hydrochloric acid for 2-chloroethyl vinyl ether, acrolein and acrylonitrile. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

GC

Sample WLIT had both surrogates below control limits for method 8141B. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

General Chemistry

For all samples sulfide for all samples was ran outside of the 7 day hold time due to lab analyst issues. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

The method blank contained total phosphorus in analytical batch 458500 above the method detection limit. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

Metals

The method blanks contained calcium, manganese, and mercury above the method detection limit. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

The CCV recovered above the upper control limit for magnesium. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

The interference check standard solution associated with all samples showed results for cobalt at a level greater than 2 times the limit of detection. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

Radiochemistry

Multiple non-detected samples were reported with a Minimum Detectable Concentration greater than the requested RL. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

The LCS percent recovery for all sample had gross alpha below control limits. Associated samples have been properly qualified, and the analytical variances have no effect on data usability.

No other issues were identified that did not meet the Data of Known Quality Protocols and all unqualified results can be considered data of known quality.

Please contact the undersigned if you have any questions or need further information.

Jaclyn Lauer
Signed: Dated: November 22, 2019
Jaclyn Lauer, P.E.
Senior Engineer and Validator
Brown and Caldwell

Tami LongJohn
Reviewed: Dated: November 22, 2019
Tami LongJohn
Staff Scientist
Brown and Caldwell

Data Qualifiers

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ = The analyte was not detected above the sample reporting limit; and the reporting limit is approximate.

U = The analyte was analyzed for but was not detected above the sample reporting limit.

R = The sample result is rejected due to serious deficiencies. The presence or absence of the analyte cannot be verified.

Reason Codes

1	Holding time violation
2	Method blank contamination
3	Surrogate recovery
4	MS/MSD recovery
5	MS/MSD precision outside limits
6	LCS recovery
7	Field blank contamination
8	Field duplicate precision outside limits
9	Other deficiencies (including cooler temperature)
A	Absence of supporting QC
S	ICV, CCV or column performance check problem
Y	Initial and continuing calibration blank problem
M	Interference check samples problem
O	Post digestion spike outside of 85-115%
F	MSA correlation coefficient <0.995, or MSA not done
G	Serial dilution problem
K	DFTPP or BFB tuning problem
Q	Initial calibration problem
X	Internal standard recovery problem
V	Second source standard calibration verification problem
L	Low bias
Z	Retention time problem
N	Counting time error (radionuclide chemistry)
W	Detector instability (radionuclide chemistry)
C	Co-elution of compounds
E	Value exceeds linear calibration range
I	Interferences present during analysis
T	Trace level compound, poor quantitation
P	1C/2C precision outside limits
B	LCS/LCSD precision outside limits
D	Lab Dup/Rep precision outside limits
H	High bias

ATTACHMENT A

SDGs associated with Leachate Water UDS Level 2 Reports with Qualifiers

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eurofins | Environment Testing
TestAmerica

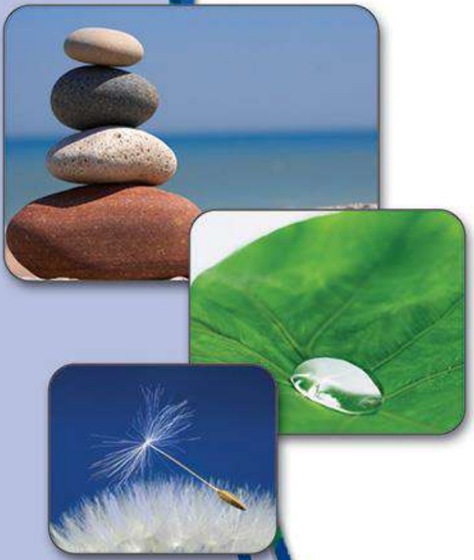
ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-128440-1
Client Project/Site: Guam

For:
Brown and Caldwell
220 Athens Way, Suite 500
Nashville, Tennessee 37228

Attn: Jaclyn Lauer



Mark Swafford

Authorized for release by:
9/30/2019 2:02:02 PM

Mark Swafford, Project Manager I
(850)471-6207
mark.swafford@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Definitions/Glossary

Client: Brown and Caldwell
Project/Site: Guam

Job ID: 280-128440-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Job ID: 280-128440-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

Job Narrative
280-128440-1

Comments
No additional comments.

Receipt
The samples were received on 9/17/2019 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.7º C.

GC Semi VOA
Method 8141B: The continuing calibration verification (CCV) associated with batch 280-472042 recovered above the upper control limit for Thionazin. Thionazin is reported from the in control column. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. 8141 (280-128387-H-6-A)

Method8141B: Surrogate recoveries for the following sample was outside control limits: WLIT (280-128440-3). Evidence of matrix interference due to non-target analytes is present; therefore, re-extraction and/or re-analysis was not performed. 8141 preparation batch 280-470993 and analytical batch 280-472042

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

LCMS
Method 8330B: CCV on confirmation run failed low for 2,4,6-Trinitrotoluene, however analyst was not confirming this compound.All other analytes in QC were within control. CCV on primary run from which results were reported from was in control.

WLIT (280-128440-3) and (CCV 280-472155/14)
8330 preparation batch 280-471081 and analytical batch 280-472155

Method(s) 8330B: The CCV's failed for Picric acid and PETN, samples not being reported for these compounds from the confirmation column. Results reported from the primary where the CCV is in control.

8330 preparation batch 280-471081 and analytical batch 280-471761

MH-11 (280-128440-1)

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

Organic Prep
Method 3535: The following sample required filtration to reduce matrix interferences: WLIT (280-128440-3).

Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-471081. A LCSD was preformed to ensure lab precision.

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

Detection Summary

Client: Brown and Caldwell
Project/Site: Guam

Job ID: 280-128440-1

Client Sample ID: MH-11

Lab Sample ID: 280-128440-1

No Detections.

Client Sample ID: MH-9

Lab Sample ID: 280-128440-2

No Detections.

Client Sample ID: WLIT

Lab Sample ID: 280-128440-3

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Brown and Caldwell
Project/Site: Guam

Job ID: 280-128440-1

Method	Method Description	Protocol	Laboratory
8141B	Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique	SW846	TAL DEN
8330B	Nitroaromatics and Nitramines (HPLC)	SW846	TAL DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL DEN
3535	Solid-Phase Extraction (SPE)	SW846	TAL DEN

Protocol References:

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

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Brown and Caldwell
Project/Site: Guam

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-128440-1	MH-11	Water	09/16/19 08:30	09/17/19 09:15	
280-128440-2	MH-9	Water	09/16/19 09:00	09/17/19 09:15	
280-128440-3	WLIT	Water	09/16/19 09:30	09/17/19 09:15	

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Client Sample ID: MH-11
Date Collected: 09/16/19 08:30
Date Received: 09/17/19 09:15
Lab Sample ID: 280-128440-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethoate	ND		1.4	0.43	ug/L		09/18/19 08:54	09/27/19 09:57	1
Famphur	ND		0.95	0.17	ug/L		09/18/19 08:54	09/27/19 09:57	1
Methyl parathion	ND		3.8	0.13	ug/L		09/18/19 08:54	09/27/19 09:57	1
Phorate	ND		1.1	0.15	ug/L		09/18/19 08:54	09/27/19 09:57	1
Thionazin	ND		0.95	0.30	ug/L		09/18/19 08:54	09/27/19 09:57	1
o,o',o''-Triethylphosphorothioate	ND		0.95	0.47	ug/L		09/18/19 08:54	09/27/19 09:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Triphenylphosphate	*74*		*60 - 154*	*09/18/19 08:54*	*09/27/19 09:57*	*1*
Chlormefos	*59*		*49 - 171*	*09/18/19 08:54*	*09/27/19 09:57*	*1*

Client Sample ID: MH-9
Date Collected: 09/16/19 09:00
Date Received: 09/17/19 09:15
Lab Sample ID: 280-128440-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethoate	ND		1.4	0.43	ug/L		09/18/19 08:54	09/27/19 07:21	1
Famphur	ND		0.95	0.17	ug/L		09/18/19 08:54	09/27/19 07:21	1
Methyl parathion	ND		3.8	0.13	ug/L		09/18/19 08:54	09/27/19 07:21	1
Phorate	ND		1.1	0.15	ug/L		09/18/19 08:54	09/27/19 07:21	1
Thionazin	ND		0.95	0.30	ug/L		09/18/19 08:54	09/27/19 07:21	1
o,o',o''-Triethylphosphorothioate	ND		0.95	0.47	ug/L		09/18/19 08:54	09/27/19 07:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Triphenylphosphate	*79*		*60 - 154*	*09/18/19 08:54*	*09/27/19 07:21*	*1*
Chlormefos	*75*		*49 - 171*	*09/18/19 08:54*	*09/27/19 07:21*	*1*

Client Sample ID: WLIT
Date Collected: 09/16/19 09:30
Date Received: 09/17/19 09:15
Lab Sample ID: 280-128440-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethoate	ND	UJ-RC:3L	1.4	0.43	ug/L		09/18/19 08:54	09/27/19 10:37	1
Famphur	ND	UJ-RC:3L	0.96	0.17	ug/L		09/18/19 08:54	09/27/19 10:37	1
Methyl parathion	ND	UJ-RC:3L	3.8	0.13	ug/L		09/18/19 08:54	09/27/19 10:37	1
Phorate	ND	UJ-RC:3L	1.1	0.15	ug/L		09/18/19 08:54	09/27/19 10:37	1
Thionazin	ND	UJ-RC:3L	0.96	0.30	ug/L		09/18/19 08:54	09/27/19 10:37	1
o,o',o''-Triethylphosphorothioate	ND	UJ-RC:3L	0.96	0.47	ug/L		09/18/19 08:54	09/27/19 10:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Triphenylphosphate	*49*	*X*	*60 - 154*	*09/18/19 08:54*	*09/27/19 10:37*	*1*
Chlormefos	*43*	*X*	*49 - 171*	*09/18/19 08:54*	*09/27/19 10:37*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Client Sample ID: MH-11
Date Collected: 09/16/19 08:30
Date Received: 09/17/19 09:15

Lab Sample ID: 280-128440-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trinitrotoluene	ND		0.42	0.17	ug/L		09/18/19 18:09	09/24/19 05:53	1
2,4-Dinitrotoluene	ND		0.42	0.088	ug/L		09/18/19 18:09	09/25/19 03:28	1
2,6-Dinitrotoluene	ND		0.21	0.068	ug/L		09/18/19 18:09	09/24/19 05:53	1
2-Amino-4,6-dinitrotoluene	ND		0.21	0.053	ug/L		09/18/19 18:09	09/24/19 05:53	1
o-Nitrotoluene	ND		0.42	0.090	ug/L		09/18/19 18:09	09/24/19 05:53	1
m-Nitrotoluene	ND		0.42	0.21	ug/L		09/18/19 18:09	09/24/19 05:53	1
p-Nitrotoluene	ND		1.1	0.21	ug/L		09/18/19 18:09	09/24/19 05:53	1
4-Amino-2,6-dinitrotoluene	ND		0.21	0.061	ug/L		09/18/19 18:09	09/24/19 05:53	1
3,5-Dinitroaniline	ND		0.42	0.14	ug/L		09/18/19 18:09	09/24/19 05:53	1
HMX	ND		0.42	0.092	ug/L		09/18/19 18:09	09/24/19 05:53	1
RDX	ND		0.32	0.17	ug/L		09/18/19 18:09	09/24/19 05:53	1
Tetryl	ND		0.25	0.083	ug/L		09/18/19 18:09	09/24/19 05:53	1
Nitroglycerin	ND		3.2	0.97	ug/L		09/18/19 18:09	09/24/19 05:53	1
PETN	ND		2.1	2.0	ug/L		09/18/19 18:09	09/24/19 05:53	1
Picric acid	ND		0.42	0.046	ug/L		09/18/19 18:09	09/24/19 05:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*90*		*75 - 118*	*09/18/19 18:09*	*09/24/19 05:53*	*1*
1,2-Dinitrobenzene	*98*		*75 - 118*	*09/18/19 18:09*	*09/25/19 03:28*	*1*

Client Sample ID: MH-9
Date Collected: 09/16/19 09:00
Date Received: 09/17/19 09:15

Lab Sample ID: 280-128440-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trinitrotoluene	ND		0.43	0.17	ug/L		09/18/19 18:09	09/24/19 06:16	1
2,4-Dinitrotoluene	ND		0.43	0.089	ug/L		09/18/19 18:09	09/24/19 06:16	1
2,6-Dinitrotoluene	ND		0.21	0.069	ug/L		09/18/19 18:09	09/24/19 06:16	1
2-Amino-4,6-dinitrotoluene	ND		0.21	0.054	ug/L		09/18/19 18:09	09/24/19 06:16	1
o-Nitrotoluene	ND		0.43	0.091	ug/L		09/18/19 18:09	09/24/19 06:16	1
m-Nitrotoluene	ND		0.43	0.21	ug/L		09/18/19 18:09	09/24/19 06:16	1
p-Nitrotoluene	ND		1.1	0.21	ug/L		09/18/19 18:09	09/24/19 06:16	1
4-Amino-2,6-dinitrotoluene	ND		0.21	0.061	ug/L		09/18/19 18:09	09/24/19 06:16	1
3,5-Dinitroaniline	ND		0.43	0.14	ug/L		09/18/19 18:09	09/24/19 06:16	1
HMX	ND		0.43	0.093	ug/L		09/18/19 18:09	09/24/19 06:16	1
RDX	ND		0.32	0.17	ug/L		09/18/19 18:09	09/24/19 06:16	1
Tetryl	ND		0.26	0.084	ug/L		09/18/19 18:09	09/24/19 06:16	1
Nitroglycerin	ND		3.2	0.98	ug/L		09/18/19 18:09	09/24/19 06:16	1
PETN	ND		2.1	2.1	ug/L		09/18/19 18:09	09/24/19 06:16	1
Picric acid	ND		0.43	0.046	ug/L		09/18/19 18:09	09/24/19 06:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*99*		*75 - 118*	*09/18/19 18:09*	*09/24/19 06:16*	*1*

Client Sample ID: WLIT
Date Collected: 09/16/19 09:30
Date Received: 09/17/19 09:15

Lab Sample ID: 280-128440-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trinitrotoluene	ND		0.42	0.17	ug/L		09/18/19 18:09	09/24/19 06:39	1
2,4-Dinitrotoluene	ND		0.42	0.089	ug/L		09/18/19 18:09	09/24/19 06:39	1
2,6-Dinitrotoluene	ND		0.21	0.069	ug/L		09/18/19 18:09	09/24/19 06:39	1

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Client Sample ID: WLIT
Date Collected: 09/16/19 09:30
Date Received: 09/17/19 09:15

Lab Sample ID: 280-128440-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Amino-4,6-dinitrotoluene	ND		0.21	0.054	ug/L		09/18/19 18:09	09/24/19 06:39	1
o-Nitrotoluene	ND		0.42	0.091	ug/L		09/18/19 18:09	09/24/19 06:39	1
m-Nitrotoluene	ND		0.42	0.21	ug/L		09/18/19 18:09	09/24/19 06:39	1
p-Nitrotoluene	ND		1.1	0.21	ug/L		09/18/19 18:09	09/24/19 06:39	1
4-Amino-2,6-dinitrotoluene	ND		0.21	0.061	ug/L		09/18/19 18:09	09/24/19 06:39	1
3,5-Dinitroaniline	ND		0.42	0.14	ug/L		09/18/19 18:09	09/24/19 06:39	1
HMX	ND		0.42	0.093	ug/L		09/18/19 18:09	09/24/19 06:39	1
RDX	ND		0.32	0.17	ug/L		09/18/19 18:09	09/24/19 06:39	1
Tetryl	ND		0.25	0.084	ug/L		09/18/19 18:09	09/24/19 06:39	1
Nitroglycerin	ND		3.2	0.98	ug/L		09/18/19 18:09	09/24/19 06:39	1
PETN	ND		2.1	2.1	ug/L		09/18/19 18:09	09/24/19 06:39	1
Picric acid	ND		0.42	0.046	ug/L		09/18/19 18:09	09/27/19 02:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*105*		*75 - 118*	*09/18/19 18:09*	*09/24/19 06:39*	*1*
1,2-Dinitrobenzene	*77*		*75 - 118*	*09/18/19 18:09*	*09/27/19 02:41*	*1*

Surrogate Summary

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		TPP1	CMF1
Lab Sample ID	Client Sample ID	(60-154)	(49-171)
280-128387-G-6-A MS	Matrix Spike	74	57
280-128440-1	MH-11	74	59
280-128440-2	MH-9	79	75
280-128440-3	WLIT	49 X	43 X
LCS 280-470993/2-A	Lab Control Sample	89	74
MB 280-470993/1-A	Method Blank	77	64

Surrogate Legend

TPP = Triphenylphosphate
CMF = Chlormefos

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		12DNB1
Lab Sample ID	Client Sample ID	(75-118)
280-128440-1	MH-11	90
280-128440-1	MH-11	98
280-128440-2	MH-9	99
280-128440-3	WLIT	105
280-128440-3	WLIT	77
LCS 280-471081/2-A	Lab Control Sample	92
LCS 280-471081/4-A	Lab Control Sample	89
LCSD 280-471081/3-A	Lab Control Sample Dup	93
LCSD 280-471081/5-A	Lab Control Sample Dup	89
MB 280-471081/1-A	Method Blank	89

Surrogate Legend

12DNB = 1,2-Dinitrobenzene

QC Sample Results

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Lab Sample ID: MB 280-470993/1-A
Matrix: Water
Analysis Batch: 472042

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 470993

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethoate	ND		1.5	0.45	ug/L		09/18/19 08:54	09/26/19 19:36	1
Famphur	ND		1.0	0.18	ug/L		09/18/19 08:54	09/26/19 19:36	1
Methyl parathion	ND		4.0	0.14	ug/L		09/18/19 08:54	09/26/19 19:36	1
Phorate	ND		1.2	0.15	ug/L		09/18/19 08:54	09/26/19 19:36	1
Thionazin	ND		1.0	0.31	ug/L		09/18/19 08:54	09/26/19 19:36	1
o,o',o''-Triethylphosphorothioate	ND		1.0	0.50	ug/L		09/18/19 08:54	09/26/19 19:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Triphenylphosphate	*77*		*60 - 154*	*09/18/19 08:54*	*09/26/19 19:36*	*1*
Chlormefos	*64*		*49 - 171*	*09/18/19 08:54*	*09/26/19 19:36*	*1*

Lab Sample ID: LCS 280-470993/2-A
Matrix: Water
Analysis Batch: 472042

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 470993

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dimethoate	4.00	2.94		ug/L		74	42 - 91
Famphur	4.00	3.74		ug/L		94	54 - 106
Methyl parathion	4.00	3.36	J	ug/L		84	58 - 115
Phorate	4.00	3.01		ug/L		75	40 - 94
Thionazin	4.00	3.52		ug/L		88	54 - 106
o,o',o''-Triethylphosphorothioate	4.00	3.05		ug/L		76	25 - 143

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Triphenylphosphate	*89*		*60 - 154*
Chlormefos	*74*		*49 - 171*

Lab Sample ID: 280-128387-G-6-A MS
Matrix: Water
Analysis Batch: 472042

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 470993

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dimethoate	ND		3.65	2.42		ug/L		66	42 - 91
Famphur	ND		3.65	2.85		ug/L		78	54 - 106
Methyl parathion	ND		3.65	2.75	J	ug/L		75	58 - 115
Phorate	ND		3.65	2.33		ug/L		64	40 - 94
Thionazin	ND	F2	3.65	2.49		ug/L		68	54 - 106
o,o',o''-Triethylphosphorothioate	ND		3.65	2.23		ug/L		61	25 - 143

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Triphenylphosphate	*74*		*60 - 154*
Chlormefos	*57*		*49 - 171*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 280-471081/1-A
Matrix: Water
Analysis Batch: 471585

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 471081

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trinitrotoluene	ND		0.40	0.16	ug/L		09/18/19 18:09	09/24/19 03:59	1
2,4-Dinitrotoluene	ND		0.40	0.084	ug/L		09/18/19 18:09	09/24/19 03:59	1
2,6-Dinitrotoluene	ND		0.20	0.065	ug/L		09/18/19 18:09	09/24/19 03:59	1
2-Amino-4,6-dinitrotoluene	ND		0.20	0.051	ug/L		09/18/19 18:09	09/24/19 03:59	1
o-Nitrotoluene	ND		0.40	0.086	ug/L		09/18/19 18:09	09/24/19 03:59	1
m-Nitrotoluene	ND		0.40	0.20	ug/L		09/18/19 18:09	09/24/19 03:59	1
p-Nitrotoluene	ND		1.0	0.20	ug/L		09/18/19 18:09	09/24/19 03:59	1
4-Amino-2,6-dinitrotoluene	ND		0.20	0.058	ug/L		09/18/19 18:09	09/24/19 03:59	1
3,5-Dinitroaniline	ND		0.40	0.13	ug/L		09/18/19 18:09	09/24/19 03:59	1
HMX	ND		0.40	0.088	ug/L		09/18/19 18:09	09/24/19 03:59	1
RDX	ND		0.30	0.16	ug/L		09/18/19 18:09	09/24/19 03:59	1
Tetryl	ND		0.24	0.079	ug/L		09/18/19 18:09	09/24/19 03:59	1
Nitroglycerin	ND		3.0	0.92	ug/L		09/18/19 18:09	09/24/19 03:59	1
PETN	ND		2.0	1.9	ug/L		09/18/19 18:09	09/24/19 03:59	1
Picric acid	ND		0.40	0.044	ug/L		09/18/19 18:09	09/24/19 03:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*89*		*75 - 118*	*09/18/19 18:09*	*09/24/19 03:59*	*1*

Lab Sample ID: LCS 280-471081/2-A
Matrix: Water
Analysis Batch: 471585

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 471081

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trinitrotoluene	2.00	1.82		ug/L		91	46 - 139
2,4-Dinitrotoluene	2.00	1.86		ug/L		93	53 - 127
2,6-Dinitrotoluene	2.00	1.84		ug/L		92	51 - 130
2-Amino-4,6-dinitrotoluene	2.00	1.81		ug/L		90	46 - 124
o-Nitrotoluene	2.00	1.77		ug/L		89	37 - 138
m-Nitrotoluene	2.00	1.80		ug/L		90	31 - 140
p-Nitrotoluene	2.00	1.76		ug/L		88	41 - 137
4-Amino-2,6-dinitrotoluene	2.00	1.63		ug/L		82	43 - 120
HMX	2.00	1.89		ug/L		94	66 - 115
RDX	2.00	1.92		ug/L		96	69 - 122
Tetryl	2.00	2.01		ug/L		101	56 - 131
Nitroglycerin	20.0	19.1		ug/L		95	70 - 125
PETN	20.0	18.8		ug/L		94	67 - 127
Picric acid	2.00	2.06		ug/L		103	63 - 135

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dinitrobenzene	*92*		*75 - 118*

Lab Sample ID: LCS 280-471081/4-A
Matrix: Water
Analysis Batch: 471585

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 471081

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
3,5-Dinitroaniline	2.00	1.80		ug/L		90	55 - 119

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dinitrobenzene	*89*		*75 - 118*

Lab Sample ID: LCSD 280-471081/3-A
Matrix: Water
Analysis Batch: 471585

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 471081

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trinitrotoluene	2.00	1.87		ug/L		94	46 - 139	3	20
2,4-Dinitrotoluene	2.00	1.95		ug/L		98	53 - 127	5	26
2,6-Dinitrotoluene	2.00	1.81		ug/L		91	51 - 130	2	23
2-Amino-4,6-dinitrotoluene	2.00	1.99		ug/L		99	46 - 124	10	30
o-Nitrotoluene	2.00	1.89		ug/L		95	37 - 138	7	38
m-Nitrotoluene	2.00	2.03		ug/L		101	31 - 140	12	30
p-Nitrotoluene	2.00	1.96		ug/L		98	41 - 137	11	37
4-Amino-2,6-dinitrotoluene	2.00	1.75		ug/L		87	43 - 120	7	26
HMX	2.00	1.91		ug/L		96	66 - 115	1	20
RDX	2.00	1.96		ug/L		98	69 - 122	2	20
Tetryl	2.00	2.04		ug/L		102	56 - 131	2	50
Nitroglycerin	20.0	19.6		ug/L		98	70 - 125	3	20
PETN	20.0	19.5		ug/L		98	67 - 127	4	20
Picric acid	2.00	2.08		ug/L		104	63 - 135	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dinitrobenzene	*93*		*75 - 118*

Lab Sample ID: LCSD 280-471081/5-A
Matrix: Water
Analysis Batch: 471585

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 471081

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
3,5-Dinitroaniline	2.00	1.64		ug/L		82	55 - 119	9	41

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dinitrobenzene	*89*		*75 - 118*

GC Semi VOA

Prep Batch: 470993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-128440-1	MH-11	Total/NA	Water	3510C	
280-128440-2	MH-9	Total/NA	Water	3510C	
280-128440-3	WLIT	Total/NA	Water	3510C	
MB 280-470993/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-470993/2-A	Lab Control Sample	Total/NA	Water	3510C	
280-128387-G-6-A MS	Matrix Spike	Total/NA	Water	3510C	

Analysis Batch: 472042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-128440-1	MH-11	Total/NA	Water	8141B	470993
280-128440-2	MH-9	Total/NA	Water	8141B	470993
280-128440-3	WLIT	Total/NA	Water	8141B	470993
MB 280-470993/1-A	Method Blank	Total/NA	Water	8141B	470993
LCS 280-470993/2-A	Lab Control Sample	Total/NA	Water	8141B	470993
280-128387-G-6-A MS	Matrix Spike	Total/NA	Water	8141B	470993

HPLC/IC

Prep Batch: 471081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-128440-1	MH-11	Total/NA	Water	3535	
280-128440-2	MH-9	Total/NA	Water	3535	
280-128440-3	WLIT	Total/NA	Water	3535	
MB 280-471081/1-A	Method Blank	Total/NA	Water	3535	
LCS 280-471081/2-A	Lab Control Sample	Total/NA	Water	3535	
LCS 280-471081/4-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 280-471081/3-A	Lab Control Sample Dup	Total/NA	Water	3535	
LCSD 280-471081/5-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 471585

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-128440-1	MH-11	Total/NA	Water	8330B	471081
280-128440-2	MH-9	Total/NA	Water	8330B	471081
280-128440-3	WLIT	Total/NA	Water	8330B	471081
MB 280-471081/1-A	Method Blank	Total/NA	Water	8330B	471081
LCS 280-471081/2-A	Lab Control Sample	Total/NA	Water	8330B	471081
LCS 280-471081/4-A	Lab Control Sample	Total/NA	Water	8330B	471081
LCSD 280-471081/3-A	Lab Control Sample Dup	Total/NA	Water	8330B	471081
LCSD 280-471081/5-A	Lab Control Sample Dup	Total/NA	Water	8330B	471081

Analysis Batch: 471761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-128440-1	MH-11	Total/NA	Water	8330B	471081

Analysis Batch: 472155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-128440-3	WLIT	Total/NA	Water	8330B	471081

Lab Chronicle

Client: Brown and Caldwell
Project/Site: Guam

Job ID: 280-128440-1

Client Sample ID: MH-11

Lab Sample ID: 280-128440-1

Date Collected: 09/16/19 08:30
Date Received: 09/17/19 09:15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1051 mL	2 mL	470993	09/18/19 08:54	AZG	TAL DEN
Total/NA	Analysis	8141B		1			472042	09/27/19 09:57	MKW	TAL DEN
Total/NA	Prep	3535			475.3 mL	5 mL	471081	09/18/19 18:09	KSA	TAL DEN
Total/NA	Analysis	8330B		1			471761	09/25/19 03:28	CBB	TAL DEN
Total/NA	Prep	3535			475.3 mL	5 mL	471081	09/18/19 18:09	KSA	TAL DEN
Total/NA	Analysis	8330B		1	1 mL	1.0 mL	471585	09/24/19 05:53	CBB	TAL DEN

Client Sample ID: MH-9

Lab Sample ID: 280-128440-2

Date Collected: 09/16/19 09:00
Date Received: 09/17/19 09:15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1050.6 mL	2 mL	470993	09/18/19 08:54	AZG	TAL DEN
Total/NA	Analysis	8141B		1			472042	09/27/19 07:21	MKW	TAL DEN
Total/NA	Prep	3535			469.3 mL	5 mL	471081	09/18/19 18:09	KSA	TAL DEN
Total/NA	Analysis	8330B		1	1 mL	1.0 mL	471585	09/24/19 06:16	CBB	TAL DEN

Client Sample ID: WLIT

Lab Sample ID: 280-128440-3

Date Collected: 09/16/19 09:30
Date Received: 09/17/19 09:15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1046.2 mL	2 mL	470993	09/18/19 08:54	AZG	TAL DEN
Total/NA	Analysis	8141B		1			472042	09/27/19 10:37	MKW	TAL DEN
Total/NA	Prep	3535			470.7 mL	5 mL	471081	09/18/19 18:09	KSA	TAL DEN
Total/NA	Analysis	8330B		1			472155	09/27/19 02:41	CBB	TAL DEN
Total/NA	Prep	3535			470.7 mL	5 mL	471081	09/18/19 18:09	KSA	TAL DEN
Total/NA	Analysis	8330B		1	1 mL	1.0 mL	471585	09/24/19 06:39	CBB	TAL DEN

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Brown and Caldwell
Project/Site: Guam

Job ID: 280-128440-1

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	DoD	2907.01	10-31-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8141B	3510C	Water	Dimethoate
8141B	3510C	Water	Famphur
8141B	3510C	Water	Methyl parathion
8141B	3510C	Water	o,o',o''-Triethylphosphorothioate
8141B	3510C	Water	Phorate
8141B	3510C	Water	Thionazin
8330B	3535	Water	2,4-Dinitrotoluene
8330B	3535	Water	2,6-Dinitrotoluene
8330B	3535	Water	2-Amino-4,6-dinitrotoluene
8330B	3535	Water	3,5-Dinitroaniline
8330B	3535	Water	4-Amino-2,6-dinitrotoluene
8330B	3535	Water	HMX
8330B	3535	Water	m-Nitrotoluene
8330B	3535	Water	Nitroglycerin
8330B	3535	Water	o-Nitrotoluene
8330B	3535	Water	PETN
8330B	3535	Water	Picric acid
8330B	3535	Water	p-Nitrotoluene
8330B	3535	Water	RDX
8330B	3535	Water	Tetryl
8330B	3535	Water	Trinitrotoluene

Laboratory: Eurofins TestAmerica, Pensacola

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

Authority	Program	Identification Number	Expiration Date
ANAB	ISO/IEC 17025	L2471	02-22-20

TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002-4517
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information

Client Contact: Jaclyn Lauer
Company: Brown and Caldwell
Address: 414 West Soledad Ave, Suite 602
City: Hagatna
State, Zip: GU, 96910
Phone: (770) 673-3641 (Tel)
Email: jlauer@brwncald.com
Project Name: Ordot Dump O&M - Groundwater/Surface Water
Site:

Sampler:
Phone:
Due Date Requested:
TAT Requested (days):
PO #: Purchase Order not required
WO #:
Project #:
SSOW#:

Lab PM: Swafford, Mark
E-Mail: mark.swafford@testamericainc.com
Carrier Tracking No(s):
COC No:
Page:
Job #:

Analysis Requested

Preservation Codes:
A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8330B - 8330A- Nitroaromatics and Nitramines	8141B - 8141B- Organophosphorous Compounds	Total Number of containers	Special Instructions/Note:
				Preservation Code:			N	N		
MH-11	9/16/19	8:30	G	Water			X	X		
MH-9	9/16/19	9:00	G	Water			X	X		
WLIT	9/16/19	9:30	G	Water			X	X		
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						

280-128440 Chain of Custody

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ________ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)
Special Instructions/QC Requirements:

Empty Kit Relinquished by:
Date:
Time:
Method of Shipment:

Relinquished by: Billy Janasak	Date/Time: 9/16/2019 10:00	Company BC	Received by: Julian Lubi	Date/Time: 9-17-19 0915	Company TA Den
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 1.7°C +0 IR 8 JL 9-17-19

Ver: 08/04/2016

15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

Login Sample Receipt Checklist

Client: Brown and Caldwell

Job Number: 280-128440-1

Login Number: 128440
List Number: 1
Creator: Lubin, Julius C

List Source: Eurofins TestAmerica, Denver

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?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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TestAmerica

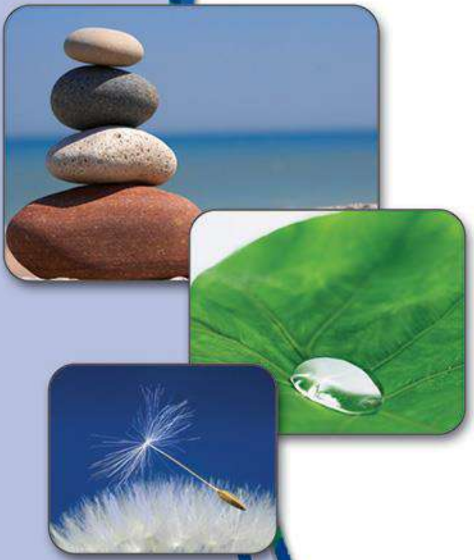
ANALYTICAL REPORT

Eurofins TestAmerica, Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

Laboratory Job ID: 400-176507-1
Client Project/Site: Guam
Revision: 1

For:
Brown and Caldwell
220 Athens Way, Suite 500
Nashville, Tennessee 37228

Attn: Jaclyn Lauer



Mark Swafford

Authorized for release by:
11/21/2019 9:54:26 AM

Mark Swafford, Project Manager I
(850)471-6207
mark.swafford@testamericainc.com

LINKS

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Have a Question? Ask The Expert

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Table of Contents

Job ID: 400-176507-1

Laboratory: Eurofins TestAmerica, Pensacola

Narrative

Job Narrative
400-176507-1

Comments
The report was revised to add Dinoseb to the 8270D list for this job.

No additional comments.

Receipt
The samples were received on 9/18/2019 9:07 AM. The temperatures of the 3 coolers at receipt time were 12.9º C, 13.8º C and 16.1º C.

GC/MS VOA
Method 8260C SIM: The continuing calibration verification (CCV) associated with batch 400-457818 recovered above the upper control limit for the 4-Bromofluorobenzene surrogate. The quality control samples and samples associated with this CCV were all within acceptance limits: therefore, the data have been reported.

Method 8260C: The continuing calibration verification (CCV) associated with batch 400-459062 recovered outside acceptance criteria, low biased, for cis-1,3-Dichloropropene and 2-Chloroethyl vinyl ether. A reporting limit (RL) standard was analyzed, and the target analytes were detected. Since the associated samples were non-detect for these analytes, the data have been reported.

Method 8260C: The matrix spike duplicate (MS/MSD) recoveries for analytical batch 400-459062 were outside control limits for 2-Chloroethyl vinyl ether due to the acidic nature of the parent sample.

Method 8260C: The RPD for the matrix spike / matrix spike duplicate (MS/MSD) for 2-Chloroethyl vinyl ether was not calculable for analytical batch 400-459062 because the recoveries were below the reporting limit due to the acidic nature of the parent sample.

Method 8260C: The preservative used in the sample containers provided is not compatible with some of the Method 8260 analytes requested. The following samples were received preserved with hydrochloric acid: MH-11 (400-176507-1), MH-9 (400-176507-2) and WLIT (400-176507-3). The requested target analyte list includes 2-chloroethyl vinyl ether, Acrolein and Acrylonitrile, which are acid-labile compounds that degrade in an acidic medium.

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

GC/MS Semi VOA
Method 8270D LL: The continuing calibration verification (CCV) associated with batch 400-458759 recovered above the upper control limit for Benzo[k]fluoranthene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8270D LL: Three surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following samples contained an allowable number of surrogate compounds outside limits: MH-9 (400-176507-2) and (MB 400-458032/1-A). These results have been reported and qualified.

Method 8270D LL: Surrogate recovery for the following sample was outside the upper control limit: WLIT (400-176507-3). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8270D LL: The continuing calibration verification (CCV) associated with batch 400-461158 recovered above the upper control limit for Indeno[1,2,3-cd]pyrene, Benzo[g,h,i]perylene, Fluorene and Dibenz(a,h)anthracene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 400-458032 and analytical batch 400-458836 recovered outside control limits for the following analytes: Hexachloroethane, 2,4-Dinitrophenol, 4-Nitrophenol, 2,4,6-Trichlorophenol, 4,6-Dinitro-2-methylphenol, Pentachlorophenol, 1,4-Dichlorobenzene, Hexachlorobutadiene, 2-Chlorophenol and 2-Nitrophenol.

Method 8270D: The laboratory control sample (LCS) for preparation batch 400-458032 and analytical batch 400-458836 recovered outside

Job ID: 400-176507-1 (Continued)

Laboratory: Eurofins TestAmerica, Pensacola (Continued)

control limits for the following analytes: Hexachloroethane, 2,4-Dinitrophenol, 4-Nitrophenol, 2,4,6-Trichlorophenol, 4,6-Dinitro-2-methylphenol, Pentachlorophenol, 1,4-Dichlorobenzene, Hexachlorobutadiene, 2-Nitrophenol and 2-Chlorophenol. The associated sample(s) was re-prepared and/or re-analyzed outside holding time. Both sets of data have been reported.

Method 8270D: The continuing calibration verification (CCV) associated with batch 400-461017 recovered above the upper control limit for 2-Nitrophenol, Hexachloroethane and 4-Nitrophenol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8270D: The continuing calibration verification (CCV) associated with batch 400-461017 does not contain Dinoseb because the analyte was not initially requested by the client. Reported per PM.

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

HPLC/IC

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

GC Semi VOA

Method 8081B: The continuing calibration verification (CCV) associated with batch 400-458257 recovered above the upper control limit for alpha-BHC and delta-BHC. The samples associated with this CCV were non-detects for the affected analytes; 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.

Dioxin

Method 1613B: EPA Method 1613B specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). The 13C-1,2,3,4-TCDD and/or 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument 10D5 exceeded this criteria: (CCV 320-331188/2), (LCS 320-329907/2-A) and (MB 320-329907/1-A). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

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

RAD

Method 900.0: Gross Alpha Beta prep batch 160-444398. Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.
Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
MH-11 (400-176507-1), MH-9 (400-176507-2), WLIT (400-176507-3), (LCS 160-444398/2-A), (LCSB 160-444398/3-A), (MB 160-444398/1-A), (400-176665-Y-3-A), (400-176665-R-3-A MS), (400-176665-R-3-C MSBT), (400-176665-R-3-D MSBTD) and (400-176665-R-3-B MSD)

Method 900.0: Gross Alpha Beta prep batch 160-444398. The gross alpha spike recovery in the LCS was slightly low (70%) outside QC limits (75%-125%) indicating a potential slight low bias to the sample results. The spike recovery in the Matrix Spike (MS) and Matrix Spike duplicate (MSD) was within limits demonstrating acceptable method performance. The data is reported with this narrative at client request.

Method 900.0: Gross Alpha Beta prep batch 160-444398. The detection goal was not met for the following samples due to a reduction of the sample size attributed to high residual mass: MH-11 (400-176507-1), MH-9 (400-176507-2), WLIT (400-176507-3), (400-176665-Y-3-A), (400-176665-R-3-A MS), (400-176665-R-3-C MSBT), (400-176665-R-3-D MSBTD) and (400-176665-R-3-B MSD). Analytical results are reported with the detection limit achieved.

Method 901.1: Gamma Prep Batch 160-444566: Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

Many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often,

Job ID: 400-176507-1 (Continued)

Laboratory: Eurofins TestAmerica, Pensacola (Continued)

such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred from	Reported to Analyte
Ac-228	Ra-228
Bi-214	Ra-226

MH-11 (400-176507-1), MH-9 (400-176507-2), WLIT (400-176507-3), (LCS 160-444566/2-A), (MB 160-444566/1-A) and (400-176507-Q-1-B DU)

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

Metals

Method 200.8: The interference check standard solution (ICSA) associated with the following samples showed results for Cobalt at a level greater than 2 times the limit of detection (LOD). It is believed that the solution contains trace impurities of this element / these elements and the results are not due to matrix interference. These results are consistent with those found by the manufacturer of the ICSA solution. (ICSA 680-589844/13)

Method 200.8: The interference check standard solution (ICSA) associated with the following samples showed results for Cobalt at a level greater than 2 times the limit of detection (LOD). It is believed that the solution contains trace impurities of this element / these elements and the results are not due to matrix interference. These results are consistent with those found by the manufacturer of the ICSA solution.

Method 200.8: The Method blank contained Calcium above the method detection limit but below the reporting for preparation batch 680-589436 and analysis batch 680-589844. There fore re-preparation was not done.

Method 200.8: The Method blank contained Manganese above the reporting for preparation batch 680-589436 and analysis batch 680-589844. The analyte was added late in the project. The sample can be re-prepped per client instructions if needed.

Method 200.8: The continuing calibration verification (CCV) associated with batch 680-589844 recovered above the upper control limit for magnesium. The data have been reported.

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

LCMS

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

General Chemistry

Method 350.1: The following sample was diluted to bring the concentration of target analytes within the calibration range: WLIT (400-176507-3). Elevated reporting limits (RLs) are provided.

Method 353.2: The following sample was diluted to bring the concentration of target analytes within the calibration range: MH-9 (400-176507-2). Elevated reporting limits (RLs) are provided.

Method 353.2: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 400-458214 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method SM 4500 S2 D: The following samples were analyzed outside of analytical holding time due to analyst error: MH-11 (400-176507-1), MH-9 (400-176507-2) and WLIT (400-176507-3).

Method 365.4: The method blank for preparation batch 400-457944 and analytical batch 400-458500 contained Phosphorus, Total above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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

1 2 3 4 5 6 7 8 9 10 11 12 13

Job ID: 400-176507-1 (Continued)

Laboratory: Eurofins TestAmerica, Pensacola (Continued)

Organic Prep

Method 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 400-457986.

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

Dioxin Prep

Method 1613B: Elevated reporting limits are provided for the following samples due to insufficient sample provided for 1613B_Sox_Sep_P preparation/analysis: Sample MH-11 (400-176507-1) and MH-9 (400-176507-2) was received in a narrow-mouth amber glass bottle.

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

Detection Summary

Client Sample ID: MH-11 Lab Sample ID: 400-176507-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.0078	J	0.019	0.0011	ug/L	1		8081B	Total/NA
Chromium, hexavalent	0.00094	J	0.0010	0.00020	mg/L	1		218.7	Total/NA
Perchlorate	0.21		0.20	0.027	ug/L	1		6850	Total/NA
Aluminum	0.090	J	0.10	0.018	mg/L	1		200.8-1994 R5.4	Total/NA
Barium	0.0097		0.0050	0.00061	mg/L	1		200.8-1994 R5.4	Total/NA
Calcium	81	B	0.50	0.068	mg/L	1		200.8-1994 R5.4	Total/NA
Chromium	0.0019	J	0.0050	0.0016	mg/L	1		200.8-1994 R5.4	Total/NA
Cobalt	0.00014	J ^	0.00050	0.00012	mg/L	1		200.8-1994 R5.4	Total/NA
Copper	0.0024	J	0.0050	0.0017	mg/L	1		200.8-1994 R5.4	Total/NA
Iron	0.27		0.10	0.025	mg/L	1		200.8-1994 R5.4	Total/NA
Magnesium	7.9	^	0.25	0.020	mg/L	1		200.8-1994 R5.4	Total/NA
Manganese	0.0049	J B	0.0050	0.0018	mg/L	1		200.8-1994 R5.4	Total/NA
Potassium	6.0		1.0	0.11	mg/L	1		200.8-1994 R5.4	Total/NA
Sodium	8.6		0.50	0.17	mg/L	1		200.8-1994 R5.4	Total/NA
Zinc	0.038		0.020	0.0096	mg/L	1		200.8-1994 R5.4	Total/NA
Uranium	0.82		0.67	0.27	pCi/L	2		200.8	Total/NA
Mercury	0.00011	J B	0.00020	0.000080	mg/L	1		245.1-1994 R3.0	Total/NA
Ammonia	0.11		0.050	0.024	mg/L	1		350.1	Total/NA
Nitrate Nitrite as N	0.40		0.050	0.018	mg/L	1		353.2	Total/NA
Phosphorus, Total	0.040	J B	0.10	0.032	mg/L	1		365.4	Total/NA

Client Sample ID: MH-9 Lab Sample ID: 400-176507-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	0.13	J	0.20	0.067	ug/L	1		8270D LL	Total/NA
Bis(2-ethylhexyl) phthalate	26		9.8	4.9	ug/L	1		8270D	Total/NA
Diethyl phthalate	0.54	J	9.8	0.24	ug/L	1		8270D	Total/NA
Perchlorate	0.26		0.20	0.027	ug/L	1		6850	Total/NA
Aluminum	0.018	J	0.10	0.018	mg/L	1		200.8-1994 R5.4	Total/NA
Antimony	0.0013	J	0.0050	0.00050	mg/L	1		200.8-1994 R5.4	Total/NA
Barium	0.0069		0.0050	0.00061	mg/L	1		200.8-1994 R5.4	Total/NA
Calcium	79	B	0.50	0.068	mg/L	1		200.8-1994 R5.4	Total/NA
Chromium	0.0020	J	0.0050	0.0016	mg/L	1		200.8-1994 R5.4	Total/NA
Cobalt	0.0017	^	0.00050	0.00012	mg/L	1		200.8-1994 R5.4	Total/NA
Copper	0.0041	J	0.0050	0.0017	mg/L	1		200.8-1994 R5.4	Total/NA
Iron	0.14		0.10	0.025	mg/L	1		200.8-1994 R5.4	Total/NA
Magnesium	20	^	0.25	0.020	mg/L	1		200.8-1994 R5.4	Total/NA
Manganese	0.042	B	0.0050	0.0018	mg/L	1		200.8-1994 R5.4	Total/NA
Nickel	0.0067		0.0050	0.0019	mg/L	1		200.8-1994 R5.4	Total/NA
Potassium	13		1.0	0.11	mg/L	1		200.8-1994 R5.4	Total/NA
Sodium	50		0.50	0.17	mg/L	1		200.8-1994 R5.4	Total/NA
Zinc	0.087		0.020	0.0096	mg/L	1		200.8-1994 R5.4	Total/NA
Uranium	0.42	J	0.67	0.27	pCi/L	2		200.8	Total/NA
Ammonia	3.4		0.050	0.024	mg/L	1		350.1	Total/NA
Nitrate Nitrite as N	7.0		0.25	0.090	mg/L	5		353.2	Total/NA
Phosphorus, Total	0.049	J B	0.10	0.032	mg/L	1		365.4	Total/NA

Client Sample ID: WLIT Lab Sample ID: 400-176507-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bis(2-ethylhexyl) phthalate	29		10	5.1	ug/L	1		8270D	Total/NA
Diethyl phthalate	0.87	J	10	0.24	ug/L	1		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Brown and Caldwell
Project/Site: Guam

Job ID: 400-176507-1

Client Sample ID: WLIT (Continued)

Lab Sample ID: 400-176507-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perchlorate	0.073	J	0.20	0.027	ug/L	1		6850	Total/NA
Aluminum	0.056	J	0.10	0.018	mg/L	1		200.8-1994 R5.4	Total/NA
Antimony	0.00085	J	0.0050	0.00050	mg/L	1		200.8-1994 R5.4	Total/NA
Arsenic	0.023		0.0030	0.0015	mg/L	1		200.8-1994 R5.4	Total/NA
Barium	0.17		0.0050	0.00061	mg/L	1		200.8-1994 R5.4	Total/NA
Calcium	77		0.50	0.068	mg/L	1		200.8-1994 R5.4	Total/NA
Chromium	0.0017	J	0.0050	0.0016	mg/L	1		200.8-1994 R5.4	Total/NA
Cobalt	0.0046	^	0.00050	0.00012	mg/L	1		200.8-1994 R5.4	Total/NA
Copper	0.014		0.0050	0.0017	mg/L	1		200.8-1994 R5.4	Total/NA
Iron	26		0.10	0.025	mg/L	1		200.8-1994 R5.4	Total/NA
Magnesium	19		0.25	0.020	mg/L	1		200.8-1994 R5.4	Total/NA
Manganese	0.67		0.0050	0.0018	mg/L	1		200.8-1994 R5.4	Total/NA
Molybdenum	0.0030	J	0.0050	0.0010	mg/L	1		200.8-1994 R5.4	Total/NA
Nickel	0.016		0.0050	0.0019	mg/L	1		200.8-1994 R5.4	Total/NA
Potassium	18		1.0	0.11	mg/L	1		200.8-1994 R5.4	Total/NA
Sodium	59		0.50	0.17	mg/L	1		200.8-1994 R5.4	Total/NA
Zinc	0.044		0.020	0.0096	mg/L	1		200.8-1994 R5.4	Total/NA
Mercury	0.00044	B	0.00020	0.000080	mg/L	1		245.1-1994 R3.0	Total/NA
Ammonia	14		0.25	0.12	mg/L	5		350.1	Total/NA
Nitrate Nitrite as N	0.27		0.050	0.018	mg/L	1		353.2	Total/NA
Phosphorus, Total	0.55	B	0.10	0.032	mg/L	1		365.4	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: Brown and Caldwell
Project/Site: Guam

Job ID: 400-176507-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
400-176507-1	MH-11	Water	09/16/19 08:30	09/18/19 09:07	
400-176507-2	MH-9	Water	09/16/19 09:00	09/18/19 09:07	
400-176507-3	WLIT	Water	09/16/19 09:30	09/18/19 09:07	

Client Sample Results

Client Sample ID: MH-11

Lab Sample ID: 400-176507-1

Date Collected: 09/16/19 08:30

Matrix: Water

Date Received: 09/18/19 09:07

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND	UJ-RC:9	1.0	0.30	ug/L			09/20/19 09:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*140*		*50 - 150*		*09/20/19 09:52*	*1*
Toluene-d8 (Surr)	*89*		*50 - 150*		*09/20/19 09:52*	*1*
4-Bromofluorobenzene	*117*		*50 - 150*		*09/20/19 09:52*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	UJ-RC:9	1.0	0.52	ug/L			09/28/19 00:14	1
1,1,1-Trichloroethane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:14	1
1,1,2,2-Tetrachloroethane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:14	1
1,1,2-Trichloroethane	ND	UJ-RC:9	5.0	0.50	ug/L			09/28/19 00:14	1
1,1-Dichloroethane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:14	1
1,1-Dichloroethene	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:14	1
1,2,3-Trichloropropane	ND	UJ-RC:9	5.0	0.84	ug/L			09/28/19 00:14	1
1,2-Dibromo-3-Chloropropane	ND	UJ-RC:9	5.0	1.5	ug/L			09/28/19 00:14	1
1,2-Dibromoethane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:14	1
1,2-Dichloroethane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:14	1
1,2-Dichloropropane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:14	1
2-Butanone (MEK)	ND	UJ-RC:9	25	2.6	ug/L			09/28/19 00:14	1
2-Chloroethyl vinyl ether	ND	UJ-RC:9	5.0	2.0	ug/L			09/28/19 00:14	1
2-Hexanone	ND	UJ-RC:9	25	3.1	ug/L			09/28/19 00:14	1
4-Methyl-2-pentanone (MIBK)	ND	UJ-RC:9	25	1.8	ug/L			09/28/19 00:14	1
Acetone	ND	UJ-RC:9	25	10	ug/L			09/28/19 00:14	1
Acrolein	ND	UJ-RC:9	20	10	ug/L			09/28/19 00:14	1
Acrylonitrile	ND	UJ-RC:9	10	2.8	ug/L			09/28/19 00:14	1
Benzene	ND	UJ-RC:9	1.0	0.38	ug/L			09/28/19 00:14	1
Bromodichloromethane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:14	1
Bromoform	ND	UJ-RC:9	5.0	0.71	ug/L			09/28/19 00:14	1
Bromomethane	ND	UJ-RC:9	1.0	0.98	ug/L			09/28/19 00:14	1
Carbon disulfide	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:14	1
Carbon tetrachloride	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:14	1
Chlorobenzene	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:14	1
Chloroethane	ND	UJ-RC:9	1.0	0.76	ug/L			09/28/19 00:14	1
Chloroform	ND	UJ-RC:9	1.0	0.60	ug/L			09/28/19 00:14	1
Chloromethane	ND	UJ-RC:9	1.0	0.83	ug/L			09/28/19 00:14	1
cis-1,2-Dichloroethene	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:14	1
cis-1,3-Dichloropropene	ND	UJ-RC:9	5.0	0.50	ug/L			09/28/19 00:14	1
Dibromochloromethane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:14	1
Ethylbenzene	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:14	1
Iodomethane	ND	UJ-RC:9	1.0	0.90	ug/L			09/28/19 00:14	1
Methylene Chloride	ND	UJ-RC:9	5.0	3.0	ug/L			09/28/19 00:14	1
Styrene	ND	UJ-RC:9	1.0	1.0	ug/L			09/28/19 00:14	1
Tetrachloroethene	ND	UJ-RC:9	1.0	0.58	ug/L			09/28/19 00:14	1
Toluene	ND	UJ-RC:9	1.0	0.41	ug/L			09/28/19 00:14	1
trans-1,2-Dichloroethene	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:14	1
trans-1,3-Dichloropropene	ND	UJ-RC:9	5.0	0.50	ug/L			09/28/19 00:14	1
trans-1,4-Dichloro-2-butene	ND	UJ-RC:9	5.0	1.0	ug/L			09/28/19 00:14	1
Trichloroethene	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:14	1

Client Sample ID: MH-11

Date Collected: 09/16/19 08:30
Date Received: 09/18/19 09:07

Lab Sample ID: 400-176507-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND	UJ-RC:9	1.0	0.52	ug/L			09/28/19 00:14	1
Vinyl acetate	ND	UJ-RC:9	25	2.0	ug/L			09/28/19 00:14	1
Vinyl chloride	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:14	1
Xylenes, Total	ND	UJ-RC:9	10	1.6	ug/L			09/28/19 00:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*78 - 118*		*09/28/19 00:14*	*1*
Dibromofluoromethane	*101*		*81 - 121*		*09/28/19 00:14*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*09/28/19 00:14*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND	UJ-RC:9	0.21	0.033	ug/L		09/21/19 16:21	09/26/19 23:21	1
Acenaphthylene	ND	UJ-RC:9	0.21	0.047	ug/L		09/21/19 16:21	09/26/19 23:21	1
Anthracene	ND	UJ-RC:9	0.21	0.033	ug/L		09/21/19 16:21	09/26/19 23:21	1
Benzo[a]anthracene	ND	UJ-RC:9	0.21	0.048	ug/L		09/21/19 16:21	09/26/19 23:21	1
Benzo[a]pyrene	ND	UJ-RC:9	0.21	0.044	ug/L		09/21/19 16:21	09/26/19 23:21	1
Benzo[b]fluoranthene	ND	UJ-RC:9	0.21	0.035	ug/L		09/21/19 16:21	09/26/19 23:21	1
Benzo[g,h,i]perylene	ND	UJ-RC:9	0.21	0.13	ug/L		09/21/19 16:21	09/26/19 23:21	1
Benzo[k]fluoranthene	ND	UJ-RC:9	0.21	0.10	ug/L		09/21/19 16:21	09/26/19 23:21	1
Chrysene	ND	UJ-RC:9	0.21	0.077	ug/L		09/21/19 16:21	09/26/19 23:21	1
Dibenz(a,h)anthracene	ND	UJ-RC:9	0.21	0.052	ug/L		09/21/19 16:21	09/26/19 23:21	1
Fluoranthene	ND	UJ-RC:9	0.21	0.070	ug/L		09/21/19 16:21	09/26/19 23:21	1
Fluorene	ND	UJ-RC:9	0.21	0.11	ug/L		09/21/19 16:21	09/26/19 23:21	1
Indeno[1,2,3-cd]pyrene	ND	UJ-RC:9	0.21	0.045	ug/L		09/21/19 16:21	09/26/19 23:21	1
Naphthalene	ND	UJ-RC:9	0.21	0.097	ug/L		09/21/19 16:21	09/26/19 23:21	1
Phenanthrene	ND	UJ-RC:9	0.21	0.037	ug/L		09/21/19 16:21	09/26/19 23:21	1
Pyrene	ND	UJ-RC:9	0.21	0.041	ug/L		09/21/19 16:21	09/26/19 23:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*84*		*15 - 122*	*09/21/19 16:21*	*09/26/19 23:21*	*1*
Nitrobenzene-d5 (Surr)	*75*		*19 - 130*	*09/21/19 16:21*	*09/26/19 23:21*	*1*
Terphenyl-d14 (Surr)	*128*		*33 - 138*	*09/21/19 16:21*	*09/26/19 23:21*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	UJ-RC:9	10	0.19	ug/L		09/21/19 16:21	09/26/19 23:21	1
1,2-Dichlorobenzene	ND	UJ-RC:9	10	0.18	ug/L		09/21/19 16:21	09/26/19 23:21	1
1,3-Dichlorobenzene	ND	UJ-RC:9	10	0.19	ug/L		09/21/19 16:21	09/26/19 23:21	1
1,4-Dichlorobenzene	ND	UJ-RC:9	10	0.17	ug/L		09/21/19 16:21	09/26/19 23:21	1
2,4,6-Trichlorophenol	ND	UJ-RC:9	10	3.6	ug/L		09/21/19 16:21	09/26/19 23:21	1
2,4-Dichlorophenol	ND	UJ-RC:9	10	3.1	ug/L		09/21/19 16:21	09/26/19 23:21	1
2,4-Dimethylphenol	ND	UJ-RC:9	10	3.6	ug/L		09/21/19 16:21	09/26/19 23:21	1
2,4-Dinitrophenol	ND	UJ-RC:9	31	3.5	ug/L		09/21/19 16:21	09/26/19 23:21	1
2,4-Dinitrotoluene	ND	UJ-RC:9	10	2.0	ug/L		09/21/19 16:21	09/26/19 23:21	1
2,6-Dinitrotoluene	ND	UJ-RC:9	10	2.0	ug/L		09/21/19 16:21	09/26/19 23:21	1
2-Chloronaphthalene	ND	UJ-RC:9	10	0.15	ug/L		09/21/19 16:21	09/26/19 23:21	1
2-Chlorophenol	ND	UJ-RC:9	10	2.3	ug/L		09/21/19 16:21	09/26/19 23:21	1
2-Nitrophenol	ND	UJ-RC:9	10	5.4	ug/L		09/21/19 16:21	09/26/19 23:21	1
3,3'-Dichlorobenzidine	ND	UJ-RC:9	10	2.7	ug/L		09/21/19 16:21	09/26/19 23:21	1

Client Sample Results

Client Sample ID: MH-11
Date Collected: 09/16/19 08:30
Date Received: 09/18/19 09:07

Lab Sample ID: 400-176507-1
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	ND	UJ-RC:9	10	1.7	ug/L		09/21/19 16:21	09/26/19 23:21	1
4-Bromophenyl phenyl ether	ND	UJ-RC:9	10	0.21	ug/L		09/21/19 16:21	09/26/19 23:21	1
4-Chloro-3-methylphenol	ND	UJ-RC:9	10	3.9	ug/L		09/21/19 16:21	09/26/19 23:21	1
4-Chlorophenyl phenyl ether	ND	UJ-RC:9	10	2.1	ug/L		09/21/19 16:21	09/26/19 23:21	1
4-Nitrophenol	ND	UJ-RC:9	10	2.2	ug/L		09/21/19 16:21	09/26/19 23:21	1
Benzidine	ND	UJ-RC:9	26	21	ug/L		09/21/19 16:21	09/26/19 23:21	1
bis (2-chloroisopropyl) ether	ND	UJ-RC:9	10	0.17	ug/L		09/21/19 16:21	09/26/19 23:21	1
Bis(2-chloroethoxy)methane	ND	UJ-RC:9	10	0.17	ug/L		09/21/19 16:21	09/26/19 23:21	1
Bis(2-chloroethyl)ether	ND	UJ-RC:9	10	2.8	ug/L		09/21/19 16:21	09/26/19 23:21	1
Bis(2-ethylhexyl) phthalate	ND	UJ-RC:9	10	5.2	ug/L		09/21/19 16:21	09/26/19 23:21	1
Butyl benzyl phthalate	ND	UJ-RC:9	10	0.20	ug/L		09/21/19 16:21	09/26/19 23:21	1
Diethyl phthalate	ND	UJ-RC:9	10	0.25	ug/L		09/21/19 16:21	09/26/19 23:21	1
Dimethyl phthalate	ND	UJ-RC:9	10	0.18	ug/L		09/21/19 16:21	09/26/19 23:21	1
Di-n-butyl phthalate	ND	UJ-RC:9	10	2.8	ug/L		09/21/19 16:21	09/26/19 23:21	1
Di-n-octyl phthalate	ND	UJ-RC:9	10	0.18	ug/L		09/21/19 16:21	09/26/19 23:21	1
Hexachlorobenzene	ND	UJ-RC:9	10	0.18	ug/L		09/21/19 16:21	09/26/19 23:21	1
Hexachlorobutadiene	ND	UJ-RC:9	10	0.57	ug/L		09/21/19 16:21	09/26/19 23:21	1
Hexachlorocyclopentadiene	ND	UJ-RC:9	21	2.7	ug/L		09/21/19 16:21	09/26/19 23:21	1
Hexachloroethane	ND	UJ-RC:9	10	4.4	ug/L		09/21/19 16:21	09/26/19 23:21	1
Isophorone	ND	UJ-RC:9	10	0.15	ug/L		09/21/19 16:21	09/26/19 23:21	1
Nitrobenzene	ND	UJ-RC:9	10	0.13	ug/L		09/21/19 16:21	09/26/19 23:21	1
N-Nitrosodimethylamine	ND	UJ-RC:9	10	3.6	ug/L		09/21/19 16:21	09/26/19 23:21	1
N-Nitrosodi-n-propylamine	ND	UJ-RC:9	10	3.4	ug/L		09/21/19 16:21	09/26/19 23:21	1
N-Nitrosodiphenylamine	ND	UJ-RC:9	10	0.19	ug/L		09/21/19 16:21	09/26/19 23:21	1
Pentachlorophenol	ND	UJ-RC:9	21	1.5	ug/L		09/21/19 16:21	09/26/19 23:21	1
Phenol	ND	UJ-RC:9	10	2.7	ug/L		09/21/19 16:21	09/26/19 23:21	1
Dinoseb	ND	UJ-RC:9	10	1.0	ug/L		09/21/19 16:21	09/26/19 23:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*84*		*26 - 150*	*09/21/19 16:21*	*09/26/19 23:21*	*1*
2-Fluorobiphenyl	*89*		*46 - 124*	*09/21/19 16:21*	*09/26/19 23:21*	*1*
2-Fluorophenol (Surr)	*33*		*13 - 113*	*09/21/19 16:21*	*09/26/19 23:21*	*1*
Nitrobenzene-d5 (Surr)	*80*		*36 - 126*	*09/21/19 16:21*	*09/26/19 23:21*	*1*
Phenol-d5 (Surr)	*62*		*17 - 127*	*09/21/19 16:21*	*09/26/19 23:21*	*1*
Terphenyl-d14 (Surr)	*92*		*44 - 149*	*09/21/19 16:21*	*09/26/19 23:21*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RERA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND	H R	11	0.18	ug/L		10/06/19 18:56	10/11/19 01:34	1
2,4,6-Trichlorophenol	ND	H R	11	4.0	ug/L		10/06/19 18:56	10/11/19 01:34	1
2,4-Dinitrophenol	ND	H R	34	3.9	ug/L		10/06/19 18:56	10/11/19 01:34	1
2-Chlorophenol	ND	H R	11	2.5	ug/L		10/06/19 18:56	10/11/19 01:34	1
2-Nitrophenol	ND	H R	11	5.9	ug/L		10/06/19 18:56	10/11/19 01:34	1
4,6-Dinitro-2-methylphenol	ND	H R	11	1.8	ug/L		10/06/19 18:56	10/11/19 01:34	1
4-Nitrophenol	ND	H R	11	2.4	ug/L		10/06/19 18:56	10/11/19 01:34	1
Hexachlorobutadiene	ND	H R	11	0.63	ug/L		10/06/19 18:56	10/11/19 01:34	1
Hexachloroethane	ND	H R	11	4.8	ug/L		10/06/19 18:56	10/11/19 01:34	1
Pentachlorophenol	ND	H R	23	1.6	ug/L		10/06/19 18:56	10/11/19 01:34	1
Dinoseb	ND	H R	11	1.1	ug/L		10/06/19 18:56	10/11/19 01:34	1

Client Sample ID: MH-11

Lab Sample ID: 400-176507-1

Date Collected: 09/16/19 08:30
Matrix: Water
Date Received: 09/18/19 09:07

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*58*		*26 - 150*	*10/06/19 18:56*	*10/11/19 01:34*	*1*
2-Fluorobiphenyl	*67*		*46 - 124*	*10/06/19 18:56*	*10/11/19 01:34*	*1*
2-Fluorophenol (Surr)	*56*		*13 - 113*	*10/06/19 18:56*	*10/11/19 01:34*	*1*
Nitrobenzene-d5 (Surr)	*72*		*36 - 126*	*10/06/19 18:56*	*10/11/19 01:34*	*1*
Phenol-d5 (Surr)	*70*		*17 - 127*	*10/06/19 18:56*	*10/11/19 01:34*	*1*
Terphenyl-d14 (Surr)	*68*		*44 - 149*	*10/06/19 18:56*	*10/11/19 01:34*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND	UJ-RC:9	0.019	0.0011	ug/L		09/20/19 22:48	09/24/19 07:24	1
alpha-BHC	ND	UJ-RC:9	0.019	0.0013	ug/L		09/20/19 22:48	09/24/19 07:24	1
beta-BHC	ND	UJ-RC:9	0.019	0.0011	ug/L		09/20/19 22:48	09/24/19 07:24	1
Chlordane (technical)	ND	UJ-RC:9	0.19	0.048	ug/L		09/20/19 22:48	09/24/19 07:24	1
cis-Chlordane	ND	UJ-RC:9	0.019	0.0016	ug/L		09/20/19 22:48	09/24/19 07:24	1
4,4'-DDD	ND	UJ-RC:9	0.019	0.0011	ug/L		09/20/19 22:48	09/24/19 07:24	1
4,4'-DDE	ND	UJ-RC:9	0.019	0.00082	ug/L		09/20/19 22:48	09/24/19 07:24	1
4,4'-DDT	ND	UJ-RC:9	0.019	0.0014	ug/L		09/20/19 22:48	09/24/19 07:24	1
delta-BHC	ND	UJ-RC:9	0.019	0.00078	ug/L		09/20/19 22:48	09/24/19 07:24	1
Dieldrin	**0.0078**	**J**	0.019	0.0011	ug/L		09/20/19 22:48	09/24/19 07:24	1
Endosulfan I	ND	UJ-RC:9	0.019	0.0011	ug/L		09/20/19 22:48	09/24/19 07:24	1
Endosulfan II	ND	UJ-RC:9	0.019	0.0027	ug/L		09/20/19 22:48	09/24/19 07:24	1
Endosulfan sulfate	ND	UJ-RC:9	0.019	0.00078	ug/L		09/20/19 22:48	09/24/19 07:24	1
Endrin	ND	UJ-RC:9	0.019	0.0011	ug/L		09/20/19 22:48	09/24/19 07:24	1
Endrin aldehyde	ND	UJ-RC:9	0.019	0.0010	ug/L		09/20/19 22:48	09/24/19 07:24	1
gamma-BHC (Lindane)	ND	UJ-RC:9	0.019	0.0093	ug/L		09/20/19 22:48	09/24/19 07:24	1
Heptachlor	ND	UJ-RC:9	0.019	0.0012	ug/L		09/20/19 22:48	09/24/19 07:24	1
Heptachlor epoxide	ND	UJ-RC:9	0.019	0.0012	ug/L		09/20/19 22:48	09/24/19 07:24	1
Toxaphene	ND	UJ-RC:9	1.1	0.11	ug/L		09/20/19 22:48	09/24/19 07:24	1
trans-Chlordane	ND	UJ-RC:9	0.019	0.0012	ug/L		09/20/19 22:48	09/24/19 07:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*103*		*10 - 130*	*09/20/19 22:48*	*09/24/19 07:24*	*1*
Tetrachloro-m-xylene	*70*		*43 - 130*	*09/20/19 22:48*	*09/24/19 07:24*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND	UJ-RC:9	0.46	0.082	ug/L		09/20/19 22:48	09/24/19 07:24	1
PCB-1232	ND	UJ-RC:9	0.46	0.037	ug/L		09/20/19 22:48	09/24/19 07:24	1
PCB-1242	ND	UJ-RC:9	0.46	0.013	ug/L		09/20/19 22:48	09/24/19 07:24	1
PCB-1248	ND	UJ-RC:9	0.46	0.0074	ug/L		09/20/19 22:48	09/24/19 07:24	1
PCB-1254	ND	UJ-RC:9	0.46	0.021	ug/L		09/20/19 22:48	09/24/19 07:24	1
PCB-1260	ND	UJ-RC:9	0.46	0.057	ug/L		09/20/19 22:48	09/24/19 07:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*103*		*10 - 125*	*09/20/19 22:48*	*09/24/19 07:24*	*1*
Tetrachloro-m-xylene	*70*		*46 - 150*	*09/20/19 22:48*	*09/24/19 07:24*	*1*

Method: 218.7 - Chromium, Hexavalent (Ion Chromatography)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	**0.00094**	**J**	0.0010	0.00020	mg/L			09/28/19 20:55	1

Client Sample Results

Client Sample ID: MH-11

Date Collected: 09/16/19 08:30
Date Received: 09/18/19 09:07

Lab Sample ID: 400-176507-1
Matrix: Water

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**0.21**	J-RC:9	0.20	0.027	ug/L			09/23/19 18:51	1

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND	UJ-RC:9	11	0.45	pg/L		10/10/19 08:27	10/15/19 14:21	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*71*		*31 - 137*	*10/10/19 08:27*	*10/15/19 14:21*	*1*
13C-2,3,7,8-TCDF	*67*		*29 - 140*	*10/10/19 08:27*	*10/15/19 14:21*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*99*		*42 - 164*	*10/10/19 08:27*	*10/15/19 14:21*	*1*

Method: 200.8-1994 R5.4 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**0.090**	**J**	0.10	0.018	mg/L		10/05/19 09:39	10/07/19 18:05	1
Antimony	ND		0.0050	0.00050	mg/L		10/05/19 09:39	10/07/19 18:05	1
Arsenic	ND		0.0030	0.0015	mg/L		10/05/19 09:39	10/07/19 18:05	1
Barium	**0.0097**		0.0050	0.00061	mg/L		10/05/19 09:39	10/07/19 18:05	1
Beryllium	ND		0.00050	0.00017	mg/L		10/05/19 09:39	10/07/19 18:05	1
Cadmium	ND		0.00050	0.00015	mg/L		10/05/19 09:39	10/07/19 18:05	1
Calcium	**81**	**B**	0.50	0.068	mg/L		10/05/19 09:39	10/07/19 18:05	1
Chromium	**0.0019**	**J**	0.0050	0.0016	mg/L		10/05/19 09:39	10/07/19 18:05	1
Cobalt	**0.00014**	**J ^** J-RC:M	0.00050	0.00012	mg/L		10/05/19 09:39	10/07/19 18:05	1
Copper	**0.0024**	**J**	0.0050	0.0017	mg/L		10/05/19 09:39	10/07/19 18:05	1
Iron	**0.27**		0.10	0.025	mg/L		10/05/19 09:39	10/07/19 18:05	1
Lead	ND		0.0025	0.00098	mg/L		10/05/19 09:39	10/07/19 18:05	1
Magnesium	**7.9**	**^** J-RC:SH	0.25	0.020	mg/L		10/05/19 09:39	10/07/19 18:05	1
Manganese	**0.0049**	**J B** UJ-RC:2	0.0354	0.0049	mg/L		10/05/19 09:39	10/07/19 18:05	1
Molybdenum	ND		0.0050	0.0010	mg/L		10/05/19 09:39	10/07/19 18:05	1
Nickel	ND		0.0050	0.0019	mg/L		10/05/19 09:39	10/07/19 18:05	1
Potassium	**6.0**		1.0	0.11	mg/L		10/05/19 09:39	10/07/19 18:05	1
Selenium	ND		0.0025	0.0010	mg/L		10/05/19 09:39	10/07/19 18:05	1
Silver	ND		0.0010	0.00010	mg/L		10/05/19 09:39	10/07/19 18:05	1
Sodium	**8.6**		0.50	0.17	mg/L		10/05/19 09:39	10/07/19 18:05	1
Thallium	ND		0.0010	0.00049	mg/L		10/05/19 09:39	10/07/19 18:05	1
Tin	ND		0.0050	0.0014	mg/L		10/05/19 09:39	10/07/19 18:05	1
Vanadium	ND		0.010	0.0053	mg/L		10/05/19 09:39	10/07/19 18:05	1
Zinc	**0.038**		0.020	0.0096	mg/L		10/05/19 09:39	10/07/19 18:05	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.82**		0.67	0.27	pCi/L		10/09/19 13:12	10/11/19 03:50	2

Method: 245.1-1994 R3.0 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00011**	**J B** UJ-RC:2	0.00064	0.00011	mg/L		10/05/19 13:12	10/07/19 16:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	**0.11**	J-RC:9	0.050	0.024	mg/L			09/20/19 14:57	1
Nitrate Nitrite as N	**0.40**	J-RC:9	0.050	0.018	mg/L			09/23/19 13:13	1

Client Sample Results

Client Sample ID: MH-11

Date Collected: 09/16/19 08:30
Date Received: 09/18/19 09:07

Lab Sample ID: 400-176507-1

Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus, Total	**0.040**	**J B** UJ-RC:2	0.373	0.040	mg/L		09/20/19 16:44	09/24/19 18:21	1
Cyanide, Total	ND	UJ-RC:9	0.0050	0.0050	mg/L		09/18/19 20:45	09/19/19 10:02	1
Sulfide	ND	H UJ-RC:1	0.10	0.057	mg/L			09/23/19 12:30	1

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	UJ-RC:G,6L 3.53	U G F *	3.02	3.04	3.00	4.64	pCi/L	09/27/19 09:16	10/04/19 11:53	1
Gross Beta	**3.72**		1.71	1.75	4.00	2.43	pCi/L	09/27/19 09:16	10/04/19 11:53	1

Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	9.80	U	8.27	8.33	50.0	36.3	pCi/L	09/30/19 14:01	10/21/19 15:37	1
Radium-228	13.6	U	16.6	16.7	50.0	26.0	pCi/L	09/30/19 14:01	10/21/19 15:37	1

Client Sample ID: MH-9

Date Collected: 09/16/19 09:00
Date Received: 09/18/19 09:07

Lab Sample ID: 400-176507-2

Matrix: Water

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND	UJ-RC:9	1.0	0.30	ug/L			09/20/19 10:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*116*		*50 - 150*		*09/20/19 10:25*	*1*
Toluene-d8 (Surr)	*91*		*50 - 150*		*09/20/19 10:25*	*1*
4-Bromofluorobenzene	*117*		*50 - 150*		*09/20/19 10:25*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	UJ-RC:9	1.0	0.52	ug/L			09/28/19 00:40	1
1,1,1-Trichloroethane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:40	1
1,1,2,2-Tetrachloroethane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:40	1
1,1,2-Trichloroethane	ND	UJ-RC:9	5.0	0.50	ug/L			09/28/19 00:40	1
1,1-Dichloroethane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:40	1
1,1-Dichloroethene	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:40	1
1,2,3-Trichloropropane	ND	UJ-RC:9	5.0	0.84	ug/L			09/28/19 00:40	1
1,2-Dibromo-3-Chloropropane	ND	UJ-RC:9	5.0	1.5	ug/L			09/28/19 00:40	1
1,2-Dibromoethane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:40	1
1,2-Dichloroethane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:40	1
1,2-Dichloropropane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:40	1
2-Butanone (MEK)	ND	UJ-RC:9	25	2.6	ug/L			09/28/19 00:40	1
2-Chloroethyl vinyl ether	ND	UJ-RC:9	5.0	2.0	ug/L			09/28/19 00:40	1
2-Hexanone	ND	UJ-RC:9	25	3.1	ug/L			09/28/19 00:40	1
4-Methyl-2-pentanone (MIBK)	ND	UJ-RC:9	25	1.8	ug/L			09/28/19 00:40	1
Acetone	ND	UJ-RC:9	25	10	ug/L			09/28/19 00:40	1
Acrolein	ND	UJ-RC:9	20	10	ug/L			09/28/19 00:40	1
Acrylonitrile	ND	UJ-RC:9	10	2.8	ug/L			09/28/19 00:40	1
Benzene	ND	UJ-RC:9	1.0	0.38	ug/L			09/28/19 00:40	1
Bromodichloromethane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:40	1
Bromoform	ND	UJ-RC:9	5.0	0.71	ug/L			09/28/19 00:40	1
Bromomethane	ND	UJ-RC:9	1.0	0.98	ug/L			09/28/19 00:40	1
Carbon disulfide	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:40	1
Carbon tetrachloride	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:40	1
Chlorobenzene	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:40	1
Chloroethane	ND	UJ-RC:9	1.0	0.76	ug/L			09/28/19 00:40	1
Chloroform	ND	UJ-RC:9	1.0	0.60	ug/L			09/28/19 00:40	1
Chloromethane	ND	UJ-RC:9	1.0	0.83	ug/L			09/28/19 00:40	1
cis-1,2-Dichloroethene	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:40	1
cis-1,3-Dichloropropene	ND	UJ-RC:9	5.0	0.50	ug/L			09/28/19 00:40	1
Dibromochloromethane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:40	1
Ethylbenzene	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:40	1
Iodomethane	ND	UJ-RC:9	1.0	0.90	ug/L			09/28/19 00:40	1
Methylene Chloride	ND	UJ-RC:9	5.0	3.0	ug/L			09/28/19 00:40	1
Styrene	ND	UJ-RC:9	1.0	1.0	ug/L			09/28/19 00:40	1
Tetrachloroethene	ND	UJ-RC:9	1.0	0.58	ug/L			09/28/19 00:40	1
Toluene	ND	UJ-RC:9	1.0	0.41	ug/L			09/28/19 00:40	1
trans-1,2-Dichloroethene	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:40	1
trans-1,3-Dichloropropene	ND	UJ-RC:9	5.0	0.50	ug/L			09/28/19 00:40	1
trans-1,4-Dichloro-2-butene	ND	UJ-RC:9	5.0	1.0	ug/L			09/28/19 00:40	1
Trichloroethene	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:40	1

Client Sample Results

Client Sample ID: MH-9

Date Collected: 09/16/19 09:00
Date Received: 09/18/19 09:07

Lab Sample ID: 400-176507-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND	UJ-RC:9	1.0	0.52	ug/L			09/28/19 00:40	1
Vinyl acetate	ND	UJ-RC:9	25	2.0	ug/L			09/28/19 00:40	1
Vinyl chloride	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 00:40	1
Xylenes, Total	ND	UJ-RC:9	10	1.6	ug/L			09/28/19 00:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*78 - 118*		*09/28/19 00:40*	*1*
Dibromofluoromethane	*101*		*81 - 121*		*09/28/19 00:40*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*09/28/19 00:40*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND	UJ-RC:9	0.20	0.031	ug/L		09/21/19 16:21	09/26/19 23:38	1
Acenaphthylene	ND	UJ-RC:9	0.20	0.044	ug/L		09/21/19 16:21	09/26/19 23:38	1
Anthracene	ND	UJ-RC:9	0.20	0.031	ug/L		09/21/19 16:21	09/26/19 23:38	1
Benzo[a]anthracene	ND	UJ-RC:9	0.20	0.045	ug/L		09/21/19 16:21	09/26/19 23:38	1
Benzo[a]pyrene	ND	UJ-RC:9	0.20	0.041	ug/L		09/21/19 16:21	09/26/19 23:38	1
Benzo[b]fluoranthene	ND	UJ-RC:9	0.20	0.033	ug/L		09/21/19 16:21	09/26/19 23:38	1
Benzo[g,h,i]perylene	ND	UJ-RC:9	0.20	0.13	ug/L		09/21/19 16:21	09/26/19 23:38	1
Benzo[k]fluoranthene	ND	UJ-RC:9	0.20	0.098	ug/L		09/21/19 16:21	09/26/19 23:38	1
Chrysene	ND	UJ-RC:9	0.20	0.073	ug/L		09/21/19 16:21	09/26/19 23:38	1
Dibenz(a,h)anthracene	ND	UJ-RC:9	0.20	0.049	ug/L		09/21/19 16:21	09/26/19 23:38	1
Fluoranthene	**0.13**	**J** J-RC:9	0.20	0.067	ug/L		09/21/19 16:21	09/26/19 23:38	1
Fluorene	ND	UJ-RC:9	0.20	0.11	ug/L		09/21/19 16:21	09/26/19 23:38	1
Indeno[1,2,3-cd]pyrene	ND	UJ-RC:9	0.20	0.042	ug/L		09/21/19 16:21	09/26/19 23:38	1
Naphthalene	ND	UJ-RC:9	0.20	0.093	ug/L		09/21/19 16:21	09/26/19 23:38	1
Phenanthrene	ND	UJ-RC:9	0.20	0.035	ug/L		09/21/19 16:21	09/26/19 23:38	1
Pyrene	ND	UJ-RC:9	0.20	0.039	ug/L		09/21/19 16:21	09/26/19 23:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*108*		*15 - 122*	*09/21/19 16:21*	*09/26/19 23:38*	*1*
Nitrobenzene-d5 (Surr)	*91*		*19 - 130*	*09/21/19 16:21*	*09/26/19 23:38*	*1*
Terphenyl-d14 (Surr)	*162*	*X*	*33 - 138*	*09/21/19 16:21*	*09/26/19 23:38*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	UJ-RC:9	9.8	0.18	ug/L		09/21/19 16:21	09/26/19 23:46	1
1,2-Dichlorobenzene	ND	UJ-RC:9	9.8	0.17	ug/L		09/21/19 16:21	09/26/19 23:46	1
1,3-Dichlorobenzene	ND	UJ-RC:9	9.8	0.18	ug/L		09/21/19 16:21	09/26/19 23:46	1
1,4-Dichlorobenzene	ND	UJ-RC:9	9.8	0.16	ug/L		09/21/19 16:21	09/26/19 23:46	1
2,4,6-Trichlorophenol	ND	UJ-RC:9	9.8	3.4	ug/L		09/21/19 16:21	09/26/19 23:46	1
2,4-Dichlorophenol	ND	UJ-RC:9	9.8	3.0	ug/L		09/21/19 16:21	09/26/19 23:46	1
2,4-Dimethylphenol	ND	UJ-RC:9	9.8	3.4	ug/L		09/21/19 16:21	09/26/19 23:46	1
2,4-Dinitrophenol	ND	UJ-RC:9	30	3.3	ug/L		09/21/19 16:21	09/26/19 23:46	1
2,4-Dinitrotoluene	ND	UJ-RC:9	9.8	1.9	ug/L		09/21/19 16:21	09/26/19 23:46	1
2,6-Dinitrotoluene	ND	UJ-RC:9	9.8	1.9	ug/L		09/21/19 16:21	09/26/19 23:46	1
2-Chloronaphthalene	ND	UJ-RC:9	9.8	0.14	ug/L		09/21/19 16:21	09/26/19 23:46	1
2-Chlorophenol	ND	UJ-RC:9	9.8	2.2	ug/L		09/21/19 16:21	09/26/19 23:46	1
2-Nitrophenol	ND	UJ-RC:9	9.8	5.1	ug/L		09/21/19 16:21	09/26/19 23:46	1
3,3'-Dichlorobenzidine	ND	UJ-RC:9	9.8	2.6	ug/L		09/21/19 16:21	09/26/19 23:46	1

Client Sample Results

Client Sample ID: MH-9
Date Collected: 09/16/19 09:00
Date Received: 09/18/19 09:07

Lab Sample ID: 400-176507-2
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	ND	UJ-RC:9	9.8	1.6	ug/L		09/21/19 16:21	09/26/19 23:46	1
4-Bromophenyl phenyl ether	ND	UJ-RC:9	9.8	0.20	ug/L		09/21/19 16:21	09/26/19 23:46	1
4-Chloro-3-methylphenol	ND	UJ-RC:9	9.8	3.7	ug/L		09/21/19 16:21	09/26/19 23:46	1
4-Chlorophenyl phenyl ether	ND	UJ-RC:9	9.8	2.0	ug/L		09/21/19 16:21	09/26/19 23:46	1
4-Nitrophenol	ND	UJ-RC:9	9.8	2.1	ug/L		09/21/19 16:21	09/26/19 23:46	1
Benzidine	ND	UJ-RC:9	25	20	ug/L		09/21/19 16:21	09/26/19 23:46	1
bis (2-chloroisopropyl) ether	ND	UJ-RC:9	9.8	0.16	ug/L		09/21/19 16:21	09/26/19 23:46	1
Bis(2-chloroethoxy)methane	ND	UJ-RC:9	9.8	0.16	ug/L		09/21/19 16:21	09/26/19 23:46	1
Bis(2-chloroethyl)ether	ND	UJ-RC:9	9.8	2.7	ug/L		09/21/19 16:21	09/26/19 23:46	1
Bis(2-ethylhexyl) phthalate	**26**	J-RC:9	9.8	4.9	ug/L		09/21/19 16:21	09/26/19 23:46	1
Butyl benzyl phthalate	ND	UJ-RC:9	9.8	0.19	ug/L		09/21/19 16:21	09/26/19 23:46	1
Diethyl phthalate	**0.54**	**J**	9.8	0.24	ug/L		09/21/19 16:21	09/26/19 23:46	1
Dimethyl phthalate	ND	UJ-RC:9	9.8	0.17	ug/L		09/21/19 16:21	09/26/19 23:46	1
Di-n-butyl phthalate	ND	UJ-RC:9	9.8	2.7	ug/L		09/21/19 16:21	09/26/19 23:46	1
Di-n-octyl phthalate	ND	UJ-RC:9	9.8	0.17	ug/L		09/21/19 16:21	09/26/19 23:46	1
Hexachlorobenzene	ND	UJ-RC:9	9.8	0.17	ug/L		09/21/19 16:21	09/26/19 23:46	1
Hexachlorobutadiene	ND	UJ-RC:9	9.8	0.54	ug/L		09/21/19 16:21	09/26/19 23:46	1
Hexachlorocyclopentadiene	ND	UJ-RC:9	20	2.6	ug/L		09/21/19 16:21	09/26/19 23:46	1
Hexachloroethane	ND	UJ-RC:9	9.8	4.1	ug/L		09/21/19 16:21	09/26/19 23:46	1
Isophorone	ND	UJ-RC:9	9.8	0.14	ug/L		09/21/19 16:21	09/26/19 23:46	1
Nitrobenzene	ND	UJ-RC:9	9.8	0.13	ug/L		09/21/19 16:21	09/26/19 23:46	1
N-Nitrosodimethylamine	ND	UJ-RC:9	9.8	3.4	ug/L		09/21/19 16:21	09/26/19 23:46	1
N-Nitrosodi-n-propylamine	ND	UJ-RC:9	9.8	3.2	ug/L		09/21/19 16:21	09/26/19 23:46	1
N-Nitrosodiphenylamine	ND	UJ-RC:9	9.8	0.18	ug/L		09/21/19 16:21	09/26/19 23:46	1
Pentachlorophenol	ND	UJ-RC:9	20	1.4	ug/L		09/21/19 16:21	09/26/19 23:46	1
Phenol	ND	UJ-RC:9	9.8	2.6	ug/L		09/21/19 16:21	09/26/19 23:46	1
Dinoseb	ND	UJ-RC:9	9.8	0.98	ug/L		09/21/19 16:21	09/26/19 23:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*99*		*26 - 150*	*09/21/19 16:21*	*09/26/19 23:46*	*1*
2-Fluorobiphenyl	*91*		*46 - 124*	*09/21/19 16:21*	*09/26/19 23:46*	*1*
2-Fluorophenol (Surr)	*44*		*13 - 113*	*09/21/19 16:21*	*09/26/19 23:46*	*1*
Nitrobenzene-d5 (Surr)	*86*		*36 - 126*	*09/21/19 16:21*	*09/26/19 23:46*	*1*
Phenol-d5 (Surr)	*73*		*17 - 127*	*09/21/19 16:21*	*09/26/19 23:46*	*1*
Terphenyl-d14 (Surr)	*93*		*44 - 149*	*09/21/19 16:21*	*09/26/19 23:46*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RERA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND	H R	11	0.17	ug/L		10/06/19 18:56	10/11/19 02:00	1
2,4,6-Trichlorophenol	ND	H R	11	3.8	ug/L		10/06/19 18:56	10/11/19 02:00	1
2,4-Dinitrophenol	ND	H R	32	3.6	ug/L		10/06/19 18:56	10/11/19 02:00	1
2-Chlorophenol	ND	H R	11	2.4	ug/L		10/06/19 18:56	10/11/19 02:00	1
2-Nitrophenol	ND	H R	11	5.6	ug/L		10/06/19 18:56	10/11/19 02:00	1
4,6-Dinitro-2-methylphenol	ND	H R	11	1.7	ug/L		10/06/19 18:56	10/11/19 02:00	1
4-Nitrophenol	ND	H R	11	2.3	ug/L		10/06/19 18:56	10/11/19 02:00	1
Hexachlorobutadiene	ND	H R	11	0.59	ug/L		10/06/19 18:56	10/11/19 02:00	1
Hexachloroethane	ND	H R	11	4.5	ug/L		10/06/19 18:56	10/11/19 02:00	1
Pentachlorophenol	ND	H R	21	1.5	ug/L		10/06/19 18:56	10/11/19 02:00	1
Dinoseb	ND	H R	11	1.1	ug/L		10/06/19 18:56	10/11/19 02:00	1

Client Sample ID: MH-9

Lab Sample ID: 400-176507-2

Date Collected: 09/16/19 09:00
Matrix: Water
Date Received: 09/18/19 09:07

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*72*		*26 - 150*	*10/06/19 18:56*	*10/11/19 02:00*	*1*
2-Fluorobiphenyl	*75*		*46 - 124*	*10/06/19 18:56*	*10/11/19 02:00*	*1*
2-Fluorophenol (Surr)	*58*		*13 - 113*	*10/06/19 18:56*	*10/11/19 02:00*	*1*
Nitrobenzene-d5 (Surr)	*79*		*36 - 126*	*10/06/19 18:56*	*10/11/19 02:00*	*1*
Phenol-d5 (Surr)	*73*		*17 - 127*	*10/06/19 18:56*	*10/11/19 02:00*	*1*
Terphenyl-d14 (Surr)	*79*		*44 - 149*	*10/06/19 18:56*	*10/11/19 02:00*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND	UJ-RC:9	0.020	0.0012	ug/L		09/20/19 22:48	09/24/19 07:55	1
alpha-BHC	ND	UJ-RC:9	0.020	0.0014	ug/L		09/20/19 22:48	09/24/19 07:55	1
beta-BHC	ND	UJ-RC:9	0.020	0.0012	ug/L		09/20/19 22:48	09/24/19 07:55	1
Chlordane (technical)	ND	UJ-RC:9	0.20	0.052	ug/L		09/20/19 22:48	09/24/19 07:55	1
cis-Chlordane	ND	UJ-RC:9	0.020	0.0017	ug/L		09/20/19 22:48	09/24/19 07:55	1
4,4'-DDD	ND	UJ-RC:9	0.020	0.0012	ug/L		09/20/19 22:48	09/24/19 07:55	1
4,4'-DDE	ND	UJ-RC:9	0.020	0.00088	ug/L		09/20/19 22:48	09/24/19 07:55	1
4,4'-DDT	ND	UJ-RC:9	0.020	0.0016	ug/L		09/20/19 22:48	09/24/19 07:55	1
delta-BHC	ND	UJ-RC:9	0.020	0.00084	ug/L		09/20/19 22:48	09/24/19 07:55	1
Dieldrin	ND	UJ-RC:9	0.020	0.0012	ug/L		09/20/19 22:48	09/24/19 07:55	1
Endosulfan I	ND	UJ-RC:9	0.020	0.0012	ug/L		09/20/19 22:48	09/24/19 07:55	1
Endosulfan II	ND	UJ-RC:9	0.020	0.0030	ug/L		09/20/19 22:48	09/24/19 07:55	1
Endosulfan sulfate	ND	UJ-RC:9	0.020	0.00084	ug/L		09/20/19 22:48	09/24/19 07:55	1
Endrin	ND	UJ-RC:9	0.020	0.0012	ug/L		09/20/19 22:48	09/24/19 07:55	1
Endrin aldehyde	ND	UJ-RC:9	0.020	0.0011	ug/L		09/20/19 22:48	09/24/19 07:55	1
gamma-BHC (Lindane)	ND	UJ-RC:9	0.020	0.010	ug/L		09/20/19 22:48	09/24/19 07:55	1
Heptachlor	ND	UJ-RC:9	0.020	0.0012	ug/L		09/20/19 22:48	09/24/19 07:55	1
Heptachlor epoxide	ND	UJ-RC:9	0.020	0.0013	ug/L		09/20/19 22:48	09/24/19 07:55	1
Toxaphene	ND	UJ-RC:9	1.2	0.12	ug/L		09/20/19 22:48	09/24/19 07:55	1
trans-Chlordane	ND	UJ-RC:9	0.020	0.0013	ug/L		09/20/19 22:48	09/24/19 07:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*82*		*10 - 130*	*09/20/19 22:48*	*09/24/19 07:55*	*1*
Tetrachloro-m-xylene	*61*		*43 - 130*	*09/20/19 22:48*	*09/24/19 07:55*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND	UJ-RC:9	0.50	0.088	ug/L		09/20/19 22:48	09/24/19 07:55	1
PCB-1232	ND	UJ-RC:9	0.50	0.040	ug/L		09/20/19 22:48	09/24/19 07:55	1
PCB-1242	ND	UJ-RC:9	0.50	0.014	ug/L		09/20/19 22:48	09/24/19 07:55	1
PCB-1248	ND	UJ-RC:9	0.50	0.0080	ug/L		09/20/19 22:48	09/24/19 07:55	1
PCB-1254	ND	UJ-RC:9	0.50	0.023	ug/L		09/20/19 22:48	09/24/19 07:55	1
PCB-1260	ND	UJ-RC:9	0.50	0.061	ug/L		09/20/19 22:48	09/24/19 07:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*82*		*10 - 125*	*09/20/19 22:48*	*09/24/19 07:55*	*1*
Tetrachloro-m-xylene	*61*		*46 - 150*	*09/20/19 22:48*	*09/24/19 07:55*	*1*

Method: 218.7 - Chromium, Hexavalent (Ion Chromatography)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	ND	UJ-RC:9	0.0010	0.00020	mg/L			09/28/19 21:10	1

1 2 3 4 5 6 7 8 9 10 11 12 13

Client Sample ID: MH-9

Date Collected: 09/16/19 09:00
Date Received: 09/18/19 09:07

Lab Sample ID: 400-176507-2
Matrix: Water

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**0.26**	J-RC:9	0.20	0.027	ug/L			09/23/19 19:06	1

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND	UJ-RC:9	10	0.47	pg/L		10/10/19 08:27	10/15/19 14:59	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*80*		*31 - 137*	*10/10/19 08:27*	*10/15/19 14:59*	*1*
13C-2,3,7,8-TCDF	*76*		*29 - 140*	*10/10/19 08:27*	*10/15/19 14:59*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*98*		*42 - 164*	*10/10/19 08:27*	*10/15/19 14:59*	*1*

Method: 200.8-1994 R5.4 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**0.018**	**J**	0.10	0.018	mg/L		10/05/19 09:39	10/07/19 18:23	1
Antimony	**0.0013**	**J**	0.0050	0.00050	mg/L		10/05/19 09:39	10/07/19 18:23	1
Arsenic	ND		0.0030	0.0015	mg/L		10/05/19 09:39	10/07/19 18:23	1
Barium	**0.0069**		0.0050	0.00061	mg/L		10/05/19 09:39	10/07/19 18:23	1
Beryllium	ND		0.00050	0.00017	mg/L		10/05/19 09:39	10/07/19 18:23	1
Cadmium	ND		0.00050	0.00015	mg/L		10/05/19 09:39	10/07/19 18:23	1
Calcium	**79**	**B**	0.50	0.068	mg/L		10/05/19 09:39	10/07/19 18:23	1
Chromium	**0.0020**	**J**	0.0050	0.0016	mg/L		10/05/19 09:39	10/07/19 18:23	1
Cobalt	**0.0017**	**^** J-RC:M	0.00050	0.00012	mg/L		10/05/19 09:39	10/07/19 18:23	1
Copper	**0.0041**	**J**	0.0050	0.0017	mg/L		10/05/19 09:39	10/07/19 18:23	1
Iron	**0.14**		0.10	0.025	mg/L		10/05/19 09:39	10/07/19 18:23	1
Lead	ND		0.0025	0.00098	mg/L		10/05/19 09:39	10/07/19 18:23	1
Magnesium	**20**	**^** J-RC:SH	0.25	0.020	mg/L		10/05/19 09:39	10/07/19 18:23	1
Manganese	**0.042**	**B**	0.0050	0.0018	mg/L		10/05/19 09:39	10/07/19 18:23	1
Molybdenum	ND		0.0050	0.0010	mg/L		10/05/19 09:39	10/07/19 18:23	1
Nickel	**0.0067**		0.0050	0.0019	mg/L		10/05/19 09:39	10/07/19 18:23	1
Potassium	**13**		1.0	0.11	mg/L		10/05/19 09:39	10/07/19 18:23	1
Selenium	ND		0.0025	0.0010	mg/L		10/05/19 09:39	10/07/19 18:23	1
Silver	ND		0.0010	0.00010	mg/L		10/05/19 09:39	10/07/19 18:23	1
Sodium	**50**		0.50	0.17	mg/L		10/05/19 09:39	10/07/19 18:23	1
Thallium	ND		0.0010	0.00049	mg/L		10/05/19 09:39	10/07/19 18:23	1
Tin	ND		0.0050	0.0014	mg/L		10/05/19 09:39	10/07/19 18:23	1
Vanadium	ND		0.010	0.0053	mg/L		10/05/19 09:39	10/07/19 18:23	1
Zinc	**0.087**		0.020	0.0096	mg/L		10/05/19 09:39	10/07/19 18:23	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.42**	**J**	0.67	0.27	pCi/L		10/09/19 13:12	10/11/19 03:57	2

Method: 245.1-1994 R3.0 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000080	mg/L		10/05/19 13:12	10/07/19 16:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	**3.4**	J-RC:9	0.050	0.024	mg/L			09/20/19 14:37	1
Nitrate Nitrite as N	**7.0**	J-RC:9	0.25	0.090	mg/L			09/23/19 13:22	5

Client Sample Results

Client Sample ID: MH-9

Date Collected: 09/16/19 09:00
Date Received: 09/18/19 09:07

Lab Sample ID: 400-176507-2
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus, Total	**0.049**	**J B** UJ-RC:2	0.373	0.049	ng/L		09/20/19 16:44	09/24/19 18:22	1
Cyanide, Total	ND	UJ-RC:9	0.0050	0.0050	mg/L		09/18/19 20:45	09/19/19 10:02	1
Sulfide	ND	H UJ-RC:1	0.10	0.057	mg/L			09/23/19 12:30	1

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	UJ-RC:G,6L 5.40	U G F *	4.74	4.78	3.00	7.16	pCi/L	09/27/19 09:16	10/04/19 11:53	1
Gross Beta	**12.5**	**G** J-RC:G	3.87	4.07	4.00	4.94	pCi/L	09/27/19 09:16	10/04/19 11:53	1

Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**21.3**		14.5	14.7	50.0	18.6	pCi/L	09/30/19 14:01	10/23/19 19:07	1
Radium-228	**25.9**		13.5	13.8	50.0	12.0	pCi/L	09/30/19 14:01	10/23/19 19:07	1

Client Sample ID: WLIT

Lab Sample ID: 400-176507-3

Date Collected: 09/16/19 09:30

Matrix: Water

Date Received: 09/18/19 09:07

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND	UJ-RC:9	1.0	0.30	ug/L			09/20/19 10:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*121*		*50 - 150*		*09/20/19 10:58*	*1*
Toluene-d8 (Surr)	*90*		*50 - 150*		*09/20/19 10:58*	*1*
4-Bromofluorobenzene	*114*		*50 - 150*		*09/20/19 10:58*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	UJ-RC:9	1.0	0.52	ug/L			09/28/19 01:06	1
1,1,1-Trichloroethane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 01:06	1
1,1,2,2-Tetrachloroethane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 01:06	1
1,1,2-Trichloroethane	ND	UJ-RC:9	5.0	0.50	ug/L			09/28/19 01:06	1
1,1-Dichloroethane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 01:06	1
1,1-Dichloroethene	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 01:06	1
1,2,3-Trichloropropane	ND	UJ-RC:9	5.0	0.84	ug/L			09/28/19 01:06	1
1,2-Dibromo-3-Chloropropane	ND	UJ-RC:9	5.0	1.5	ug/L			09/28/19 01:06	1
1,2-Dibromoethane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 01:06	1
1,2-Dichloroethane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 01:06	1
1,2-Dichloropropane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 01:06	1
2-Butanone (MEK)	ND	UJ-RC:9	25	2.6	ug/L			09/28/19 01:06	1
2-Chloroethyl vinyl ether	ND	UJ-RC:9	5.0	2.0	ug/L			09/28/19 01:06	1
2-Hexanone	ND	UJ-RC:9	25	3.1	ug/L			09/28/19 01:06	1
4-Methyl-2-pentanone (MIBK)	ND	UJ-RC:9	25	1.8	ug/L			09/28/19 01:06	1
Acetone	ND	UJ-RC:9	25	10	ug/L			09/28/19 01:06	1
Acrolein	ND	UJ-RC:9	20	10	ug/L			09/28/19 01:06	1
Acrylonitrile	ND	UJ-RC:9	10	2.8	ug/L			09/28/19 01:06	1
Benzene	ND	UJ-RC:9	1.0	0.38	ug/L			09/28/19 01:06	1
Bromodichloromethane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 01:06	1
Bromoform	ND	UJ-RC:9	5.0	0.71	ug/L			09/28/19 01:06	1
Bromomethane	ND	UJ-RC:9	1.0	0.98	ug/L			09/28/19 01:06	1
Carbon disulfide	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 01:06	1
Carbon tetrachloride	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 01:06	1
Chlorobenzene	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 01:06	1
Chloroethane	ND	UJ-RC:9	1.0	0.76	ug/L			09/28/19 01:06	1
Chloroform	ND	UJ-RC:9	1.0	0.60	ug/L			09/28/19 01:06	1
Chloromethane	ND	UJ-RC:9	1.0	0.83	ug/L			09/28/19 01:06	1
cis-1,2-Dichloroethene	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 01:06	1
cis-1,3-Dichloropropene	ND	UJ-RC:9	5.0	0.50	ug/L			09/28/19 01:06	1
Dibromochloromethane	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 01:06	1
Ethylbenzene	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 01:06	1
Iodomethane	ND	UJ-RC:9	1.0	0.90	ug/L			09/28/19 01:06	1
Methylene Chloride	ND	UJ-RC:9	5.0	3.0	ug/L			09/28/19 01:06	1
Styrene	ND	UJ-RC:9	1.0	1.0	ug/L			09/28/19 01:06	1
Tetrachloroethene	ND	UJ-RC:9	1.0	0.58	ug/L			09/28/19 01:06	1
Toluene	ND	UJ-RC:9	1.0	0.41	ug/L			09/28/19 01:06	1
trans-1,2-Dichloroethene	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 01:06	1
trans-1,3-Dichloropropene	ND	UJ-RC:9	5.0	0.50	ug/L			09/28/19 01:06	1
trans-1,4-Dichloro-2-butene	ND	UJ-RC:9	5.0	1.0	ug/L			09/28/19 01:06	1
Trichloroethene	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 01:06	1

Client Sample ID: WLIT

Date Collected: 09/16/19 09:30
Date Received: 09/18/19 09:07

Lab Sample ID: 400-176507-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND	UJ-RC:9	1.0	0.52	ug/L			09/28/19 01:06	1
Vinyl acetate	ND	UJ-RC:9	25	2.0	ug/L			09/28/19 01:06	1
Vinyl chloride	ND	UJ-RC:9	1.0	0.50	ug/L			09/28/19 01:06	1
Xylenes, Total	ND	UJ-RC:9	10	1.6	ug/L			09/28/19 01:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*78 - 118*		*09/28/19 01:06*	*1*
Dibromofluoromethane	*100*		*81 - 121*		*09/28/19 01:06*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*09/28/19 01:06*	*1*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND	UJ-RC:9	0.20	0.032	ug/L		09/21/19 16:21	09/26/19 23:56	1
Acenaphthylene	ND	UJ-RC:9	0.20	0.045	ug/L		09/21/19 16:21	09/26/19 23:56	1
Anthracene	ND	UJ-RC:9	0.20	0.032	ug/L		09/21/19 16:21	09/26/19 23:56	1
Benzo[a]anthracene	ND	UJ-RC:9	0.20	0.046	ug/L		09/21/19 16:21	09/26/19 23:56	1
Benzo[a]pyrene	ND	UJ-RC:9	0.20	0.042	ug/L		09/21/19 16:21	09/26/19 23:56	1
Benzo[b]fluoranthene	ND	UJ-RC:9	0.20	0.034	ug/L		09/21/19 16:21	09/26/19 23:56	1
Benzo[g,h,i]perylene	ND	UJ-RC:9	0.20	0.13	ug/L		09/21/19 16:21	09/26/19 23:56	1
Benzo[k]fluoranthene	ND	UJ-RC:9	0.20	0.10	ug/L		09/21/19 16:21	09/26/19 23:56	1
Chrysene	ND	UJ-RC:9	0.20	0.075	ug/L		09/21/19 16:21	09/26/19 23:56	1
Dibenz(a,h)anthracene	ND	UJ-RC:9	0.20	0.051	ug/L		09/21/19 16:21	09/26/19 23:56	1
Fluoranthene	ND	UJ-RC:9	0.20	0.069	ug/L		09/21/19 16:21	09/26/19 23:56	1
Fluorene	ND	UJ-RC:9	0.20	0.11	ug/L		09/21/19 16:21	09/26/19 23:56	1
Indeno[1,2,3-cd]pyrene	ND	UJ-RC:9	0.20	0.043	ug/L		09/21/19 16:21	09/26/19 23:56	1
Naphthalene	ND	UJ-RC:9	0.20	0.095	ug/L		09/21/19 16:21	09/26/19 23:56	1
Phenanthrene	ND	UJ-RC:9	0.20	0.036	ug/L		09/21/19 16:21	09/26/19 23:56	1
Pyrene	ND	UJ-RC:9	0.20	0.040	ug/L		09/21/19 16:21	09/26/19 23:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*125*	*X*	*15 - 122*	*09/21/19 16:21*	*09/26/19 23:56*	*1*
Nitrobenzene-d5 (Surr)	*117*		*19 - 130*	*09/21/19 16:21*	*09/26/19 23:56*	*1*
Terphenyl-d14 (Surr)	*207*	*X*	*33 - 138*	*09/21/19 16:21*	*09/26/19 23:56*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	UJ-RC:9	10	0.18	ug/L		09/21/19 16:21	09/27/19 00:11	1
1,2-Dichlorobenzene	ND	UJ-RC:9	10	0.17	ug/L		09/21/19 16:21	09/27/19 00:11	1
1,3-Dichlorobenzene	ND	UJ-RC:9	10	0.18	ug/L		09/21/19 16:21	09/27/19 00:11	1
1,4-Dichlorobenzene	ND	UJ-RC:9	10	0.16	ug/L		09/21/19 16:21	09/27/19 00:11	1
2,4,6-Trichlorophenol	ND	UJ-RC:9	10	3.5	ug/L		09/21/19 16:21	09/27/19 00:11	1
2,4-Dichlorophenol	ND	UJ-RC:9	10	3.0	ug/L		09/21/19 16:21	09/27/19 00:11	1
2,4-Dimethylphenol	ND	UJ-RC:9	10	3.5	ug/L		09/21/19 16:21	09/27/19 00:11	1
2,4-Dinitrophenol	ND	UJ-RC:9	30	3.4	ug/L		09/21/19 16:21	09/27/19 00:11	1
2,4-Dinitrotoluene	ND	UJ-RC:9	10	1.9	ug/L		09/21/19 16:21	09/27/19 00:11	1
2,6-Dinitrotoluene	ND	UJ-RC:9	10	1.9	ug/L		09/21/19 16:21	09/27/19 00:11	1
2-Chloronaphthalene	ND	UJ-RC:9	10	0.14	ug/L		09/21/19 16:21	09/27/19 00:11	1
2-Chlorophenol	ND	UJ-RC:9	10	2.2	ug/L		09/21/19 16:21	09/27/19 00:11	1
2-Nitrophenol	ND	UJ-RC:9	10	5.3	ug/L		09/21/19 16:21	09/27/19 00:11	1
3,3'-Dichlorobenzidine	ND	UJ-RC:9	10	2.6	ug/L		09/21/19 16:21	09/27/19 00:11	1

Client Sample ID: WLIT

Lab Sample ID: 400-176507-3

Date Collected: 09/16/19 09:30
Matrix: Water
Date Received: 09/18/19 09:07

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	ND	UJ-RC:9	10	1.6	ug/L		09/21/19 16:21	09/27/19 00:11	1
4-Bromophenyl phenyl ether	ND	UJ-RC:9	10	0.20	ug/L		09/21/19 16:21	09/27/19 00:11	1
4-Chloro-3-methylphenol	ND	UJ-RC:9	10	3.8	ug/L		09/21/19 16:21	09/27/19 00:11	1
4-Chlorophenyl phenyl ether	ND	UJ-RC:9	10	2.0	ug/L		09/21/19 16:21	09/27/19 00:11	1
4-Nitrophenol	ND	UJ-RC:9	10	2.1	ug/L		09/21/19 16:21	09/27/19 00:11	1
Benzidine	ND	UJ-RC:9	25	20	ug/L		09/21/19 16:21	09/27/19 00:11	1
bis (2-chloroisopropyl) ether	ND	UJ-RC:9	10	0.16	ug/L		09/21/19 16:21	09/27/19 00:11	1
Bis(2-chloroethoxy)methane	ND	UJ-RC:9	10	0.16	ug/L		09/21/19 16:21	09/27/19 00:11	1
Bis(2-chloroethyl)ether	ND	UJ-RC:9	10	2.7	ug/L		09/21/19 16:21	09/27/19 00:11	1
Bis(2-ethylhexyl) phthalate	**29**	J-RC:9	10	5.1	ug/L		09/21/19 16:21	09/27/19 00:11	1
Butyl benzyl phthalate	ND	UJ-RC:9	10	0.19	ug/L		09/21/19 16:21	09/27/19 00:11	1
Diethyl phthalate	**0.87**	**J**	10	0.24	ug/L		09/21/19 16:21	09/27/19 00:11	1
Dimethyl phthalate	ND	UJ-RC:9	10	0.17	ug/L		09/21/19 16:21	09/27/19 00:11	1
Di-n-butyl phthalate	ND	UJ-RC:9	10	2.7	ug/L		09/21/19 16:21	09/27/19 00:11	1
Di-n-octyl phthalate	ND	UJ-RC:9	10	0.17	ug/L		09/21/19 16:21	09/27/19 00:11	1
Hexachlorobenzene	ND	UJ-RC:9	10	0.17	ug/L		09/21/19 16:21	09/27/19 00:11	1
Hexachlorobutadiene	ND	UJ-RC:9	10	0.56	ug/L		09/21/19 16:21	09/27/19 00:11	1
Hexachlorocyclopentadiene	ND	UJ-RC:9	20	2.6	ug/L		09/21/19 16:21	09/27/19 00:11	1
Hexachloroethane	ND	UJ-RC:9	10	4.2	ug/L		09/21/19 16:21	09/27/19 00:11	1
Isophorone	ND	UJ-RC:9	10	0.14	ug/L		09/21/19 16:21	09/27/19 00:11	1
Nitrobenzene	ND	UJ-RC:9	10	0.13	ug/L		09/21/19 16:21	09/27/19 00:11	1
N-Nitrosodimethylamine	ND	UJ-RC:9	10	3.5	ug/L		09/21/19 16:21	09/27/19 00:11	1
N-Nitrosodi-n-propylamine	ND	UJ-RC:9	10	3.3	ug/L		09/21/19 16:21	09/27/19 00:11	1
N-Nitrosodiphenylamine	ND	UJ-RC:9	10	0.18	ug/L		09/21/19 16:21	09/27/19 00:11	1
Pentachlorophenol	ND	UJ-RC:9	20	1.4	ug/L		09/21/19 16:21	09/27/19 00:11	1
Phenol	ND	UJ-RC:9	10	2.6	ug/L		09/21/19 16:21	09/27/19 00:11	1
Dinoseb	ND	UJ-RC:9	10	1.0	ug/L		09/21/19 16:21	09/27/19 00:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*117*		*26 - 150*	*09/21/19 16:21*	*09/27/19 00:11*	*1*
2-Fluorobiphenyl	*101*		*46 - 124*	*09/21/19 16:21*	*09/27/19 00:11*	*1*
2-Fluorophenol (Surr)	*40*		*13 - 113*	*09/21/19 16:21*	*09/27/19 00:11*	*1*
Nitrobenzene-d5 (Surr)	*93*		*36 - 126*	*09/21/19 16:21*	*09/27/19 00:11*	*1*
Phenol-d5 (Surr)	*85*		*17 - 127*	*09/21/19 16:21*	*09/27/19 00:11*	*1*
Terphenyl-d14 (Surr)	*107*		*44 - 149*	*09/21/19 16:21*	*09/27/19 00:11*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RERA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND	H R	11	0.17	ug/L		10/06/19 18:56	10/11/19 02:26	1
2,4,6-Trichlorophenol	ND	H R	11	3.7	ug/L		10/06/19 18:56	10/11/19 02:26	1
2,4-Dinitrophenol	ND	H R	32	3.6	ug/L		10/06/19 18:56	10/11/19 02:26	1
2-Chlorophenol	ND	H R	11	2.3	ug/L		10/06/19 18:56	10/11/19 02:26	1
2-Nitrophenol	ND	H R	11	5.5	ug/L		10/06/19 18:56	10/11/19 02:26	1
4,6-Dinitro-2-methylphenol	ND	H R	11	1.7	ug/L		10/06/19 18:56	10/11/19 02:26	1
4-Nitrophenol	ND	H R	11	2.2	ug/L		10/06/19 18:56	10/11/19 02:26	1
Hexachlorobutadiene	ND	H R	11	0.58	ug/L		10/06/19 18:56	10/11/19 02:26	1
Hexachloroethane	ND	H R	11	4.5	ug/L		10/06/19 18:56	10/11/19 02:26	1
Pentachlorophenol	ND	H R	21	1.5	ug/L		10/06/19 18:56	10/11/19 02:26	1
Dinoseb	ND	H R	11	1.1	ug/L		10/06/19 18:56	10/11/19 02:26	1

Client Sample ID: WLIT

Date Collected: 09/16/19 09:30
Date Received: 09/18/19 09:07

Lab Sample ID: 400-176507-3

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*68*		*26 - 150*	*10/06/19 18:56*	*10/11/19 02:26*	*1*
2-Fluorobiphenyl	*66*		*46 - 124*	*10/06/19 18:56*	*10/11/19 02:26*	*1*
2-Fluorophenol (Surr)	*55*		*13 - 113*	*10/06/19 18:56*	*10/11/19 02:26*	*1*
Nitrobenzene-d5 (Surr)	*73*		*36 - 126*	*10/06/19 18:56*	*10/11/19 02:26*	*1*
Phenol-d5 (Surr)	*69*		*17 - 127*	*10/06/19 18:56*	*10/11/19 02:26*	*1*
Terphenyl-d14 (Surr)	*52*		*44 - 149*	*10/06/19 18:56*	*10/11/19 02:26*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND	UJ-RC:9	0.019	0.0011	ug/L		09/20/19 22:48	09/24/19 08:25	1
alpha-BHC	ND	UJ-RC:9	0.019	0.0013	ug/L		09/20/19 22:48	09/24/19 08:25	1
beta-BHC	ND	UJ-RC:9	0.019	0.0011	ug/L		09/20/19 22:48	09/24/19 08:25	1
Chlordane (technical)	ND	UJ-RC:9	0.19	0.049	ug/L		09/20/19 22:48	09/24/19 08:25	1
cis-Chlordane	ND	UJ-RC:9	0.019	0.0016	ug/L		09/20/19 22:48	09/24/19 08:25	1
4,4'-DDD	ND	UJ-RC:9	0.019	0.0011	ug/L		09/20/19 22:48	09/24/19 08:25	1
4,4'-DDE	ND	UJ-RC:9	0.019	0.00082	ug/L		09/20/19 22:48	09/24/19 08:25	1
4,4'-DDT	ND	UJ-RC:9	0.019	0.0015	ug/L		09/20/19 22:48	09/24/19 08:25	1
delta-BHC	ND	UJ-RC:9	0.019	0.00078	ug/L		09/20/19 22:48	09/24/19 08:25	1
Dieldrin	ND	UJ-RC:9	0.019	0.0011	ug/L		09/20/19 22:48	09/24/19 08:25	1
Endosulfan I	ND	UJ-RC:9	0.019	0.0011	ug/L		09/20/19 22:48	09/24/19 08:25	1
Endosulfan II	ND	UJ-RC:9	0.019	0.0028	ug/L		09/20/19 22:48	09/24/19 08:25	1
Endosulfan sulfate	ND	UJ-RC:9	0.019	0.00078	ug/L		09/20/19 22:48	09/24/19 08:25	1
Endrin	ND	UJ-RC:9	0.019	0.0011	ug/L		09/20/19 22:48	09/24/19 08:25	1
Endrin aldehyde	ND	UJ-RC:9	0.019	0.0010	ug/L		09/20/19 22:48	09/24/19 08:25	1
gamma-BHC (Lindane)	ND	UJ-RC:9	0.019	0.0093	ug/L		09/20/19 22:48	09/24/19 08:25	1
Heptachlor	ND	UJ-RC:9	0.019	0.0012	ug/L		09/20/19 22:48	09/24/19 08:25	1
Heptachlor epoxide	ND	UJ-RC:9	0.019	0.0012	ug/L		09/20/19 22:48	09/24/19 08:25	1
Toxaphene	ND	UJ-RC:9	1.1	0.11	ug/L		09/20/19 22:48	09/24/19 08:25	1
trans-Chlordane	ND	UJ-RC:9	0.019	0.0012	ug/L		09/20/19 22:48	09/24/19 08:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*64*		*10 - 130*	*09/20/19 22:48*	*09/24/19 08:25*	*1*
Tetrachloro-m-xylene	*48*		*43 - 130*	*09/20/19 22:48*	*09/24/19 08:25*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND	UJ-RC:9	0.47	0.082	ug/L		09/20/19 22:48	09/24/19 08:25	1
PCB-1232	ND	UJ-RC:9	0.47	0.037	ug/L		09/20/19 22:48	09/24/19 08:25	1
PCB-1242	ND	UJ-RC:9	0.47	0.013	ug/L		09/20/19 22:48	09/24/19 08:25	1
PCB-1248	ND	UJ-RC:9	0.47	0.0075	ug/L		09/20/19 22:48	09/24/19 08:25	1
PCB-1254	ND	UJ-RC:9	0.47	0.021	ug/L		09/20/19 22:48	09/24/19 08:25	1
PCB-1260	ND	UJ-RC:9	0.47	0.057	ug/L		09/20/19 22:48	09/24/19 08:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*64*		*10 - 125*	*09/20/19 22:48*	*09/24/19 08:25*	*1*
Tetrachloro-m-xylene	*48*		*46 - 150*	*09/20/19 22:48*	*09/24/19 08:25*	*1*

Method: 218.7 - Chromium, Hexavalent (Ion Chromatography)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	ND	UJ-RC:9	0.0010	0.00020	mg/L			09/28/19 21:26	1

Client Sample Results

Client: Brown and Caldwell
Project/Site: Guam

Job ID: 400-176507-1

Client Sample ID: WLIT

Date Collected: 09/16/19 09:30
Date Received: 09/18/19 09:07

Lab Sample ID: 400-176507-3

Matrix: Water

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**0.073**	**J**	0.20	0.027	ug/L			09/23/19 19:21	1

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND	UJ-RC:9	9.9	0.51	pg/L		10/10/19 08:27	10/15/19 15:37	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*70*		*31 - 137*	*10/10/19 08:27*	*10/15/19 15:37*	*1*
13C-2,3,7,8-TCDF	*67*		*29 - 140*	*10/10/19 08:27*	*10/15/19 15:37*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*97*		*42 - 164*	*10/10/19 08:27*	*10/15/19 15:37*	*1*

Method: 200.8-1994 R5.4 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**0.056**	**J**	0.10	0.018	mg/L		10/05/19 09:43	10/08/19 21:00	1
Antimony	**0.00085**	**J**	0.0050	0.00050	mg/L		10/05/19 09:43	10/08/19 21:00	1
Arsenic	**0.023**		0.0030	0.0015	mg/L		10/05/19 09:43	10/08/19 21:00	1
Barium	**0.17**		0.0050	0.00061	mg/L		10/05/19 09:43	10/08/19 21:00	1
Beryllium	ND		0.00050	0.00017	mg/L		10/05/19 09:43	10/08/19 21:00	1
Cadmium	ND		0.00050	0.00015	mg/L		10/05/19 09:43	10/08/19 21:00	1
Calcium	**77**		0.50	0.068	mg/L		10/05/19 09:43	10/08/19 21:00	1
Chromium	**0.0017**	**J**	0.0050	0.0016	mg/L		10/05/19 09:43	10/08/19 21:00	1
Cobalt	**0.0046**	**^** J-RC:M	0.00050	0.00012	mg/L		10/05/19 09:43	10/08/19 21:00	1
Copper	**0.014**		0.0050	0.0017	mg/L		10/05/19 09:43	10/08/19 21:00	1
Iron	**26**		0.10	0.025	mg/L		10/05/19 09:43	10/08/19 21:00	1
Lead	ND		0.0025	0.00098	mg/L		10/05/19 09:43	10/08/19 21:00	1
Magnesium	**19**		0.25	0.020	mg/L		10/05/19 09:43	10/08/19 21:00	1
Manganese	**0.67**	J-RC:SH	0.0050	0.0018	mg/L		10/05/19 09:43	10/08/19 21:00	1
Molybdenum	**0.0030**	**J**	0.0050	0.0010	mg/L		10/05/19 09:43	10/08/19 21:00	1
Nickel	**0.016**		0.0050	0.0019	mg/L		10/05/19 09:43	10/08/19 21:00	1
Potassium	**18**		1.0	0.11	mg/L		10/05/19 09:43	10/08/19 21:00	1
Selenium	ND		0.0025	0.0010	mg/L		10/05/19 09:43	10/08/19 21:00	1
Silver	ND		0.0010	0.00010	mg/L		10/05/19 09:43	10/08/19 21:00	1
Sodium	**59**		0.50	0.17	mg/L		10/05/19 09:43	10/08/19 21:00	1
Thallium	ND		0.0010	0.00049	mg/L		10/05/19 09:43	10/08/19 21:00	1
Tin	ND		0.0050	0.0014	mg/L		10/05/19 09:43	10/08/19 21:00	1
Vanadium	ND		0.010	0.0053	mg/L		10/05/19 09:43	10/08/19 21:00	1
Zinc	**0.044**		0.020	0.0096	mg/L		10/05/19 09:43	10/08/19 21:00	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	ND		0.67	0.27	pCi/L		10/09/19 13:12	10/11/19 04:24	2

Method: 245.1-1994 R3.0 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00044**	**B** UJ-RC:2	0.00064	0.00044	mg/L		10/05/19 13:12	10/07/19 16:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	**14**	J-RC:9	0.25	0.12	mg/L			09/20/19 15:28	5
Nitrate Nitrite as N	**0.27**	J-RC:9	0.050	0.018	mg/L			09/23/19 13:15	1

1 2 3 4 5 6 7 8 9 10 11 12 13

Client Sample Results

Client Sample ID: WLIT

Lab Sample ID: 400-176507-3

Date Collected: 09/16/19 09:30

Matrix: Water

Date Received: 09/18/19 09:07

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus, Total	**0.55**	**B** J-RC:9	0.10	0.032	mg/L		09/20/19 16:44	09/24/19 18:30	1
Cyanide, Total	ND	UJ-RC:9	0.0050	0.0050	mg/L		09/18/19 20:45	09/19/19 10:08	1
Sulfide	ND	H UJ-RC:1	0.10	0.057	mg/L			09/23/19 12:30	1

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	UJ-RC:G,6L 2.27	U G F *	2.90	2.92	3.00	4.82	pCi/L	09/27/19 09:16	10/04/19 16:31	1
Gross Beta	**13.2**	**G** J-RC:G	3.36	3.61	4.00	4.10	pCi/L	09/27/19 09:16	10/04/19 16:31	1

Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-15.2	U	20.9	21.0	50.0	39.6	pCi/L	09/30/19 14:01	10/21/19 17:40	1
Radium-228	1.30	U	2.94	2.94	50.0	37.5	pCi/L	09/30/19 14:01	10/21/19 17:40	1

Definitions/Glossary

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

GC/MS Semi VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

LCMS

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance limits.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Rad

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
F	MS/MSD Recovery and/or RPD exceeds the control limits
G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.

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
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)

Definitions/Glossary

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

QC Association Summary

GC/MS VOA

Analysis Batch: 457818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	8260C SIM	
400-176507-2	MH-9	Total/NA	Water	8260C SIM	
400-176507-3	WLIT	Total/NA	Water	8260C SIM	
MB 400-457818/4	Method Blank	Total/NA	Water	8260C SIM	
LCS 400-457818/1002	Lab Control Sample	Total/NA	Water	8260C SIM	
400-176507-2 MS	MH-9	Total/NA	Water	8260C SIM	
400-176507-2 MSD	MH-9	Total/NA	Water	8260C SIM	

Analysis Batch: 459062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	8260C	
400-176507-2	MH-9	Total/NA	Water	8260C	
400-176507-3	WLIT	Total/NA	Water	8260C	
MB 400-459062/20	Method Blank	Total/NA	Water	8260C	
LCS 400-459062/1006	Lab Control Sample	Total/NA	Water	8260C	
400-176541-A-1 MS	Matrix Spike	Total/NA	Water	8260C	
400-176541-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 458032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	3520C	
400-176507-2	MH-9	Total/NA	Water	3520C	
400-176507-3	WLIT	Total/NA	Water	3520C	
MB 400-458032/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-458032/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-458032/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 458759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	8270D LL	458032
400-176507-2	MH-9	Total/NA	Water	8270D LL	458032
400-176507-3	WLIT	Total/NA	Water	8270D LL	458032
MB 400-458032/1-A	Method Blank	Total/NA	Water	8270D LL	458032
LCS 400-458032/2-A	Lab Control Sample	Total/NA	Water	8270D LL	458032

Analysis Batch: 458836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	8270D	458032
400-176507-2	MH-9	Total/NA	Water	8270D	458032
400-176507-3	WLIT	Total/NA	Water	8270D	458032
MB 400-458032/1-A	Method Blank	Total/NA	Water	8270D	458032

Analysis Batch: 459133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 400-458032/3-A	Lab Control Sample Dup	Total/NA	Water	8270D LL	458032

Prep Batch: 460310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1 - RERA	MH-11	Total/NA	Water	3520C	

GC/MS Semi VOA (Continued)

Prep Batch: 460310 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-2 - RERA	MH-9	Total/NA	Water	3520C	
400-176507-3 - RERA	WLIT	Total/NA	Water	3520C	
MB 400-460310/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-460310/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-460310/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 461001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-460310/1-A	Method Blank	Total/NA	Water	8270D	460310

Analysis Batch: 461017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1 - RERA	MH-11	Total/NA	Water	8270D	460310
400-176507-2 - RERA	MH-9	Total/NA	Water	8270D	460310
400-176507-3 - RERA	WLIT	Total/NA	Water	8270D	460310

Analysis Batch: 461117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-460310/2-A	Lab Control Sample	Total/NA	Water	8270D	460310
LCSD 400-460310/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	460310

GC Semi VOA

Prep Batch: 457986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	3520C	
400-176507-2	MH-9	Total/NA	Water	3520C	
400-176507-3	WLIT	Total/NA	Water	3520C	
MB 400-457986/1-A	Method Blank	Total/NA	Water	3520C	
LCS 400-457986/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 400-457986/4-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 400-457986/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
LCSD 400-457986/5-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 458257

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	8081B	457986
400-176507-2	MH-9	Total/NA	Water	8081B	457986
400-176507-3	WLIT	Total/NA	Water	8081B	457986
MB 400-457986/1-A	Method Blank	Total/NA	Water	8081B	457986
LCS 400-457986/4-A	Lab Control Sample	Total/NA	Water	8081B	457986
LCSD 400-457986/5-A	Lab Control Sample Dup	Total/NA	Water	8081B	457986

Analysis Batch: 458260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	8082A	457986
400-176507-2	MH-9	Total/NA	Water	8082A	457986
400-176507-3	WLIT	Total/NA	Water	8082A	457986
MB 400-457986/1-A	Method Blank	Total/NA	Water	8082A	457986
LCS 400-457986/2-A	Lab Control Sample	Total/NA	Water	8082A	457986
LCSD 400-457986/3-A	Lab Control Sample Dup	Total/NA	Water	8082A	457986

HPLC/IC

Analysis Batch: 459182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	218.7	
400-176507-2	MH-9	Total/NA	Water	218.7	
400-176507-3	WLIT	Total/NA	Water	218.7	
MB 400-459182/9	Method Blank	Total/NA	Water	218.7	
LCS 400-459182/11	Lab Control Sample	Total/NA	Water	218.7	
LCSD 400-459182/12	Lab Control Sample Dup	Total/NA	Water	218.7	
MRL 400-459182/10	Lab Control Sample	Total/NA	Water	218.7	
400-176665-T-3 MS	Matrix Spike	Total/NA	Water	218.7	
400-176665-T-3 MSD	Matrix Spike Duplicate	Total/NA	Water	218.7	

LCMS

Analysis Batch: 147544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	6850	
400-176507-2	MH-9	Total/NA	Water	6850	
400-176507-3	WLIT	Total/NA	Water	6850	
MB 200-147544/3	Method Blank	Total/NA	Water	6850	
LCS 200-147544/4	Lab Control Sample	Total/NA	Water	6850	

Specialty Organics

Prep Batch: 329907

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	1613B	
400-176507-2	MH-9	Total/NA	Water	1613B	
400-176507-3	WLIT	Total/NA	Water	1613B	
MB 320-329907/1-A	Method Blank	Total/NA	Water	1613B	
LCS 320-329907/2-A	Lab Control Sample	Total/NA	Water	1613B	
400-176665-E-3-A MS	Matrix Spike	Total/NA	Water	1613B	
400-176665-E-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	1613B	

Analysis Batch: 331185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	1613B	329907
400-176507-2	MH-9	Total/NA	Water	1613B	329907
400-176507-3	WLIT	Total/NA	Water	1613B	329907
400-176665-E-3-A MS	Matrix Spike	Total/NA	Water	1613B	329907
400-176665-E-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	1613B	329907

Analysis Batch: 331188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-329907/1-A	Method Blank	Total/NA	Water	1613B	329907
LCS 320-329907/2-A	Lab Control Sample	Total/NA	Water	1613B	329907

Metals

Prep Batch: 445578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	200.7/200.8	
400-176507-2	MH-9	Total/NA	Water	200.7/200.8	
400-176507-3	WLIT	Total/NA	Water	200.7/200.8	

Metals (Continued)

Prep Batch: 445578 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 160-445578/1-A	Method Blank	Total/NA	Water	200.7/200.8	
LCS 160-445578/2-A	Lab Control Sample	Total/NA	Water	200.7/200.8	
400-176665-S-3-A MS	Matrix Spike	Total/NA	Water	200.7/200.8	
400-176665-S-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	200.7/200.8	

Analysis Batch: 445866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	200.8	445578
400-176507-2	MH-9	Total/NA	Water	200.8	445578
400-176507-3	WLIT	Total/NA	Water	200.8	445578
MB 160-445578/1-A	Method Blank	Total/NA	Water	200.8	445578
LCS 160-445578/2-A	Lab Control Sample	Total/NA	Water	200.8	445578
400-176665-S-3-A MS	Matrix Spike	Total/NA	Water	200.8	445578
400-176665-S-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	200.8	445578

Prep Batch: 589436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	200.8-1994 R5.4	
400-176507-2	MH-9	Total/NA	Water	200.8-1994 R5.4	
MB 680-589436/1-A	Method Blank	Total/NA	Water	200.8-1994 R5.4	
LCS 680-589436/2-A	Lab Control Sample	Total/NA	Water	200.8-1994 R5.4	
400-177296-F-6-B MS	Matrix Spike	Total/NA	Water	200.8-1994 R5.4	
400-177296-F-6-C MSD	Matrix Spike Duplicate	Total/NA	Water	200.8-1994 R5.4	

Prep Batch: 589438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-3	WLIT	Total/NA	Water	200.8-1994 R5.4	
MB 680-589438/1-A	Method Blank	Total/NA	Water	200.8-1994 R5.4	
LCS 680-589438/2-A	Lab Control Sample	Total/NA	Water	200.8-1994 R5.4	
400-176928-A-1-F MS	Matrix Spike	Total/NA	Water	200.8-1994 R5.4	
400-176928-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Water	200.8-1994 R5.4	

Prep Batch: 589479

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	245.1	
400-176507-2	MH-9	Total/NA	Water	245.1	
400-176507-3	WLIT	Total/NA	Water	245.1	
MB 680-589479/1-A	Method Blank	Total/NA	Water	245.1	
LCS 680-589479/2-A	Lab Control Sample	Total/NA	Water	245.1	
400-176665-T-3-E MS	Matrix Spike	Total/NA	Water	245.1	
400-176665-T-3-F MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	

Analysis Batch: 589844

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	200.8-1994 R5.4	589436
400-176507-2	MH-9	Total/NA	Water	200.8-1994 R5.4	589436
MB 680-589436/1-A	Method Blank	Total/NA	Water	200.8-1994 R5.4	589436
LCS 680-589436/2-A	Lab Control Sample	Total/NA	Water	200.8-1994 R5.4	589436
400-177296-F-6-B MS	Matrix Spike	Total/NA	Water	200.8-1994 R5.4	589436
400-177296-F-6-C MSD	Matrix Spike Duplicate	Total/NA	Water	200.8-1994 R5.4	589436

QC Association Summary

Metals

Analysis Batch: 589862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	245.1-1994 R3.0	589479
400-176507-2	MH-9	Total/NA	Water	245.1-1994 R3.0	589479
400-176507-3	WLIT	Total/NA	Water	245.1-1994 R3.0	589479
MB 680-589479/1-A	Method Blank	Total/NA	Water	245.1-1994 R3.0	589479
LCS 680-589479/2-A	Lab Control Sample	Total/NA	Water	245.1-1994 R3.0	589479
400-176665-T-3-E MS	Matrix Spike	Total/NA	Water	245.1-1994 R3.0	589479
400-176665-T-3-F MSD	Matrix Spike Duplicate	Total/NA	Water	245.1-1994 R3.0	589479

Analysis Batch: 590056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-3	WLIT	Total/NA	Water	200.8-1994 R5.4	589438
MB 680-589438/1-A	Method Blank	Total/NA	Water	200.8-1994 R5.4	589438
LCS 680-589438/2-A	Lab Control Sample	Total/NA	Water	200.8-1994 R5.4	589438
400-176928-A-1-F MS	Matrix Spike	Total/NA	Water	200.8-1994 R5.4	589438
400-176928-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Water	200.8-1994 R5.4	589438

General Chemistry

Prep Batch: 457594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	SM 4500 CN C	
400-176507-2	MH-9	Total/NA	Water	SM 4500 CN C	
400-176507-3	WLIT	Total/NA	Water	SM 4500 CN C	
MB 400-457594/1-A	Method Blank	Total/NA	Water	SM 4500 CN C	
LCS 400-457594/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN C	
400-176415-O-1-B MS	Matrix Spike	Total/NA	Water	SM 4500 CN C	
400-176415-O-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CN C	
400-176507-1 DU	MH-11	Total/NA	Water	SM 4500 CN C	

Analysis Batch: 457681

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	SM 4500 CN E	457594
400-176507-2	MH-9	Total/NA	Water	SM 4500 CN E	457594
400-176507-3	WLIT	Total/NA	Water	SM 4500 CN E	457594
MB 400-457594/1-A	Method Blank	Total/NA	Water	SM 4500 CN E	457594
LCS 400-457594/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN E	457594
400-176415-O-1-B MS	Matrix Spike	Total/NA	Water	SM 4500 CN E	457594
400-176415-O-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CN E	457594
400-176507-1 DU	MH-11	Total/NA	Water	SM 4500 CN E	457594

Analysis Batch: 457900

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-2	MH-9	Total/NA	Water	350.1	
MB 400-457900/6	Method Blank	Total/NA	Water	350.1	
LCS 400-457900/7	Lab Control Sample	Total/NA	Water	350.1	
MRL 400-457900/5	Lab Control Sample	Total/NA	Water	350.1	
400-176603-B-1 MS	Matrix Spike	Total/NA	Water	350.1	
400-176603-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	350.1	

General Chemistry

Analysis Batch: 457939

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	350.1	
400-176507-3	WLIT	Total/NA	Water	350.1	
MB 400-457939/31	Method Blank	Total/NA	Water	350.1	
LCS 400-457939/32	Lab Control Sample	Total/NA	Water	350.1	
MRL 400-457939/30	Lab Control Sample	Total/NA	Water	350.1	
400-176507-1 MS	MH-11	Total/NA	Water	350.1	
400-176507-1 MSD	MH-11	Total/NA	Water	350.1	
400-176536-N-1 MS	Matrix Spike	Total/NA	Water	350.1	
400-176536-N-1 MSD	Matrix Spike Duplicate	Total/NA	Water	350.1	

Prep Batch: 457944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	365.2/365.3/365	
400-176507-2	MH-9	Total/NA	Water	365.2/365.3/365	
400-176507-3	WLIT	Total/NA	Water	365.2/365.3/365	
MB 400-457944/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 400-457944/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	
400-176601-L-1-E MS	Matrix Spike	Total/NA	Water	365.2/365.3/365	
400-176601-L-1-F MSD	Matrix Spike Duplicate	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 458214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	353.2	
400-176507-2	MH-9	Total/NA	Water	353.2	
400-176507-3	WLIT	Total/NA	Water	353.2	
MB 400-458214/14	Method Blank	Total/NA	Water	353.2	
LCS 400-458214/15	Lab Control Sample	Total/NA	Water	353.2	
MRL 400-458214/13	Lab Control Sample	Total/NA	Water	353.2	
400-176516-L-13 MS	Matrix Spike	Total/NA	Water	353.2	
400-176516-L-13 MSD	Matrix Spike Duplicate	Total/NA	Water	353.2	
400-176543-N-5 MS	Matrix Spike	Total/NA	Water	353.2	
400-176543-N-5 MSD	Matrix Spike Duplicate	Total/NA	Water	353.2	

Analysis Batch: 458319

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	SM 4500 S2 D	
400-176507-2	MH-9	Total/NA	Water	SM 4500 S2 D	
400-176507-3	WLIT	Total/NA	Water	SM 4500 S2 D	
MB 400-458319/3	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 400-458319/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 400-458319/5	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	
MRL 400-458319/1	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
400-176413-D-1 MS	Matrix Spike	Leach	Water	SM 4500 S2 D	
400-176413-D-1 MSD	Matrix Spike Duplicate	Leach	Water	SM 4500 S2 D	
660-97321-A-4 MS	Matrix Spike	Total/NA	Water	SM 4500 S2 D	
660-97321-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 458500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	365.4	457944
400-176507-2	MH-9	Total/NA	Water	365.4	457944

General Chemistry (Continued)

Analysis Batch: 458500 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-3	WLIT	Total/NA	Water	365.4	457944
MB 400-457944/1-A	Method Blank	Total/NA	Water	365.4	457944
LCS 400-457944/2-A	Lab Control Sample	Total/NA	Water	365.4	457944
MRL 400-458500/13	Lab Control Sample	Total/NA	Water	365.4	
400-176601-L-1-E MS	Matrix Spike	Total/NA	Water	365.4	457944
400-176601-L-1-F MSD	Matrix Spike Duplicate	Total/NA	Water	365.4	457944

Rad

Prep Batch: 444398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	Evaporation	
400-176507-2	MH-9	Total/NA	Water	Evaporation	
400-176507-3	WLIT	Total/NA	Water	Evaporation	
MB 160-444398/1-A	Method Blank	Total/NA	Water	Evaporation	
LCS 160-444398/2-A	Lab Control Sample	Total/NA	Water	Evaporation	
LCSB 160-444398/3-A	Lab Control Sample	Total/NA	Water	Evaporation	
400-176665-R-3-A MS	Matrix Spike	Total/NA	Water	Evaporation	
400-176665-R-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	Evaporation	
400-176665-R-3-C MSBT	Matrix Spike	Total/NA	Water	Evaporation	
400-176665-R-3-D MSBTD	Matrix Spike Duplicate	Total/NA	Water	Evaporation	

Prep Batch: 444566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-176507-1	MH-11	Total/NA	Water	Fill_Geo-21	
400-176507-2	MH-9	Total/NA	Water	Fill_Geo-21	
400-176507-3	WLIT	Total/NA	Water	Fill_Geo-21	
MB 160-444566/1-A	Method Blank	Total/NA	Water	Fill_Geo-21	
LCS 160-444566/2-A	Lab Control Sample	Total/NA	Water	Fill_Geo-21	
400-176507-1 DU	MH-11	Total/NA	Water	Fill_Geo-21	

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

Lab Sample ID: MB 400-459062/20
Matrix: Water
Analysis Batch: 459062

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			09/27/19 19:29	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			09/27/19 19:29	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			09/27/19 19:29	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			09/27/19 19:29	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			09/27/19 19:29	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			09/27/19 19:29	1
1,2,3-Trichloropropane	ND		5.0	0.84	ug/L			09/27/19 19:29	1
1,2-Dibromo-3-Chloropropane	ND		5.0	1.5	ug/L			09/27/19 19:29	1
1,2-Dibromoethane	ND		1.0	0.50	ug/L			09/27/19 19:29	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			09/27/19 19:29	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			09/27/19 19:29	1
2-Butanone (MEK)	ND		25	2.6	ug/L			09/27/19 19:29	1
2-Chloroethyl vinyl ether	ND		5.0	2.0	ug/L			09/27/19 19:29	1
2-Hexanone	ND		25	3.1	ug/L			09/27/19 19:29	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.8	ug/L			09/27/19 19:29	1
Acetone	ND		25	10	ug/L			09/27/19 19:29	1
Acrolein	ND		20	10	ug/L			09/27/19 19:29	1
Acrylonitrile	ND		10	2.8	ug/L			09/27/19 19:29	1
Benzene	ND		1.0	0.38	ug/L			09/27/19 19:29	1
Bromodichloromethane	ND		1.0	0.50	ug/L			09/27/19 19:29	1
Bromoform	ND		5.0	0.71	ug/L			09/27/19 19:29	1
Bromomethane	ND		1.0	0.98	ug/L			09/27/19 19:29	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/27/19 19:29	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			09/27/19 19:29	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/27/19 19:29	1
Chloroethane	ND		1.0	0.76	ug/L			09/27/19 19:29	1
Chloroform	ND		1.0	0.60	ug/L			09/27/19 19:29	1
Chloromethane	ND		1.0	0.83	ug/L			09/27/19 19:29	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			09/27/19 19:29	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			09/27/19 19:29	1
Dibromochloromethane	ND		1.0	0.50	ug/L			09/27/19 19:29	1
Ethylbenzene	ND		1.0	0.50	ug/L			09/27/19 19:29	1
Iodomethane	ND		1.0	0.90	ug/L			09/27/19 19:29	1
Methylene Chloride	ND		5.0	3.0	ug/L			09/27/19 19:29	1
Styrene	ND		1.0	1.0	ug/L			09/27/19 19:29	1
Tetrachloroethene	ND		1.0	0.58	ug/L			09/27/19 19:29	1
Toluene	ND		1.0	0.41	ug/L			09/27/19 19:29	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			09/27/19 19:29	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			09/27/19 19:29	1
trans-1,4-Dichloro-2-butene	ND		5.0	1.0	ug/L			09/27/19 19:29	1
Trichloroethene	ND		1.0	0.50	ug/L			09/27/19 19:29	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			09/27/19 19:29	1
Vinyl acetate	ND		25	2.0	ug/L			09/27/19 19:29	1
Vinyl chloride	ND		1.0	0.50	ug/L			09/27/19 19:29	1
Xylenes, Total	ND		10	1.6	ug/L			09/27/19 19:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*78 - 118*		*09/27/19 19:29*	*1*

1 2 3 4 5 6 7 8 9 10 11 12 13

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

Lab Sample ID: MB 400-459062/20
Matrix: Water
Analysis Batch: 459062

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

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*103*		*81 - 121*		*09/27/19 19:29*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*09/27/19 19:29*	*1*

Lab Sample ID: LCS 400-459062/1006
Matrix: Water
Analysis Batch: 459062

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

Analyte	**Spike Added**	**LCS Result**	**LCS Qualifier**	**Unit**	**D**	**%Rec**	**%Rec. Limits**
1,1,1,2-Tetrachloroethane	50.0	50.5		ug/L		101	67 - 131
1,1,1-Trichloroethane	50.0	50.8		ug/L		102	68 - 130
1,1,2,2-Tetrachloroethane	50.0	47.9		ug/L		96	70 - 131
1,1,2-Trichloroethane	50.0	50.5		ug/L		101	70 - 130
1,1-Dichloroethane	50.0	51.2		ug/L		102	70 - 130
1,1-Dichloroethene	50.0	51.7		ug/L		103	63 - 134
1,2,3-Trichloropropane	50.0	46.6		ug/L		93	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	50.7		ug/L		101	54 - 135
1,2-Dibromoethane	50.0	48.8		ug/L		98	70 - 130
1,2-Dichloroethane	50.0	50.1		ug/L		100	69 - 130
1,2-Dichloropropane	50.0	51.7		ug/L		103	70 - 130
2-Butanone (MEK)	200	252		ug/L		126	61 - 145
2-Chloroethyl vinyl ether	50.0	36.6		ug/L		73	10 - 160
2-Hexanone	200	229		ug/L		115	65 - 137
4-Methyl-2-pentanone (MIBK)	200	170		ug/L		85	69 - 138
Acetone	200	247		ug/L		124	43 - 160
Acrolein	500	595		ug/L		119	38 - 160
Acrylonitrile	500	536		ug/L		107	64 - 142
Benzene	50.0	51.9		ug/L		104	70 - 130
Bromodichloromethane	50.0	52.7		ug/L		105	67 - 133
Bromoform	50.0	54.9		ug/L		110	57 - 140
Bromomethane	50.0	52.3		ug/L		105	10 - 160
Carbon disulfide	50.0	52.2		ug/L		104	61 - 137
Carbon tetrachloride	50.0	52.2		ug/L		104	61 - 137
Chlorobenzene	50.0	51.0		ug/L		102	70 - 130
Chloroethane	50.0	54.9		ug/L		110	55 - 141
Chloroform	50.0	50.6		ug/L		101	69 - 130
Chloromethane	50.0	52.3		ug/L		105	58 - 137
cis-1,2-Dichloroethene	50.0	51.6		ug/L		103	68 - 130
cis-1,3-Dichloropropene	50.0	39.9		ug/L		80	69 - 132
Dibromochloromethane	50.0	51.5		ug/L		103	67 - 135
Ethylbenzene	50.0	50.1		ug/L		100	70 - 130
Iodomethane	50.0	50.8		ug/L		102	27 - 159
Methylene Chloride	50.0	54.1		ug/L		108	66 - 135
m-Xylene & p-Xylene	50.0	48.2		ug/L		96	70 - 130
o-Xylene	50.0	48.3		ug/L		97	70 - 130
Styrene	50.0	51.5		ug/L		103	70 - 130
Tetrachloroethene	50.0	49.3		ug/L		99	65 - 130
Toluene	50.0	49.5		ug/L		99	70 - 130
trans-1,2-Dichloroethene	50.0	52.1		ug/L		104	70 - 130

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

Lab Sample ID: LCS 400-459062/1006
Matrix: Water
Analysis Batch: 459062

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene			50.0	47.6		ug/L		95	63 - 130
trans-1,4-Dichloro-2-butene			50.0	48.3		ug/L		97	57 - 140
Trichloroethene			50.0	51.6		ug/L		103	70 - 130
Trichlorofluoromethane			50.0	50.2		ug/L		100	65 - 138
Vinyl acetate			100	110		ug/L		110	26 - 160
Vinyl chloride			50.0	50.8		ug/L		102	59 - 136
Xylenes, Total			100	96.6		ug/L		97	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*83*		*78 - 118*
Dibromofluoromethane	*101*		*81 - 121*
Toluene-d8 (Surr)	*94*		*80 - 120*

Lab Sample ID: 400-176541-A-1 MS
Matrix: Water
Analysis Batch: 459062

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		50.0	51.2		ug/L		102	59 - 137
1,1,1-Trichloroethane	ND		50.0	51.0		ug/L		102	57 - 142
1,1,2,2-Tetrachloroethane	ND		50.0	50.8		ug/L		102	66 - 135
1,1,2-Trichloroethane	ND		50.0	50.8		ug/L		102	66 - 131
1,1-Dichloroethane	ND		50.0	51.6		ug/L		103	61 - 144
1,1-Dichloroethene	ND		50.0	51.2		ug/L		102	54 - 147
1,2,3-Trichloropropane	ND		50.0	50.3		ug/L		101	65 - 133
1,2-Dibromo-3-Chloropropane	ND		50.0	50.0		ug/L		100	45 - 135
1,2-Dibromoethane	ND		50.0	49.9		ug/L		100	64 - 132
1,2-Dichloroethane	ND		50.0	50.6		ug/L		101	60 - 141
1,2-Dichloropropane	ND		50.0	51.5		ug/L		103	66 - 137
2-Butanone (MEK)	ND		200	149		ug/L		75	55 - 150
2-Chloroethyl vinyl ether	ND	F1	50.0	6.18		ug/L		12	10 - 150
2-Hexanone	ND		200	148		ug/L		74	65 - 140
4-Methyl-2-pentanone (MIBK)	ND		200	204		ug/L		102	63 - 146
Acetone	ND		200	90.7		ug/L		45	43 - 150
Acrolein	ND		500	549		ug/L		110	38 - 150
Acrylonitrile	ND		500	525		ug/L		105	62 - 149
Benzene	ND		50.0	51.4		ug/L		103	56 - 142
Bromodichloromethane	ND		50.0	51.3		ug/L		103	59 - 143
Bromoform	ND		50.0	53.7		ug/L		107	50 - 140
Bromomethane	ND		50.0	51.8		ug/L		104	10 - 150
Carbon disulfide	ND		50.0	51.7		ug/L		103	48 - 150
Carbon tetrachloride	ND		50.0	51.7		ug/L		103	55 - 145
Chlorobenzene	ND		50.0	50.3		ug/L		101	64 - 130
Chloroethane	ND		50.0	52.7		ug/L		105	50 - 150
Chloroform	ND		50.0	51.3		ug/L		103	60 - 141
Chloromethane	ND		50.0	49.4		ug/L		99	49 - 148
cis-1,2-Dichloroethene	ND		50.0	52.1		ug/L		104	59 - 143
cis-1,3-Dichloropropene	ND		50.0	51.1		ug/L		102	57 - 140

QC Sample Results

Client: Brown and Caldwell
Project/Site: Guam

Job ID: 400-176507-1

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

Lab Sample ID: 400-176541-A-1 MS
Matrix: Water
Analysis Batch: 459062

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibromochloromethane	ND		50.0	52.0		ug/L		104	56 - 143
Ethylbenzene	ND		50.0	50.7		ug/L		101	58 - 131
Iodomethane	ND		50.0	48.9		ug/L		98	20 - 150
Methylene Chloride	ND		50.0	51.8		ug/L		104	60 - 146
m-Xylene & p-Xylene	ND		50.0	51.8		ug/L		104	57 - 130
o-Xylene	ND		50.0	51.3		ug/L		103	61 - 130
Styrene	ND		50.0	51.4		ug/L		103	58 - 131
Tetrachloroethene	ND		50.0	48.6		ug/L		97	52 - 133
Toluene	0.61	J	50.0	50.6		ug/L		100	65 - 130
trans-1,2-Dichloroethene	ND		50.0	52.2		ug/L		104	61 - 143
trans-1,3-Dichloropropene	ND		50.0	49.4		ug/L		99	53 - 133
trans-1,4-Dichloro-2-butene	ND		50.0	53.7		ug/L		107	43 - 147
Trichloroethene	ND		50.0	51.0		ug/L		102	64 - 136
Trichlorofluoromethane	ND		50.0	50.2		ug/L		100	54 - 150
Vinyl acetate	ND		100	107		ug/L		107	26 - 150
Vinyl chloride	ND		50.0	49.2		ug/L		98	46 - 150
Xylenes, Total	ND		100	103		ug/L		103	59 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*103*		*78 - 118*
Dibromofluoromethane	*100*		*81 - 121*
Toluene-d8 (Surr)	*96*		*80 - 120*

Lab Sample ID: 400-176541-A-1 MSD
Matrix: Water
Analysis Batch: 459062

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		50.0	47.8		ug/L		96	59 - 137	7	30
1,1,1-Trichloroethane	ND		50.0	47.3		ug/L		95	57 - 142	8	30
1,1,2,2-Tetrachloroethane	ND		50.0	49.2		ug/L		98	66 - 135	3	30
1,1,2-Trichloroethane	ND		50.0	48.5		ug/L		97	66 - 131	5	30
1,1-Dichloroethane	ND		50.0	48.5		ug/L		97	61 - 144	6	30
1,1-Dichloroethene	ND		50.0	48.1		ug/L		96	54 - 147	6	30
1,2,3-Trichloropropane	ND		50.0	49.2		ug/L		98	65 - 133	2	30
1,2-Dibromo-3-Chloropropane	ND		50.0	50.4		ug/L		101	45 - 135	1	30
1,2-Dibromoethane	ND		50.0	48.1		ug/L		96	64 - 132	4	30
1,2-Dichloroethane	ND		50.0	47.5		ug/L		95	60 - 141	6	30
1,2-Dichloropropane	ND		50.0	48.0		ug/L		96	66 - 137	7	30
2-Butanone (MEK)	ND		200	143		ug/L		72	55 - 150	4	30
2-Chloroethyl vinyl ether	ND	F1	50.0	ND	F1	ug/L		0	10 - 150	NC	50
2-Hexanone	ND		200	146		ug/L		73	65 - 140	1	30
4-Methyl-2-pentanone (MIBK)	ND		200	197		ug/L		98	63 - 146	4	30
Acetone	ND		200	86.8		ug/L		43	43 - 150	4	30
Acrolein	ND		500	517		ug/L		103	38 - 150	6	31
Acrylonitrile	ND		500	507		ug/L		101	62 - 149	3	30
Benzene	ND		50.0	47.7		ug/L		95	56 - 142	7	30
Bromodichloromethane	ND		50.0	47.7		ug/L		95	59 - 143	7	30

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

Lab Sample ID: 400-176541-A-1 MSD
Matrix: Water
Analysis Batch: 459062

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromoform	ND		50.0	50.5		ug/L		101	50 - 140	6	30
Bromomethane	ND		50.0	47.2		ug/L		94	10 - 150	9	50
Carbon disulfide	ND		50.0	48.2		ug/L		96	48 - 150	7	30
Carbon tetrachloride	ND		50.0	47.7		ug/L		95	55 - 145	8	30
Chlorobenzene	ND		50.0	45.8		ug/L		92	64 - 130	9	30
Chloroethane	ND		50.0	46.2		ug/L		92	50 - 150	13	30
Chloroform	ND		50.0	47.9		ug/L		96	60 - 141	7	30
Chloromethane	ND		50.0	46.1		ug/L		92	49 - 148	7	31
cis-1,2-Dichloroethene	ND		50.0	48.9		ug/L		98	59 - 143	6	30
cis-1,3-Dichloropropene	ND		50.0	48.2		ug/L		96	57 - 140	6	30
Dibromochloromethane	ND		50.0	49.0		ug/L		98	56 - 143	6	30
Ethylbenzene	ND		50.0	45.9		ug/L		92	58 - 131	10	30
Iodomethane	ND		50.0	45.6		ug/L		91	20 - 150	7	44
Methylene Chloride	ND		50.0	49.8		ug/L		100	60 - 146	4	32
m-Xylene & p-Xylene	ND		50.0	45.9		ug/L		92	57 - 130	12	30
o-Xylene	ND		50.0	45.9		ug/L		92	61 - 130	11	30
Styrene	ND		50.0	46.8		ug/L		94	58 - 131	9	30
Tetrachloroethene	ND		50.0	43.7		ug/L		87	52 - 133	11	30
Toluene	0.61	J	50.0	47.4		ug/L		93	65 - 130	7	30
trans-1,2-Dichloroethene	ND		50.0	48.5		ug/L		97	61 - 143	7	30
trans-1,3-Dichloropropene	ND		50.0	46.9		ug/L		94	53 - 133	5	30
trans-1,4-Dichloro-2-butene	ND		50.0	50.9		ug/L		102	43 - 147	5	36
Trichloroethene	ND		50.0	47.6		ug/L		95	64 - 136	7	30
Trichlorofluoromethane	ND		50.0	46.8		ug/L		94	54 - 150	7	30
Vinyl acetate	ND		100	102		ug/L		102	26 - 150	5	33
Vinyl chloride	ND		50.0	46.1		ug/L		92	46 - 150	6	30
Xylenes, Total	ND		100	91.8		ug/L		92	59 - 130	12	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*104*		*78 - 118*
Dibromofluoromethane	*99*		*81 - 121*
Toluene-d8 (Surr)	*98*		*80 - 120*

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-457818/4
Matrix: Water
Analysis Batch: 457818

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0	0.30	ug/L			09/20/19 09:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*108*		*50 - 150*		*09/20/19 09:18*	*1*
Toluene-d8 (Surr)	*91*		*50 - 150*		*09/20/19 09:18*	*1*
4-Bromofluorobenzene	*113*		*50 - 150*		*09/20/19 09:18*	*1*

Method: 8260C SIM - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-457818/1002
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 457818

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			10.0	10.1		ug/L		101	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane	*110*		*50 - 150*
Toluene-d8 (Surr)	*88*		*50 - 150*
4-Bromofluorobenzene	*140*		*50 - 150*

Lab Sample ID: 400-176507-2 MS
Client Sample ID: MH-9
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 457818

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane	ND		10.0	11.3		ug/L		113	50 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Dibromofluoromethane	*119*		*50 - 150*
Toluene-d8 (Surr)	*89*		*50 - 150*
4-Bromofluorobenzene	*129*		*50 - 150*

Lab Sample ID: 400-176507-2 MSD
Client Sample ID: MH-9
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 457818

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	ND		10.0	10.8		ug/L		108	50 - 150	4	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Dibromofluoromethane	*103*		*50 - 150*
Toluene-d8 (Surr)	*91*		*50 - 150*
4-Bromofluorobenzene	*123*		*50 - 150*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-458032/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 458836
Prep Batch: 458032

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		10	0.18	ug/L		09/21/19 16:21	09/26/19 17:01	1
1,2-Dichlorobenzene	ND		10	0.17	ug/L		09/21/19 16:21	09/26/19 17:01	1
1,3-Dichlorobenzene	ND		10	0.18	ug/L		09/21/19 16:21	09/26/19 17:01	1
1,4-Dichlorobenzene	ND		10	0.16	ug/L		09/21/19 16:21	09/26/19 17:01	1
2,4,6-Trichlorophenol	ND		10	3.5	ug/L		09/21/19 16:21	09/26/19 17:01	1
2,4-Dichlorophenol	ND		10	3.0	ug/L		09/21/19 16:21	09/26/19 17:01	1
2,4-Dimethylphenol	ND		10	3.5	ug/L		09/21/19 16:21	09/26/19 17:01	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		09/21/19 16:21	09/26/19 17:01	1
2,4-Dinitrotoluene	ND		10	1.9	ug/L		09/21/19 16:21	09/26/19 17:01	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		09/21/19 16:21	09/26/19 17:01	1

QC Sample Results

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-458032/1-A
Matrix: Water
Analysis Batch: 458836

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 458032

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	ND		10	0.14	ug/L		09/21/19 16:21	09/26/19 17:01	1
2-Chlorophenol	ND		10	2.2	ug/L		09/21/19 16:21	09/26/19 17:01	1
2-Nitrophenol	ND		10	5.2	ug/L		09/21/19 16:21	09/26/19 17:01	1
3,3'-Dichlorobenzidine	ND		10	2.6	ug/L		09/21/19 16:21	09/26/19 17:01	1
4,6-Dinitro-2-methylphenol	ND		10	1.6	ug/L		09/21/19 16:21	09/26/19 17:01	1
4-Bromophenyl phenyl ether	ND		10	0.20	ug/L		09/21/19 16:21	09/26/19 17:01	1
4-Chloro-3-methylphenol	ND		10	3.8	ug/L		09/21/19 16:21	09/26/19 17:01	1
4-Chlorophenyl phenyl ether	ND		10	2.0	ug/L		09/21/19 16:21	09/26/19 17:01	1
4-Nitrophenol	ND		10	2.1	ug/L		09/21/19 16:21	09/26/19 17:01	1
Benzidine	ND		25	20	ug/L		09/21/19 16:21	09/26/19 17:01	1
bis (2-chloroisopropyl) ether	ND		10	0.16	ug/L		09/21/19 16:21	09/26/19 17:01	1
Bis(2-chloroethoxy)methane	ND		10	0.16	ug/L		09/21/19 16:21	09/26/19 17:01	1
Bis(2-chloroethyl)ether	ND		10	2.7	ug/L		09/21/19 16:21	09/26/19 17:01	1
Bis(2-ethylhexyl) phthalate	ND		10	5.0	ug/L		09/21/19 16:21	09/26/19 17:01	1
Butyl benzyl phthalate	ND		10	0.19	ug/L		09/21/19 16:21	09/26/19 17:01	1
Diethyl phthalate	ND		10	0.24	ug/L		09/21/19 16:21	09/26/19 17:01	1
Dimethyl phthalate	ND		10	0.17	ug/L		09/21/19 16:21	09/26/19 17:01	1
Di-n-butyl phthalate	ND		10	2.7	ug/L		09/21/19 16:21	09/26/19 17:01	1
Di-n-octyl phthalate	ND		10	0.17	ug/L		09/21/19 16:21	09/26/19 17:01	1
Hexachlorobenzene	ND		10	0.17	ug/L		09/21/19 16:21	09/26/19 17:01	1
Hexachlorobutadiene	ND		10	0.55	ug/L		09/21/19 16:21	09/26/19 17:01	1
Hexachlorocyclopentadiene	ND		20	2.6	ug/L		09/21/19 16:21	09/26/19 17:01	1
Hexachloroethane	ND		10	4.2	ug/L		09/21/19 16:21	09/26/19 17:01	1
Isophorone	ND		10	0.14	ug/L		09/21/19 16:21	09/26/19 17:01	1
Nitrobenzene	ND		10	0.13	ug/L		09/21/19 16:21	09/26/19 17:01	1
N-Nitrosodimethylamine	ND		10	3.5	ug/L		09/21/19 16:21	09/26/19 17:01	1
N-Nitrosodi-n-propylamine	ND		10	3.3	ug/L		09/21/19 16:21	09/26/19 17:01	1
N-Nitrosodiphenylamine	ND		10	0.18	ug/L		09/21/19 16:21	09/26/19 17:01	1
Pentachlorophenol	ND		20	1.4	ug/L		09/21/19 16:21	09/26/19 17:01	1
Phenol	ND		10	2.6	ug/L		09/21/19 16:21	09/26/19 17:01	1
Dinoseb	ND		10	1.0	ug/L		09/21/19 16:21	09/26/19 17:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*68*		*26 - 150*	*09/21/19 16:21*	*09/26/19 17:01*	*1*
2-Fluorobiphenyl	*64*		*46 - 124*	*09/21/19 16:21*	*09/26/19 17:01*	*1*
2-Fluorophenol (Surr)	*14*		*13 - 113*	*09/21/19 16:21*	*09/26/19 17:01*	*1*
Nitrobenzene-d5 (Surr)	*61*		*36 - 126*	*09/21/19 16:21*	*09/26/19 17:01*	*1*
Phenol-d5 (Surr)	*36*		*17 - 127*	*09/21/19 16:21*	*09/26/19 17:01*	*1*
Terphenyl-d14 (Surr)	*71*		*44 - 149*	*09/21/19 16:21*	*09/26/19 17:01*	*1*

Lab Sample ID: MB 400-460310/1-A
Matrix: Water
Analysis Batch: 461001

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 460310

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		10	0.16	ug/L		10/06/19 18:56	10/10/19 16:49	1
2,4,6-Trichlorophenol	ND		10	3.5	ug/L		10/06/19 18:56	10/10/19 16:49	1
2,4-Dinitrophenol	ND		30	3.4	ug/L		10/06/19 18:56	10/10/19 16:49	1

QC Sample Results

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-460310/1-A
Matrix: Water
Analysis Batch: 461001

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 460310

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	ND		10	2.2	ug/L		10/06/19 18:56	10/10/19 16:49	1
2-Nitrophenol	ND		10	5.2	ug/L		10/06/19 18:56	10/10/19 16:49	1
4,6-Dinitro-2-methylphenol	ND		10	1.6	ug/L		10/06/19 18:56	10/10/19 16:49	1
4-Nitrophenol	ND		10	2.1	ug/L		10/06/19 18:56	10/10/19 16:49	1
Hexachlorobutadiene	ND		10	0.55	ug/L		10/06/19 18:56	10/10/19 16:49	1
Hexachloroethane	ND		10	4.2	ug/L		10/06/19 18:56	10/10/19 16:49	1
Pentachlorophenol	ND		20	1.4	ug/L		10/06/19 18:56	10/10/19 16:49	1
Dinoseb	ND		10	1.0	ug/L		10/06/19 18:56	10/10/19 16:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*81*		*26 - 150*	*10/06/19 18:56*	*10/10/19 16:49*	*1*
2-Fluorobiphenyl	*77*		*46 - 124*	*10/06/19 18:56*	*10/10/19 16:49*	*1*
2-Fluorophenol (Surr)	*55*		*13 - 113*	*10/06/19 18:56*	*10/10/19 16:49*	*1*
Nitrobenzene-d5 (Surr)	*76*		*36 - 126*	*10/06/19 18:56*	*10/10/19 16:49*	*1*
Phenol-d5 (Surr)	*73*		*17 - 127*	*10/06/19 18:56*	*10/10/19 16:49*	*1*
Terphenyl-d14 (Surr)	*87*		*44 - 149*	*10/06/19 18:56*	*10/10/19 16:49*	*1*

Lab Sample ID: LCS 400-460310/2-A
Matrix: Water
Analysis Batch: 461117

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 460310

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dichlorobenzene			120	73.8		ug/L		61	45 - 130		
2,4,6-Trichlorophenol			120	120		ug/L		100	50 - 127		
2,4-Dinitrophenol			240	274		ug/L		114	10 - 150		
2-Chlorophenol			120	87.8		ug/L		73	40 - 120		
2-Nitrophenol			120	112		ug/L		94	40 - 124		
4,6-Dinitro-2-methylphenol			240	254		ug/L		106	23 - 148		
4-Nitrophenol			240	272		ug/L		113	23 - 146		
Hexachlorobutadiene			120	63.5		ug/L		53	45 - 120		
Hexachloroethane			120	58.7		ug/L		49	41 - 120		
Pentachlorophenol			240	234		ug/L		98	31 - 130		
Dinoseb			120	139		ug/L		116	40 - 148		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*114*		*26 - 150*
2-Fluorobiphenyl	*95*		*46 - 124*
2-Fluorophenol (Surr)	*59*		*13 - 113*
Nitrobenzene-d5 (Surr)	*89*		*36 - 126*
Phenol-d5 (Surr)	*84*		*17 - 127*
Terphenyl-d14 (Surr)	*116*		*44 - 149*

Lab Sample ID: LCSD 400-460310/3-A
Matrix: Water
Analysis Batch: 461117

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 460310

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene			120	71.9		ug/L		60	45 - 130	3	30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-460310/3-A
Matrix: Water
Analysis Batch: 461117

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 460310

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,6-Trichlorophenol			120	126		ug/L		105	50 - 127	5	30
2,4-Dinitrophenol			240	278		ug/L		116	10 - 150	2	30
2-Chlorophenol			120	105		ug/L		87	40 - 120	18	30
2-Nitrophenol			120	121		ug/L		101	40 - 124	8	30
4,6-Dinitro-2-methylphenol			240	259		ug/L		108	23 - 148	2	30
4-Nitrophenol			240	286		ug/L		119	23 - 146	5	30
Hexachlorobutadiene			120	65.5		ug/L		55	45 - 120	3	30
Hexachloroethane			120	60.6		ug/L		51	41 - 120	3	30
Pentachlorophenol			240	239		ug/L		100	31 - 130	2	30
Dinoseb			120	134		ug/L		112	40 - 148	3	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*113*		*26 - 150*
2-Fluorobiphenyl	*90*		*46 - 124*
2-Fluorophenol (Surr)	*72*		*13 - 113*
Nitrobenzene-d5 (Surr)	*90*		*36 - 126*
Phenol-d5 (Surr)	*89*		*17 - 127*
Terphenyl-d14 (Surr)	*103*		*44 - 149*

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 400-458032/1-A
Matrix: Water
Analysis Batch: 458759

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 458032

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20	0.032	ug/L		09/21/19 16:21	09/26/19 22:29	1
Acenaphthylene	ND		0.20	0.045	ug/L		09/21/19 16:21	09/26/19 22:29	1
Anthracene	ND		0.20	0.032	ug/L		09/21/19 16:21	09/26/19 22:29	1
Benzo[a]anthracene	ND		0.20	0.046	ug/L		09/21/19 16:21	09/26/19 22:29	1
Benzo[a]pyrene	ND		0.20	0.042	ug/L		09/21/19 16:21	09/26/19 22:29	1
Benzo[b]fluoranthene	ND		0.20	0.034	ug/L		09/21/19 16:21	09/26/19 22:29	1
Benzo[g,h,i]perylene	ND		0.20	0.13	ug/L		09/21/19 16:21	09/26/19 22:29	1
Benzo[k]fluoranthene	ND		0.20	0.10	ug/L		09/21/19 16:21	09/26/19 22:29	1
Chrysene	ND		0.20	0.074	ug/L		09/21/19 16:21	09/26/19 22:29	1
Dibenz(a,h)anthracene	ND		0.20	0.050	ug/L		09/21/19 16:21	09/26/19 22:29	1
Fluoranthene	ND		0.20	0.068	ug/L		09/21/19 16:21	09/26/19 22:29	1
Fluorene	ND		0.20	0.11	ug/L		09/21/19 16:21	09/26/19 22:29	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.043	ug/L		09/21/19 16:21	09/26/19 22:29	1
Naphthalene	ND		0.20	0.094	ug/L		09/21/19 16:21	09/26/19 22:29	1
Phenanthrene	ND		0.20	0.036	ug/L		09/21/19 16:21	09/26/19 22:29	1
Pyrene	ND		0.20	0.040	ug/L		09/21/19 16:21	09/26/19 22:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*91*		*15 - 122*	*09/21/19 16:21*	*09/26/19 22:29*	*1*
Nitrobenzene-d5 (Surr)	*85*		*19 - 130*	*09/21/19 16:21*	*09/26/19 22:29*	*1*
Terphenyl-d14 (Surr)	*152*	*X*	*33 - 138*	*09/21/19 16:21*	*09/26/19 22:29*	*1*

QC Sample Results

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCS 400-458032/2-A
Matrix: Water
Analysis Batch: 458759

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 458032

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	120	90.7		ug/L		76	41 - 120
Acenaphthylene	120	92.1		ug/L		77	44 - 120
Anthracene	120	94.0		ug/L		78	49 - 120
Benzo[a]anthracene	120	88.8		ug/L		74	61 - 135
Benzo[a]pyrene	120	105		ug/L		87	52 - 120
Benzo[b]fluoranthene	120	100		ug/L		84	53 - 134
Benzo[g,h,i]perylene	120	85.6		ug/L		71	47 - 133
Benzo[k]fluoranthene	120	112		ug/L		93	57 - 134
Chrysene	120	85.4		ug/L		71	55 - 122
Dibenz(a,h)anthracene	120	96.1		ug/L		80	48 - 146
Fluoranthene	120	91.1		ug/L		76	54 - 128
Fluorene	120	96.2		ug/L		80	45 - 125
Indeno[1,2,3-cd]pyrene	120	99.4		ug/L		83	43 - 142
Naphthalene	120	75.0		ug/L		62	39 - 125
Phenanthrene	120	95.1		ug/L		79	48 - 120
Pyrene	120	104		ug/L		86	48 - 132

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*77*		*15 - 122*
Nitrobenzene-d5 (Surr)	*65*		*19 - 130*
Terphenyl-d14 (Surr)	*82*		*33 - 138*

Lab Sample ID: LCSD 400-458032/3-A
Matrix: Water
Analysis Batch: 459133

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 458032

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	120	112		ug/L		93	41 - 120	21	56
Acenaphthylene	120	115		ug/L		96	44 - 120	22	56
Anthracene	120	115		ug/L		96	49 - 120	20	51
Benzo[a]anthracene	120	113		ug/L		94	61 - 135	24	49
Benzo[a]pyrene	120	112		ug/L		93	52 - 120	7	50
Benzo[b]fluoranthene	120	124		ug/L		103	53 - 134	21	54
Benzo[g,h,i]perylene	120	105		ug/L		88	47 - 133	20	50
Benzo[k]fluoranthene	120	111		ug/L		93	57 - 134	1	52
Chrysene	120	110		ug/L		91	55 - 122	25	50
Dibenz(a,h)anthracene	120	117		ug/L		98	48 - 146	20	50
Fluoranthene	120	114		ug/L		95	54 - 128	22	52
Fluorene	120	111		ug/L		93	45 - 125	14	56
Indeno[1,2,3-cd]pyrene	120	116		ug/L		96	43 - 142	15	51
Naphthalene	120	90.6		ug/L		76	39 - 125	19	56
Phenanthrene	120	114		ug/L		95	48 - 120	18	56
Pyrene	120	105		ug/L		87	48 - 132	1	52

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*104*		*15 - 122*
Nitrobenzene-d5 (Surr)	*87*		*19 - 130*
Terphenyl-d14 (Surr)	*105*		*33 - 138*

QC Sample Results

Client: Brown and Caldwell
Project/Site: Guam

Job ID: 400-176507-1

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 400-457986/1-A
Matrix: Water
Analysis Batch: 458257

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 457986

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.020	0.0012	ug/L		09/20/19 22:48	09/24/19 02:22	1
alpha-BHC	ND		0.020	0.0014	ug/L		09/20/19 22:48	09/24/19 02:22	1
beta-BHC	ND		0.020	0.0012	ug/L		09/20/19 22:48	09/24/19 02:22	1
Chlordane (technical)	ND		0.20	0.052	ug/L		09/20/19 22:48	09/24/19 02:22	1
cis-Chlordane	ND		0.020	0.0017	ug/L		09/20/19 22:48	09/24/19 02:22	1
4,4'-DDD	ND		0.020	0.0012	ug/L		09/20/19 22:48	09/24/19 02:22	1
4,4'-DDE	ND		0.020	0.00088	ug/L		09/20/19 22:48	09/24/19 02:22	1
4,4'-DDT	ND		0.020	0.0016	ug/L		09/20/19 22:48	09/24/19 02:22	1
delta-BHC	ND		0.020	0.00084	ug/L		09/20/19 22:48	09/24/19 02:22	1
Dieldrin	ND		0.020	0.0012	ug/L		09/20/19 22:48	09/24/19 02:22	1
Endosulfan I	ND		0.020	0.0012	ug/L		09/20/19 22:48	09/24/19 02:22	1
Endosulfan II	ND		0.020	0.0030	ug/L		09/20/19 22:48	09/24/19 02:22	1
Endosulfan sulfate	ND		0.020	0.00084	ug/L		09/20/19 22:48	09/24/19 02:22	1
Endrin	ND		0.020	0.0012	ug/L		09/20/19 22:48	09/24/19 02:22	1
Endrin aldehyde	ND		0.020	0.0011	ug/L		09/20/19 22:48	09/24/19 02:22	1
gamma-BHC (Lindane)	ND		0.020	0.010	ug/L		09/20/19 22:48	09/24/19 02:22	1
Heptachlor	ND		0.020	0.0012	ug/L		09/20/19 22:48	09/24/19 02:22	1
Heptachlor epoxide	ND		0.020	0.0013	ug/L		09/20/19 22:48	09/24/19 02:22	1
Toxaphene	ND		1.2	0.12	ug/L		09/20/19 22:48	09/24/19 02:22	1
trans-Chlordane	ND		0.020	0.0013	ug/L		09/20/19 22:48	09/24/19 02:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*65*		*10 - 130*	*09/20/19 22:48*	*09/24/19 02:22*	*1*
Tetrachloro-m-xylene	*68*		*43 - 130*	*09/20/19 22:48*	*09/24/19 02:22*	*1*

Lab Sample ID: LCS 400-457986/4-A
Matrix: Water
Analysis Batch: 458257

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 457986

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aldrin	2.00	2.42		ug/L		121	52 - 150
alpha-BHC	2.00	2.40		ug/L		120	50 - 150
beta-BHC	2.00	2.40		ug/L		120	58 - 150
cis-Chlordane	2.00	2.51		ug/L		126	63 - 150
4,4'-DDD	2.00	2.51		ug/L		126	58 - 150
4,4'-DDE	2.00	2.53		ug/L		126	65 - 150
4,4'-DDT	2.00	2.08		ug/L		104	59 - 150
delta-BHC	2.00	1.54		ug/L		77	42 - 150
Dieldrin	2.00	2.65		ug/L		133	64 - 150
Endosulfan I	2.00	2.48		ug/L		124	40 - 127
Endosulfan II	2.00	1.97		ug/L		99	40 - 135
Endosulfan sulfate	2.00	2.37		ug/L		119	50 - 150
Endrin	2.00	2.31		ug/L		116	63 - 150
Endrin aldehyde	2.00	2.72		ug/L		136	40 - 150
gamma-BHC (Lindane)	2.00	2.09		ug/L		104	53 - 150
Heptachlor	2.00	1.91		ug/L		96	59 - 150
Heptachlor epoxide	2.00	2.54		ug/L		127	63 - 150
trans-Chlordane	2.00	2.57		ug/L		129	62 - 150

QC Sample Results

Client: Brown and Caldwell
Project/Site: Guam

Job ID: 400-176507-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 400-457986/4-A
Matrix: Water
Analysis Batch: 458257

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 457986

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*74*		*10 - 130*
Tetrachloro-m-xylene	*70*		*43 - 130*

Lab Sample ID: LCSD 400-457986/5-A
Matrix: Water
Analysis Batch: 458257

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 457986

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aldrin	2.00	2.32		ug/L		116	52 - 150	4	40
alpha-BHC	2.00	2.35		ug/L		118	50 - 150	2	40
beta-BHC	2.00	2.24		ug/L		112	58 - 150	7	40
cis-Chlordane	2.00	2.38		ug/L		119	63 - 150	5	40
4,4'-DDD	2.00	2.36		ug/L		118	58 - 150	6	40
4,4'-DDE	2.00	2.39		ug/L		119	65 - 150	6	40
4,4'-DDT	2.00	2.17		ug/L		108	59 - 150	4	40
delta-BHC	2.00	1.41		ug/L		71	42 - 150	8	40
Dieldrin	2.00	2.50		ug/L		125	64 - 150	6	40
Endosulfan I	2.00	2.34		ug/L		117	40 - 127	6	40
Endosulfan II	2.00	1.85		ug/L		93	40 - 135	6	40
Endosulfan sulfate	2.00	2.27		ug/L		114	50 - 150	4	40
Endrin	2.00	2.18		ug/L		109	63 - 150	6	40
Endrin aldehyde	2.00	2.65		ug/L		132	40 - 150	3	40
gamma-BHC (Lindane)	2.00	2.01		ug/L		100	53 - 150	4	40
Heptachlor	2.00	1.93		ug/L		96	59 - 150	1	40
Heptachlor epoxide	2.00	2.41		ug/L		121	63 - 150	5	40
trans-Chlordane	2.00	2.41		ug/L		121	62 - 150	6	40

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*93*		*10 - 130*
Tetrachloro-m-xylene	*70*		*43 - 130*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 400-457986/1-A
Matrix: Water
Analysis Batch: 458260

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 457986

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		0.50	0.088	ug/L		09/20/19 22:48	09/24/19 02:22	1
PCB-1232	ND		0.50	0.040	ug/L		09/20/19 22:48	09/24/19 02:22	1
PCB-1242	ND		0.50	0.014	ug/L		09/20/19 22:48	09/24/19 02:22	1
PCB-1248	ND		0.50	0.0080	ug/L		09/20/19 22:48	09/24/19 02:22	1
PCB-1254	ND		0.50	0.023	ug/L		09/20/19 22:48	09/24/19 02:22	1
PCB-1260	ND		0.50	0.061	ug/L		09/20/19 22:48	09/24/19 02:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*65*		*10 - 125*	*09/20/19 22:48*	*09/24/19 02:22*	*1*
Tetrachloro-m-xylene	*68*		*46 - 150*	*09/20/19 22:48*	*09/24/19 02:22*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: LCS 400-457986/2-A
Matrix: Water
Analysis Batch: 458260

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 457986

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1260	20.1	23.2		ug/L		115	56 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*87*		*10 - 125*
Tetrachloro-m-xylene	*70*		*46 - 150*

Lab Sample ID: LCSD 400-457986/3-A
Matrix: Water
Analysis Batch: 458260

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 457986

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1260	20.1	18.0		ug/L		90	56 - 139	25	40

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*59*		*10 - 125*
Tetrachloro-m-xylene	*67*		*46 - 150*

Method: 218.7 - Chromium, Hexavalent (Ion Chromatography)

Lab Sample ID: MB 400-459182/9
Matrix: Water
Analysis Batch: 459182

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	ND		0.0010	0.00020	mg/L			09/28/19 17:49	1

Lab Sample ID: LCS 400-459182/11
Matrix: Water
Analysis Batch: 459182

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hexavalent	0.0100	0.00865		mg/L		87	85 - 115

Lab Sample ID: LCSD 400-459182/12
Matrix: Water
Analysis Batch: 459182

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
Chromium, hexavalent	0.0100	0.00868		mg/L		87	85 - 115	0	15

Lab Sample ID: MRL 400-459182/10
Matrix: Water
Analysis Batch: 459182

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hexavalent	0.000500	0.000483	J	mg/L		97	50 - 150

Method: 218.7 - Chromium, Hexavalent (Ion Chromatography) (Continued)

Lab Sample ID: 400-176665-T-3 MS
Matrix: Water
Analysis Batch: 459182

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hexavalent	ND		0.00500	0.00453		mg/L		91	85 - 115

Lab Sample ID: 400-176665-T-3 MSD
Matrix: Water
Analysis Batch: 459182

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chromium, hexavalent	ND		0.00500	0.00458		mg/L		92	85 - 115	1	15

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Lab Sample ID: MB 200-147544/3
Matrix: Water
Analysis Batch: 147544

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.20	0.027	ug/L			09/23/19 17:04	1

Lab Sample ID: LCS 200-147544/4
Matrix: Water
Analysis Batch: 147544

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	0.200	0.181	J	ug/L		90	80 - 120

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS

Lab Sample ID: MB 320-329907/1-A
Matrix: Water
Analysis Batch: 331188

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 329907

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.54	pg/L		10/10/19 08:27	10/15/19 14:26	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*82*		*31 - 137*	*10/10/19 08:27*	*10/15/19 14:26*	*1*
13C-2,3,7,8-TCDF	*70*		*29 - 140*	*10/10/19 08:27*	*10/15/19 14:26*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*108*		*42 - 164*	*10/10/19 08:27*	*10/15/19 14:26*	*1*

Lab Sample ID: LCS 320-329907/2-A
Matrix: Water
Analysis Batch: 331188

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 329907

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	187		pg/L		93	73 - 146

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*81*		*25 - 141*

Method: 1613B - Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS (Continued)

Lab Sample ID: LCS 320-329907/2-A
Matrix: Water
Analysis Batch: 331188

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 329907

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDF	*70*		*26 - 126*

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*105*		*37 - 158*

Lab Sample ID: 400-176665-E-3-A MS
Matrix: Water
Analysis Batch: 331185

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 329907

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	ND		199	195		pg/L		98	73 - 146

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*74*		*31 - 137*
13C-2,3,7,8-TCDF	*68*		*29 - 140*

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*98*		*42 - 164*

Lab Sample ID: 400-176665-E-3-B MSD
Matrix: Water
Analysis Batch: 331185

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 329907

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	ND		202	199		pg/L		99	73 - 146	2	50

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*78*		*31 - 137*
13C-2,3,7,8-TCDF	*74*		*29 - 140*

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*98*		*42 - 164*

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 160-445578/1-A
Matrix: Water
Analysis Batch: 445866

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 445578

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	ND		0.67	0.27	pCi/L		10/09/19 13:12	10/11/19 03:37	2

Lab Sample ID: LCS 160-445578/2-A
Matrix: Water
Analysis Batch: 445866

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 445578

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Uranium	670	703		pCi/L		105	85 - 115

QC Sample Results

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-176665-S-3-A MS

Client Sample ID: Matrix Spike
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 445866
Prep Batch: 445578

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Uranium	ND		670	700		pCi/L		104	70 - 130		

Lab Sample ID: 400-176665-S-3-B MSD

Client Sample ID: Matrix Spike Duplicate
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 445866
Prep Batch: 445578

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Uranium	ND		670	749		pCi/L		112	70 - 130	7	20

Method: 200.8-1994 R5.4 - Metals (ICP/MS)

Lab Sample ID: MB 680-589436/1-A

Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 589844
Prep Batch: 589436

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.10	0.018	mg/L		10/05/19 09:39	10/07/19 16:39	1
Antimony	ND		0.0050	0.00050	mg/L		10/05/19 09:39	10/07/19 16:39	1
Arsenic	ND		0.0030	0.0015	mg/L		10/05/19 09:39	10/07/19 16:39	1
Barium	ND		0.0050	0.00061	mg/L		10/05/19 09:39	10/07/19 16:39	1
Beryllium	ND		0.00050	0.00017	mg/L		10/05/19 09:39	10/07/19 16:39	1
Cadmium	ND		0.00050	0.00015	mg/L		10/05/19 09:39	10/07/19 16:39	1
Calcium	0.0910	J	0.50	0.068	mg/L		10/05/19 09:39	10/07/19 16:39	1
Chromium	ND		0.0050	0.0016	mg/L		10/05/19 09:39	10/07/19 16:39	1
Cobalt	ND	^	0.00050	0.00012	mg/L		10/05/19 09:39	10/07/19 16:39	1
Copper	ND		0.0050	0.0017	mg/L		10/05/19 09:39	10/07/19 16:39	1
Iron	ND		0.10	0.025	mg/L		10/05/19 09:39	10/07/19 16:39	1
Lead	ND		0.0025	0.00098	mg/L		10/05/19 09:39	10/07/19 16:39	1
Magnesium	ND		0.25	0.020	mg/L		10/05/19 09:39	10/07/19 16:39	1
Manganese	0.00707		0.0050	0.0018	mg/L		10/05/19 09:39	10/07/19 16:39	1
Molybdenum	ND		0.0050	0.0010	mg/L		10/05/19 09:39	10/07/19 16:39	1
Nickel	ND		0.0050	0.0019	mg/L		10/05/19 09:39	10/07/19 16:39	1
Potassium	ND		1.0	0.11	mg/L		10/05/19 09:39	10/07/19 16:39	1
Selenium	ND		0.0025	0.0010	mg/L		10/05/19 09:39	10/07/19 16:39	1
Silver	ND		0.0010	0.00010	mg/L		10/05/19 09:39	10/07/19 16:39	1
Sodium	ND		0.50	0.17	mg/L		10/05/19 09:39	10/07/19 16:39	1
Thallium	ND		0.0010	0.00049	mg/L		10/05/19 09:39	10/07/19 16:39	1
Tin	ND		0.0050	0.0014	mg/L		10/05/19 09:39	10/07/19 16:39	1
Vanadium	ND		0.010	0.0053	mg/L		10/05/19 09:39	10/07/19 16:39	1
Zinc	ND		0.020	0.0096	mg/L		10/05/19 09:39	10/07/19 16:39	1

Lab Sample ID: LCS 680-589436/2-A

Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 589844
Prep Batch: 589436

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Aluminum			5.00	4.90		mg/L		98	85 - 115		
Antimony			0.0500	0.0526		mg/L		105	85 - 115		
Arsenic			0.100	0.102		mg/L		102	85 - 115		

QC Sample Results

Method: 200.8-1994 R5.4 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 680-589436/2-A
Matrix: Water
Analysis Batch: 589844

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 589436

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	0.100	0.101		mg/L		101	85 - 115
Beryllium	0.0500	0.0463		mg/L		93	85 - 115
Cadmium	0.0500	0.0512		mg/L		102	85 - 115
Calcium	5.00	5.34		mg/L		107	85 - 115
Chromium	0.100	0.105		mg/L		105	85 - 115
Cobalt	0.0501	0.0526	^	mg/L		105	85 - 115
Copper	0.100	0.106		mg/L		106	85 - 115
Iron	5.01	5.15		mg/L		103	85 - 115
Lead	0.505	0.494		mg/L		98	85 - 115
Magnesium	5.01	5.34		mg/L		107	85 - 115
Manganese	0.400	0.414		mg/L		104	85 - 115
Molybdenum	0.0999	0.104		mg/L		104	85 - 115
Nickel	0.0995	0.105		mg/L		105	85 - 115
Potassium	8.00	8.14		mg/L		102	85 - 115
Selenium	0.100	0.108		mg/L		108	85 - 115
Silver	0.0500	0.0529		mg/L		106	85 - 115
Sodium	5.04	5.49		mg/L		109	85 - 115
Thallium	0.0400	0.0402		mg/L		101	85 - 115
Tin	0.100	0.0982		mg/L		98	85 - 115
Vanadium	0.0998	0.104		mg/L		105	85 - 115
Zinc	0.101	0.104		mg/L		104	85 - 115

Lab Sample ID: 400-177296-F-6-B MS
Matrix: Water
Analysis Batch: 589844

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 589436

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	0.13		5.00	5.67		mg/L		111	70 - 130
Antimony	ND		0.0500	0.0595		mg/L		119	70 - 130
Arsenic	0.0037		0.100	0.120		mg/L		116	70 - 130
Barium	0.023		0.100	0.146		mg/L		123	70 - 130
Beryllium	ND		0.0500	0.0552		mg/L		110	70 - 130
Cadmium	ND		0.0500	0.0580		mg/L		116	70 - 130
Calcium	12	F1 B	5.00	20.8	F1	mg/L		185	70 - 130
Chromium	ND		0.100	0.116		mg/L		116	70 - 130
Cobalt	0.00013	J ^	0.0501	0.0586	^	mg/L		117	70 - 130
Copper	ND		0.100	0.115		mg/L		115	70 - 130
Iron	1.1	F2	5.01	7.17		mg/L		121	70 - 130
Lead	ND		0.505	0.550		mg/L		109	70 - 130
Magnesium	4.8	F1	5.01	12.0	F1	mg/L		143	70 - 130
Manganese	0.048	B	0.400	0.508		mg/L		115	70 - 130
Molybdenum	0.0049	J	0.0999	0.121		mg/L		116	70 - 130
Nickel	0.0093		0.0995	0.126		mg/L		118	70 - 130
Potassium	4.9		8.00	14.7		mg/L		123	70 - 130
Selenium	ND	F2	0.100	0.112		mg/L		112	70 - 130
Silver	ND		0.0500	0.0577		mg/L		115	70 - 130
Sodium	47		5.04	60.1	4	mg/L		251	70 - 130
Thallium	ND		0.0400	0.0451		mg/L		113	70 - 130
Tin	ND		0.100	0.110		mg/L		110	70 - 130

QC Sample Results

Method: 200.8-1994 R5.4 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-177296-F-6-B MS
Matrix: Water
Analysis Batch: 589844
Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 589436

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Vanadium	ND		0.0998	0.122		mg/L		122	70 - 130		
Zinc	ND		0.101	0.113		mg/L		113	70 - 130		

Lab Sample ID: 400-177296-F-6-C MSD
Matrix: Water
Analysis Batch: 589844
Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 589436

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	0.13		5.00	5.07		mg/L		99	70 - 130	11	20
Antimony	ND		0.0500	0.0517		mg/L		103	70 - 130	14	20
Arsenic	0.0037		0.100	0.106		mg/L		102	70 - 130	12	20
Barium	0.023		0.100	0.128		mg/L		105	70 - 130	13	20
Beryllium	ND		0.0500	0.0475		mg/L		95	70 - 130	15	20
Cadmium	ND		0.0500	0.0512		mg/L		102	70 - 130	13	20
Calcium	12	F1 B	5.00	17.9		mg/L		126	70 - 130	15	20
Chromium	ND		0.100	0.103		mg/L		103	70 - 130	12	20
Cobalt	0.00013	J ^	0.0501	0.0509	^	mg/L		101	70 - 130	14	20
Copper	ND		0.100	0.102		mg/L		102	70 - 130	12	20
Iron	1.1	F2	5.01	5.81	F2	mg/L		94	70 - 130	21	20
Lead	ND		0.505	0.483		mg/L		96	70 - 130	13	20
Magnesium	4.8	F1	5.01	10.8		mg/L		119	70 - 130	10	20
Manganese	0.048	B	0.400	0.452		mg/L		101	70 - 130	12	20
Molybdenum	0.0049	J	0.0999	0.105		mg/L		100	70 - 130	14	20
Nickel	0.0093		0.0995	0.109		mg/L		100	70 - 130	15	20
Potassium	4.9		8.00	13.2		mg/L		104	70 - 130	11	20
Selenium	ND	F2	0.100	0.0911	F2	mg/L		91	70 - 130	21	20
Silver	ND		0.0500	0.0539		mg/L		108	70 - 130	7	20
Sodium	47		5.04	56.7	4	mg/L		185	70 - 130	6	20
Thallium	ND		0.0400	0.0395		mg/L		99	70 - 130	13	20
Tin	ND		0.100	0.0981		mg/L		98	70 - 130	12	20
Vanadium	ND		0.0998	0.105		mg/L		105	70 - 130	15	20
Zinc	ND		0.101	0.101		mg/L		100	70 - 130	12	20

Lab Sample ID: MB 680-589438/1-A
Matrix: Water
Analysis Batch: 590056
Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 589438

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.10	0.018	mg/L		10/05/19 09:43	10/08/19 20:28	1
Antimony	ND		0.0050	0.00050	mg/L		10/05/19 09:43	10/08/19 20:28	1
Arsenic	ND		0.0030	0.0015	mg/L		10/05/19 09:43	10/08/19 20:28	1
Barium	ND		0.0050	0.00061	mg/L		10/05/19 09:43	10/08/19 20:28	1
Beryllium	ND		0.00050	0.00017	mg/L		10/05/19 09:43	10/08/19 20:28	1
Cadmium	ND		0.00050	0.00015	mg/L		10/05/19 09:43	10/08/19 20:28	1
Calcium	ND		0.50	0.068	mg/L		10/05/19 09:43	10/08/19 20:28	1
Chromium	ND		0.0050	0.0016	mg/L		10/05/19 09:43	10/08/19 20:28	1
Cobalt	ND	^	0.00050	0.00012	mg/L		10/05/19 09:43	10/08/19 20:28	1
Copper	ND		0.0050	0.0017	mg/L		10/05/19 09:43	10/08/19 20:28	1
Iron	ND		0.10	0.025	mg/L		10/05/19 09:43	10/08/19 20:28	1

Method: 200.8-1994 R5.4 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 680-589438/1-A
Matrix: Water
Analysis Batch: 590056

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 589438

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0025	0.00098	mg/L		10/05/19 09:43	10/08/19 20:28	1
Magnesium	ND		0.25	0.020	mg/L		10/05/19 09:43	10/08/19 20:28	1
Manganese	ND		0.0050	0.0018	mg/L		10/05/19 09:43	10/08/19 20:28	1
Molybdenum	ND		0.0050	0.0010	mg/L		10/05/19 09:43	10/08/19 20:28	1
Nickel	ND		0.0050	0.0019	mg/L		10/05/19 09:43	10/08/19 20:28	1
Potassium	ND		1.0	0.11	mg/L		10/05/19 09:43	10/08/19 20:28	1
Selenium	ND		0.0025	0.0010	mg/L		10/05/19 09:43	10/08/19 20:28	1
Silver	ND		0.0010	0.00010	mg/L		10/05/19 09:43	10/08/19 20:28	1
Sodium	ND		0.50	0.17	mg/L		10/05/19 09:43	10/08/19 20:28	1
Thallium	ND		0.0010	0.00049	mg/L		10/05/19 09:43	10/08/19 20:28	1
Tin	ND		0.0050	0.0014	mg/L		10/05/19 09:43	10/08/19 20:28	1
Vanadium	ND		0.010	0.0053	mg/L		10/05/19 09:43	10/08/19 20:28	1
Zinc	ND		0.020	0.0096	mg/L		10/05/19 09:43	10/08/19 20:28	1

Lab Sample ID: LCS 680-589438/2-A
Matrix: Water
Analysis Batch: 590056

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 589438

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	5.00	4.71		mg/L		94	85 - 115
Antimony	0.0500	0.0531		mg/L		106	85 - 115
Arsenic	0.100	0.102		mg/L		102	85 - 115
Barium	0.100	0.105		mg/L		105	85 - 115
Beryllium	0.0500	0.0504		mg/L		101	85 - 115
Cadmium	0.0500	0.0515		mg/L		103	85 - 115
Calcium	5.00	5.24		mg/L		105	85 - 115
Chromium	0.100	0.106		mg/L		106	85 - 115
Cobalt	0.0501	0.0524	^	mg/L		105	85 - 115
Copper	0.100	0.103		mg/L		103	85 - 115
Iron	5.01	5.23		mg/L		104	85 - 115
Lead	0.505	0.495		mg/L		98	85 - 115
Magnesium	5.01	4.62		mg/L		92	85 - 115
Manganese	0.400	0.413		mg/L		103	85 - 115
Molybdenum	0.0999	0.102		mg/L		102	85 - 115
Nickel	0.0995	0.105		mg/L		105	85 - 115
Potassium	8.00	8.06		mg/L		101	85 - 115
Selenium	0.100	0.105		mg/L		105	85 - 115
Silver	0.0500	0.0518		mg/L		104	85 - 115
Sodium	5.04	5.55		mg/L		110	85 - 115
Thallium	0.0400	0.0404		mg/L		101	85 - 115
Tin	0.100	0.102		mg/L		102	85 - 115
Vanadium	0.0998	0.101		mg/L		101	85 - 115
Zinc	0.101	0.102		mg/L		102	85 - 115

QC Sample Results

Method: 200.8-1994 R5.4 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-176928-A-1-F MS
Matrix: Water
Analysis Batch: 590056

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 589438

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	0.063	J	5.00	4.85		mg/L		96	70 - 130
Antimony	0.0049	J	0.0500	0.0567		mg/L		104	70 - 130
Arsenic	0.0095		0.100	0.110		mg/L		101	70 - 130
Barium	0.34	F1	0.100	0.397	F1	mg/L		56	70 - 130
Beryllium	ND		0.0500	0.0544		mg/L		109	70 - 130
Cadmium	ND		0.0500	0.0513		mg/L		103	70 - 130
Calcium	88		5.00	80.6	4	mg/L		-141	70 - 130
Chromium	ND		0.100	0.100		mg/L		100	70 - 130
Cobalt	0.0026	^	0.0501	0.0521	^	mg/L		99	70 - 130
Copper	0.0022	J	0.100	0.101		mg/L		99	70 - 130
Iron	0.060	J	5.01	4.61		mg/L		91	70 - 130
Lead	ND		0.505	0.483		mg/L		96	70 - 130
Magnesium	26		5.01	27.2	4	mg/L		20	70 - 130
Manganese	0.33		0.400	0.685		mg/L		89	70 - 130
Molybdenum	0.34	F1	0.0999	0.407	F1	mg/L		64	70 - 130
Nickel	0.026		0.0995	0.123		mg/L		97	70 - 130
Potassium	15		8.00	21.1		mg/L		80	70 - 130
Selenium	0.0017	J	0.100	0.0947		mg/L		93	70 - 130
Silver	ND		0.0500	0.0502		mg/L		100	70 - 130
Sodium	220		5.04	198	4	mg/L		-381	70 - 130
Thallium	ND		0.0400	0.0408		mg/L		102	70 - 130
Tin	ND		0.100	0.101		mg/L		101	70 - 130
Vanadium	ND		0.0998	0.0985		mg/L		99	70 - 130
Zinc	ND		0.101	0.100		mg/L		100	70 - 130

Lab Sample ID: 400-176928-A-1-G MSD
Matrix: Water
Analysis Batch: 590056

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 589438

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	0.063	J	5.00	5.08		mg/L		100	70 - 130	5	20
Antimony	0.0049	J	0.0500	0.0592		mg/L		109	70 - 130	4	20
Arsenic	0.0095		0.100	0.116		mg/L		106	70 - 130	5	20
Barium	0.34	F1	0.100	0.430		mg/L		88	70 - 130	8	20
Beryllium	ND		0.0500	0.0491		mg/L		98	70 - 130	10	20
Cadmium	ND		0.0500	0.0531		mg/L		106	70 - 130	3	20
Calcium	88		5.00	84.7	4	mg/L		-59	70 - 130	5	20
Chromium	ND		0.100	0.105		mg/L		105	70 - 130	4	20
Cobalt	0.0026	^	0.0501	0.0544	^	mg/L		104	70 - 130	4	20
Copper	0.0022	J	0.100	0.104		mg/L		102	70 - 130	3	20
Iron	0.060	J	5.01	4.75		mg/L		94	70 - 130	3	20
Lead	ND		0.505	0.503		mg/L		100	70 - 130	4	20
Magnesium	26		5.01	29.0	4	mg/L		55	70 - 130	6	20
Manganese	0.33		0.400	0.714		mg/L		97	70 - 130	4	20
Molybdenum	0.34	F1	0.0999	0.429		mg/L		85	70 - 130	5	20
Nickel	0.026		0.0995	0.127		mg/L		101	70 - 130	3	20
Potassium	15		8.00	21.7		mg/L		88	70 - 130	3	20
Selenium	0.0017	J	0.100	0.0975		mg/L		95	70 - 130	3	20
Silver	ND		0.0500	0.0522		mg/L		104	70 - 130	4	20

QC Sample Results

Client: Brown and Caldwell
Project/Site: Guam

Job ID: 400-176507-1

Method: 200.8-1994 R5.4 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-176928-A-1-G MSD
Matrix: Water
Analysis Batch: 590056

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 589438

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sodium	220		5.04	209	4	mg/L		-155	70 - 130	6	20
Thallium	ND		0.0400	0.0414		mg/L		104	70 - 130	2	20
Tin	ND		0.100	0.105		mg/L		105	70 - 130	4	20
Vanadium	ND		0.0998	0.103		mg/L		103	70 - 130	5	20
Zinc	ND		0.101	0.103		mg/L		103	70 - 130	3	20

Method: 245.1-1994 R3.0 - Mercury (CVAA)

Lab Sample ID: MB 680-589479/1-A
Matrix: Water
Analysis Batch: 589862

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 589479

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000128	J	0.00020	0.000080	mg/L		10/05/19 13:12	10/07/19 15:23	1

Lab Sample ID: LCS 680-589479/2-A
Matrix: Water
Analysis Batch: 589862

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 589479

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00489		mg/L		98	85 - 115

Lab Sample ID: 400-176665-T-3-E MS
Matrix: Water
Analysis Batch: 589862

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 589479

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00013	J B	0.00200	0.00188		mg/L		87	70 - 130

Lab Sample ID: 400-176665-T-3-F MSD
Matrix: Water
Analysis Batch: 589862

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 589479

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00013	J B	0.00200	0.00188		mg/L		88	70 - 130	0	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 400-457900/6
Matrix: Water
Analysis Batch: 457900

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.050	0.024	mg/L			09/20/19 14:08	1

Lab Sample ID: LCS 400-457900/7
Matrix: Water
Analysis Batch: 457900

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	2.00	2.05		mg/L		103	90 - 110

QC Sample Results

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MRL 400-457900/5
Matrix: Water
Analysis Batch: 457900

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	0.0500	0.0590		mg/L		118	50 - 150

Lab Sample ID: 400-176603-B-1 MS
Matrix: Water
Analysis Batch: 457900

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	0.84		2.00	2.70		mg/L		93	90 - 110

Lab Sample ID: 400-176603-B-1 MSD
Matrix: Water
Analysis Batch: 457900

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia	0.84		2.00	2.69		mg/L		93	90 - 110	0	11

Lab Sample ID: MB 400-457939/31
Matrix: Water
Analysis Batch: 457939

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.050	0.024	mg/L			09/20/19 15:23	1

Lab Sample ID: LCS 400-457939/32
Matrix: Water
Analysis Batch: 457939

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	2.00	2.06		mg/L		103	90 - 110

Lab Sample ID: MRL 400-457939/30
Matrix: Water
Analysis Batch: 457939

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	0.0500	0.0750		mg/L		150	50 - 150

Lab Sample ID: 400-176507-1 MS
Matrix: Water
Analysis Batch: 457939

Client Sample ID: MH-11
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	0.11		2.00	1.91		mg/L		90	90 - 110

Lab Sample ID: 400-176507-1 MSD
Matrix: Water
Analysis Batch: 457939

Client Sample ID: MH-11
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia	0.11		2.00	1.91		mg/L		90	90 - 110	0	11

QC Sample Results

Client: Brown and Caldwell
Job ID: 400-176507-1
Project/Site: Guam

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: 400-176536-N-1 MS
Client Sample ID: Matrix Spike
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 457939

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	ND		2.00	1.87		mg/L		94	90 - 110

Lab Sample ID: 400-176536-N-1 MSD
Client Sample ID: Matrix Spike Duplicate
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 457939

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia	ND		2.00	1.88		mg/L		94	90 - 110	0	11

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 400-458214/14
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 458214

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.050	0.018	mg/L			09/23/19 12:41	1

Lab Sample ID: LCS 400-458214/15
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 458214

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.500	0.516		mg/L		103	90 - 110

Lab Sample ID: MRL 400-458214/13
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 458214

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.0500	0.0370	J	mg/L		74	50 - 150

Lab Sample ID: 400-176516-L-13 MS
Client Sample ID: Matrix Spike
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 458214

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	ND		1.00	0.896		mg/L		90	90 - 110

Lab Sample ID: 400-176516-L-13 MSD
Client Sample ID: Matrix Spike Duplicate
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 458214

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	ND		1.00	0.911		mg/L		91	90 - 110	2	4

QC Sample Results

Client: Brown and Caldwell
Project/Site: Guam

Job ID: 400-176507-1

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: 400-176543-N-5 MS
Matrix: Water
Analysis Batch: 458214

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	5.7	F1	5.00	6.62	F1	mg/L		19	90 - 110

Lab Sample ID: 400-176543-N-5 MSD
Matrix: Water
Analysis Batch: 458214

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	5.7	F1	5.00	6.52	F1	mg/L		17	90 - 110	2	4

Method: 365.4 - Phosphorus, Total

Lab Sample ID: MB 400-457944/1-A
Matrix: Water
Analysis Batch: 458500

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 457944

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus, Total	0.0746	J	0.10	0.032	mg/L		09/20/19 16:44	09/24/19 17:53	1

Lab Sample ID: LCS 400-457944/2-A
Matrix: Water
Analysis Batch: 458500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 457944

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phosphorus, Total	2.00	2.10		mg/L		105	75 - 113

Lab Sample ID: 400-176601-L-1-E MS
Matrix: Water
Analysis Batch: 458500

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 457944

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Phosphorus, Total	1.8	J B	9.82	12.8		mg/L		112	72 - 120

Lab Sample ID: 400-176601-L-1-F MSD
Matrix: Water
Analysis Batch: 458500

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 457944

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phosphorus, Total	1.8	J B	9.81	11.9		mg/L		103	72 - 120	7	27

Lab Sample ID: MRL 400-458500/13
Matrix: Water
Analysis Batch: 458500

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Phosphorus, Total	0.100	0.0906	J	mg/L		91	50 - 150

QC Sample Results

Method: SM 4500 CN E - Cyanide, Total

Lab Sample ID: MB 400-457594/1-A
Matrix: Water
Analysis Batch: 457681
Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 457594

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.0050	0.0050	mg/L		09/18/19 20:45	09/19/19 09:56	1

Lab Sample ID: LCS 400-457594/2-A
Matrix: Water
Analysis Batch: 457681
Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 457594

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			0.399	0.412		mg/L		103	75 - 125		

Lab Sample ID: 400-176415-O-1-B MS
Matrix: Water
Analysis Batch: 457681
Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 457594

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total	ND		0.200	0.194		mg/L		97	68 - 133		

Lab Sample ID: 400-176415-O-1-C MSD
Matrix: Water
Analysis Batch: 457681
Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 457594

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND		0.200	0.194		mg/L		97	68 - 133	0	36

Lab Sample ID: 400-176507-1 DU
Matrix: Water
Analysis Batch: 457681
Client Sample ID: MH-11
Prep Type: Total/NA
Prep Batch: 457594

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Cyanide, Total	ND			ND		mg/L				NC	36

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 400-458319/3
Matrix: Water
Analysis Batch: 458319
Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.057	mg/L			09/23/19 12:30	1

Lab Sample ID: LCS 400-458319/4
Matrix: Water
Analysis Batch: 458319
Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfide			0.500	0.488		mg/L		98	80 - 120		

Method: SM 4500 S2 D - Sulfide, Total (Continued)

Lab Sample ID: LCSD 400-458319/5
Matrix: Water
Analysis Batch: 458319

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
Sulfide			0.500	0.477		mg/L		95	80 - 120	2	25

Lab Sample ID: MRL 400-458319/1
Matrix: Water
Analysis Batch: 458319

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfide			0.100	0.0748	J	mg/L		75	50 - 150		

Lab Sample ID: 660-97321-A-4 MS
Matrix: Water
Analysis Batch: 458319

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfide	0.081	J	0.502	0.552		mg/L		94	75 - 125		

Lab Sample ID: 660-97321-A-4 MSD
Matrix: Water
Analysis Batch: 458319

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide	0.081	J	0.502	0.523		mg/L		88	75 - 125	5	25

Lab Sample ID: 400-176413-D-1 MS
Matrix: Water
Analysis Batch: 458319

Client Sample ID: Matrix Spike
Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfide	ND		0.502	0.480		mg/L		96	75 - 125		

Lab Sample ID: 400-176413-D-1 MSD
Matrix: Water
Analysis Batch: 458319

Client Sample ID: Matrix Spike Duplicate
Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide	ND		0.502	0.493		mg/L		98	75 - 125	3	25

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Lab Sample ID: MB 160-444398/1-A
Matrix: Water
Analysis Batch: 445173

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 444398

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	0.1440	U	0.485	0.485	3.00	0.917	pCi/L	09/27/19 09:16	10/04/19 11:51	1
Gross Beta	0.4218	U	0.568	0.570	4.00	0.944	pCi/L	09/27/19 09:16	10/04/19 11:51	1

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity (Continued)

Lab Sample ID: LCS 160-444398/2-A
Matrix: Water
Analysis Batch: 445620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 444398

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Gross Alpha			49.6	34.89	*	5.69	3.00	2.28	pCi/L	70	75 - 125		

Lab Sample ID: LCSB 160-444398/3-A
Matrix: Water
Analysis Batch: 445173

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 444398

Analyte			Spike Added	LCSB Result	LCSB Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Gross Beta			85.6	84.77		9.02	4.00	0.988	pCi/L	99	75 - 125		

Lab Sample ID: 400-176665-R-3-A MS
Matrix: Water
Analysis Batch: 445173

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 444398

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Gross Alpha	0.524	U G F *	159	154.2		22.3	3.00	4.63	pCi/L	97	60 - 140		

Lab Sample ID: 400-176665-R-3-B MSD
Matrix: Water
Analysis Batch: 445173

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 444398

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Gross Alpha	0.524	U G F *	159	165.5		23.8	3.00	4.69	pCi/L	104	60 - 140	0.24	1

Lab Sample ID: 400-176665-R-3-C MSBT
Matrix: Water
Analysis Batch: 445173

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 444398

Analyte	Sample Result	Sample Qual	Spike Added	MSBT Result	MSBT Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Gross Beta	3.35		274	263.7		28.1	4.00	3.36	pCi/L	95	60 - 140		

Lab Sample ID: 400-176665-R-3-D MSBTD
Matrix: Water
Analysis Batch: 445173

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 444398

Analyte	Sample Result	Sample Qual	Spike Added	MSBTD Result	MSBTD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Gross Beta	3.35		274	263.1		28.0	4.00	3.12	pCi/L	95	60 - 140	0.01	1

QC Sample Results

Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-444566/1-A
Matrix: Water
Analysis Batch: 447042

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 444566

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-15.18	U	17.3	17.3	50.0	36.7	pCi/L	09/30/19 14:01	10/21/19 09:57	1
Radium-228	8.858	U	21.2	21.2	50.0	31.2	pCi/L	09/30/19 14:01	10/21/19 09:57	1

Lab Sample ID: LCS 160-444566/2-A
Matrix: Water
Analysis Batch: 448663

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 444566

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Americium-241	136000	132600		15300		297	pCi/L	98	90 - 111
Cesium-137	44200	43580		4360		77.8	pCi/L	99	90 - 111
Cobalt-60	27900	27170		2690		46.1	pCi/L	98	89 - 110

Lab Sample ID: 400-176507-1 DU
Matrix: Water
Analysis Batch: 447329

Client Sample ID: MH-11
Prep Type: Total/NA
Prep Batch: 444566

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	9.80	U	13.06	U	14.6	50.0	16.1	pCi/L	0.14	1
Radium-228	13.6	U	4.343	U	7.35	50.0	32.2	pCi/L	0.38	1

Lab Chronicle

Client Sample ID: MH-11

Lab Sample ID: 400-176507-1

Date Collected: 09/16/19 08:30

Matrix: Water

Date Received: 09/18/19 09:07

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	459062	09/28/19 00:14	RS	TAL PEN
Total/NA	Analysis	8260C SIM		1	5 mL	5 mL	457818	09/20/19 09:52	RS	TAL PEN
Total/NA	Prep	3520C			241.2 mL	1 mL	458032	09/21/19 16:21	LGF	TAL PEN
Total/NA	Analysis	8270D		1	0.4 mL	1.0 mL	458836	09/26/19 23:21	VC1	TAL PEN
Total/NA	Prep	3520C	RERA		218.6 mL	1 mL	460310	10/06/19 18:56	LGF	TAL PEN
Total/NA	Analysis	8270D	RERA	1	0.4 mL	1.0 mL	461017	10/11/19 01:34	VC1	TAL PEN
Total/NA	Prep	3520C			241.2 mL	1 mL	458032	09/21/19 16:21	LGF	TAL PEN
Total/NA	Analysis	8270D LL		1			458759	09/26/19 23:21	KJA	TAL PEN
Total/NA	Prep	3520C			269.2 mL	5 mL	457986	09/20/19 22:48	CGM	TAL PEN
Total/NA	Analysis	8081B		1			458257	09/24/19 07:24	CS	TAL PEN
Total/NA	Prep	3520C			269.2 mL	5 mL	457986	09/20/19 22:48	CGM	TAL PEN
Total/NA	Analysis	8082A		1			458260	09/24/19 07:24	DS	TAL PEN
Total/NA	Analysis	218.7		1			459182	09/28/19 20:55	JAW	TAL PEN
Total/NA	Analysis	6850		1			147544	09/23/19 18:51	ELD	TAL BUR
Total/NA	Prep	1613B			901.3 mL	20 uL	329907	10/10/19 08:27	RDR	TAL SAC
Total/NA	Analysis	1613B		1			331185	10/15/19 14:21	ALM	TAL SAC
Total/NA	Prep	200.7/200.8			50 mL	50 mL	445578	10/09/19 13:12	LAM	TAL SL
Total/NA	Analysis	200.8		2			445866	10/11/19 03:50	FLC	TAL SL
Total/NA	Prep	200.8-1994 R5.4			50 mL	250 mL	589436	10/05/19 09:39	PG	TAL SAV
Total/NA	Analysis	200.8-1994 R5.4		1			589844	10/07/19 18:05	BJB	TAL SAV
Total/NA	Prep	245.1			50 mL	50 mL	589479	10/05/19 13:12	DB	TAL SAV
Total/NA	Analysis	245.1-1994 R3.0		1			589862	10/07/19 16:01	DB	TAL SAV
Total/NA	Analysis	350.1		1	10 mL	10 mL	457939	09/20/19 14:57	KJR	TAL PEN
Total/NA	Analysis	353.2		1	10 mL	10 mL	458214	09/23/19 13:13	KJR	TAL PEN
Total/NA	Prep	365.2/365.3/365			25 mL	25 mL	457944	09/20/19 16:44	HES	TAL PEN
Total/NA	Analysis	365.4		1	10 mL	10 mL	458500	09/24/19 18:21	JAT	TAL PEN
Total/NA	Prep	SM 4500 CN C			50 mL	50 mL	457594	09/18/19 20:45	HES	TAL PEN
Total/NA	Analysis	SM 4500 CN E		1	10 mL	10 mL	457681	09/19/19 10:02	HES	TAL PEN
Total/NA	Analysis	SM 4500 S2 D		1	40 mL	40 mL	458319	09/23/19 12:30	JP	TAL PEN
Total/NA	Prep	Evaporation			83.33 mL	1.0 g	444398	09/27/19 09:16	LTC	TAL SL
Total/NA	Analysis	900.0		1	1.0 mL	1.0 mL	445173	10/04/19 11:53	KLS	TAL SL
Total/NA	Prep	Fill_Geo-21			1000 mL	1.0 g	444566	09/30/19 14:01	KRS	TAL SL
Total/NA	Analysis	901.1		1			447042	10/21/19 15:37	KLS	TAL SL

Client Sample ID: MH-9

Lab Sample ID: 400-176507-2

Date Collected: 09/16/19 09:00

Matrix: Water

Date Received: 09/18/19 09:07

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	459062	09/28/19 00:40	RS	TAL PEN
Total/NA	Analysis	8260C SIM		1	5 mL	5 mL	457818	09/20/19 10:25	RS	TAL PEN
Total/NA	Prep	3520C			254 mL	1 mL	458032	09/21/19 16:21	LGF	TAL PEN
Total/NA	Analysis	8270D		1	0.4 mL	1.0 mL	458836	09/26/19 23:46	VC1	TAL PEN

Lab Chronicle

Client: Brown and Caldwell
Project/Site: Guam

Job ID: 400-176507-1

Client Sample ID: MH-9

Lab Sample ID: 400-176507-2

Date Collected: 09/16/19 09:00
Date Received: 09/18/19 09:07

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C	RERA		233 mL	1 mL	460310	10/06/19 18:56	LGF	TAL PEN
Total/NA	Analysis	8270D	RERA	1	0.4 mL	1.0 mL	461017	10/11/19 02:00	VC1	TAL PEN
Total/NA	Prep	3520C			254 mL	1 mL	458032	09/21/19 16:21	LGF	TAL PEN
Total/NA	Analysis	8270D LL		1			458759	09/26/19 23:38	KJA	TAL PEN
Total/NA	Prep	3520C			248.8 mL	5 mL	457986	09/20/19 22:48	CGM	TAL PEN
Total/NA	Analysis	8081B		1			458257	09/24/19 07:55	CS	TAL PEN
Total/NA	Prep	3520C			248.8 mL	5 mL	457986	09/20/19 22:48	CGM	TAL PEN
Total/NA	Analysis	8082A		1			458260	09/24/19 07:55	DS	TAL PEN
Total/NA	Analysis	218.7		1			459182	09/28/19 21:10	JAW	TAL PEN
Total/NA	Analysis	6850		1			147544	09/23/19 19:06	ELD	TAL BUR
Total/NA	Prep	1613B			962.1 mL	20 uL	329907	10/10/19 08:27	RDR	TAL SAC
Total/NA	Analysis	1613B		1			331185	10/15/19 14:59	ALM	TAL SAC
Total/NA	Prep	200.7/200.8			50 mL	50 mL	445578	10/09/19 13:12	LAM	TAL SL
Total/NA	Analysis	200.8		2			445866	10/11/19 03:57	FLC	TAL SL
Total/NA	Prep	200.8-1994 R5.4			50 mL	250 mL	589436	10/05/19 09:39	PG	TAL SAV
Total/NA	Analysis	200.8-1994 R5.4		1			589844	10/07/19 18:23	BJB	TAL SAV
Total/NA	Prep	245.1			50 mL	50 mL	589479	10/05/19 13:12	DB	TAL SAV
Total/NA	Analysis	245.1-1994 R3.0		1			589862	10/07/19 16:04	DB	TAL SAV
Total/NA	Analysis	350.1		1	10 mL	10 mL	457900	09/20/19 14:37	KJR	TAL PEN
Total/NA	Analysis	353.2		5	10 mL	10 mL	458214	09/23/19 13:22	KJR	TAL PEN
Total/NA	Prep	365.2/365.3/365			25 mL	25 mL	457944	09/20/19 16:44	HES	TAL PEN
Total/NA	Analysis	365.4		1	10 mL	10 mL	458500	09/24/19 18:22	JAT	TAL PEN
Total/NA	Prep	SM 4500 CN C			50 mL	50 mL	457594	09/18/19 20:45	HES	TAL PEN
Total/NA	Analysis	SM 4500 CN E		1	10 mL	10 mL	457681	09/19/19 10:02	HES	TAL PEN
Total/NA	Analysis	SM 4500 S2 D		1	40 mL	40 mL	458319	09/23/19 12:30	JP	TAL PEN
Total/NA	Prep	Evaporation			37.50 mL	1.0 g	444398	09/27/19 09:16	LTC	TAL SL
Total/NA	Analysis	900.0		1	1.0 mL	1.0 mL	445173	10/04/19 11:53	KLS	TAL SL
Total/NA	Prep	Fill_Geo-21			1000 mL	1.0 g	444566	09/30/19 14:01	KRS	TAL SL
Total/NA	Analysis	901.1		1			447330	10/23/19 19:07	KLS	TAL SL

Client Sample ID: WLIT

Lab Sample ID: 400-176507-3

Date Collected: 09/16/19 09:30
Date Received: 09/18/19 09:07

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	459062	09/28/19 01:06	RS	TAL PEN
Total/NA	Analysis	8260C SIM		1	5 mL	5 mL	457818	09/20/19 10:58	RS	TAL PEN
Total/NA	Prep	3520C			247.4 mL	1 mL	458032	09/21/19 16:21	LGF	TAL PEN
Total/NA	Analysis	8270D		1	0.4 mL	1.0 mL	458836	09/27/19 00:11	VC1	TAL PEN
Total/NA	Prep	3520C	RERA		235.4 mL	1 mL	460310	10/06/19 18:56	LGF	TAL PEN
Total/NA	Analysis	8270D	RERA	1	0.4 mL	1.0 mL	461017	10/11/19 02:26	VC1	TAL PEN
Total/NA	Prep	3520C			247.4 mL	1 mL	458032	09/21/19 16:21	LGF	TAL PEN
Total/NA	Analysis	8270D LL		1			458759	09/26/19 23:56	KJA	TAL PEN

1 2 3 4 5 6 7 8 9 10 11 12 13

Client Sample ID: WLIT

Lab Sample ID: 400-176507-3

Date Collected: 09/16/19 09:30

Matrix: Water

Date Received: 09/18/19 09:07

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			268 mL	5 mL	457986	09/20/19 22:48	CGM	TAL PEN
Total/NA	Analysis	8081B		1			458257	09/24/19 08:25	CS	TAL PEN
Total/NA	Prep	3520C			268 mL	5 mL	457986	09/20/19 22:48	CGM	TAL PEN
Total/NA	Analysis	8082A		1			458260	09/24/19 08:25	DS	TAL PEN
Total/NA	Analysis	218.7		1			459182	09/28/19 21:26	JAW	TAL PEN
Total/NA	Analysis	6850		1			147544	09/23/19 19:21	ELD	TAL BUR
Total/NA	Prep	1613B			1009 mL	20 uL	329907	10/10/19 08:27	RDR	TAL SAC
Total/NA	Analysis	1613B		1			331185	10/15/19 15:37	ALM	TAL SAC
Total/NA	Prep	200.7/200.8			50 mL	50 mL	445578	10/09/19 13:12	LAM	TAL SL
Total/NA	Analysis	200.8		2			445866	10/11/19 04:24	FLC	TAL SL
Total/NA	Prep	200.8-1994 R5.4			50 mL	250 mL	589438	10/05/19 09:43	PG	TAL SAV
Total/NA	Analysis	200.8-1994 R5.4		1			590056	10/08/19 21:00	BJB	TAL SAV
Total/NA	Prep	245.1			50 mL	50 mL	589479	10/05/19 13:12	DB	TAL SAV
Total/NA	Analysis	245.1-1994 R3.0		1			589862	10/07/19 16:08	DB	TAL SAV
Total/NA	Analysis	350.1		5	10 mL	10 mL	457939	09/20/19 15:28	KJR	TAL PEN
Total/NA	Analysis	353.2		1	10 mL	10 mL	458214	09/23/19 13:15	KJR	TAL PEN
Total/NA	Prep	365.2/365.3/365			25 mL	25 mL	457944	09/20/19 16:44	HES	TAL PEN
Total/NA	Analysis	365.4		1	10 mL	10 mL	458500	09/24/19 18:30	JAT	TAL PEN
Total/NA	Prep	SM 4500 CN C			50 mL	50 mL	457594	09/18/19 20:45	HES	TAL PEN
Total/NA	Analysis	SM 4500 CN E		1	10 mL	10 mL	457681	09/19/19 10:08	HES	TAL PEN
Total/NA	Analysis	SM 4500 S2 D		1	40 mL	40 mL	458319	09/23/19 12:30	JP	TAL PEN
Total/NA	Prep	Evaporation			46.30 mL	1.0 g	444398	09/27/19 09:16	LTC	TAL SL
Total/NA	Analysis	900.0		1	1.0 mL	1.0 mL	445173	10/04/19 16:31	KLS	TAL SL
Total/NA	Prep	Fill_Geo-21			1000 mL	1.0 g	444566	09/30/19 14:01	KRS	TAL SL
Total/NA	Analysis	901.1		1			447042	10/21/19 17:40	KLS	TAL SL

Client Sample ID: Method Blank

Lab Sample ID: MB 160-444398/1-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Evaporation			200.00 mL	1.0 g	444398	09/27/19 09:16	LTC	TAL SL
Total/NA	Analysis	900.0		1	1.0 mL	1.0 mL	445173	10/04/19 11:51	KLS	TAL SL

Client Sample ID: Method Blank

Lab Sample ID: MB 160-444566/1-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Fill_Geo-21			1000 mL	1.0 g	444566	09/30/19 14:01	KRS	TAL SL
Total/NA	Analysis	901.1		1			447042	10/21/19 09:57	KLS	TAL SL

Client Sample ID: Method Blank

Lab Sample ID: MB 160-445578/1-A

Date Collected: N/A
Date Received: N/A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.7/200.8			50 mL	50 mL	445578	10/09/19 13:12	LAM	TAL SL
Total/NA	Analysis	200.8		2			445866	10/11/19 03:37	FLC	TAL SL

Client Sample ID: Method Blank

Lab Sample ID: MB 200-147544/3

Date Collected: N/A
Date Received: N/A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6850		1			147544	09/23/19 17:04	ELD	TAL BUR

Client Sample ID: Method Blank

Lab Sample ID: MB 320-329907/1-A

Date Collected: N/A
Date Received: N/A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			1000 mL	20 uL	329907	10/10/19 08:27	RDR	TAL SAC
Total/NA	Analysis	1613B		1			331188	10/15/19 14:26	AS	TAL SAC

Client Sample ID: Method Blank

Lab Sample ID: MB 400-457594/1-A

Date Collected: N/A
Date Received: N/A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SM 4500 CN C			50 mL	50 mL	457594	09/18/19 20:45	HES	TAL PEN
Total/NA	Analysis	SM 4500 CN E		1	10 mL	10 mL	457681	09/19/19 09:56	HES	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-457818/4

Date Collected: N/A
Date Received: N/A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	5 mL	5 mL	457818	09/20/19 09:18	RS	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-457900/6

Date Collected: N/A
Date Received: N/A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	350.1		1	10 mL	10 mL	457900	09/20/19 14:08	KJR	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-457939/31

Date Collected: N/A
Date Received: N/A
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	350.1		1	10 mL	10 mL	457939	09/20/19 15:23	KJR	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-457944/1-A

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	365.2/365.3/365			25 mL	25 mL	457944	09/20/19 16:44	HES	TAL PEN
Total/NA	Analysis	365.4		1	10 mL	10 mL	458500	09/24/19 17:53	JAT	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-457986/1-A

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			250 mL	5 mL	457986	09/20/19 22:48	CGM	TAL PEN
Total/NA	Analysis	8081B		1			458257	09/24/19 02:22	CS	TAL PEN
Total/NA	Prep	3520C			250 mL	5 mL	457986	09/20/19 22:48	CGM	TAL PEN
Total/NA	Analysis	8082A		1			458260	09/24/19 02:22	DS	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-458032/1-A

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			250 mL	1 mL	458032	09/21/19 16:21	LGF	TAL PEN
Total/NA	Analysis	8270D		1			458836	09/26/19 17:01	VC1	TAL PEN
Total/NA	Prep	3520C			250 mL	1 mL	458032	09/21/19 16:21	LGF	TAL PEN
Total/NA	Analysis	8270D LL		1			458759	09/26/19 22:29	KJA	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-458214/14

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	353.2		1	10 mL	10 mL	458214	09/23/19 12:41	KJR	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-458319/3

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 S2 D		1	40 mL	40 mL	458319	09/23/19 12:30	JP	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-459062/20

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	459062	09/27/19 19:29	RS	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-459182/9

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	218.7		1			459182	09/28/19 17:49	JAW	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-460310/1-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			250 mL	1 mL	460310	10/06/19 18:56	LGF	TAL PEN
Total/NA	Analysis	8270D		1			461001	10/10/19 16:49	VC1	TAL PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 680-589436/1-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8-1994 R5.4			50 mL	250 mL	589436	10/05/19 09:39	PG	TAL SAV
Total/NA	Analysis	200.8-1994 R5.4		1			589844	10/07/19 16:39	BJB	TAL SAV

Client Sample ID: Method Blank

Lab Sample ID: MB 680-589438/1-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8-1994 R5.4			50 mL	250 mL	589438	10/05/19 09:43	PG	TAL SAV
Total/NA	Analysis	200.8-1994 R5.4		1			590056	10/08/19 20:28	BJB	TAL SAV

Client Sample ID: Method Blank

Lab Sample ID: MB 680-589479/1-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	245.1			50 mL	50 mL	589479	10/05/19 13:12	DB	TAL SAV
Total/NA	Analysis	245.1-1994 R3.0		1			589862	10/07/19 15:23	DB	TAL SAV

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 160-444398/2-A

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Evaporation			200.00 mL	1.0 g	444398	09/27/19 09:16	LTC	TAL SL
Total/NA	Analysis	900.0		1	1.0 mL	1.0 mL	445620	10/10/19 11:46	KLS	TAL SL

Client Sample ID: Lab Control Sample Lab Sample ID: LCS 160-444566/2-A

Date Collected: N/A **Matrix: Water**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Fill_Geo-21			1000 mL	1.0 g	444566	09/30/19 14:01	KRS	TAL SL
Total/NA	Analysis	901.1		1			448663	11/01/19 09:36	KLS	TAL SL

Client Sample ID: Lab Control Sample Lab Sample ID: LCS 160-445578/2-A

Date Collected: N/A **Matrix: Water**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.7/200.8			50 mL	50 mL	445578	10/09/19 13:12	LAM	TAL SL
Total/NA	Analysis	200.8		2			445866	10/11/19 03:43	FLC	TAL SL

Client Sample ID: Lab Control Sample Lab Sample ID: LCS 200-147544/4

Date Collected: N/A **Matrix: Water**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6850		1			147544	09/23/19 17:19	ELD	TAL BUR

Client Sample ID: Lab Control Sample Lab Sample ID: LCS 320-329907/2-A

Date Collected: N/A **Matrix: Water**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			1000 mL	20 uL	329907	10/10/19 08:27	RDR	TAL SAC
Total/NA	Analysis	1613B		1			331188	10/15/19 15:12	AS	TAL SAC

Client Sample ID: Lab Control Sample Lab Sample ID: LCS 400-457594/2-A

Date Collected: N/A **Matrix: Water**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SM 4500 CN C			50 mL	50 mL	457594	09/18/19 20:45	HES	TAL PEN
Total/NA	Analysis	SM 4500 CN E		1	10 mL	10 mL	457681	09/19/19 09:56	HES	TAL PEN

Client Sample ID: Lab Control Sample Lab Sample ID: LCS 400-457818/1002

Date Collected: N/A **Matrix: Water**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	5 mL	5 mL	457818	09/20/19 08:10	RS	TAL PEN

Lab Chronicle

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-457900/7
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	350.1		1	10 mL	10 mL	457900	09/20/19 14:09	KJR	TAL PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-457939/32
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	350.1		1	10 mL	10 mL	457939	09/20/19 15:24	KJR	TAL PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-457944/2-A
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	365.2/365.3/365			25 mL	25 mL	457944	09/20/19 16:44	HES	TAL PEN
Total/NA	Analysis	365.4		1	10 mL	10 mL	458500	09/24/19 17:56	JAT	TAL PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-457986/2-A
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			250 mL	5 mL	457986	09/20/19 22:48	CGM	TAL PEN
Total/NA	Analysis	8082A		1			458260	09/24/19 02:52	DS	TAL PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-457986/4-A
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			250 mL	5 mL	457986	09/20/19 22:48	CGM	TAL PEN
Total/NA	Analysis	8081B		1			458257	09/24/19 03:52	CS	TAL PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-458032/2-A
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			250 mL	1 mL	458032	09/21/19 16:21	LGF	TAL PEN
Total/NA	Analysis	8270D LL		5			458759	09/26/19 22:46	KJA	TAL PEN

Lab Chronicle

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-458214/15

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	353.2		1	10 mL	10 mL	458214	09/23/19 12:42	KJR	TAL PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-458319/4

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 S2 D		1	40 mL	40 mL	458319	09/23/19 12:30	JP	TAL PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-459062/1006

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	459062	09/27/19 18:18	RS	TAL PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-459182/11

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	218.7		1			459182	09/28/19 18:20	JAW	TAL PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 400-460310/2-A

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			250 mL	1 mL	460310	10/06/19 18:56	LGF	TAL PEN
Total/NA	Analysis	8270D		1			461117	10/11/19 11:00	VC1	TAL PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 680-589436/2-A

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8-1994 R5.4			50 mL	250 mL	589436	10/05/19 09:39	PG	TAL SAV
Total/NA	Analysis	200.8-1994 R5.4		1			589844	10/07/19 16:43	BJB	TAL SAV

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 680-589438/2-A

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8-1994 R5.4			50 mL	250 mL	589438	10/05/19 09:43	PG	TAL SAV
Total/NA	Analysis	200.8-1994 R5.4		1			590056	10/08/19 20:31	BJB	TAL SAV

Lab Chronicle

Client: Brown and Caldwell
Project/Site: Guam

Job ID: 400-176507-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 680-589479/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	245.1			50 mL	50 mL	589479	10/05/19 13:12	DB	TAL SAV
Total/NA	Analysis	245.1-1994 R3.0		1			589862	10/07/19 15:26	DB	TAL SAV

Client Sample ID: Lab Control Sample

Lab Sample ID: LCSB 160-444398/3-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Evaporation			200.00 mL	1.0 g	444398	09/27/19 09:16	LTC	TAL SL
Total/NA	Analysis	900.0		1	1.0 mL	1.0 mL	445173	10/04/19 11:52	KLS	TAL SL

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 400-457986/3-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			250 mL	5 mL	457986	09/20/19 22:48	CGM	TAL PEN
Total/NA	Analysis	8082A		1			458260	09/24/19 03:22	DS	TAL PEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 400-457986/5-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			250 mL	5 mL	457986	09/20/19 22:48	CGM	TAL PEN
Total/NA	Analysis	8081B		1			458257	09/24/19 04:23	CS	TAL PEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 400-458032/3-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			250 mL	1 mL	458032	09/21/19 16:21	LGF	TAL PEN
Total/NA	Analysis	8270D LL		5			459133	09/28/19 21:29	KJA	TAL PEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 400-458319/5

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 S2 D		1	40 mL	40 mL	458319	09/23/19 12:30	JP	TAL PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-459182/12

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	218.7		1			459182	09/28/19 18:35	JAW	TAL PEN

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 400-460310/3-A

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			250 mL	1 mL	460310	10/06/19 18:56	LGF	TAL PEN
Total/NA	Analysis	8270D		1			461117	10/11/19 11:26	VC1	TAL PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: MRL 400-457900/5

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	350.1		1	10 mL	10 mL	457900	09/20/19 14:07	KJR	TAL PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: MRL 400-457939/30

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	350.1		1	10 mL	10 mL	457939	09/20/19 15:21	KJR	TAL PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: MRL 400-458214/13

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	353.2		1	10 mL	10 mL	458214	09/23/19 12:40	KJR	TAL PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: MRL 400-458319/1

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	458319	09/23/19 12:30	JP	TAL PEN

Client Sample ID: Lab Control Sample
Lab Sample ID: MRL 400-458500/13

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	365.4		1	10 mL	10 mL	458500	09/24/19 16:44	JAT	TAL PEN

Lab Chronicle

Client: Brown and Caldwell
Project/Site: Guam

Job ID: 400-176507-1

Client Sample ID: Lab Control Sample **Lab Sample ID: MRL 400-459182/10**
Date Collected: N/A **Matrix: Water**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	218.7		1			459182	09/28/19 18:04	JAW	TAL PEN

Client Sample ID: Matrix Spike **Lab Sample ID: 400-176413-D-1 MS**
Date Collected: N/A **Matrix: Water**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Analysis	SM 4500 S2 D		1	40 mL	40 mL	458319	09/23/19 12:30	JP	TAL PEN

Client Sample ID: Matrix Spike Duplicate **Lab Sample ID: 400-176413-D-1 MSD**
Date Collected: N/A **Matrix: Water**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Analysis	SM 4500 S2 D		1	40 mL	40 mL	458319	09/23/19 12:30	JP	TAL PEN

Client Sample ID: Matrix Spike **Lab Sample ID: 400-176415-O-1-B MS**
Date Collected: N/A **Matrix: Water**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SM 4500 CN C			50 mL	50 mL	457594	09/18/19 20:45	HES	TAL PEN
Total/NA	Analysis	SM 4500 CN E		1	10 mL	10 mL	457681	09/19/19 09:56	HES	TAL PEN

Client Sample ID: Matrix Spike Duplicate **Lab Sample ID: 400-176415-O-1-C MSD**
Date Collected: N/A **Matrix: Water**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SM 4500 CN C			50 mL	50 mL	457594	09/18/19 20:45	HES	TAL PEN
Total/NA	Analysis	SM 4500 CN E		1	10 mL	10 mL	457681	09/19/19 09:56	HES	TAL PEN

Client Sample ID: MH-11 **Lab Sample ID: 400-176507-1 MS**
Date Collected: 09/16/19 08:30 **Matrix: Water**
Date Received: 09/18/19 09:07

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	350.1		1	10 mL	10 mL	457939	09/20/19 14:58	KJR	TAL PEN

Client Sample ID: MH-11 **Lab Sample ID: 400-176507-1 MSD**
Date Collected: 09/16/19 08:30 **Matrix: Water**
Date Received: 09/18/19 09:07

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	350.1		1	10 mL	10 mL	457939	09/20/19 14:59	KJR	TAL PEN

Lab Chronicle

Client: Brown and Caldwell
Job ID: 400-176507-1
Project/Site: Guam

Client Sample ID: MH-9
Lab Sample ID: 400-176507-2 MS

Date Collected: 09/16/19 09:00
Matrix: Water
Date Received: 09/18/19 09:07

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	5 mL	5 mL	457818	09/20/19 13:13	RS	TAL PEN

Client Sample ID: MH-9
Lab Sample ID: 400-176507-2 MSD

Date Collected: 09/16/19 09:00
Matrix: Water
Date Received: 09/18/19 09:07

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	5 mL	5 mL	457818	09/20/19 13:46	RS	TAL PEN

Client Sample ID: Matrix Spike
Lab Sample ID: 400-176516-L-13 MS

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	353.2		1	10 mL	10 mL	458214	09/23/19 12:44	KJR	TAL PEN

Client Sample ID: Matrix Spike Duplicate
Lab Sample ID: 400-176516-L-13 MSD

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	353.2		1	10 mL	10 mL	458214	09/23/19 12:45	KJR	TAL PEN

Client Sample ID: Matrix Spike
Lab Sample ID: 400-176536-N-1 MS

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	350.1		1	10 mL	10 mL	457939	09/20/19 15:14	KJR	TAL PEN

Client Sample ID: Matrix Spike Duplicate
Lab Sample ID: 400-176536-N-1 MSD

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	350.1		1	10 mL	10 mL	457939	09/20/19 15:15	KJR	TAL PEN

Client Sample ID: Matrix Spike
Lab Sample ID: 400-176541-A-1 MS

Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	459062	09/27/19 20:21	RS	TAL PEN

Lab Chronicle

Client Sample ID: Matrix Spike Duplicate

Lab Sample ID: 400-176541-A-1 MSD
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	459062	09/27/19 20:47	RS	TAL PEN

Client Sample ID: Matrix Spike

Lab Sample ID: 400-176543-N-5 MS
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	353.2		5	10 mL	10 mL	458214	09/23/19 13:18	KJR	TAL PEN

Client Sample ID: Matrix Spike Duplicate

Lab Sample ID: 400-176543-N-5 MSD
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	353.2		5	10 mL	10 mL	458214	09/23/19 13:18	KJR	TAL PEN

Client Sample ID: Matrix Spike

Lab Sample ID: 400-176601-L-1-E MS
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	365.2/365.3/365			1.0186 g	25 mL	457944	09/20/19 16:44	HES	TAL PEN
Total/NA	Analysis	365.4		1	10 mL	10 mL	458500	09/24/19 17:58	JAT	TAL PEN

Client Sample ID: Matrix Spike Duplicate

Lab Sample ID: 400-176601-L-1-F MSD
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	365.2/365.3/365			1.0189 g	25 mL	457944	09/20/19 16:44	HES	TAL PEN
Total/NA	Analysis	365.4		1	10 mL	10 mL	458500	09/24/19 17:59	JAT	TAL PEN

Client Sample ID: Matrix Spike

Lab Sample ID: 400-176603-B-1 MS
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	350.1		1	10 mL	10 mL	457900	09/20/19 14:11	KJR	TAL PEN

Client Sample ID: Matrix Spike Duplicate

Lab Sample ID: 400-176603-B-1 MSD
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	350.1		1	10 mL	10 mL	457900	09/20/19 14:12	KJR	TAL PEN

Client Sample ID: Matrix Spike
Lab Sample ID: 400-176665-E-3-A MS
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			1006.7 mL	20 uL	329907	10/10/19 08:27	RDR	TAL SAC
Total/NA	Analysis	1613B		1			331185	10/15/19 18:09	ALM	TAL SAC

Client Sample ID: Matrix Spike Duplicate
Lab Sample ID: 400-176665-E-3-B MSD
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1613B			990.5 mL	20 uL	329907	10/10/19 08:27	RDR	TAL SAC
Total/NA	Analysis	1613B		1			331185	10/15/19 18:46	ALM	TAL SAC

Client Sample ID: Matrix Spike
Lab Sample ID: 400-176665-R-3-A MS
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Evaporation			62.49 mL	1.0 g	444398	09/27/19 09:16	LTC	TAL SL
Total/NA	Analysis	900.0		1	1.0 mL	1.0 mL	445173	10/04/19 16:33	KLS	TAL SL

Client Sample ID: Matrix Spike Duplicate
Lab Sample ID: 400-176665-R-3-B MSD
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Evaporation			62.49 mL	1.0 g	444398	09/27/19 09:16	LTC	TAL SL
Total/NA	Analysis	900.0		1	1.0 mL	1.0 mL	445173	10/04/19 16:33	KLS	TAL SL

Client Sample ID: Matrix Spike
Lab Sample ID: 400-176665-R-3-C MSBT
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Evaporation			62.49 mL	1.0 g	444398	09/27/19 09:16	LTC	TAL SL
Total/NA	Analysis	900.0		1	1.0 mL	1.0 mL	445173	10/04/19 16:33	KLS	TAL SL

Client Sample ID: Matrix Spike Duplicate
Lab Sample ID: 400-176665-R-3-D MSBTD
Date Collected: N/A
Matrix: Water
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Evaporation			62.50 mL	1.0 g	444398	09/27/19 09:16	LTC	TAL SL
Total/NA	Analysis	900.0		1	1.0 mL	1.0 mL	445173	10/04/19 16:34	KLS	TAL SL

Lab Chronicle

Client: Brown and Caldwell
Project/Site: Guam

Job ID: 400-176507-1

Client Sample ID: Matrix Spike

Lab Sample ID: 400-176665-S-3-A MS

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.7/200.8			50 mL	50 mL	445578	10/09/19 13:12	LAM	TAL SL
Total/NA	Analysis	200.8		2			445866	10/11/19 04:57	FLC	TAL SL

Client Sample ID: Matrix Spike Duplicate

Lab Sample ID: 400-176665-S-3-B MSD

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.7/200.8			50 mL	50 mL	445578	10/09/19 13:12	LAM	TAL SL
Total/NA	Analysis	200.8		2			445866	10/11/19 05:04	FLC	TAL SL

Client Sample ID: Matrix Spike

Lab Sample ID: 400-176665-T-3 MS

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	218.7		1			459182	09/28/19 19:06	JAW	TAL PEN

Client Sample ID: Matrix Spike Duplicate

Lab Sample ID: 400-176665-T-3 MSD

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	218.7		1			459182	09/28/19 19:22	JAW	TAL PEN

Client Sample ID: Matrix Spike

Lab Sample ID: 400-176665-T-3-E MS

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	245.1			50 mL	50 mL	589479	10/05/19 13:12	DB	TAL SAV
Total/NA	Analysis	245.1-1994 R3.0		1			589862	10/07/19 15:33	DB	TAL SAV

Client Sample ID: Matrix Spike Duplicate

Lab Sample ID: 400-176665-T-3-F MSD

Date Collected: N/A
Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	245.1			50 mL	50 mL	589479	10/05/19 13:12	DB	TAL SAV
Total/NA	Analysis	245.1-1994 R3.0		1			589862	10/07/19 15:37	DB	TAL SAV

Client Sample ID: Matrix Spike Lab Sample ID: 400-176928-A-1-F MS

Date Collected: N/A **Matrix: Water**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8-1994 R5.4			50 mL	250 mL	589438	10/05/19 09:43	PG	TAL SAV
Total/NA	Analysis	200.8-1994 R5.4		1			590056	10/08/19 20:45	BJB	TAL SAV

Client Sample ID: Matrix Spike Duplicate Lab Sample ID: 400-176928-A-1-G MSD

Date Collected: N/A **Matrix: Water**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8-1994 R5.4			50 mL	250 mL	589438	10/05/19 09:43	PG	TAL SAV
Total/NA	Analysis	200.8-1994 R5.4		1			590056	10/08/19 20:49	BJB	TAL SAV

Client Sample ID: Matrix Spike Lab Sample ID: 400-177296-F-6-B MS

Date Collected: N/A **Matrix: Water**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8-1994 R5.4			50 mL	250 mL	589436	10/05/19 09:39	PG	TAL SAV
Total/NA	Analysis	200.8-1994 R5.4		1			589844	10/07/19 17:08	BJB	TAL SAV

Client Sample ID: Matrix Spike Duplicate Lab Sample ID: 400-177296-F-6-C MSD

Date Collected: N/A **Matrix: Water**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8-1994 R5.4			50 mL	250 mL	589436	10/05/19 09:39	PG	TAL SAV
Total/NA	Analysis	200.8-1994 R5.4		1			589844	10/07/19 17:11	BJB	TAL SAV

Client Sample ID: Matrix Spike Lab Sample ID: 660-97321-A-4 MS

Date Collected: N/A **Matrix: Water**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 S2 D		1	40 mL	40 mL	458319	09/23/19 12:30	JP	TAL PEN

Client Sample ID: Matrix Spike Duplicate Lab Sample ID: 660-97321-A-4 MSD

Date Collected: N/A **Matrix: Water**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 S2 D		1	40 mL	40 mL	458319	09/23/19 12:30	JP	TAL PEN

Lab Chronicle

Client: Brown and Caldwell
Project/Site: Guam

Job ID: 400-176507-1

Client Sample ID: MH-11
Date Collected: 09/16/19 08:30
Date Received: 09/18/19 09:07

Lab Sample ID: 400-176507-1 DU
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SM 4500 CN C			50 mL	50 mL	457594	09/18/19 20:45	HES	TAL PEN
Total/NA	Analysis	SM 4500 CN E		1	10 mL	10 mL	457681	09/19/19 10:02	HES	TAL PEN
Total/NA	Prep	Fill_Geo-21			1000 mL	1.0 g	444566	09/30/19 14:01	KRS	TAL SL
Total/NA	Analysis	901.1		1			447329	10/23/19 19:06	KLS	TAL SL

Laboratory References:

TAL BUR = Eurofins TestAmerica, Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990
TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
TAL SAV = Eurofins TestAmerica, Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858
TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Method Summary

Client: Brown and Caldwell
Project/Site: Guam

Job ID: 400-176507-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL PEN
8260C SIM	Volatile Organic Compounds (GC/MS)	SW846	TAL PEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL PEN
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	TAL PEN
8081B	Organochlorine Pesticides (GC)	SW846	TAL PEN
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL PEN
218.7	Chromium, Hexavalent (Ion Chromatography)	EPA	TAL PEN
6850	Perchlorate by LC/MS or LC/MS/MS	EPA	TAL BUR
1613B	Tetra Chlorinated Dioxins & Furans ID HRGC/HRMS	40CFR136A	TAL SAC
200.8	Metals (ICP/MS)	EPA	TAL SL
200.8-1994 R5.4	Metals (ICP/MS)	EPA	TAL SAV
245.1-1994 R3.0	Mercury (CVAA)	EPA	TAL SAV
350.1	Nitrogen, Ammonia	MCAWW	TAL PEN
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL PEN
365.4	Phosphorus, Total	EPA	TAL PEN
SM 4500 CN E	Cyanide, Total	SM	TAL PEN
SM 4500 S2 D	Sulfide, Total	SM	TAL PEN
900.0	Gross Alpha and Gross Beta Radioactivity	EPA	TAL SL
901.1	Radium-226 & Other Gamma Emitters (GS)	EPA	TAL SL
1613B	Separatory Funnel (L/L) Extraction with Soxhlet Extraction of Dioxin and Furans	40CFR136A	TAL SAC
200.7/200.8	Preparation, Metals	EPA	TAL SL
200.8-1994 R5.4	Preparation, Total Metals	EPA	TAL SAV
245.1	Preparation, Mercury	EPA	TAL SAV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL PEN
365.2/365.3/365	Phosphorus, Total	MCAWW	TAL PEN
5030C	Purge and Trap	SW846	TAL PEN
Evaporation	Preparation, Evaporation	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL
SM 4500 CN C	Cyanide, Distillation	SM	TAL PEN

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

TAL BUR = Eurofins TestAmerica, Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

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

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information

Client Contact: Jaclyn Lauer
Company: Brown and Caldwell
Address: 414 West Soledad Ave, Suite 602
City: Hagatna
State, Zip: GU, 96910
Phone: (770) 673-3641 (Tel)
Email: jlauer@brwncald.com
Project Name: Ordot Dump O&M - Groundwater/Surface Water
Site:

Sampler:
Phone:
Due Date Requested:
TAT Requested (days):
PO #: Purchase Order not required
WO #:
Project #:
SSOW#:

Lab PM: Swafford, Mark
E-Mail: mark.swafford@testamericainc.com

Carrier Tracking No(s):

COC No:
Page:
Job #:

Analysis Requested

400-176507 COC

Preservation Codes:
A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)
Other:

Sample Identification	**Sample Date**	**Sample Time**	**Sample Type (C=Comp, G=grab)**	**Matrix** (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	**Field Filtered Sample (Yes or No)**	**Perform MS/MSD (Yes or No)**	**901.1_Ra - Radium-226/228**	**200.8 - Uranium**	**900.0 - Gross Alpha and Gross Beta**	**6850 - Perchlorate**	**1613B_Tetras - TCDD**	**8081B, 8082A**	**8270D, 8270D_LL**	**350.1, 353.2_Pres, 365.4**	**200.8_CWA, 245.1**	**8260C - TCL 8260 Volatiles**	**8260C_SIM - 1,4-Dioxane**	**Total Number of containers**	**Special Instructions/Note:**
				Preservation Code:			D	D	D	N	N	N	N	S	D	A	A		
MH-11	9/16/19	8:30	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X		Perchlorate sample was field filtered
MH-9	9/16/19	9:00	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X		Perchlorate sample was field filtered
WLIT	9/16/19	9:30	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X		Perchlorate sample was field filtered
				Water															
				Water															
				Water															
				Water															
				Water															
				Water															
				Water															
				Water															

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ______ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date: Time: Method of Shipment:

Relinquished by: Billy Janasak	Date/Time: 9/16/2019 10:00	Company BC	Received by: N Meadaway	Date/Time: 9/18/19 907	Company TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 13.8C, 16.1°C 12.9°C JRS

Ver: 08/04/2016

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information
Client Contact: Jaclyn Lauer
Company: Brown and Caldwell
Address: 414 West Soledad Ave, Suite 602
City: Hagatna
State, Zip: GU, 96910
Phone: (770) 673-3641 (Tel)
Email: jlauer@brwncald.com
Project Name: Ordot Dump O&M - Groundwater/Surface Water
Site:

Sampler:
Phone:
Due Date Requested:
TAT Requested (days):
PO #: Purchase Order not required
WO #:
Project #:
SSOW#:

Lab PM: Swafford, Mark
E-Mail: mark.swafford@testamericainc.com

Carrier Tracking No(s):

COC No:
Page:
Job #:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	**Sample Date**	**Sample Time**	**Sample Type (C=Comp, G=grab)**	**Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)**	**Field Filtered Sample (Yes or No)**	**Perform MS/MSD (Yes or No)**	**218.7 - Hexavalent Chromium**	**SM4500_S2_D - Sulfide, Total**	**4500_CN_E - Cyanide, Total**											**Total Number of containers**	**Special Instructions/Note:**
				Preservation Code:				CB	B												
MH-11	9/16/19	8:30	G	Water	N	N	X	X	X												
MH-9	9/16/19	9:00	G	Water	**N**	N	X	X	X												
WLIT	9/16/19	9:30	G	Water	**N**	N	X	X	X												
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ________ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:
Date:
Time:
Method of Shipment:

Relinquished by: Billy Janasak	Date/Time: 9/16/2019 10:00	Company BC	Received by: M Madaway	Date/Time: 9/18/19 907	Company TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 3.8°C, 6.1°C, 2.9°C IR8

Ver: 08/04/2016

Eurofins TestAmerica, Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone: 850-474-1001 Fax: 850-478-2671

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Swafford, Mark H	Carrier Tracking No(s):	COC No: 400-221738.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: mark.swafford@testamericainc.com	State of Origin: Guam	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; ISO/IEC 17025 - ANAB		Job #: 400-176507-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 9/30/2019			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Guam	Project #: 40009535			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	901.1_Ra/Fill_Geo_21 Radium-226/228	200.8/200_2%P Uranium	900.0/Evaporation Gross Alpha and Gross Beta	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MH-11 (400-176507-1)	9/16/19	08:30 West		Water			X	X	X	1	
MH-9 (400-176507-2)	9/16/19	09:00 West		Water			X	X	X	1	
WLIT (400-176507-3)	9/16/19	09:30 West		Water			X	X	X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification

Unconfirmed

Deliverable Requested: I, II, III, IV, Other (specify)

Primary Deliverable Rank: 2

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ________ *Months*

Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date: Time: Method of Shipment:

Relinquished by:	Date/Time: 9-18-19 1630	Company TA-Pen	Received by: Michael Flum	Date/Time: 9-19-19 09:10	Company TA SD
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No

Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

Chain of Custody Record

eurofins Environment Testing TestAmerica

Client Information (Sub Contract Lab)
Client Contact: Shipping/Receiving
Company: TestAmerica Laboratories, Inc.
Address: 13715 Rider Trail North,
City: Earth City
State, Zip: MO, 63045
Phone: 314-298-8566(Tel) 314-298-8757(Fax)
Email:
Project Name: Guam
Site:

Sampler:
Phone:
Due Date Requested: 10/17/2019
TAT Requested (days):
PO #:
WO #:
Project #: 40009535
SSOW#:

Lab PM: Swafford, Mark H
E-Mail: mark.swafford@testamericainc.com
Accreditations Required (See note): DoD - A2LA; ISO/IEC 17025 - ANAB

Carrier Tracking No(s):
State of Origin: Guam

COC No: 320-160301.1
Page: Page 1 of 1
Job #: 400-176507-1

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	901.1_Ra/Fill_Geo_21 Radium-226/228	200.8/200_2%P Uranium	900.0/Evaporation Gross Alpha and Gross Beta	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MH-11 (400-176507-1)	9/16/19	08:30 West		Water			X	X	X	2	
MH-9 (400-176507-2)	9/16/19	09:00 West		Water			X	X	X	2	
WLIT (400-176507-3)	9/16/19	09:30 West		Water			X	X	X	2	

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ________ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)
Primary Deliverable Rank: 2
Special Instructions/QC Requirements:

Empty Kit Relinquished by:
Date:
Time:
Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	9/26/19 1630	ETTAS	Michael [illegible]	9-27-19 09:00	TASR

Custody Seals Intact: △ Yes △ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica, Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone: 850-474-1001 Fax: 850-478-2671

Chain of Custody Record

400-176507 Chain of Custody

Environment Testing
TestAmerica

Client Information (Sub Contract Lab)

Sampler:

Lab PM: Swafford, Mark H

+4.1

Client Contact: Shipping/Receiving

Phone:

E-Mail: mark.swafford@testamericainc.com

State of Origin: Guam

Page: Page 1 of 1

Company: TestAmerica Laboratories, Inc.

Accreditations Required (See note): DoD - A2LA; ISO/IEC 17025 - ANAB

Job #: 400-176507-1

Address: 30 Community Drive, Suite 11,

Due Date Requested: 9/30/2019

City: South Burlington

TAT Requested (days):

State, Zip: VT, 05403

Phone: 802-660-1990(Tel) 802-660-1919(Fax)

PO #:

Email:

WO #:

Project Name: Guam

Project #: 40009535

Site:

SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850/ Perchlorate	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MH-11 (400-176507-1)	9/16/19	08:30 West		Water			X	1	
MH-9 (400-176507-2)	9/16/19	09:00 West		Water			X	1	
WLIT (400-176507-3)	9/16/19	09:30 West		Water			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification

Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ______ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:

Date:

Time:

Method of Shipment:

Relinquished by: Kathy R Auer	Date/Time: 9-18-19 1700	Company: TA-Pen	Received by:	Date/Time: 9/19/19 10:28	Company: TABurl
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: [✓ Yes] Δ No

Custody Seal No.: 107133

Cooler Temperature(s) °C and Other Remarks: 0.6

Ver: 01/16/2019

estAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Part # 159469-434 RIT2 EXP 04/20

ORIGIN ID:PNSA (850) 474-1001
SAMPLE RECEIVING
TEST AMERICA PENSACOLA
3355 MCLEMORE DR

PENSACOLA, FL 32514
UNITED STATES US

SHIP DATE: 18SEP19
ACTWGT: 19.15 LB
CAD: 0335906/CAFE3211

BILL RECIPIENT

551C1/9D0471D4C

TO **SAMPLE CONTROL**
TESTAMERICA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660 - 1990
INV:
PO:

REF:

DEPT:

FedEx
Express

E

J181118090501uv

TRK# 0201 **4535 0243 7650**

THU - 19 SEP 10:30A
PRIORITY OVERNIGHT

XH BTVA

05403
VT-US **BTV**

Eurofins TestAmerica, Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone: 850-474-1001 Fax: 850-478-2671

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)
Sampler:
Lab PM: Swafford, Mark H
Carrier Tracking No(s):
COC No: 400-221746.1
Client Contact: Shipping/Receiving
Phone:
E-Mail: mark.swafford@testamericainc.com
State of Origin: Guam
Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.
Accreditations Required (See note): DoD - A2LA; ISO/IEC 17025 - ANAB
Job #: 400-176507-1
Address: 880 Riverside Parkway, ,
Due Date Requested: 9/30/2019
City: West Sacramento
TAT Requested (days):
State, Zip: CA, 95605
Phone: 916-373-5600(Tel) 916-372-1059(Fax)
PO #:
Email:
WO #:
Project Name: Guam
Project #: 40009535
Site:
SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B_Tetras/1613B_Sox_Sep_P 1613B - TCDD	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MH-11 (400-176507-1)	9/16/19	08:30 West		Water			X	2	
MH-9 (400-176507-2)	9/16/19	09:00 West		Water			X	2	
WLIT (400-176507-3)	9/16/19	09:30 West		Water			X	2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification
Unconfirmed
Deliverable Requested: I, II, III, IV, Other (specify)
Primary Deliverable Rank: 2

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ________ *Months*
Special Instructions/QC Requirements:

Empty Kit Relinquished by:
Date:
Time:
Method of Shipment:

Relinquished by: Kathy R	Date/Time: 9-18-19 1700	Company TAIRV	Received by:	Date/Time: 9/19/19 920	Company ETA - SAC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ▲ Yes △ No
Custody Seal No.: 107 1327
Cooler Temperature(s) °C and Other Remarks: 20.0°C

Ver: 01/16/2019

Eurofins TestAmerica, Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone: 850-474-1001 Fax: 850-478-2671

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Swafford, Mark H	Carrier Tracking No(s):	COC No: 400-222109.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: mark.swafford@testamericainc.com	State of Origin: Guam	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; ISO/IEC 17025 - ANAB		Job #: 400-176507-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 10/11/2019	**Analysis Requested**		**Preservation Codes:**
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Guam	Project #: 40009535			
Site:	SSOW#:			Other:

Preservation Codes:
A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B_Tetras/1613B_Sox_Sep_P 1613B - TCDD	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MH-11 (400-176507-1)	9/16/19	08:30 West		Water			X	2	
MH-9 (400-176507-2)	9/16/19	09:00 West		Water			X	2	
WLIT (400-176507-3)	9/16/19	09:30 West		Water			X	2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ________ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)
Primary Deliverable Rank: 2
Special Instructions/QC Requirements:

Empty Kit Relinquished by:
Date:
Time:
Method of Shipment:

Relinquished by:	Date/Time: 9/23/19 1630	Company TA/Gu	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: ob: 2.0°c corr: 2.1°C

Ver: 01/16/2019

Eurofins TestAmerica, Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone: 850-474-1001 Fax: 850-478-2671

Chain of Custody Record

eurofins Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Swafford, Mark H	Carrier Tracking No(s):	COC No: 400-223050.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: mark.swafford@testamericainc.com	State of Origin: Guam	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; ISO/IEC 17025 - ANAB		Job #: 400-176507-1
Address: 5102 LaRoche Avenue,	Due Date Requested: 10/14/2019	**Analysis Requested**		**Preservation Codes:**
City: Savannah	TAT Requested (days):			
State, Zip: GA, 31404				
Phone: 912-354-7858(Tel) 912-352-0165(Fax)	PO #:			
Email:	WO #:			
Project Name: Guam	Project #: 40009535			
Site:	SSOW#:			Other:

Preservation Codes:
A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8_CWA/200.8_P_TOT Metals	245.1/245.1_Prep Mercury (CVAA)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MH-11 (400-176507-1)	9/16/19	08:30 West		Water			X	X	1	LEVEL 4 PACKAGE
MH-9 (400-176507-2)	9/16/19	09:00 West		Water			X	X	1	LEVEL 4 PACKAGE
WLIT (400-176507-3)	9/16/19	09:30 West		Water			X	X	1	LEVEL 4 PACKAGE

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ________ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date: Time: Method of Shipment:

Relinquished by: Kathy R Auer	Date/Time: 10-2-19 1400	Company TAPEN	Received by:	Date/Time: 10-3-19 930	Company TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 16.8/16.7		

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: Brown and Caldwell

Job Number: 400-176507-1

Login Number: 176507
List Number: 1
Creator: Brown, Nathan

List Source: Eurofins TestAmerica, Pensacola

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.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Water present in cooler; indicates evidence of melted ice.
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	True	13.8°C, 16.1°C, 12.9°C IR8
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	

Login Sample Receipt Checklist

Client: Brown and Caldwell

Job Number: 400-176507-1

Login Number: 176507
List Number: 2
Creator: Mohn, Taylor J

List Source: Eurofins TestAmerica, Burlington
List Creation: 09/19/19 12:33 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	1071333
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	0.8ºC
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?	N/A	Received project as a subcontract.
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.	N/A	
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	

Login Sample Receipt Checklist

Client: Brown and Caldwell

Job Number: 400-176507-1

Login Number: 176507
List Number: 4
Creator: Thompson, Sarah W

List Source: Eurofins TestAmerica, Sacramento
List Creation: 09/19/19 05:21 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1071327
Sample custody seals, if present, are intact.	N/A	
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.	False	Samples were out of temp. Cooler had no ice and temp blank not present.
Cooler Temperature is recorded.	True	20.0c
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?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Brown and Caldwell

Job Number: 400-176507-1

Login Number: 176507
List Number: 5
Creator: Thompson, Sarah W

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1070557
Sample custody seals, if present, are intact.	N/A	
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	2.0c cor 2.1c, 1.2c cor 1.3c
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?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Brown and Caldwell

Job Number: 400-176507-1

Login Number: 176507
List Number: 6
Creator: Sims, Robert D

List Source: Eurofins TestAmerica, Savannah
List Creation: 10/03/19 04:03 PM

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?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Brown and Caldwell

Job Number: 400-176507-1

Login Number: 176507
List Number: 3
Creator: Hellm, Michael

List Source: Eurofins TestAmerica, St. Louis
List Creation: 09/19/19 12:44 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	20.0
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?	N/A	
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").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Conceptual Site Model
Update II
Ordot Dump Post-Closure Facility

Prepared for

Gershman, Brickner & Bratton, Inc.,
Receiver for the Guam Solid Waste Authority

October 2021

Conceptual Site Model Update II
Ordot Dump Post-Closure Facility

Prepared for

Gershman, Brickner & Bratton, Inc., Receiver for the Guam Solid Waste Authority

October 2021

Brown AND Caldwell

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List of Abbreviations

BC	Brown and Caldwell
bgs	below ground surface
CSM	Conceptual Site Model
ft/day	feet per day
ft. msl.	feet mean sea level
GBB	Gershman, Brickner & Bratton, Inc., Receiver for Guam Solid Waste Authority
GSWA	Guam Solid Waste Authority
msl	mean sea level
SVOC	semi-volatile organic compounds
TSS	total suspended solids
USEPA	United States Environmental Protection Agency
VOC	volatile organic compounds

Section 1

Introduction

This is an update to the Conceptual Site Model (CSM) presented in the Closure Design Report (BC, 2013) and the CSM 2019 Update (BC, 2019) for the Ordot Dump Post-Closure Facility (Facility). The primary purpose of this update is to incorporate the data collected from four new monitoring wells that were installed in November and December 2019 into the overall Site geologic and hydrogeologic conceptual model, thus enhancing the understanding of Site groundwater and leachate flow under post-closure conditions and forming the basis for the RCRA compliant groundwater monitoring network.

The objectives of the CSM are as follows:

1. To present the Site geology, hydrogeology, groundwater and leachate flow, and water quality components under pre-closure conditions to support finalization of the post-closure RCRA compliant groundwater monitoring network.
2. To identify the wells and water quality data to be used to statistically calculate background groundwater quality.

The pre-closure investigation, conducted between October 2011 and February 2013, is the primary data source used to define pre-closure conditions and used to technically support the initial selection of the upgradient and down-gradient post-closure monitoring well network.

As part of the closure construction activities, nine pre-closure monitoring wells were abandoned; four pre-closure monitoring wells were retained; and six new monitoring wells were installed in 2015. The retained monitoring wells and the six additional monitoring wells installed comprised the post-closure monitoring well network presented in the CSM 2019 Update. As part of the CSM 2019 Update, four additional monitoring wells were proposed to enhance the existing monitoring well network and fill identified data gaps. These monitoring wells were installed in November and December 2019 and the data from these monitoring wells have been incorporated into this CSM update.

1.1 Summary of Previous Site Investigations

The pre-closure Site investigation was conducted between October 2011 and February 2013 and consisted of the installation of groundwater monitoring wells, landfill gas wells, landfill gas monitoring wells, and surface water staff-gauges (BC, 2013). The locations and construction details related to these pre-closure monitoring points are presented in Section 2.

Fourteen pre-closure groundwater monitoring wells (MW-1A, MW-1B, MW-1C, MW-2A, MW-2B, MW-3, MW-4, MW-5A, MW-5B, MW-6A, MW-6B, MW-7A, MW-7B, and MW-8) were installed around the perimeter of the landfill to provide data related to the Site geology, hydrogeology, groundwater elevations, and groundwater quality.

Three pre-closure landfill gas monitoring wells (LFGW-1, LFGW-2, LFGW-3) were installed within the waste mound to provide data on landfill gas production and leachate levels within the waste.

Nineteen pre-closure landfill gas monitoring wells (LFGMW-1 through LFGMW-19) were installed around the perimeter of the landfill to provide data on landfill gas migration beyond the footprint of the waste limits. These gas monitoring wells also provided data related to site geology, hydrogeology, and groundwater elevations.

Three pre-closure surface water staff-gauges (GS-1, GS-2, and GS-3) were installed within the Lonfit River to measure river stage elevations.

The pre-closure investigation results are the primary data source used to defined Site geology, hydrogeology, groundwater and leachate flow, and water quality components under pre-closure conditions. The investigation results were also used to technically support selection of the initial upgradient and down-gradient post-closure monitoring well network. A detailed discussion of the pre-closure data and evaluation is presented in Section 2.

As part of closure construction monitoring wells MW-3, MW-4, MW-5B, MW-6A, MW-6B, MW-7A, MW-7B, and MW-8 were abandoned in 2015 with monitoring wells MW-1B, MW-1C, MW-2A, and MW-5A being retained as post-closure monitoring wells. Monitoring well MW-1A was converted to a landfill gas monitoring well (GHD, 2016).

During closure construction, monitoring well MW-3 was replaced with MW-9; MW-4 was replaced with MW-10; MW-6A and MW-6B were replaced with MW-6; and MW-7A and MW-7B were replaced with MW-11. Monitoring wells MW-12 and MW-13 were added to supplement monitoring along the western perimeter of the Dump. The replacement monitoring wells and the additional supplemental monitoring wells were installed in 2015.

Given this, monitoring wells MW-1B, MW-1C, MW-2A, MW-5A, MW-6, MW-9, MW-10, MW-11, MW-12, and MW-13 comprised the post-closure monitoring well network until the end of 2019. Construction details and locations of these monitoring wells are presented in Section 3.

1.2 Additional Data Gap Monitoring Wells

The CSM 2019 Update identified data gaps in the initial post-closure monitoring well network and four additional monitoring wells were recommended to fill these data gaps in the post-closure monitoring well network. The additional monitoring wells were installed in November and December 2019 and are discussed in below.

Monitoring well MW-2A was and currently is designated as one of the upgradient/background wells. However, at the time of the October 2019 CSM Update, MW-2A had only been sampled twice during the eight rounds of post-closure sampling due to insufficient groundwater in the well. Given this, it was recommended that an additional upgradient monitoring well (MW-14) be installed to supplement the monitoring well network. MW-14 was completed on December 8, 2019 and is located approximately 150 feet to the northeast of MW-2A. MW-14 is an upper bedrock well and was installed to a depth of 42-feet bgs and was screened from 21 to 41-feet bgs.

Water levels have been obtained from monitoring well MW-11 during each post-closure sampling event. However, insufficient water was observed in this well to allow for water quality sampling (less that about 1.5 feet of water in the well). As a result, it was recommended that MW-11 be replaced with MW-11R and the screen extending deeper within the upper bedrock aquifer. MW-11R was completed on December 8, 2019 and is located adjacent to MW-11. MW-11R is an upper bedrock well and was installed to a depth of 45-feet bgs and was screened from 24.6 to 44.6-feet bgs. The use of MW-11 will be discontinued as part of the groundwater monitoring program.

The current upper bedrock monitoring well network along the southern perimeter of the Facility was installed at a spacing ranging from approximately 422 to 530 feet. Along the western perimeter the upper bedrock wells were installed at a spacing between approximately 290 and 340 feet. Along the southwestern perimeter the spacing between MW-6 and MW-11 is approximately 1,000 feet. An additional upper bedrock monitoring well (MW-15) was recommended to be installed between these two locations to monitor groundwater flowing beneath the center of the landfill. MW-15 was completed on December 1, 2019. MW-15 is an upper bedrock well and was installed to a depth of 51-feet bgs and was screened from 30 to 50-feet bgs.

MW-6 is an alluvial monitoring well and was installed to a depth of 22-feet bgs. This shallow monitoring well monitors groundwater quality at or just below the water table. Groundwater quality in this monitoring well is likely influenced by direct recharge dilution from rainfall and may not be representative of deeper groundwater that may be impacted at the Facility. Given this, it was recommended that a deeper monitoring well (MW-16) be coupled with MW-6. MW-16 was completed on November 26, 2019. MW-16 was installed to a depth of 41-ft bgs and was screened from 30.2 to 40.2-feet bgs. This monitoring well was initially proposed to be screened near the base of the alluvial materials. However, during installation approximately 8-feet of relatively higher permeability saprolite was encountered between the base of the alluvial and competent bedrock. This screened interval spanned the entire thickness of the saprolite and extended approximately 2-feet into the lower permeable alluvium.

Boring and well construction logs for the four additional monitoring wells are presented in Appendix A. Data collected from these wells were incorporated into the Site geology and hydrogeology discussions presented in Section 2.2 and Section 2.3, respectively. The locations of these monitoring wells along with a discussion of post closure conditions and a post closure potentiometric surface maps incorporating data from these wells are presented in Section 3.

1.3 Site Description

The Facility is a 43.5-acre unlined waste disposal facility that is owned and operated by the Government of Guam. The site is located approximately 2.5 miles south of Guam’s capital, Hagatña and approximately 1 mile west of the intersection of Route 4 and Dero Road in the Village of Ordot (Latitude 13° 27’ 10” North and Longitude 144° 44’ 55” East). The location of the Facility is presented on Figure 1. The Facility closure activities were completed in 2016. Closure features include an engineered cap, leachate collection system, landfill gas collection and treatment system, a stormwater management system, groundwater monitoring well network, and a perimeter gas monitoring well network. In 2018, a soil vapor extraction system was constructed to address methane detected at the northern boundary of the Facility (BC, 2018).

The site is bordered by the Lonfit River to the south and the Western Surface Drainage Channel to the west.

The limit of waste is generally south of Dero Road, east and parallel to the Western Surface Drainage Channel to the west, west of a low elevation ridge to the east, and the waste extended to the top or approximately the mid-elevations of the topographic escarpment to the south. The limits of the waste are presented on Figure 2.

Guam experiences a tropical climate moderated by seasonal northeasterly trade winds. However, due to its proximity to the equator, high sea surface temperature and warm ocean current that transports heat and moisture, the weather is generally hot and humid throughout the year with little seasonal temperature variation. Hence, Guam is known to have equable temperatures year-round.

The mean high temperature is 86 °F (30 °C) and mean low is 76 °F (24.4 °C). Temperatures rarely exceed 90 °F (32.2 °C) or fall below 70 °F (21.1 °C). The relative humidity commonly exceeds 84 percent at night throughout the year, but the average monthly humidity hovers near 66 percent (National Weather Service 2014). The dry season runs from December to June. Average monthly rainfall for the Guam International Airport from 1960 to 2019 ranged from 2.83 inches to 14.89 inches per month, with an average annual rainfall of 92.2 inches per year (see Table 1). March is the driest month with average rainfall of 2.83 inches and August is the wettest month with an average of 14.89. The Guam International Airport is located approximately 4.5 miles from the Closure Facility.

Table 1. Average Monthly Precipitation 1960 to 2019

Month	Average Precipitation (in.)
January	4.7
February	3.72
March	2.83
April	3.46
May	5.27
June	6.53
July	11.33
August	14.89
September	14
October	12.36
November	7.66
December	5.11
Annual Average	**92.2**

Guam is located in "Typhoon Alley" so it is common for the island to be threatened by tropical storms and sometimes typhoons during the wet season. The highest risk of typhoons is August through October. They can, however, occur year-round. Typhoons can result in high winds and significant rainfall occurring over a relatively short period of time (a few days). The wettest month on record at Guam Airport has been August 2004 with 37.32 inches which corresponds to Typhoon Chaba.

1.4 Current and Historic Topography

Site topography outside of the footprint of the waste ranges in elevation from 35 to 40 feet mean sea level (ft. msl.) adjacent to the Lonfit River to the south to approximately 280 ft. msl. along the eastern and northeastern perimeter of the Dump. A significant topographic escarpment is present along the southern perimeter of the waste limits, where elevations drop from approximately 210 ft. msl. to approximately 70 ft. msl. over a relatively short distance to the south towards the Lonfit River. Bordering the western limits of the Dump is the Western Surface Drainage Channel with elevations ranging from approximately 40 to 200 ft. msl. On the west side of the Western Surface Drainage Channel topography increases creating an upland topographic ridge that generally parallels the Channel separating it from a larger drainage area further to the west (see Figure 1).

The historic topography of the area now currently beneath waste is presented on Figure 2. This historic surface is associated with the surface topography that was present prior to waste disposal activities which are believed to have begun between 1941 and 1944. Though information is limited it is also believed that the waste was disposed in this area with minimal disturbance or excavation of the original surface. Given this, it is assumed that this historic surface generally represents the lower limits of the waste beneath the Dump.

The historic topographic surface beneath the waste generally ranges in elevation between approximately 120 ft. msl. to approximately 290 ft. msl. The overall topography slopes to the south in the eastern area of the Facility. In the western portion of the Facility the topography generally slopes to the west/southwest which is likely a result of surface erosion associated with the Western Surface Drainage Channel.

In addition to these general features, historic localized drainage-ways or drainage swales beneath the current waste mound are suggested by the shape and character of the historic topographic contours. These historic localized drainage-ways are presented on Figure 2. In the eastern portion of the site two historic drainage-ways can be identified and merge into one primary drainage swale which can be traced to the perimeter of the former Dump. The location where this drainage swale intersects the perimeter of the site corresponds to a location were a significant leachate flow seep was observed to emerge from the toe of the Dump and discharged to low-lying wetlands that drain to the south. The Perimeter Leachate Collection Trench installed as a part of the Facility closure was designed to capture this leachate.

The location of the now covered western drainage swales is associated with an area where the waste along the perimeter of the Dump was the thickest observed and leachate flowed into the former location of the Western Surface Drainage Channel. Observation of the western leachate flow seep promoted the installation of the Western Leachate Interceptor Trench (see Figure 2) which was designed to collect leachate emerging from these drainage swales.

The Perimeter Leachate Collection Trench and the Western Leachate Interceptor Trench are discussed further in Section 3.

Section 2

Geology

2.1 Regional Geology

Figure 3 is a geologic map of the island of Guam. The Pago-Adelup Fault bisects Guam into two provinces. The fault is located approximately a thousand feet to the northeast of the Facility. The vertical displacement on the fault is approximately 400 feet down=thrown to the north with the original volcanic surface of 200 feet above mean sea level (msl) on the south and 200 feet below msl to the north (Siegrist and Reagan, 2008).

The region to the northeast of the Pago-Adelup Fault (the down-thrown side) is primarily comprised of a series of six Miocene to Early Pliocene limestone formations and associated members. They include the following (youngest to oldest): the Alifan Limestone, Janum Formation, Barrigada Limestone, Talisay Member, Bonya Limestone, and Maemong Limestone Formation. The Maemong Limestone is exposed at the surface on the northeast side of the fault and is comprised of reef facies consisting of compact white recrystallized limestone containing large Foraminifera and algae, and corals with estimated thickness ranging up to 150 feet (Siegrist and Reagan, 2008).

The Facility is located on the up-thrown side of the fault and is underlain by the Alutom Formation (Late Eocene to Early Oligocene). This formation consists of interbedded volcanic breccias, conglomerates, sandstone and siltstone turbidite deposits, and rare sandy and micritic to bioclastic limestones. The estimated thickness of the Alutom Fm. is 1,850 to 2,000 feet. The Alutom Fm forms the terrain of the northern half of southern Guam from the Fena Basin to the Pago-Adelup Fault and is thought to form the basement bedrock beneath the limestone plateau of northern Guam.

The geologic map indicates that a small limestone remnant is present between the Facility's southern perimeter and the Lonfit River. Site soil borings completed in this area did not identify the presence of this limestone remnant.

Localized Quaternary alluvium is observed in association with the Lonfit River.

2.2 Site Geology

As stated in Section 1.1, fourteen pre-closure groundwater monitoring wells (MW-1A, MW-1B, MW-1C, MW-2A, MW-2B, MW-3, MW-4, MW-5A, MW-5B, MW-6A, MW-6B, MW-7A, MW-7B, and MW-8) were installed around the perimeter of the Facility to provide data related to geology, hydrogeology, groundwater elevations, and groundwater quality. Three pre-closure landfill gas monitoring wells (LFGW-1, LFGW-2, LFGW-3) were installed within the waste mound to provide data on landfill gas production and leachate levels within the waste.

Nineteen pre-closure landfill gas monitoring wells (LFGMW-1 through LFGMW-19) were installed around the perimeter to provide data on landfill gas migration beyond the footprint of the waste limits. These gas monitoring wells also provided data related to site geology, hydrogeology, and groundwater elevations.

Three pre-closure surface water staff-gauges (GS-1, GS-2, and GS-3) were installed within the Lonfit River to measure river stage elevations.

The location of the pre-closure groundwater monitoring wells, landfill gas wells, landfill gas monitoring wells, and staff-gauges are shown on Figure 4. General construction details associated with the installed monitoring wells are presented on Table 2.

Table 2. Pre-Closure Monitoring Well Construction Details

Well Name	Screened Hydrostratigraphic Unit	Installation Date	Top of Casing Elevation (ft. msl.)	Top of Screen Elevation (ft. msl.)	Bottom of Screen Elevation (ft. msl.)
Groundwater Monitoring Wells					
MW-1A	Saprolite	10/31/2011	271.53	257.9	242.9
MW-1B	Saprolite/Bedrock	10/29/2011	271.68	233.44	223.44
MW-1C	Upper Bedrock	2/17/2012	270.21	217.83	200.83
MW-2A	Upper Bedrock	4/12/2012	243.63	232.38	222.38
MW-2B	Upper Bedrock	4/12/2012	243.22	213.33	203.33
MW-3	Upper Bedrock	1/12/2012	235.87	206.58	193.58
MW-4	Upper Bedrock	4/11/2012	184.46	174.25	161.25
MW-5A	Alluvium	11/12/2011	66.31	49.22	39.22
MW-5B	Upper Bedrock	11/16/2011	66.82	22.07	12.07
MW-6A	Upper Bedrock	2/3/2012	77.99	59.67	44.67
MW-6B	Alluvium	2/7/2012	76.28	50.04	40.04
MW-7A	Saprolite/Bedrock	1/25/2012	147.03	128.9	118.9
MW-7B	Upper Bedrock	2/2/2012	147.03	104.56	84.56
MW-8	Upper Bedrock	4/14/2012	146.56	123.83	113.83
Landfill Gas Monitoring Wells					
LFGMW-1	Saprolite/Bedrock	11/10/2011	235.7	231.89	204.89
LFGMW-2	Saprolite	11/8/2011	252.57	249.68	209.68
LFGMW-3	Saprolite	10/19/2011	270.51	263.24	233.24
LFGMW-4	Upper Bedrock	10/20/2011	261.94	255.49	248.49
LFGMW-5	Saprolite/Bedrock	10/21/2011	243.4	235.53	225.53
LFGMW-6	Alluvium	11/11/2011	75.5	67.26	49.26
LFGMW-7	Upper Bedrock	11/11/2011	129.76	121.74	106.74
LFGMW-8	Upper Bedrock	1/6/2012	234.01	226.39	206.39
LFGMW-9	Upper Bedrock	1/7/2012	181.68	173.2	158.2
LFGMW-10	Saprolite/Bedrock	1/24/2012	146.33	139.25	114.25
LFGMW-11	Saprolite/Bedrock	1/21/2012	140.72	131.33	123.33
LFGMW-12	Upper Bedrock	1/4/2012	201.46	193.52	175.52
LFGMW-13	Saprolite/Bedrock	4/18/2012	244.16	239.97	214.97

Table 2. Pre-Closure Monitoring Well Construction Details

Well Name	Screened Hydrostratigraphic Unit	Installation Date	Top of Casing Elevation (ft. msl.)	Top of Screen Elevation (ft. msl.)	Bottom of Screen Elevation (ft. msl.)
LFGMW-14	Saprolite/Bedrock	4/18/2012	254.63	250.31	220.31
LFGMW-15	Saprolite	4/17/2012	261.28	257.14	227.14
LFGMW-16	Saprolite	5/4/2012	271.53	257.9	242.9
LFGMW-17	Saprolite/Bedrock	4/13/2012	274.12	266.39	236.39
LFGMW-18	Saprolite	4/19/2012	214.41	210.41	180.41
LFGMW-19	Saprolite/Bedrock	4/16/2012	209.11	230.97	206.97
Landfill Gas Well					
LFGW-1	Waste	12/5/2011	339.65	332.12	237.12
LFGW-2	Waste	12/14/2011	334.52	327.55	232.55
LFGW-3	Waste	12/15/2011	329.28	322.29	227.29

The data collected from these pre-closure monitoring locations were used to define Site geology, hydrogeology, groundwater and leachate flow, and water quality components under pre-closure conditions and is discussed in the remainder of this subsection and in general throughout Section 2.

Based on the drilling of the 14 groundwater and 19 landfill gas monitoring wells, there are basically six sedimentary facies of the Alutom Fm. beneath the Dump site. Table 3 provides a list of those facies along with a photograph of each. Additionally, river alluvium was also observed in the lower elevations associated with the Lonfit River alluvial valley.

The surficial deposits consist of thin soil material beneath which the parent volcanic rock is weathered to an unconsolidated material or saprolite. Saprolite was defined as unconsolidated material where the parent bedrock was weathered in place. In a number of soil-samples the fabric of the parent rock was still visible, however, the samples had lost cementitious properties and were readily penetrated with the split-spoon sampler. These materials were classified as unconsolidated material or saprolite. Saprolite was observed at each of the perimeter groundwater and landfill gas monitoring well locations, except at borings MW-5A, MW-5B and MW-6B where the Lonfit River valley has been backfilled with alluvium. The saprolite ranged in thickness from approximately 1 foot at MW-3 to as great as 45 feet at MW-1B. The saprolite is generally described as silty clay, clayey silts, clay sands, and silt. Saprolite was observed at all boring locations along the eastern, northern, and western perimeter of the Facility with the thinnest layer observed in vicinity of MW-3. This area of the Site has been subject to historic borrowing for construction material use which has likely resulted in the bulk of the saprolite being removed during these activities. During the installation of the new additional post closure monitoring well MW-16 saprolite was encountered beneath the Lonfit River alluvium. Additionally, visual observation of the Western Surface Drainage Channel indicates that the channel has eroded through the saprolite to the top of bedrock.

Below the saprolite is the more competent bedrock associated with the Alutom Formation which is the parent material for the saprolite. The bedrock is comprised of various layers of conglomerate/breccia, siltstone, sandstone, and mudstone. In most instances, none of these rock types exceed a few feet in thickness. It is difficult to predict the sequence of strata between borings at the site because of the heterogeneity in rock types and their original environment of deposition.

The rock matrix permeabilities associated with these bedrock units are relatively low due to the precipitation of minerals in solution from hydrothermal fluids filling much of the primary porosity. The final result is a sequence of layered rocks with limited hydraulic conductivity associated with the rock matrix. The hydraulic conductivity that does exist is mostly due to secondary fractures which are generally associated with the upper portion of the bedrock and rapidly diminish with depth.

Table 3. Six Sedimentary Facies Observed at the Ordot Site

Competent Conglomerate/Breccia	
Competent Siltstone (ash deposit)	
Silty Modeled Lean Clay (Saprolite)	
Interbedded Silty Lean Clay and Sandstone (Saprolite)	
Sandstone	
Mudstone	

The presence of the Lonfit River has created an alluvial valley that has backfilled in response to sea level rise since the last glaciation period. The alluvial valley has been backfilled with river sediments generally comprised of sands, silty sands, silts, and clays based on site borings. Alluvium was observed in borings MW-5A, MW-5B, and MW-6B. The alluvial material was observed to be approximately 35 feet thick at MW-5A and in excess of 34 feet thick at MW-6B. Alluvium was observed at LFGMW-6 in excess of 24 feet thick. Approximately 33-feet of Alluvium was observed in the new post-closure monitoring well MW-16. Below MW-16 approximately 8-feet of saprolite was encountered. Alluvium was not observed at MW-6A indicating that the surface contact between the alluvium and the saprolite/bedrock is probably located between these borings. The surface contact between the alluvium and the saprolite/bedrock is projected to be within approximately 100-feet to the north of MW-5A/B, MW-6B, and LFGMW-6. No borings were completed adjacent to the Lonfit River to define the alluvium thickness immediately adjacent to the river channel.

As noted earlier, it is difficult to predict the sequence of individual strata associated with the identified Alutom facies between borings because of the noted heterogeneity. However, facies can be grouped together based on similar hydrogeologic properties. Given this, the Alutom Facies have been grouped into two hydrostratigraphic units (saprolite and upper bedrock) with the Lonfit River alluvium comprising a third hydrostratigraphic unit. Though not a geologic unit, the waste within the Facility also behaves as a hydrostratigraphic unit influencing groundwater flow within the underlying saprolite and upper bedrock.

Geologic cross-sections have been developed to illustrate the spatial relationship of the identified hydrostratigraphic units (waste, the saprolite, the bedrock, and the alluvium). The locations of the geologic cross-sections are presented on Figure 5 with individual geologic cross-sections presented on Figures 6 through 11. As indicated saprolite was generally observed around the majority of the waste perimeter, given this, it is assumed that it is likely that a saprolite layer is present beneath the waste. Additionally, the base of the waste was assumed to be atop the historic land surface, therefore, the contact between the waste and the underlying saprolite was based on the historic topographic surface elevations.

2.3 Site Hydrogeology

This section presents the conceptual understanding of the hydrogeology and groundwater/leachate flow under pre-closure conditions.

2.3.1 Hydrostratigraphic Units

As previously discussed, four hydrostratigraphic units, saprolite, upper bedrock, alluvium and waste are generally present at the Facility. A discussion of hydrostratigraphic units and the interaction of groundwater/leachate within these units is provided below.

The saprolite is comprised of discontinuous layers of silty clay, clayey silts, clay sands, and silt which derived from the weathering of the underlying bedrock. These materials are generally associated with low to moderately low hydraulic conductivities. Given the similar nature of the hydraulic conductivities assumed for the layers within the saprolite and the lateral continuous nature of saprolite surrounding and beneath the Facility, the saprolite likely behaves as a single hydrogeologic unit. Although no slug tests were completed within a well only screened within the saprolite, given the nature of the observed materials it is inferred that saprolite hydraulic conductivities would be about an order of magnitude lower than the geometric mean of the upper bedrock.

The second hydrostratigraphic unit is the upper fractured bedrock. The bedrock is comprised of a sequence of thinly layered rocks with limited hydraulic conductivity associated with the rock matrix. The hydraulic conductivity that does exist is mostly due to secondary fractures which are generally associated with the upper portion of the bedrock and diminish with depth. These interconnected secondary fractures within the upper bedrock comprise the upper bedrock hydrostratigraphic unit. Slug test hydraulic conductivity measurements conducted within upper bedrock wells range from 0.1 ft/day to 7.82 ft/day with a geometric mean value of 0.94 ft/day. The slug test results are summarized in Table 4.

Table 4. Summary of Slug Test Results

Hydrostratigraphic Unit	Monitoring Well	K - Hydraulic Cond. (ft/day)
Alluvium	MW-5A	1.46
	MW-5B	1.79
	MW-6B	2.38
Geometric mean:		**1.97**
Bedrock	MW-1C	7.82
	MW-2A	1.04
	MW-2B	8.26
	MW-3	2.28
	MW-4	0.38
	MW-7B	0.1
	MW-8	0.114
Geometric mean		**0.94**
Saprolite/Bedrock Interface	MW-1B	0.28
	MW-7A	0.55
Geometric mean		**0.39**

The third hydrostratigraphic unit is the Lonfit River alluvium. The River valley has been backfilled with river sediments generally comprised of sands, silty sands, silts, and clays. Slug test hydraulic conductivity measurements conducted within alluvium wells ranged from 1.46 ft/day to 2.38 ft/day with a geometric mean value of 1.97 ft/day. The slug test results are summarized in Table 4.

The spatial relationship between these hydrostratigraphic units (saprolite, upper bedrock, and alluvium) and the landfill waste are shown on geologic cross-sections presented on Figures 6 through 11.

2.3.2 Equal-Potential Cross-Sections

As part of the pre-closure investigation two sets of groundwater elevations were collected in all groundwater monitoring wells, perimeter landfill gas monitoring wells, landfill gas wells, and Lonfit River staff gauges in April 2012 and August 2012. The April monitoring event represents water levels collected during Guam's dry season. The August event represents water levels collected during Guam's wet season. Based on records from the Guam International Airport, August receives the greatest rainfall.

The April 2012 dry season data were used to develop three equal-potential cross-sections (see Figures 12, 13, and 14). The equal-potential cross-sections show the inferred vertical distribution of water elevation heads within the waste and the underlying hydrostratigraphic units for the April dry season and are discussed in the following paragraphs.

April 2012 equal-potential cross-section A-A' (see Figure 12) runs generally north to south and transects the upgradient upland area, the waste mound, the down-gradient alluvium/saprolite, and the Lonfit River. Landfill gas monitoring wells LFGW-2 and LFGW-3 were installed at the top of the waste mound and were screened across a large percentage of the waste. The measured elevations within these wells likely represent leachate saturation within the waste. Leachate elevation heads within the wastes dissipate vertically downward consistent with mounded leachate flow that is primarily downward in the waste. Leachate continues its primarily vertical movement until it encounters the historic ground surface or top of the saprolite. The majority of leachate then flows laterally after encountering the waste/saprolite interface towards the south and southwest following the historic topography described in Section 1.2. The remainder continues its downward flow through the saprolite and enters the bedrock groundwater flow system ultimately discharging to the Lonfit alluvium and Lonfit River.

As indicated the hydraulic conductivity associated with the saprolite is assumed to be lower than that measured in the upper bedrock. The probable hydraulic conductivity contrast between these two units suggests that the saprolite will generally behave as a semi-confining unit above the upper bedrock water bearing zone. The relationship of the inferred heads within the waste and the heads inferred within the saprolite suggest that heads are dissipated vertically across the unit which is consistent with a semi-confining unit. Groundwater within this unit would move predominantly in a vertical direction through the saprolite and would ultimately discharge into the upper bedrock water-bearing zone.

The distribution of heads within the upper bedrock is generally consistent with a hydrostratigraphic unit with a significant horizontal groundwater flow component. Once groundwater recharges vertically into the upper bedrock from the overlying saprolite, it begins to move primarily horizontally toward the Lonfit River which is the local groundwater discharge area. The equal-potential cross-section also illustrates that groundwater recharging from the upland areas to the north of MW-1B and MW-1C also probably moves primarily horizontally within the upper bedrock water-bearing zone beneath the site toward the Lonfit River. The equal-potential cross-section also shows that monitoring wells MW-1B and MW-1C are likely hydraulically upgradient of the Facility based on the two rounds of water levels taken in 2012.

The upper bedrock water-bearing zone is not in direct communication with the Lonfit River, as can be seen on the cross-section (Figure 12) where saprolite and alluvial material are present in the lower elevations of the site and adjacent to the River. In this downgradient area of the site, groundwater from the upper bedrock water-bearing zone discharges to the saprolite and alluvium with groundwater in these units ultimately discharging directly to the Lonfit River.

April 2012 equal-potential cross-section B-B' (Figure 13) runs from the eastern side of the Facility, transecting LFGW-3 and LFGMW-7 and intersects the Western Surface Drainage Channel. This cross-section shows the likely behavior of, and between, the hydrostratigraphic units as described above. This cross-section also illustrates that monitoring wells MW-2A and MW-2B are likely hydraulically upgradient of the waste mound (in April 2012) and shows that the Western Surface Drainage Channel is a secondary discharge area for groundwater in the western part of the Facility.

April 2012 equal-potential cross-section E-E' (see Figure 14) runs from the upland area near MW-1B and MW-1C, transecting LFGW-1 and MW-7A and MW-7B and intersects the Western Surface Drainage Channel. This cross-section shows the likely behavior of, and between, the hydrostratigraphic units as described above and suggests that groundwater is discharging from the upper bedrock water-bearing zone to the Western Surface Drainage Channel.

The August 2012 wet season equal-potential cross-sections A-A’, B-B’ and E-E’ are presented on Figures 15, 16 and 17, respectively. These cross-sections support generally the same likely behavior of, and between, the hydrostratigraphic units as described for the April 2012 dry period above. The August 2012 equal-potential cross-sections illustrate that the upper bedrock water-bearing zone and the saprolite/alluvial water-bearing zone are the primary water-bearing zones beneath the waste and serve as the primary horizontal pathways for groundwater migration. Given this, the upper bedrock water-bearing zone and saprolite/alluvial water-bearing zone are the most appropriate water-bearing zones to monitor groundwater quality to assess potential groundwater impacts associated with the Site.

2.3.3 Bedrock Potentiometric Surface Maps

Figures 18 and 19 present pre-closure plan view potentiometric surface maps for the upper bedrock water-bearing zone and alluvial water-bearing zone for the April 2012 dry and August 2012 wet seasons, respectively. Because no upper bedrock groundwater monitoring wells are present within the interior of the waste limits, the groundwater potentiometric surface elevations in the upper bedrock are drawn to be consistent with the equal-potential cross-sections to provide a technically probable and consistent understanding of groundwater flow beneath the Dump.

A topographic high, or ridge, is located north and northeast of the Dump (Figure 1). This topographic ridge and upland area serve as the primary recharge areas for groundwater and acts as a hydraulic divide to northern groundwater flow. In general, groundwater flows to the south-southwest and discharges into the Western Surface Drainage Channel and then flows as surface water into the Lonfit River. The remaining groundwater flow beneath the Dump turns southward and discharges directly into the Lonfit River to the south. Groundwater flow in the vicinity of MW-2A and MW-2B flows to the west and southwest depending on variations in groundwater elevations. Prior soil borrowing activities also occurred along the eastern perimeter of the Facility which potentially increases groundwater recharge in this area and potentially influencing localized groundwater flow.

East of MW-3 groundwater elevations are projected to mimic the surface topography which has resulted in groundwater flow to the south and a suggestion of an eastern component of flow unaffected by the Facility on the other side of the upland ridge.

Groundwater flow in the upper bedrock along the southern-southeastern perimeter is greatly influenced by the topographic escarpment as groundwater flow generally follows the surface topography before entering the alluvial system and discharges to the Lonfit River.

In the western portion of the Facility groundwater within the upper bedrock generally flows to the southwest and discharges to the Western Surface Drainage Channel.

A very narrow topographic ridge forms the western slope of the Western Surface Drainage Channel (Figure 1). This ridge area is likely too narrow to strongly influence groundwater flow given that a much larger (deeper and longer) drainage area lies further to the west. However, the narrow topographic ridge does direct surface water runoff towards the Western Surface Drainage Channel.

Visual observations in the Western Surface Drainage Channel suggest that local groundwater is discharging to the channel. Although staff gauges were not installed within the Channel, topographic channel elevations can be used to infer if groundwater is potentially discharging to the Channel. The elevations for the Channel are shown on Figures 18 and 19 (based on the 2012 Site 2-foot contour map (BC, 2013). In the upper reaches of the drainage, above 170 ft. msl. groundwater elevations are projected below the Channel elevation. At 170 ft. msl., the Channel drops to an elevation of 150 ft. msl. over approximately 50 ft. Based on the measured groundwater elevations in wells in the western portion of the Facility and the Channel elevations, groundwater most probably discharges to the Channel starting at an elevation of approximately 150 ft. msl. to approximately 40 ft. msl at the Lonfit River.

Section 3

Post-Closure Conditions

Closure construction of the Facility was completed in 2016, which included an engineered cap, leachate collection system, landfill gas collection and treatment system, and a stormwater management system as described in the Design Report (see Ordot Dump Final Construction Quality Assurance Report, (GHD, 2016)).

As part of the closure construction nine monitoring wells were abandoned (MW-2B, MW-3, MW-4, MW-5B, MW-6A, MW-6B, MW-7A, MW-7B, and MW-8); existing monitoring wells MW-1B, MW-1C, MW-2A, and MW-5A were retained; and monitoring wells MW-6, MW-9, MW-10, MW-11, MW-12, and MW-13 were installed as part of the post-closure monitoring well network. The locations of these monitoring wells are presented on Figure 4 (abandoned wells) and Figure 20 (replacement wells). Additionally, the 2019 CSM Update identified data gaps in the original post-closure monitoring well network and additional monitoring wells were recommended to fill these data gaps. The four new additional monitoring wells (MW-11R, MW-14, MW-15, and MW-16) were installed in November and December 2019 and are discussed in greater detail below. Construction details related to these four new monitoring wells are presented in Table 5. The current monitoring well network was resurveyed in February 2020. The results of this resurvey are reflected in Table 5.

Existing monitoring wells MW-1B, MW-1C, MW-2A, and MW-5A were retained as part of the initial post-closure monitoring well network. Monitoring wells MW-1C and MW-2A are screened within the upper bedrock water-bearing zone. Monitoring well MW-5A is screened within the alluvium. Monitoring wells MW-6, MW-9, MW-10, MW-12, and MW-13 were installed during closure construction. Monitoring wells MW-9, MW-10, MW-12, and MW-13 were screened within the upper bedrock water-bearing zone and monitoring well MW-6 was screened in the alluvium. Monitoring wells MW-11R, MW-14, MW-15, and MW-16 were installed in November 2019 and December 2019 to fill data gaps. Monitoring well MW-11R, MW-14, and MW-15 were screened within the upper bedrock water-bearing zone and monitoring well MW-16 was screened within the base of the alluvium and saprolite (see Figure 20).

Monitoring well MW-1B is screened in both the saprolite and upper bedrock. Monitoring well MW-11 is a bedrock well but was not screened at sufficient depth to allow groundwater samples to be consistently collected from this location. Given these identified deficiencies MW-1B and MW-11 will not be retained as part of the ongoing groundwater monitoring program. Though not part of the monitoring program these wells will be retained for future potential use.

Table 5. Post Closure Monitoring Well Construction Details

Well Name	Screened Unit	Installation Date	Top of Casing Elevation (ft. msl.)	Top of Screen Elevation (ft. msl.)	Bottom of Screen Elevation (ft. msl.)
MW-1B[a]	Saprolite/Upper Bedrock	10/31/2011	269.96	231.72	221.72
MW-1C	Upper Bedrock	02/17/2012	269.55	217.17	200.17
MW-2A	Upper Bedrock	4/12/2012	243.78	232.53	222.53
MW-5A	Alluvium	11/12/2011	64.46	47.37	37.37
MW-6	Alluvium	09/17/2015	73.79	67.79	52.79
MW-9	Upper Bedrock	07/08/2015	217.27	210.27	195.27
MW-10	Upper Bedrock	7/10/2015	169.79	162.79	147.79
MW-11[b]	Upper Bedrock	09/28/2015	138.72	130.72	115.72
MW-12	Upper Bedrock	09/23/2015	155.03	131.03	111.03
MW-13	Upper Bedrock	09/25/2015	202.64	184.64	164.64
MW-11R	Upper Bedrock	12/08/2019	137.97	111.02	91.02
MW-14	Upper Bedrock	12/08/2019	259.84	236.74	216.74
MW-15	Upper Bedrock	12/01/2019	116.32	124.24	94.24
MW-16	Alluvium/Saprolite	11/26/2019	73.86	41.4	31.4

[a] – MW-1B is recommended to be abandoned. The abandonment will be addressed in the Post Closure Care Plan

[b] – MW-11 is not part of the GWMP but is retained for potential future use.

A leachate collection system was installed to intersect the leachate seeps and the areas where shallow leachate had the potential to discharge. The leachate collection system is comprised of the Perimeter Leachate Collection Trench and the Western Leachate Interceptor Trench. The locations of these collection systems are presented on Figure 20.

Figure 21 also provides a post-closure potentiometric surface map for the upper bedrock water-bearing zone and the alluvium from data collected in October 2018 (wet season). Figure 22 provides a post-closure potentiometric surface map from data collected in February 2020 (dry season) for the upper bedrock water-bearing zone and the alluvium that includes the four new wells installed in 2019. The elevation contours presented under post-closure conditions are generally consistent with the interpretations under pre-closure conditions as presented on Figures 18 and 19. In the central and western portion of the Facility groundwater generally flows to the southwest toward the Western Surface Drainage Channel. Groundwater flow in the upper bedrock along the southern perimeter of the Facility is generally to the south and influenced by the topographic escarpment generally following the surface topography before entering the alluvial system and discharging to the Lonfit River.

As part of the closure activities a portion of the Western Surface Drainage Channel was re-routed. The location of the relocated Channel is shown on Figure 20. The reconstruction of the section of the Channel resulted in the channel being moved approximately 65 feet to the west of the original channel. The Channel elevations associated with its relocation and with the elevation for the remaining natural course of the drainage are presented on Figure 21 and Figure 22. Based on these elevations, groundwater intersects and discharges to the Western Surface Drainage Channel between an elevation of approximately 140 ft. msl. and 160 ft. msl. This reach of the is located immediately north of the relocated Channel. Over the length of the relocated section, groundwater is not projected to be in direct communication with the Channel. South of the re-located section the groundwater is projected to intersect Channel.

The Western Leachate Interceptor Trench was generally installed near the base of the original Western Surface Water Drainage Channel. The location and elevations of the interceptor trench are shown on Figure 21 and Figure 22. The trench is projected to intersect the groundwater at or below 120 ft. msl. Above elevation 120 ft. msl., which generally corresponds to the northern half of the trench, the trench is above the projected groundwater potentiometric surface.

Liquid level monitoring within landfill gas extraction wells installed during closure started in August 2019. Leachate levels are currently being monitored in landfill gas extraction wells GV1-2, GV1-8, GV1-11, and GV2-9. GV1-2, GV1-8, and GV2-9 are located on the slopes of the capped waste and GV1-11 is located near the top of the capped waste mound. These extraction wells were deemed sufficient to monitor for leachate levels in the waste based on the well construction detail presented in the design. The locations of these landfill gas extraction wells are presented on Figure 20. Measured leachate elevations are presented on Table 6.

During the first two measurement events, liquid elevations in GV1-11, located at the top of the waste mound, ranged from 318.78 to 334.08 ft. msl. No historic landfill gas monitoring wells were installed at or near this location that allow direct comparison for pre- and post-closure leachate levels. However, historic landfill gas monitoring wells LFGW-1, LFGW-2, and LFGW-3 were installed at the top of the waste mound. Leachate elevations in these wells during the August 2012 sampling event ranged from 302.43 to 313.64 ft. msl. In general, these leachate elevations are similar to those observed in GV1-11. The remaining landfill gas extraction wells are located on the slope of the Dump (see Figure 20). Observed leachate elevations ranged from 186.03 to 261.57 ft. msl (see Table 6). No pre-closure leachate elevations are available for these locations for comparison. Accounting for seasonal variations, the leachate levels in the waste do not appear to have substantially declined since completing the cap in 2016, given the similarity between the pre- and post-closure leachate elevations observed in post-closure well GV1-11 and pre-closure wells LFGW-1, LFGW-2, and LFGW-3.

Table 6. Leachate Elevation Monitoring in Landfill Gas Wells

Name	Well Type	Date	Top of Casing (ft. msl.)	Bottom of Well (ft. msl.)	Depth to Leachate (ft.)	Leachate Elevation (ft. msl.)
LFGW-1	Pre-Closure	4/17/2012	337.25	237.12	32.0	307.65
		8/23/2012	337.29	237.12	32.5	304.77
LFGW-2	Pre-Closure	4/17/2012	331.93	232.55	33.0	301.52
		8/23/2012	331.93	232.55	29.0	302.43
LFGW-3	Pre-Closure	4/17/2012	327.14	227.29	37.0	292.28
		8/23/2012	327.14	227.29	13.5	

Table 6. Leachate Elevation Monitoring in Landfill Gas Wells						
Name	Well Type	Date	Top of Casing (ft. msl.)	Bottom of Well (ft. msl.)	Depth to Leachate (ft.)	Leachate Elevation (ft. msl.)
GV1-2	Post-Closure	8/12/2019	292.37	259	30.9	261.47
		8/16/2019	292.37	259	31	261.37
		8/19/2019	292.37	259	31	261.37
		8/27/2019	292.37	259	30.06	262.31
		9/03/2019	292.37	259	30.9	261.47
		9/09/2019	292.37	259	30.8	261.57
		9/17/2019	292.37	259	30.95	261.42
GV1-8	Post-Closure	8/12/2019	246.27	199	37.06	209.21
		8/16/2019	246.27	199	36.9	209.37
		8/19/2019	246.27	199	37.09	209.18
		8/27/2019	246.27	199	37.06	209.21
		9/03/2019	246.27	199	35.6	210.67
		9/09/2019	246.27	199	36.7	209.57
		9/17/2019	246.27	199	35.69	210.58
GV1-11	Post-Closure	8/12/2019	349.28	290	15.2	334.08
		8/16/2019	349.28	290	30.25	319.03
		8/19/2019	349.28	290	30.23	319.05
		8/27/2019	349.28	290	20.26	329.02
		9/03/2019	349.28	290	30.5	318.78
		9/09/2019	349.28	290	30.2	319.08
		9/17/2019	349.28	290	30.2	319.08
GV2-9	Post-Closure	8/12/2019	229.88	165	43.6	186.28
		8/16/2019	229.88	165	43.51	186.37
		8/19/2019	229.88	165	43.6	186.28
		8/27/2019	229.88	165	43.06	186.82
		9/03/2019	229.88	165	43.62	186.26
		9/09/2019	229.88	165	43.85	186.03
		9/17/2019	229.88	165	43.67	186.21

Section 4

Establishing Background Monitoring Wells

Consistent with USEPA guidance for RCRA facilities, background monitoring wells are required to be hydraulically upgradient of the Facility and demonstrated not to be impacted by Facility activities based on eight or more sampling rounds. Also, the background monitoring wells should satisfy the key statistical assumption of statistical independence of the background measurements, temporal and spatial stationarity, and the lack of statistical outliers (USEPA, 2009).

Monitoring wells MW-1C and MW-2A are upper bedrock water-bearing zone wells and are likely hydraulically upgradient of the Facility based on the equal-potential cross-sections and the potentiometric surface maps from wet and dry seasons of 2012. Monitoring well MW-1B was previously included as a hydraulically upgradient well. However, because MW-1B is screened across two hydrogeologic units (saprolite and upper bedrock) it is not representative of the upper-most water-bearing zone and therefore should not be used as a monitoring well.

MW-1C has exhibited sporadic detections of chlorobenzene during the last eight sampling events and therefore may have been impacted by the Facility and thus should not be used to represent the quality of background groundwater for organics. MW-2A has not been impacted by volatile organic compounds (VOCs) or semi-volatile organic compounds (SVOCs) from the Facility and therefore can be used to represent the quality of background groundwater for VOCs and SVOCs, however it has only two validated rounds of groundwater samples. Note that prior analysis and discussion has concluded that the semi-volatile constituent naphthalene is present in background and can have a non-anthropologic origin and therefore is not considered a constituent that has been impacted by the Facility.

MW-1C and MW-2A have likely not been impacted by inorganic constituents (metals, cations/anions, etc.) from the Facility. Box plots based on the pre-closure data sets (May 2012 through February 2013) for the cations/anions and heavy metals are presented as Appendix B. The box plots clearly show that concentration ranges and concentration mean for sodium, potassium, total dissolved solids, sulfate, chloride and magnesium (all landfill indicator parameters) are consistently lower than observed in the down-gradient monitoring wells

Therefore, MW-1C and MW-2A combined represent the quality of background groundwater quality for all inorganic constituents but not for VOCs and SVOCs, subject to removal of outlier sample suites discussed below.

The inorganic pre-closure data sets used to create the aforementioned box plots were manually evaluated for outliers during a meeting between the USEPA's consultants and BC on July 8, 2019, with the only significant outlier being total suspended solids (TSS). Elevated TSS within groundwater samples created by sample collection methods can generate analytical results that are not representative of actual groundwater conditions. In particular, elevated TSS in groundwater can inflate total metal results. A review of the pre-closure sample results for MW-1C and MW-2A indicated that TSS was observed to be elevated at least one order of magnitude in select sampling events as compared to the remaining sampling events. Consistent with the elevated TSS, inorganic results anion, cation, and total metals were also generally elevated compared to samples collected with lower TSS. Elevated TSS was observed in one sampling event in MW-1C and two sample events in MW-2A. These elevated TSS results are likely the result of sample collection methods and are not considered to be representative of actual TSS within groundwater. Given this, groundwater results for anion, cation, and total metals associated with these elevated TSS results are considered to be outliers and excluded from the calculation of the Appendix B, Box Plots.

There are no set standards for removing sample results due to elevated TSS, but during the July 8, 2019 review meeting it was agreed that the pre-closure data sets with TSS greater than 500 mg/L should be excluded from the Box Plot evaluation. It was noted at the time that removal of high concentration outliers makes the statistically calculated inorganic backgrounds values much more conservative than if the outlier data was included in the calculations.

Because the fully validated post-closure eight rounds of groundwater quality samples used to statistically calculate background were collected on an accelerated schedule, it is necessary to verify that sample independence was maintained during the full sample collection period. To test for sample independence, a theoretical minimum time interval between samples was calculated by dividing the diameter of the monitoring well borehole by the groundwater flow velocity using Darcy's Law, as recommended in the Section 14.3.2 of the USEPA's guidance (USEPA, 2009).

A groundwater flow velocity was calculated from the October 2018 groundwater monitoring event using average of the gradients observed in the vicinity of MW-1C and MW-2A, the designated background wells. The gradients in the vicinity of MW-1C and MW-2A were estimated to be 0.052 ft/ft and 0.031 ft/ft respectively, with an average gradient of 0.042 ft/ft. The groundwater flow velocity was calculated using Darcy's equation:

$$V = \frac{K * i}{n_e}$$

where:

$V =$ Groundwater flow velocity $\left(\frac{feet}{day}\right)$

$K =$ Hydraulic Conductivity of the aquifer $\left(\frac{feet}{day}\right)$

$i =$ Horizontal hydraulic gradient $\left(\frac{feet}{feet}\right)$

$n_e =$ Effective porosity $(unitless)$

A porosity of 1 percent was assumed to represent flow within the fractured bedrock water-bearing zone. The geomean hydraulic conductivity values for the upper bedrock (0.94 ft/day) was used for the estimate. Using the calculated hydraulic gradient, the average groundwater flow velocity was calculated to be 4.23/day.

Based on estimated groundwater flow velocity indicated above, and a borehole diameter of 8 inches (including the sand pack), the time interval in order to maintain sample independence at the site was calculated to be 0.16 days. The sampling events conducted since closure have occurred at least 5 weeks or more apart which is well over the time interval needed, therefore sample independence has been maintained during collection of the current post-closure dataset.

Monitoring well MW-2A is designated as one of the upgradient/background wells. However, at the time of the October 2019 CSM Update, MW-2A had only been sampled twice during the eight rounds of post closure sampling due to insufficient groundwater in the well. Given this, the additional new upgradient/background monitoring well (MW-14) was installed to supplement the monitoring well network.

Based on the February 2020 post closure potentiometric surface (see Figure 22) and equal potential cross-sections, MW-14 is projected to be likely hydraulically upgradient of the Closure Facility. Groundwater quality data collected from MW-14 will be used to supplement the background data set currently being collected from MW-1C and MW-2A.

Section 5

References

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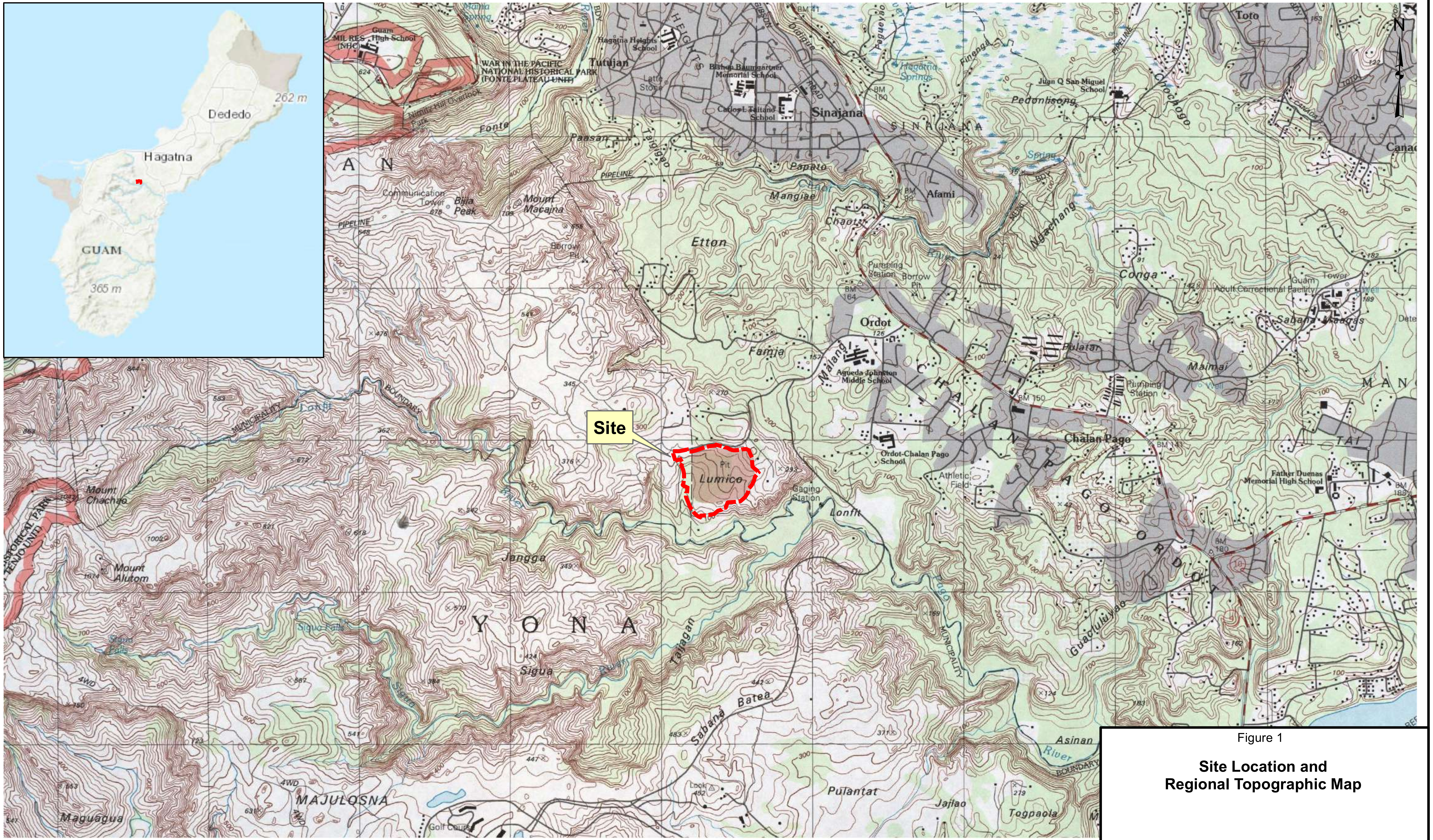
Figures



Legend

▬ Estimated Limits of Dump

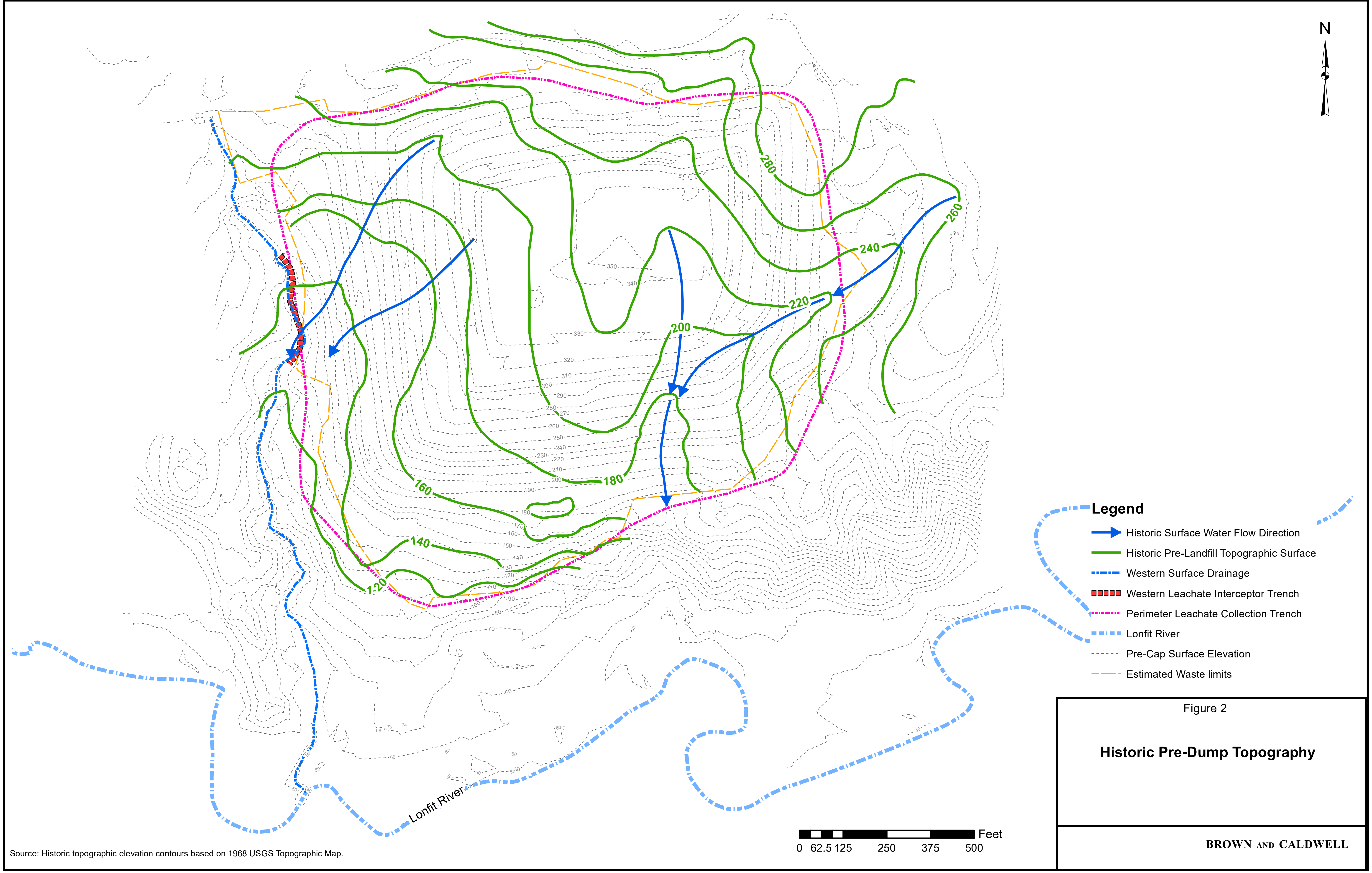
0 0.125 0.25 0.5 0.75 1 Miles

Source: 2000 USGS Topographic Map, Hagatna, Guam, Quadrangle

Figure 1

Site Location and Regional Topographic Map

BROWN AND CALDWELL

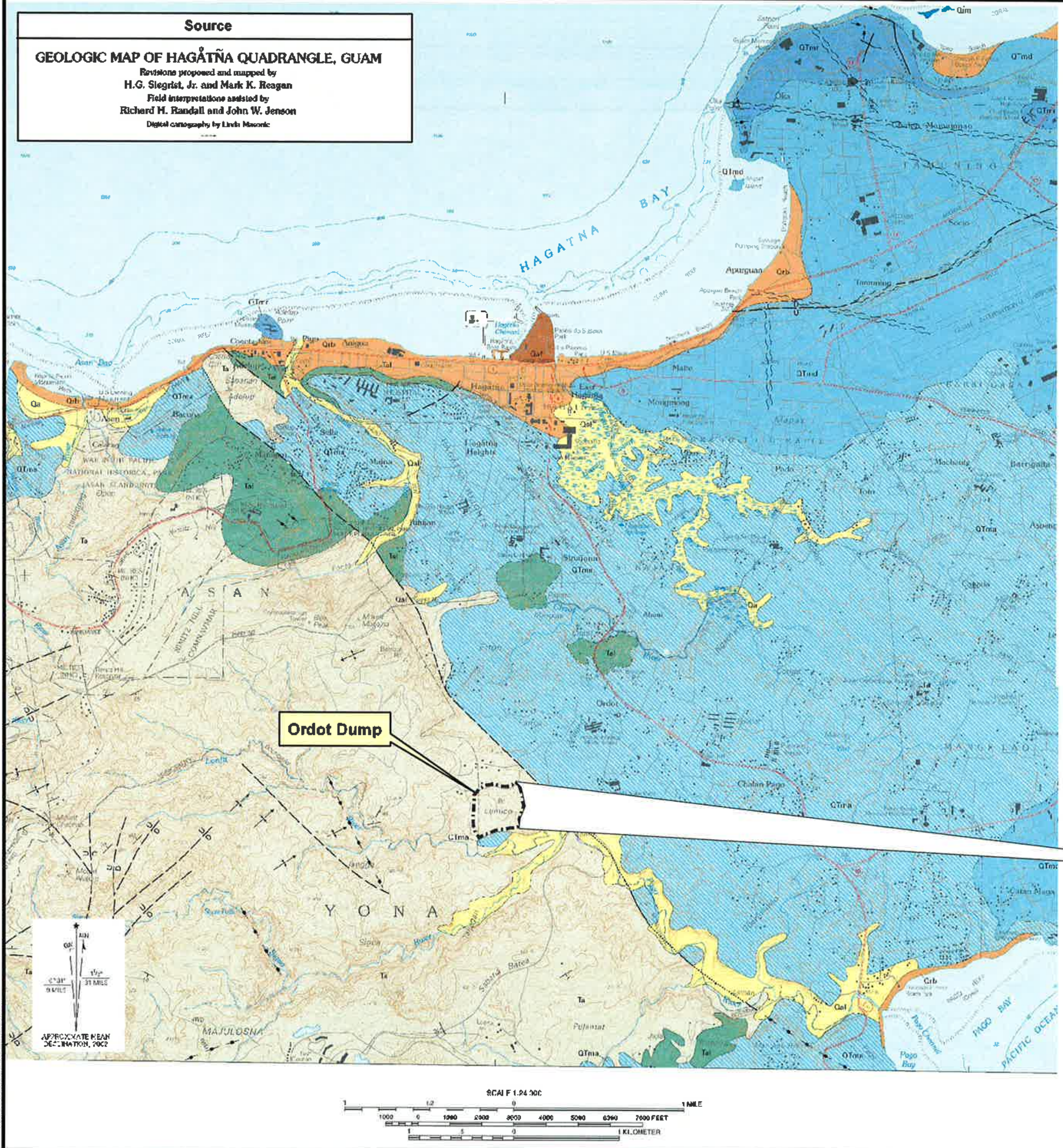


Source: Historic topographic elevation contours based on 1968 USGS Topographic Map.

Figure 2

Historic Pre-Dump Topography

BROWN AND CALDWELL



Source

GEOLOGIC MAP OF HAGÅTÑA QUADRANGLE, GUAM

Revisions proposed and mapped by
H.G. Siegrist, Jr. and Mark K. Reagan
Field interpretations assisted by
Richard H. Randall and John W. Jenson
Digital cartography by Linda Masonic

DESCRIPTION OF MAP UNITS

Tf **Facpi formation (Eocene)**—basal portion consists of high-Ca boninite pillow lavas interbedded with pillow breccias, hyaloclastites, and sandstones of the same lithology. Least differentiated lavas have olivine, augite, and chromite phenocrysts; more differentiated varieties lack chromite and have plagioclase and orthopyroxene phenocrysts. The upper portion consists of pillow lavas, breccias, bedded breccias and conglomerates of arc tholeiitic basalt with olivine, augite, and plagioclase phenocrysts. Boninitic and basaltic dikes cut this formation and are particularly abundant in the region of the Facpi peninsula. All portions of this formation have undergone zeolite facies metamorphism, and many areas also have undergone lateritic weathering. Estimated thickness of the Facpi formation ranges from 500 to 800 feet

Ta **Alutom formation (Eocene and Oligocene)**—bedded breccias, conglomerates, sandstones turbidites, sandy limestones, and micritic to bioclastic limestones. Clasts in the breccias and conglomerates generally are two-pyroxene andesites, although rare olivine phyric basalts and hornblende andesite clasts also are present. Estimated thickness of the Alutom formation ranges from 1850 to 2000 feet

Umatac formation (Oligocene-Miocene)
Aggregate thickness of formation about 2200 feet

Tu **Umatac formation undifferentiated (Miocene)**—unresolved stratigraphic sequences in Umatac formation that encompass sections of Tub, Tug, and/or Tus. Approximate thickness ranges from 200 to 500 feet

🟥 **Dandan flow member (Miocene)**—compact medium- to coarse-grained porphyritic andesite flows separated from the underlying Bolanos pyroclastic member by a flow breccias approximately 10 feet thick; maximum thickness of member 50 feet.

Tub **Bolanos pyroclastic member (Miocene)**—breccias, conglomerates, and sandstones consisting largely of fragmented andesite. These andesites typically have prominant euhedral augite phenocrysts up to 1 centimeter in length and millimeter-scale plagioclase phenocrysts. Limestone clasts are conspicuous in some breccias and conglomerates. Estimated thickness of the Bolanos pyroclastic member ranges from 750 to 1000 feet

🟪 **Schroeder flow member (Miocene)**—basaltic andesite pillow lava with plagioclase, augite and olvine phenocrysts. Volcanic sandstones consisting of clasts derived from the pillow lavas. Interbedded with the uppermost portion of the Schroeder flow member. Estimated thickness of the Schroeder flow member ranges from 100 to 400 feet

🟦 **Geus River member (Oligocene)**—interbedded limestones, sandy and tuffaceous limestones, sandstones and conglomerates. Clasts in sandy units are largely fragmented and altered andesitic volcanics, but also include intraformational limestones including reef limestones not seen in southwestern Guam. Conglomerates with clasts of basalts, andesites and dacites are considered to be near the base of Tug. Estimated thickness of the Geus River member ranges from 250 to 300 feer

Tal **Alifan limestone (Miocene and Pliocene)**—Massive coarse-to fine-grained recrystallized limstone generally pale pink, buff, or white but locally red, yellow, or brown. Characterized by dominance of sticklike *Porites* and *Acropora* and by long calcite tubes formed by burrowing worms or gastropods. Locally argillaceous above base. Maximum estimated thickness of the Alifan limestone is 150 feet

Tj **Janum formation (Miocene and Pliocene)**—well-bedded white, pink, tan, and brown foraminiferal limestone containing abundant globigerinid Foraminifera. Overlies Bonya limestone in north Guam; generally unconformable with overlying Mariana limestone. Deposits are lenticular and tongue into Barrigada limestone; maximum thickness 70 feet

🟩 **Barrigada limestone (Miocene and Pliocene)**—massive well-lithified to friable medium- to coarse-grained white foraminiferal limestone characterized by the Foraminifera *Operculina*, *Gypsina*, and *Cycloclypeus*. Corals and molluscs present at the top of the formation where it locally grades upward into the Mariana limestone. Unconformable with the Mariama limestone in parts of north Guam. Maximum thickness unknown but exceeds 540 feet

▨ **Talisay member (Oligocene)**—yellow, green, and red clay and lenticular clayey conglomerate and lignite; gray to green marl containing sticklike *Porites* and *Acropora*, and interbedded limestone lenses, 2 to 30 feet thick. Generally unconformable with the volcanics; locally overlies the Bonya limestone

🟩 **Bonya limestone (Miocene)**—pure to argillaceous limestone. In south Guam, generally well bedded, coarse grained, and sandy; in north Guam, mainly massive, compact, white foraminiferal limestone. Scattered concentrations and grain coatings of manganese oxides. Maximum thickness about 120 feet

Tm **Maemong limestone formation (Miocene)**—reef facies in central Guam consists of compact white recrystallized limestone containing larger Foraminifera and algae, and corals in position of growth; at some places overlain by the Bolanos pyroclastic member. Outcrop distribution restricted generally to several prominent wooded knolls in the upper Talofofo River valley, many lying within the Talofofo Golfing Resort. The estimated outcrop thickness of the Maemong limestone ranges from less than 10 feet to about 150 feet, although the elevation of the base of the unit is not apparent

EXPLANATION OF MAP SYMBOLS

Contact—Dashed where approximately located, gradational, or inferred

Fault (showing dip)—Solid where definitely located; dashed where approximately located; dotted where concealed. Queries indicate uncertainty as to existence of fault. Arrows show relative movement. U, upthrown side; D, downthrown side

Brecciated zone—Crushed and brecciated zone in limestone. Zone may grade into joint and fault zones along its strike, and into massive, structureless rock perpendicular to its strike

Thrust fault—Dashed where inferred

Anticline—Showing crestline and bearing and plunge of axis

Syncline—Showing position of trough and bearing and plunge of axis

Strike and dip of beds

Inclined

Strike of vertical joints—A line of joint symbols indicates a prominent joint or structural lineament, along which unbrecciated limestone is cut by a dominant set of joints in which solution has produced deep fissures bounding elongate, pinnacled ridges or along which volcanic rocks are cut by recognizable structural lines that show as a series of knobs and ridges crossing topographic trends or as line fissures. In places, drainage patterns and valley-wall alinements are determined by these lines. Minor movement at the zone may have occured, but significant stratigraphic displacement is not shown

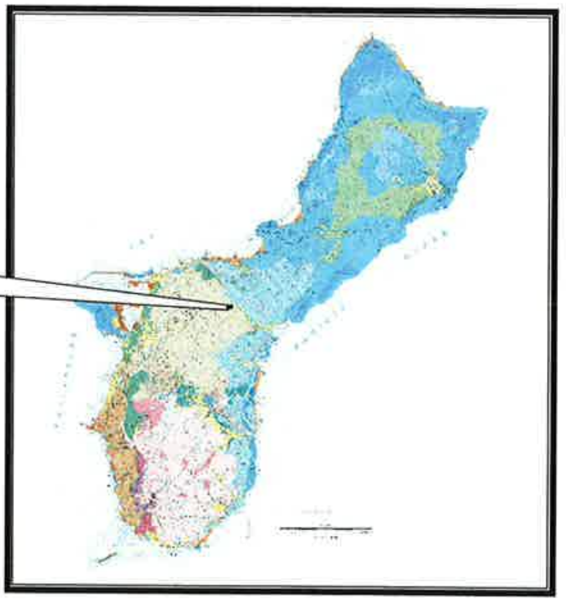


Figure 3

Geologic Map of Guam

Ordot, Guam

BROWN AND CALDWELL

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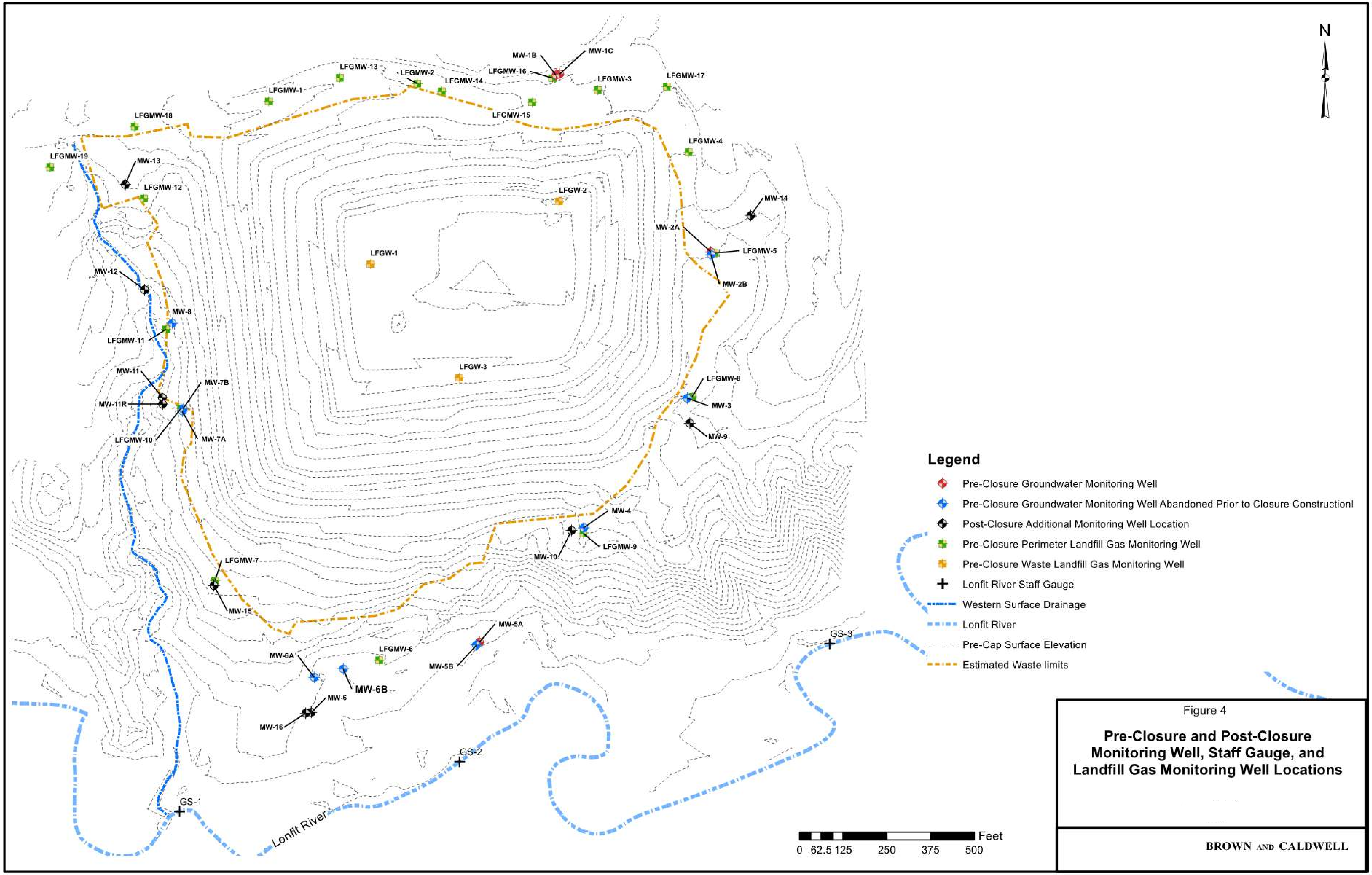


Figure 4

Pre-Closure and Post-Closure Monitoring Well, Staff Gauge, and Landfill Gas Monitoring Well Locations

BROWN AND CALDWELL

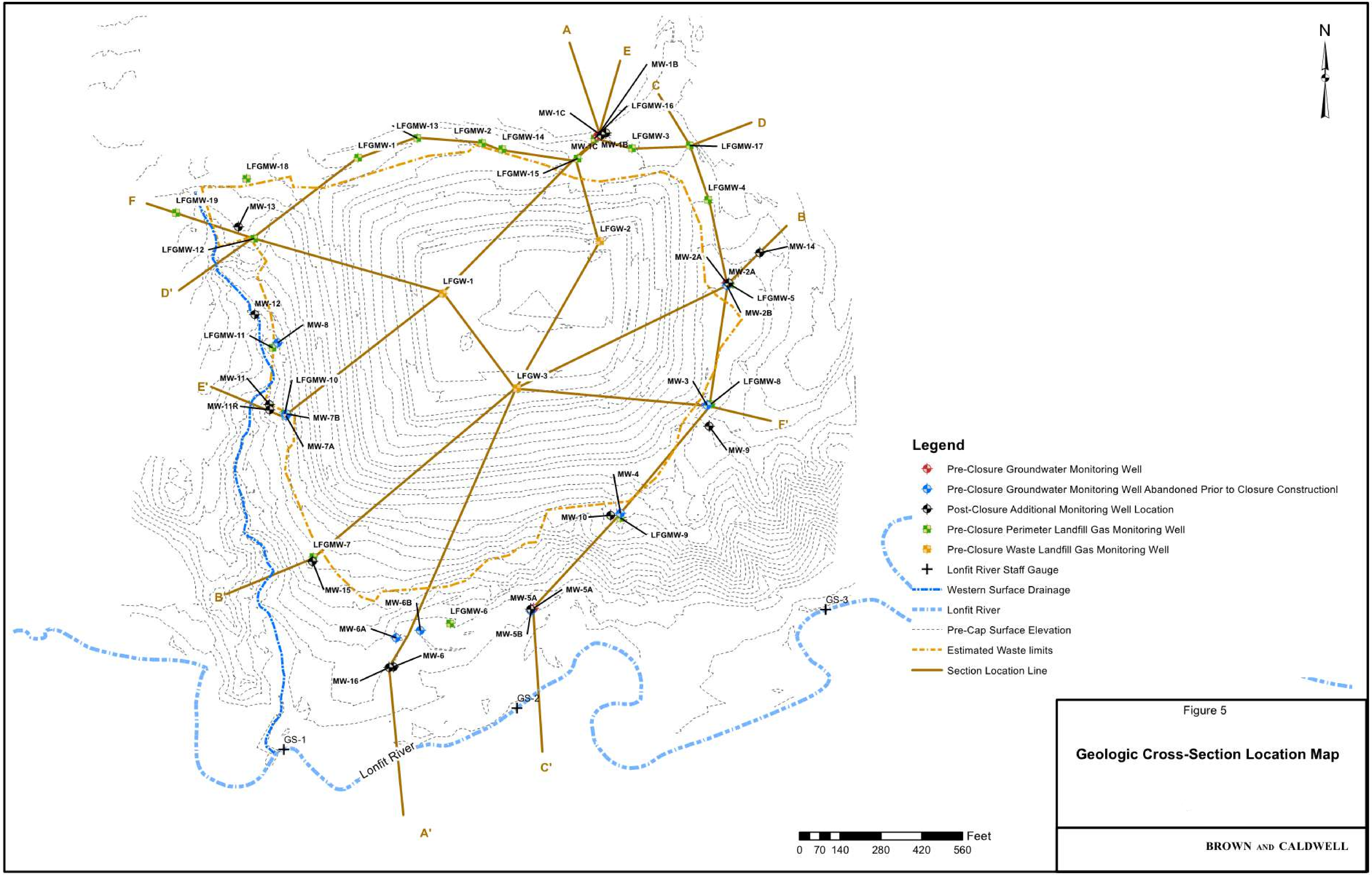
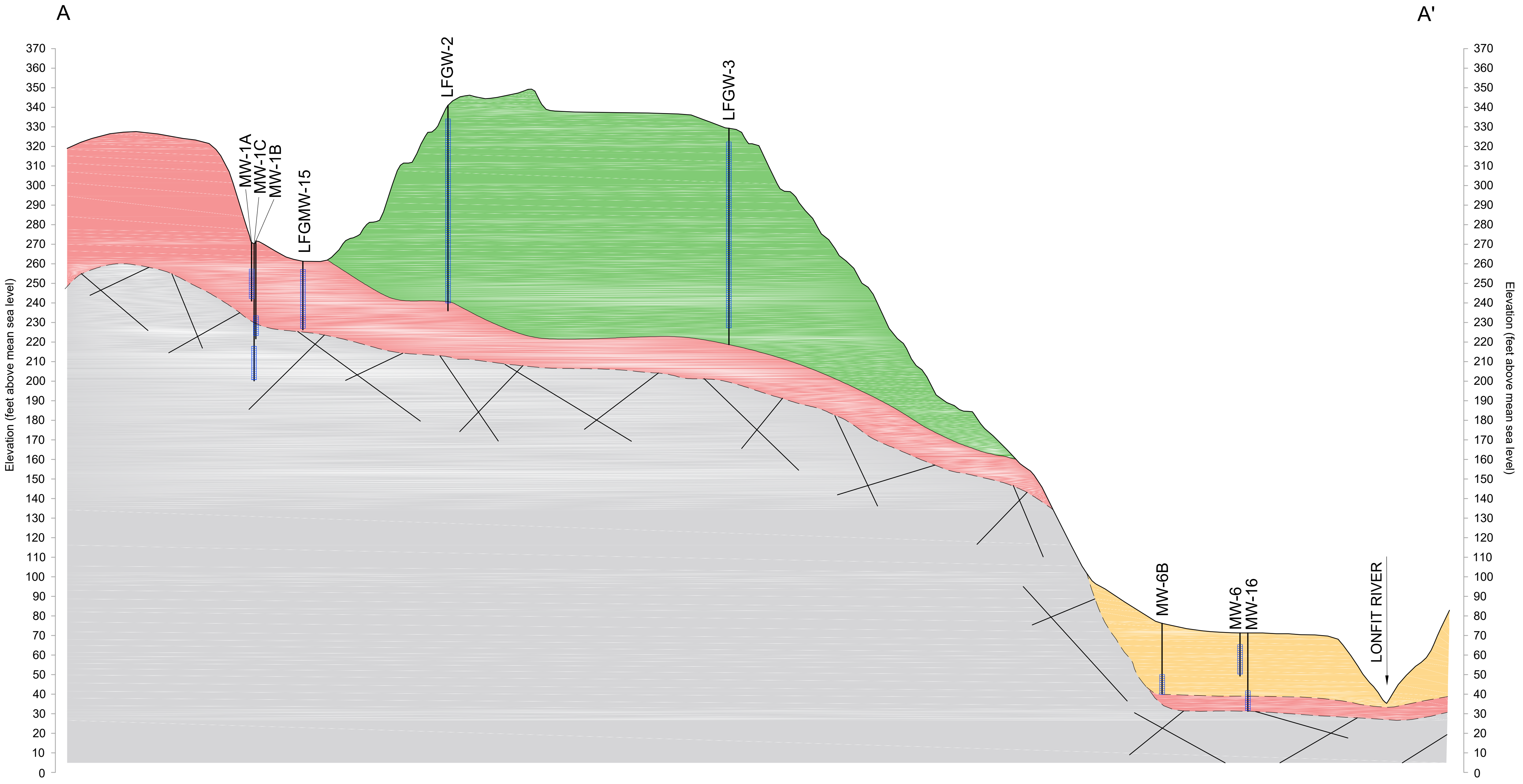


Figure 5

Geologic Cross-Section Location Map

BROWN AND CALDWELL



LEGEND:

MW-1A — MONITORING WELL IDENTIFICATION AND APPROXIMATE LOCATION

GENERALIZED GROUND SURFACE

WELL SCREEN INTERVAL

TOTAL DEPTH OF BOREHOLE

🟩 WASTE

🟥 WEATHERED UNCONSOLIDATED MATERIAL/SAPROLITE

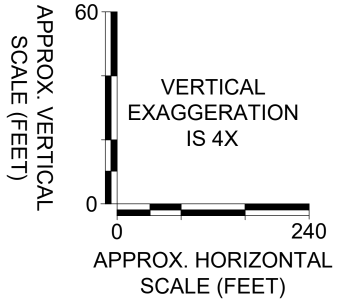
🟨 ALLUVIUM

☒ BEDROCK

~ LITHOLOGIC CONTACT

~ ~ INFERRED LITHOLOGIC CONTACT

NOTE:
- LITHOLOGIC CONTACT BETWEEN WASTE AND WEATHERED UNCONSOLIDATED MATERIAL/SAPROLITE IS BASED ON THE PRE-WASTE USGS 1968 TOPOGRAPHIC MAP.



VERTICAL EXAGGERATION IS 4X

Figure 6

Geologic Cross Section
A-A'

Brown AND Caldwell

DATE:
SCALE: AS SHOWN
DRAWN BY: DRM
CHECKED BY: GLC
PROJECT #: 151215

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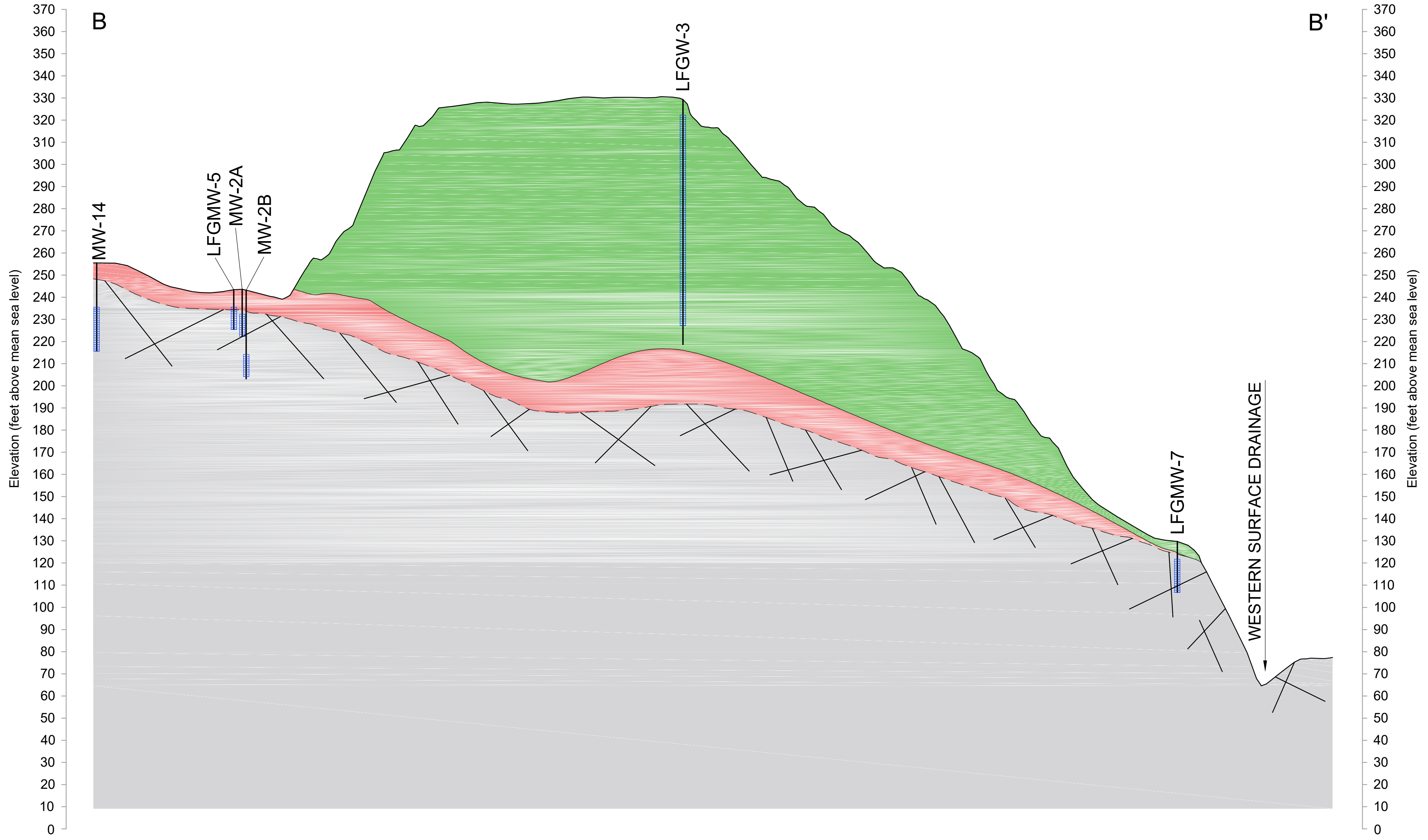

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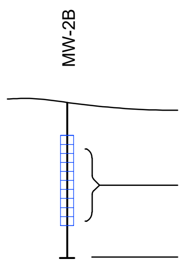

MONITORING WELL IDENTIFICATION AND APPROXIMATE LOCATION

GENERALIZED GROUND SURFACE

WELL SCREEN INTERVAL

TOTAL DEPTH OF BOREHOLE

🟩 WASTE

🟥 WEATHERED UNCONSOLIDATED MATERIAL/SAPROLITE

☒ BEDROCK

∼ LITHOLOGIC CONTACT

∼ INFERRED LITHOLOGIC CONTACT

NOTE:
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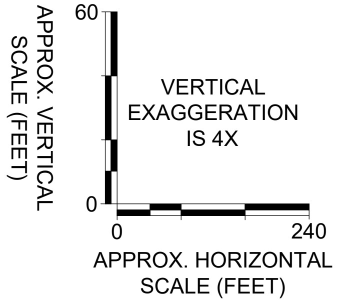

VERTICAL EXAGGERATION IS 4X

Figure 7

Geologic Cross Section
B-B'

Brown AND Caldwell

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DRAWN BY: DRM
CHECKED BY: GLC
PROJECT #: 151215

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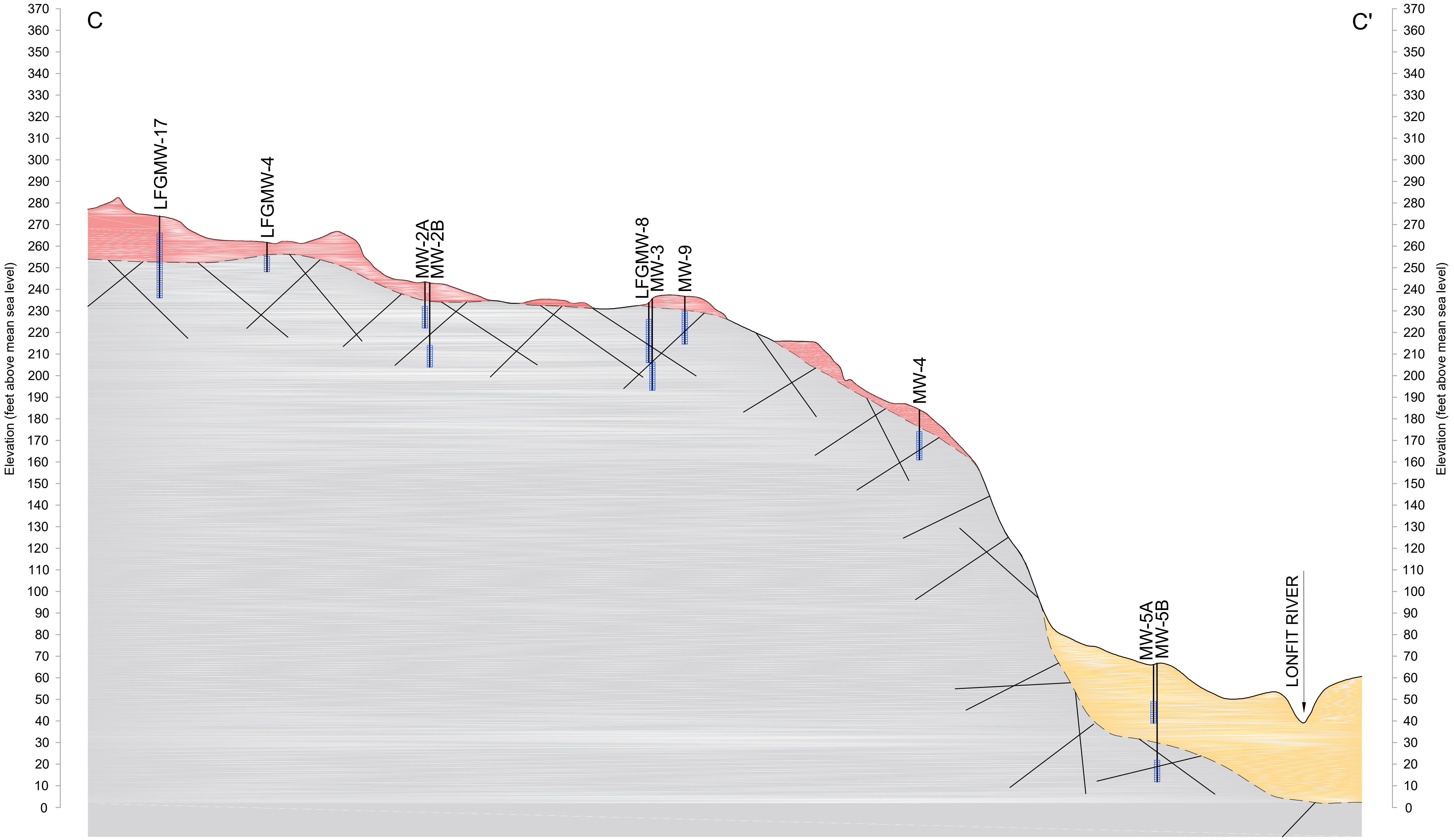

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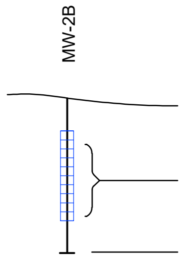


MONITORING WELL IDENTIFICATION AND APPROXIMATE LOCATION

GENERALIZED GROUND SURFACE

WELL SCREEN INTERVAL

TOTAL DEPTH OF BOREHOLE

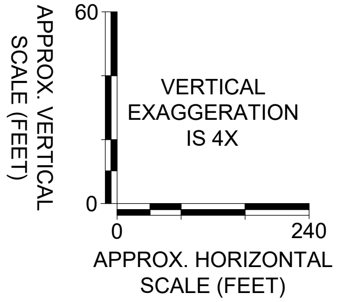
🟥 WEATHERED UNCONSOLIDATED MATERIAL/SAPROLITE

🟨 ALLUVIUM

☒ BEDROCK

~ LITHOLOGIC CONTACT

~ INFERRED LITHOLOGIC CONTACT



VERTICAL EXAGGERATION IS 4X

APPROX. HORIZONTAL SCALE (FEET)

Figure 8

Geologic Cross Section C-C'

Brown AND Caldwell

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DRAWN BY: DRM
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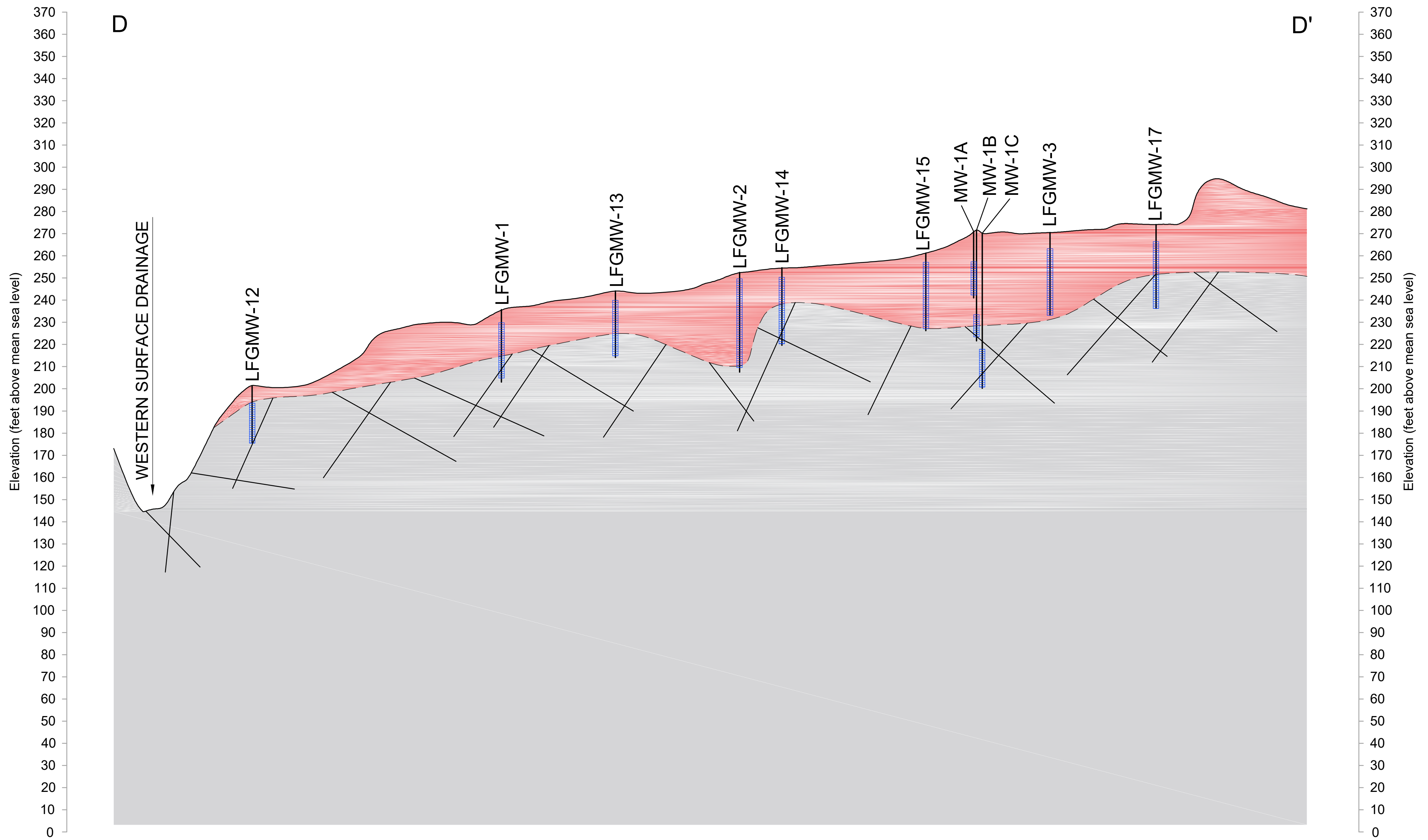
PROJECT #: 151215



LEGEND:

MW-2B	MONITORING WELL IDENTIFICATION AND APPROXIMATE LOCATION
	GENERALIZED GROUND SURFACE
	WELL SCREEN INTERVAL
	TOTAL DEPTH OF BOREHOLE
🟩	WASTE
🟥	WEATHERED UNCONSOLIDATED MATERIAL/SAPROLITE
☒	BEDROCK
~	LITHOLOGIC CONTACT
- -	INFERRED LITHOLOGIC CONTACT

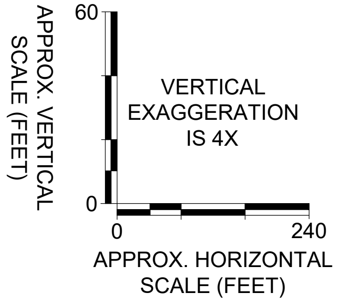


Figure 9

Geologic Cross Section
D-D'

Brown AND Caldwell

DATE:
SCALE: AS SHOWN
DRAWN BY: DRM
CHECKED BY: GLC
PROJECT #: 151215

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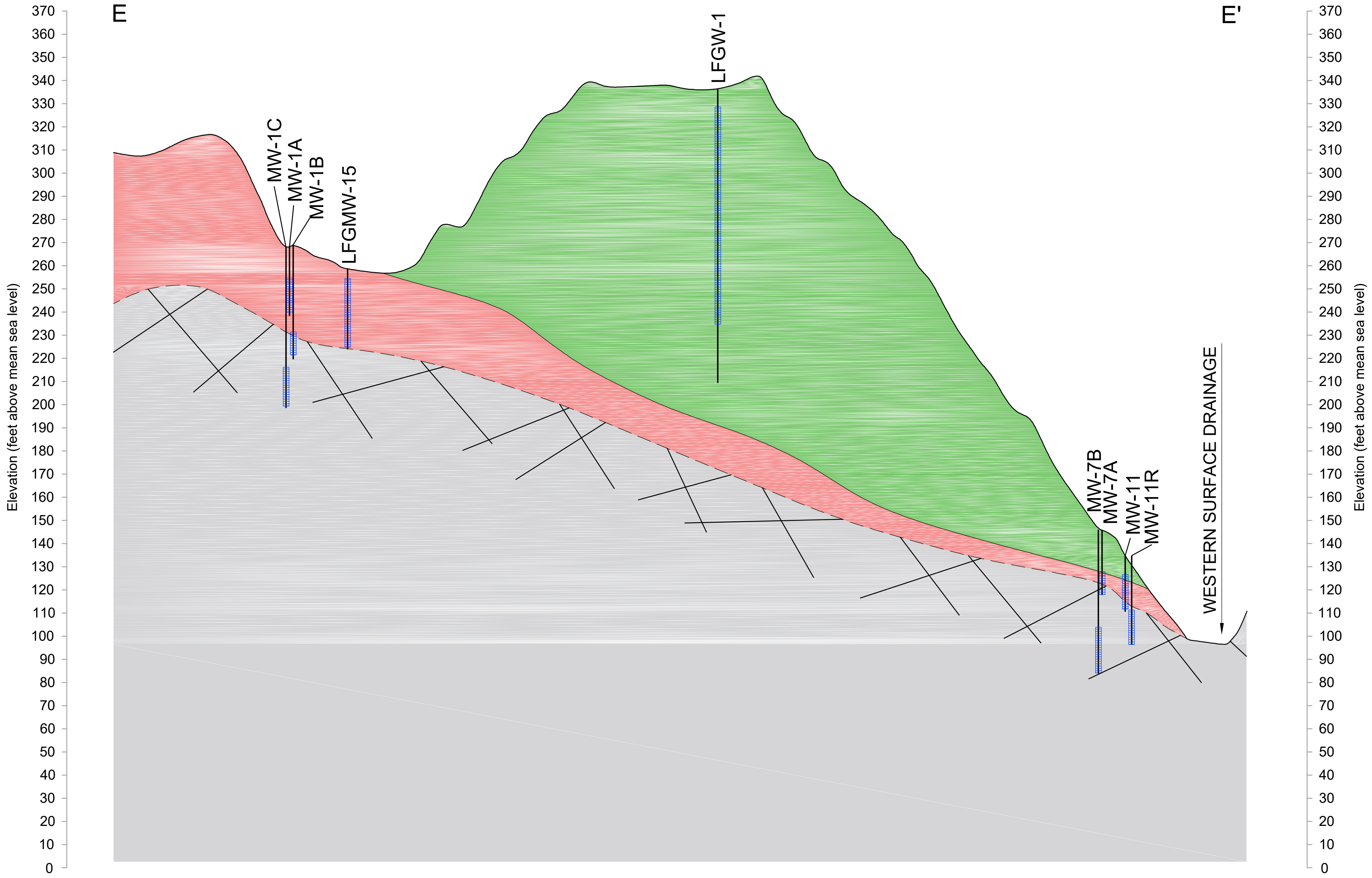

LEGEND:

MW-1A	MONITORING WELL IDENTIFICATION AND APPROXIMATE LOCATION
	GENERALIZED GROUND SURFACE
	WELL SCREEN INTERVAL
	TOTAL DEPTH OF BOREHOLE
🟩	WASTE
🟥	WEATHERED UNCONSOLIDATED MATERIAL/SAPROLITE
☒	BEDROCK
～	LITHOLOGIC CONTACT
⁓ ⁓	INFERRED LITHOLOGIC CONTACT

NOTE:
- LITHOLOGIC CONTACT BETWEEN WASTE AND WEATHERED UNCONSOLIDATED MATERIAL/SAPROLITE IS BASED ON THE PRE-WASTE USGS 1968 TOPOGRAPHIC MAP.

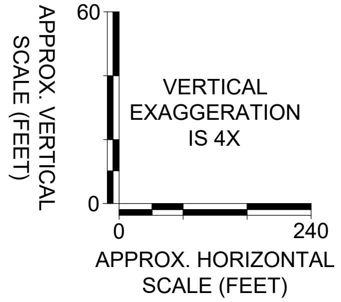

Figure 10

Geologic Cross Section
E-E'

Brown AND Caldwell

DATE:
SCALE: AS SHOWN
DRAWN BY: DRM
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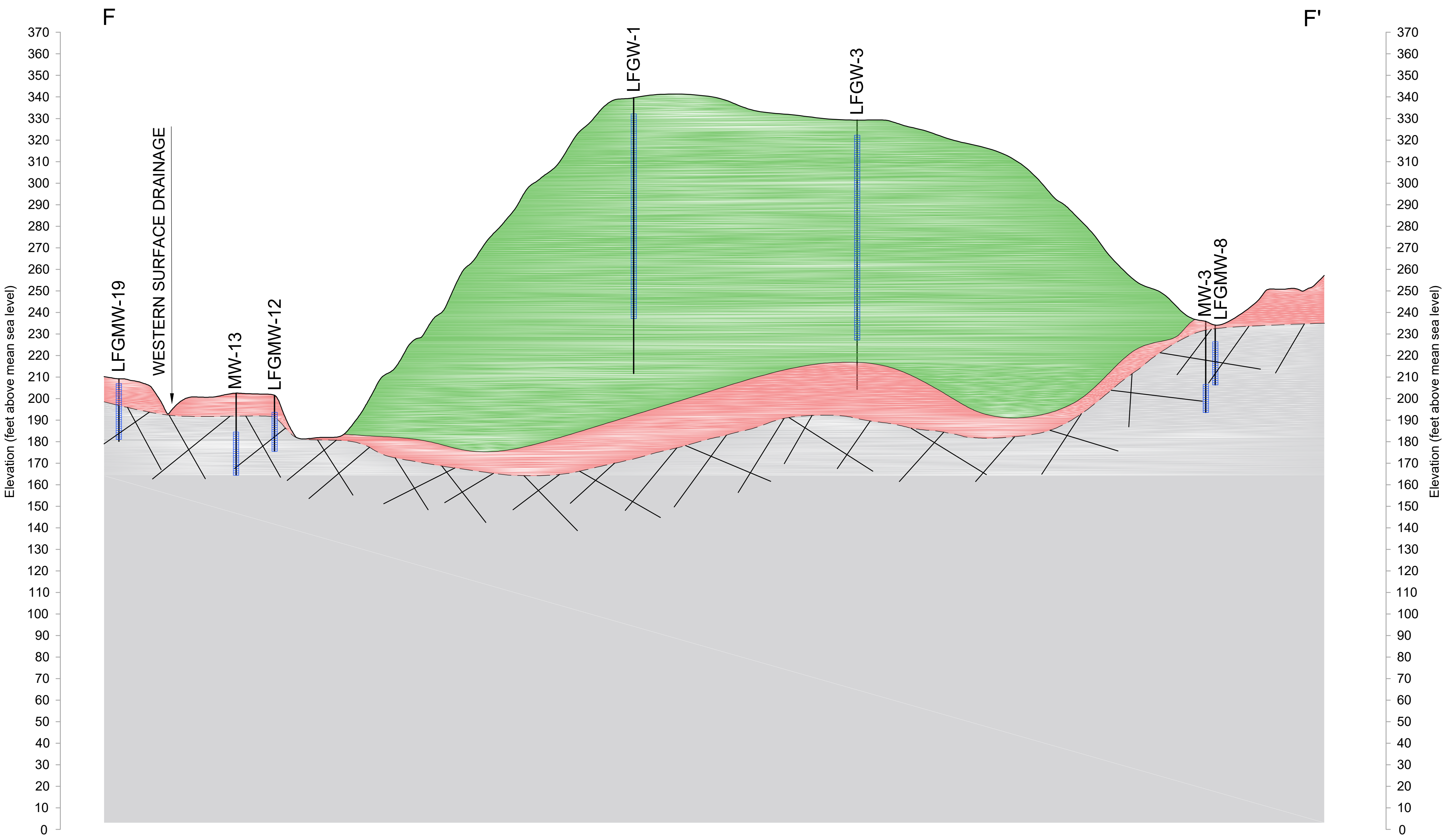
PROJECT #: 151215



LEGEND:

MW-1A — MONITORING WELL IDENTIFICATION AND APPROXIMATE LOCATION

GENERALIZED GROUND SURFACE

WELL SCREEN INTERVAL

TOTAL DEPTH OF BOREHOLE

🟩 WASTE

🟥 WEATHERED UNCONSOLIDATED MATERIAL/SAPROLITE

☒ BEDROCK

~ LITHOLOGIC CONTACT

~ ~ INFERRED LITHOLOGIC CONTACT

NOTE:

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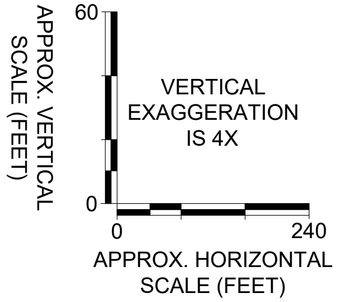

VERTICAL EXAGGERATION IS 4X

Figure 11

Geologic Cross Section
F-F'

Brown AND Caldwell

DATE:	
SCALE:	AS SHOWN
DRAWN BY:	DRM
CHECKED BY:	GLC
PROJECT #:	151215

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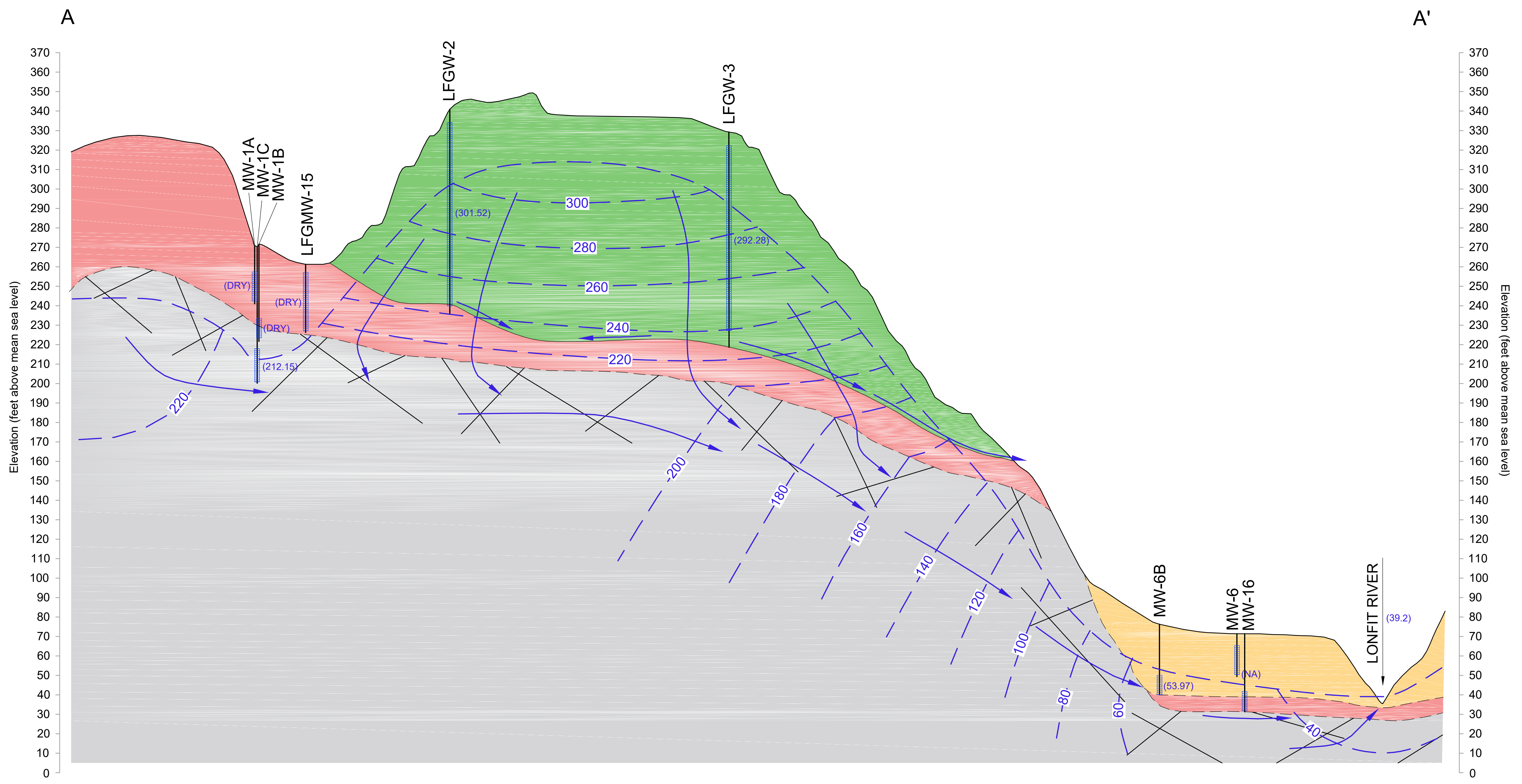
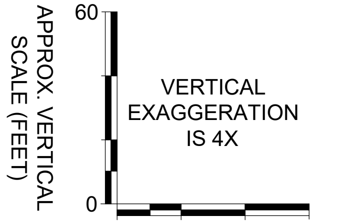


LEGEND:

MW-1A	MONITORING WELL IDENTIFICATION AND APPROXIMATE LOCATION
	GENERALIZED GROUND SURFACE
	WELL SCREEN INTERVAL
	TOTAL DEPTH OF BOREHOLE
🟩	WASTE
🟥	WEATHERED UNCONSOLIDATED MATERIAL/SAPROLITE
🟨	ALLUVIUM
☒	BEDROCK
	LITHOLOGIC CONTACT
	INFERRED LITHOLOGIC CONTACT
	GROUNDWATER EQUAL-POTENTIAL CONTOUR (FT. MSL)
	ESTIMATED GROUNDWATER FLOW DIRECTION
(212.5)	GROUNDWATER ELEVATION (FT. MSL)



VERTICAL EXAGGERATION IS 4X

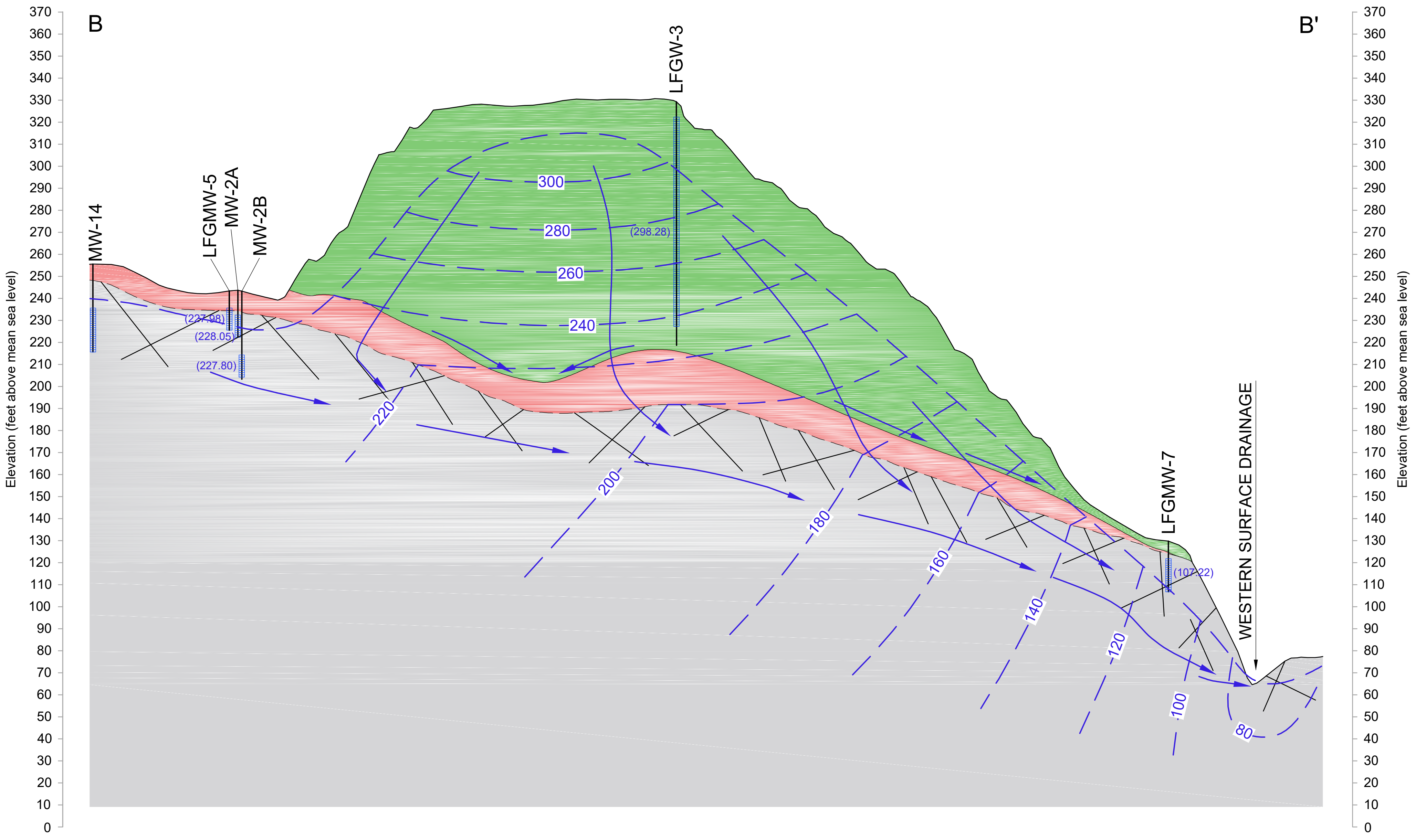
APPROX. HORIZONTAL SCALE (FEET)

Figure 12

Equal-Potential Cross Section A-A'
April 2012
Dry Season

Brown AND Caldwell

DATE:	
SCALE:	AS SHOWN
DRAWN BY:	DRM
CHECKED BY:	GLC
PROJECT #:	151215



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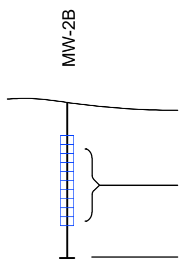


MONITORING WELL IDENTIFICATION AND APPROXIMATE LOCATION

GENERALIZED GROUND SURFACE

WELL SCREEN INTERVAL

TOTAL DEPTH OF BOREHOLE

🟩 WASTE

🟥 WEATHERED UNCONSOLIDATED MATERIAL/SAPROLITE

☒ BEDROCK

LITHOLOGIC CONTACT

INFERRED LITHOLOGIC CONTACT

GROUNDWATER EQUAL-POTENTIAL CONTOUR (FT. MSL)

ESTIMATED GROUNDWATER FLOW DIRECTION

(107.22) GROUNDWATER ELEVATION (FT. MSL)

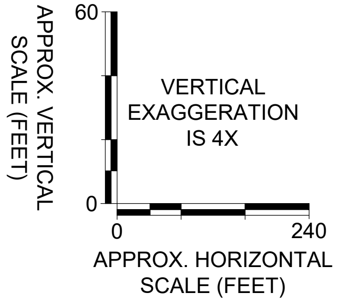


Figure 13

Equal-Potential Cross Section B-B'
April 2012
Dry Season

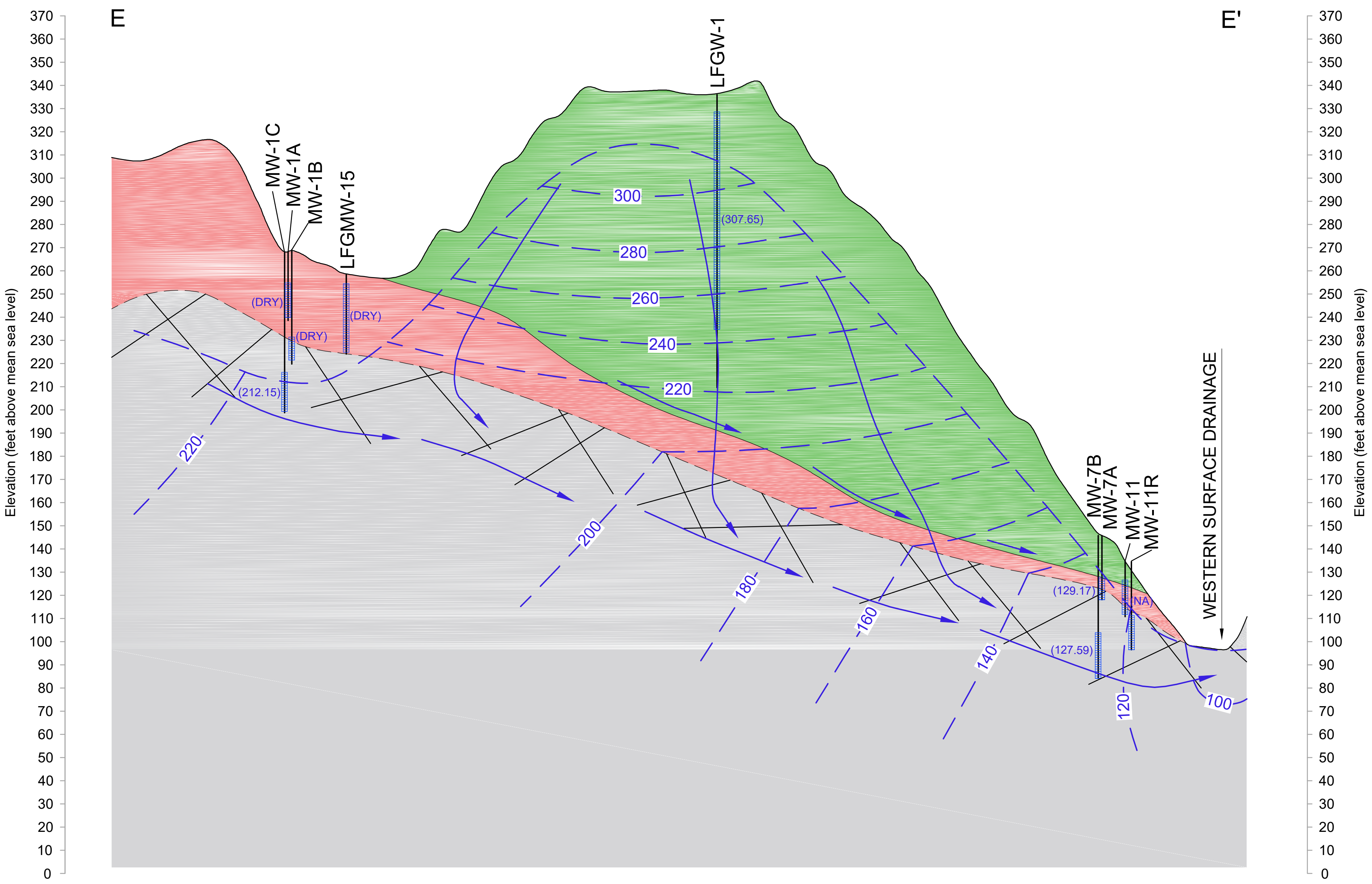
Brown AND Caldwell

DATE:
SCALE: AS SHOWN
DRAWN BY: DRM
CHECKED BY: GLC
PROJECT #: 151215

DMcCloy

X:\bc\Projects, Active\141057 Ordot Dump Closure and Design\Deliverables\CSM Update\CAD Figures\ORDOT_cross section_equipot.DWG

Mar 09, 2020 - 12:09pm



LEGEND:

MW-1A MONITORING WELL IDENTIFICATION AND APPROXIMATE LOCATION

GENERALIZED GROUND SURFACE

WELL SCREEN INTERVAL

TOTAL DEPTH OF BOREHOLE

🟩 WASTE

🟥 WEATHERED UNCONSOLIDATED MATERIAL/SAPROLITE

☒ BEDROCK

LITHOLOGIC CONTACT

INFERRED LITHOLOGIC CONTACT

GROUNDWATER EQUAL-POTENTIAL CONTOUR (FT. MSL)

ESTIMATED GROUNDWATER FLOW DIRECTION

(127.55) GROUNDWATER ELEVATION (FT. MSL)

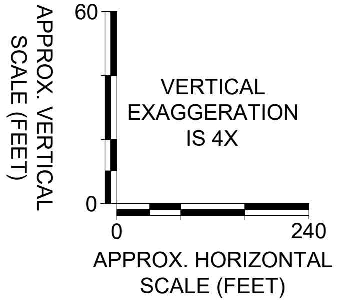
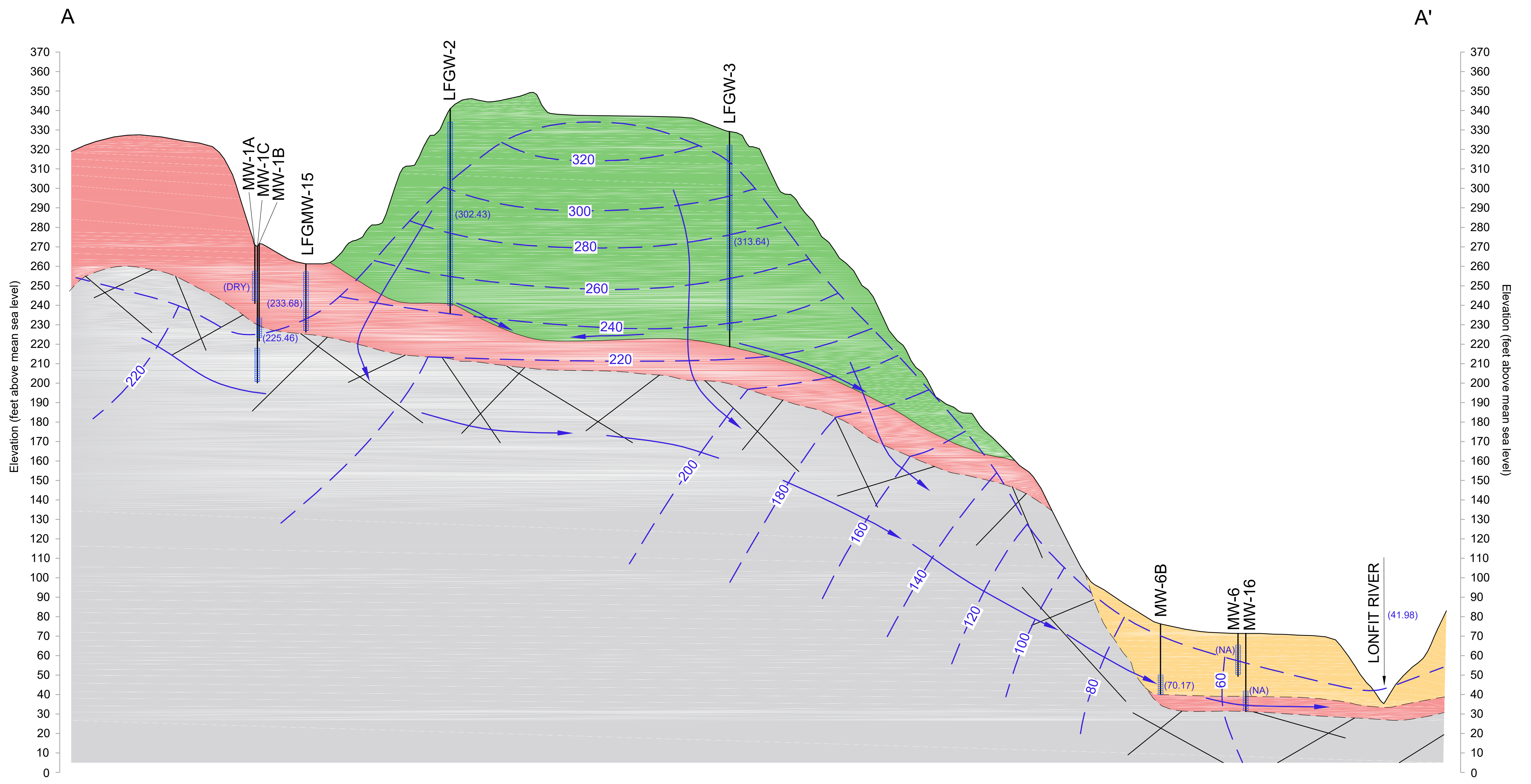


Figure 14

Equal-Potential Cross Section E-E'
April 2012
Dry Season

Brown AND Caldwell

DATE:
SCALE: AS SHOWN
DRAWN BY: DRM
CHECKED BY: GLC
PROJECT #: 151215



LEGEND:

MW-1A

MONITORING WELL IDENTIFICATION AND APPROXIMATE LOCATION

GENERALIZED GROUND SURFACE

WELL SCREEN INTERVAL

TOTAL DEPTH OF BOREHOLE

🟩 WASTE

🟥 WEATHERED UNCONSOLIDATED MATERIAL/SAPROLITE

🟨 ALLUVIUM

☒ BEDROCK

LITHOLOGIC CONTACT

INFERRED LITHOLOGIC CONTACT

GROUNDWATER EQUAL-POTENTIAL CONTOUR (FT. MSL)

ESTIMATED GROUNDWATER FLOW DIRECTION

(70.17) GROUNDWATER ELEVATION (FT. MSL)

APPROX. VERTICAL SCALE (FEET)
60
0
VERTICAL EXAGGERATION IS 4X
0
240
APPROX. HORIZONTAL SCALE (FEET)

Figure 15

Equal-Potential Cross Section A-A'
August 2012
Wet Season

Brown AND Caldwell

DATE:
SCALE: AS SHOWN
DRAWN BY: DRM
CHECKED BY: GLC
PROJECT #: 151215

DMcCloy

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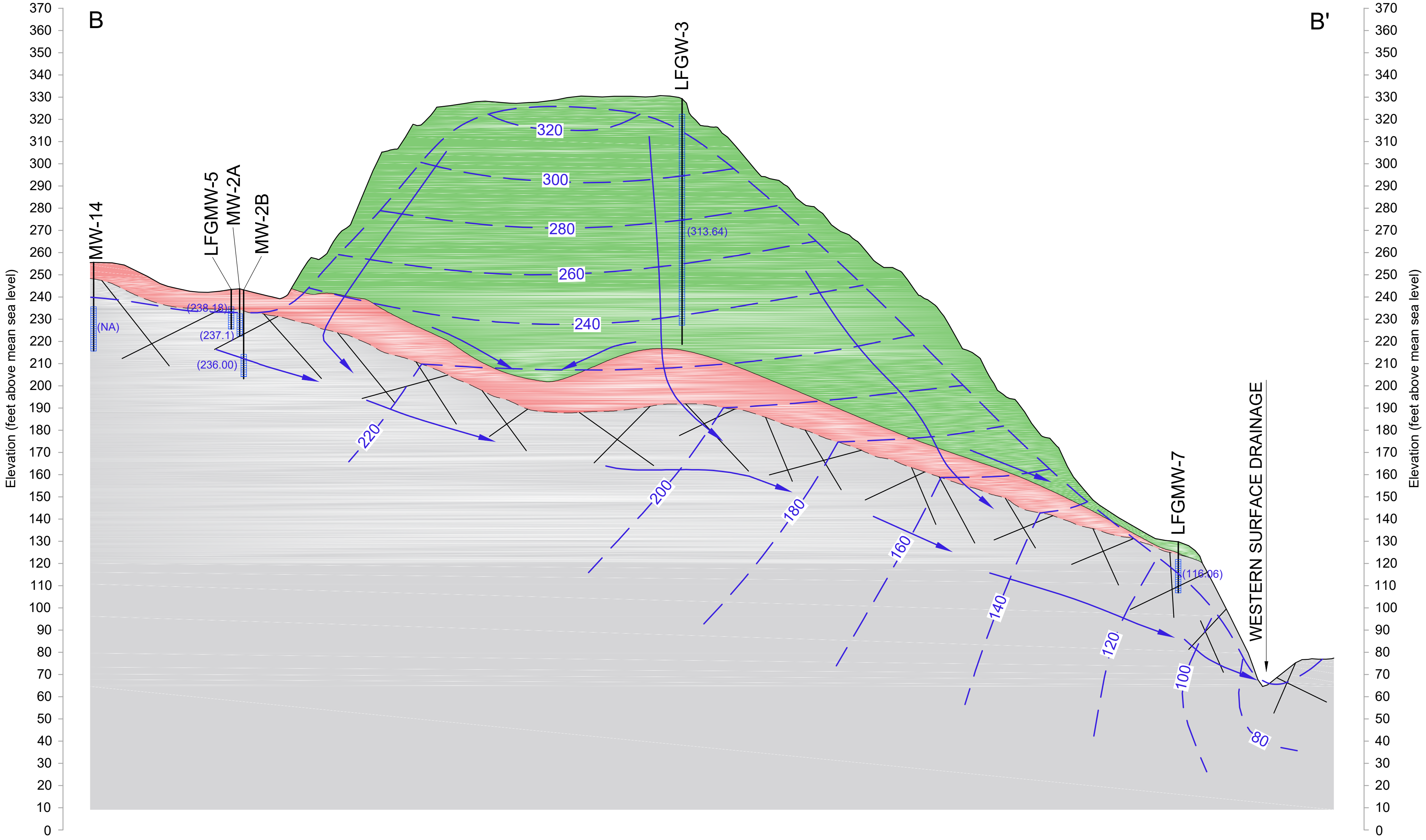
Mar 09, 2020 - 12:10pm



LEGEND:

MW-2B — MONITORING WELL IDENTIFICATION AND APPROXIMATE LOCATION

GENERALIZED GROUND SURFACE

WELL SCREEN INTERVAL

TOTAL DEPTH OF BOREHOLE

🟩 WASTE

🟥 WEATHERED UNCONSOLIDATED MATERIAL/SAPROLITE

☒ BEDROCK

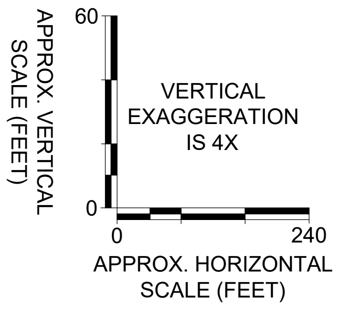
LITHOLOGIC CONTACT

INFERRED LITHOLOGIC CONTACT

GROUNDWATER EQUAL-POTENTIAL CONTOUR (FT. MSL)

ESTIMATED GROUNDWATER FLOW DIRECTION

(116.06) GROUNDWATER ELEVATION (FT. MSL)



VERTICAL EXAGGERATION IS 4X

Figure 16

Equal-Potential Cross Section B-B'
August 2012
Wet Season

Brown AND Caldwell

DATE:
SCALE: AS SHOWN
DRAWN BY: DRM
CHECKED BY: GLC
PROJECT #: 151215

DMcCloy

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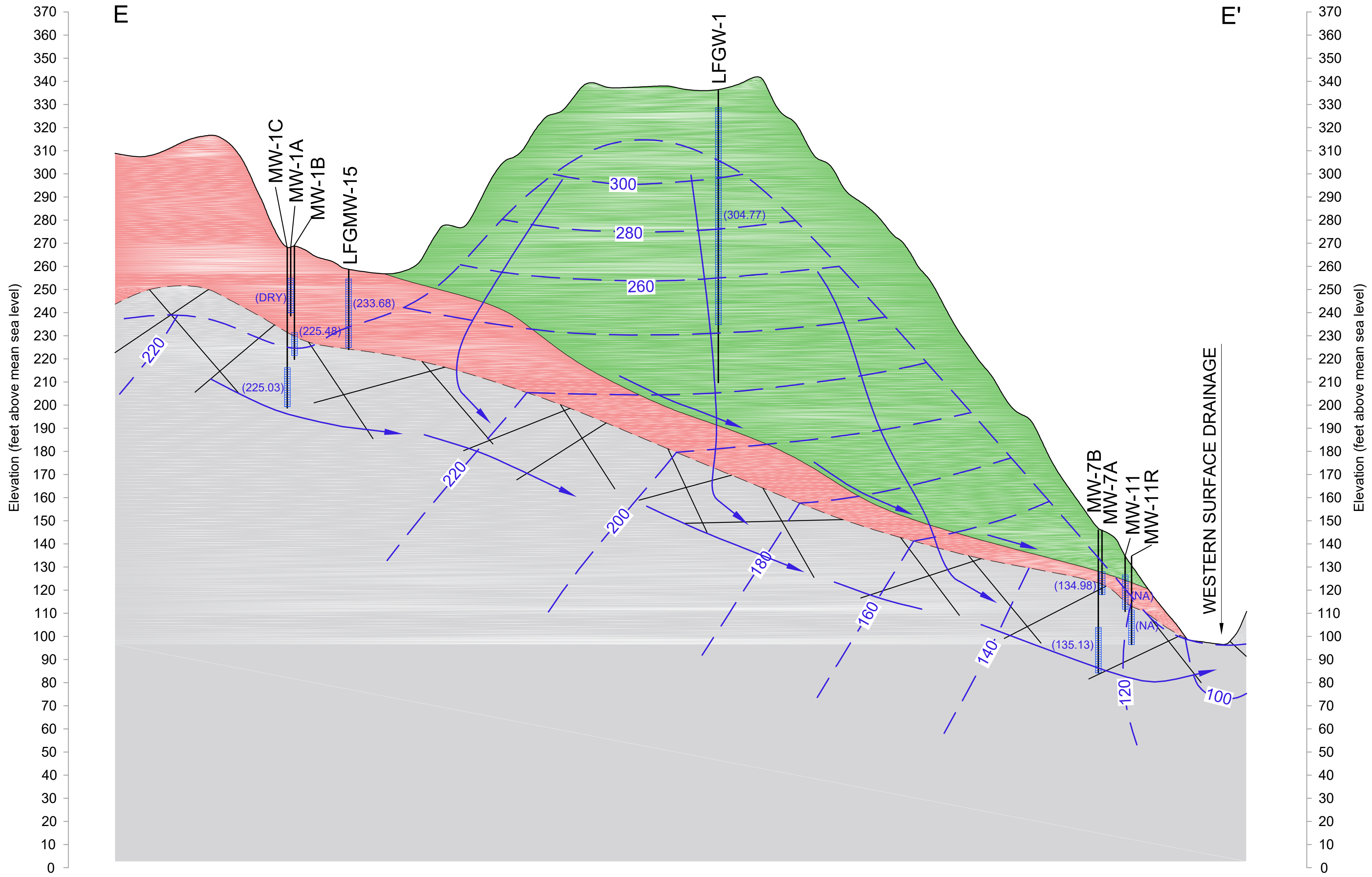
Mar 09, 2020 - 12:11pm



LEGEND:

MW-1A	MONITORING WELL IDENTIFICATION AND APPROXIMATE LOCATION
⌒	GENERALIZED GROUND SURFACE
▥	WELL SCREEN INTERVAL
─	TOTAL DEPTH OF BOREHOLE
🟩	WASTE
🟥	WEATHERED UNCONSOLIDATED MATERIAL/SAPROLITE
☒	BEDROCK
~	LITHOLOGIC CONTACT
- -	INFERRED LITHOLOGIC CONTACT
— —	GROUNDWATER EQUAL-POTENTIAL CONTOUR (FT. MSL)
↗	ESTIMATED GROUNDWATER FLOW DIRECTION
(134.98)	GROUNDWATER ELEVATION (FT. MSL)

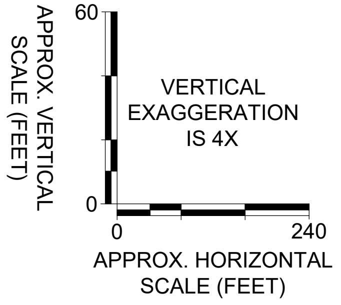


Figure 17

Equal-Potential Cross Section E-E'
August 2012
Wet Season

Brown AND Caldwell

DATE:
SCALE: AS SHOWN
DRAWN BY: DRM
CHECKED BY: GLC
PROJECT #: 151215

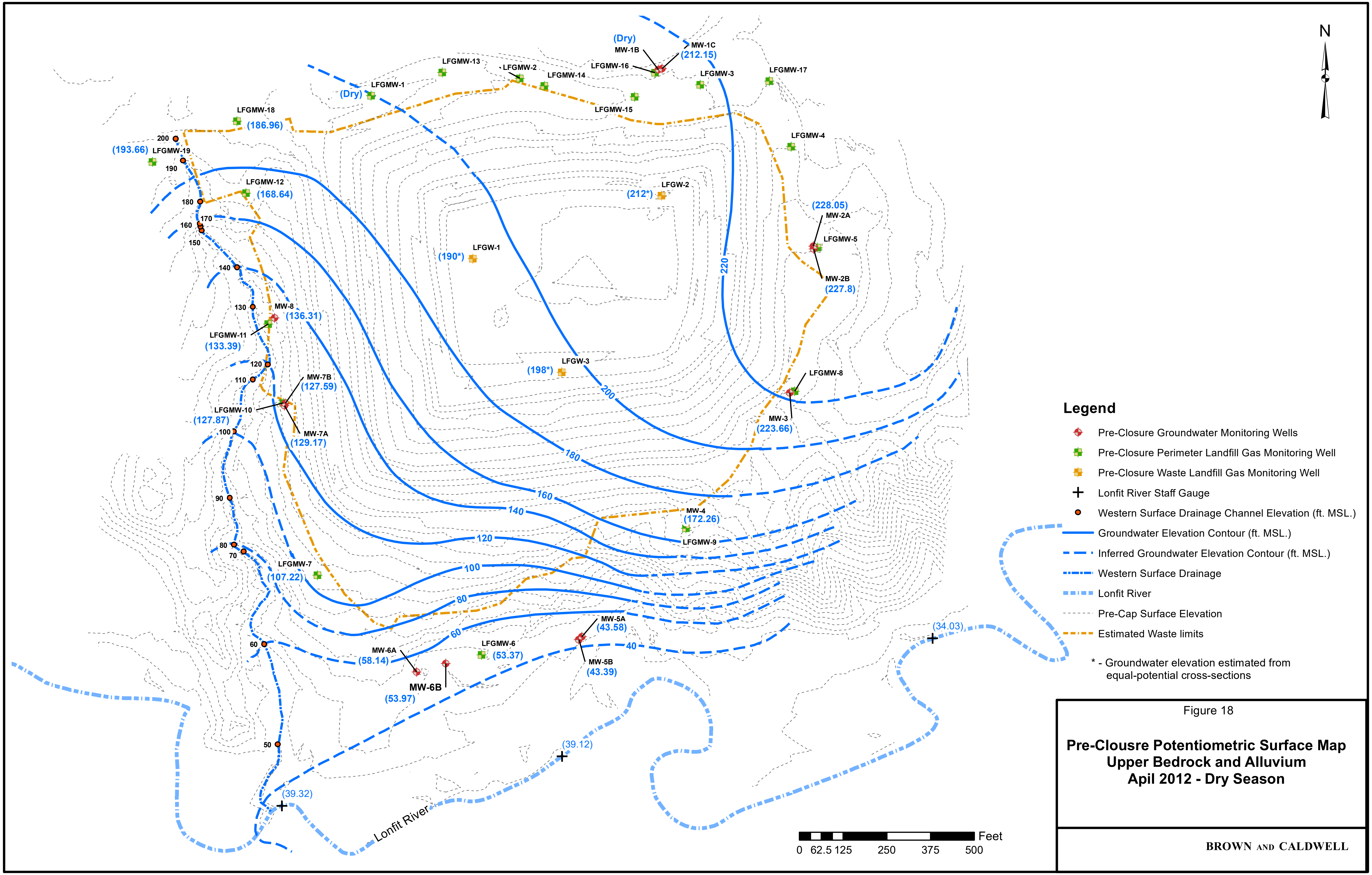
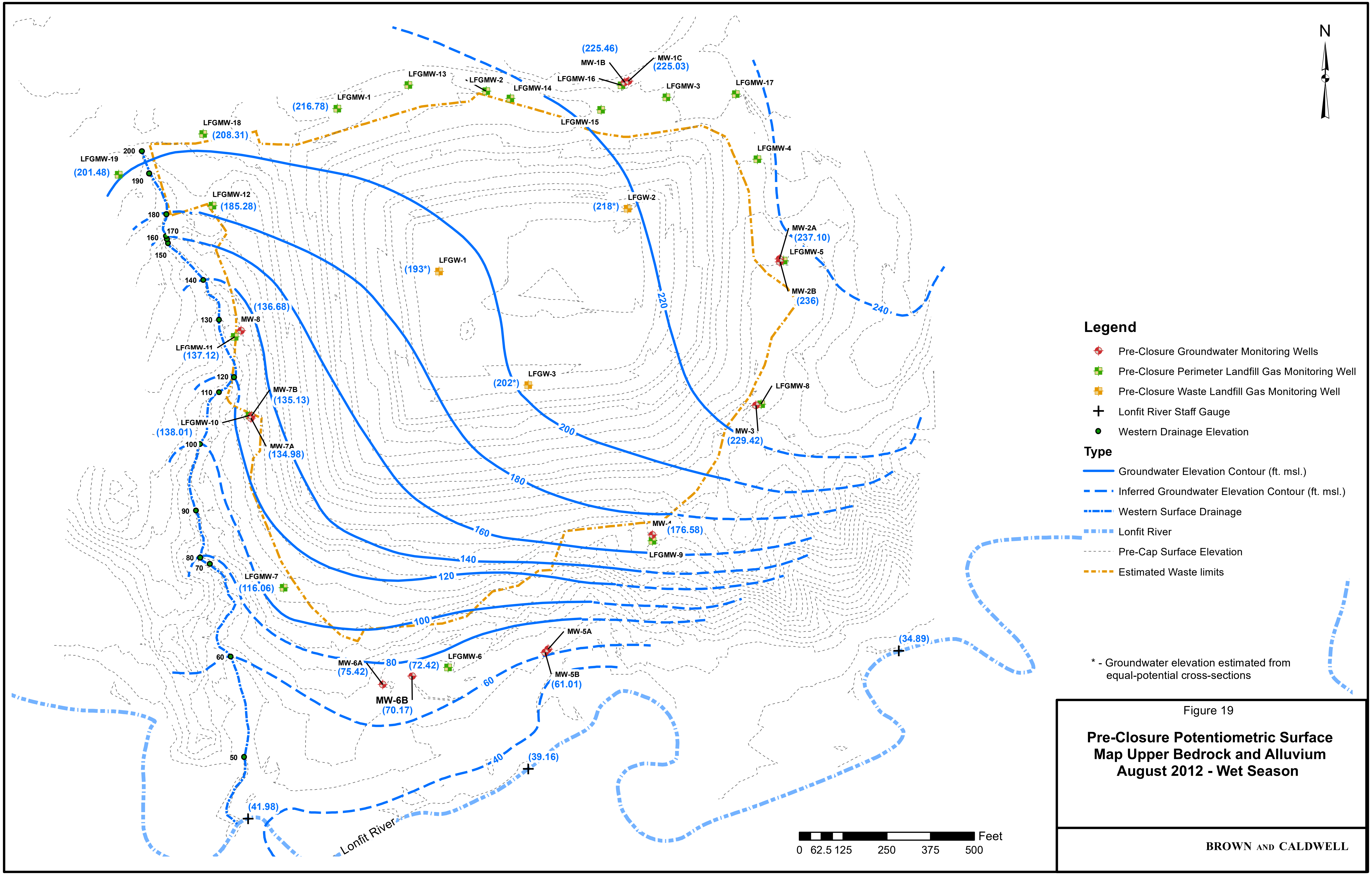


Figure 18

Pre-Clousre Potentiometric Surface Map
Upper Bedrock and Alluvium
Apil 2012 - Dry Season

BROWN AND CALDWELL



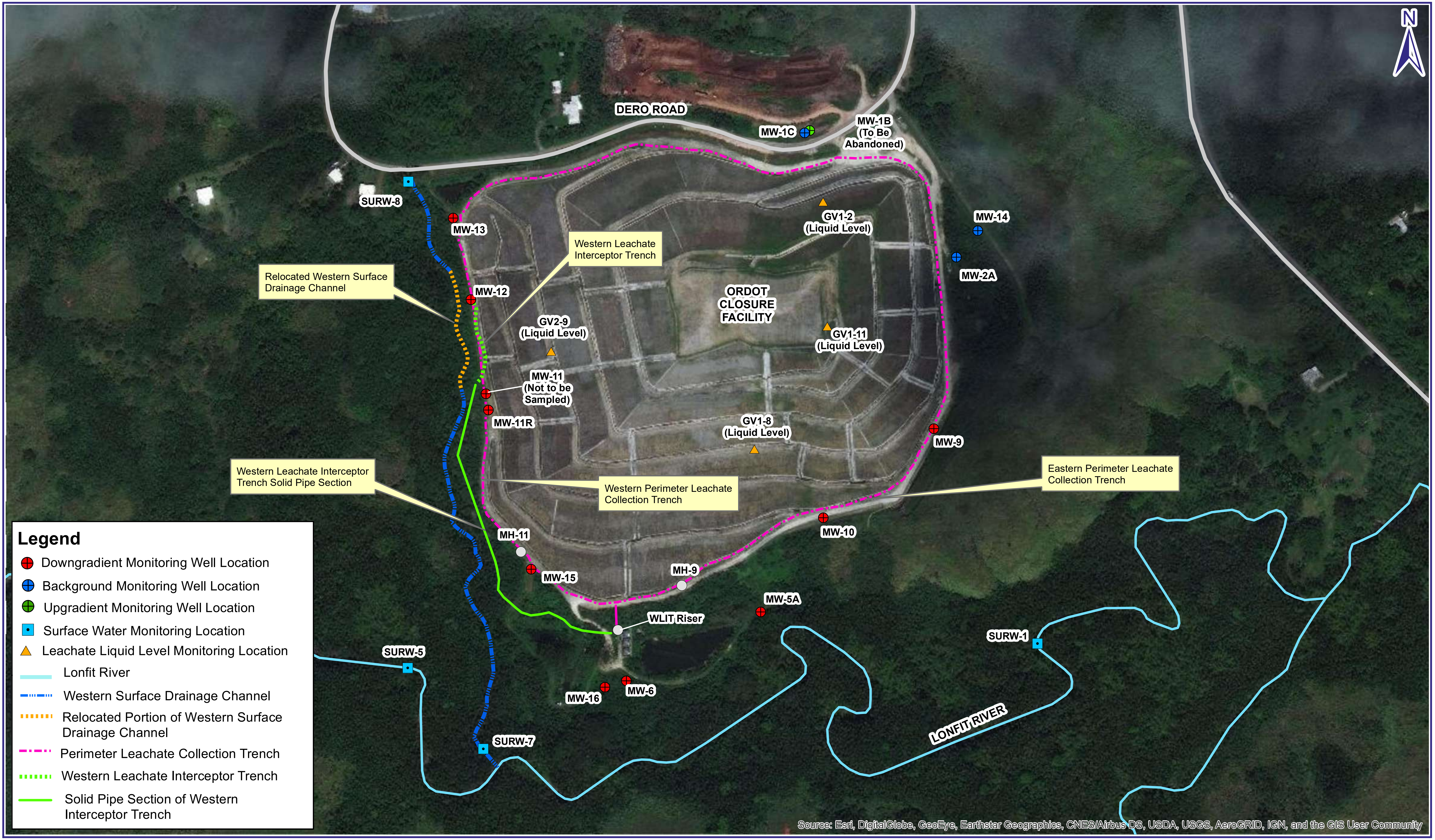
* - Groundwater elevation estimated from equal-potential cross-sections

Figure 19

Pre-Closure Potentiometric Surface Map Upper Bedrock and Alluvium August 2012 - Wet Season

BROWN AND CALDWELL

4/10/2020

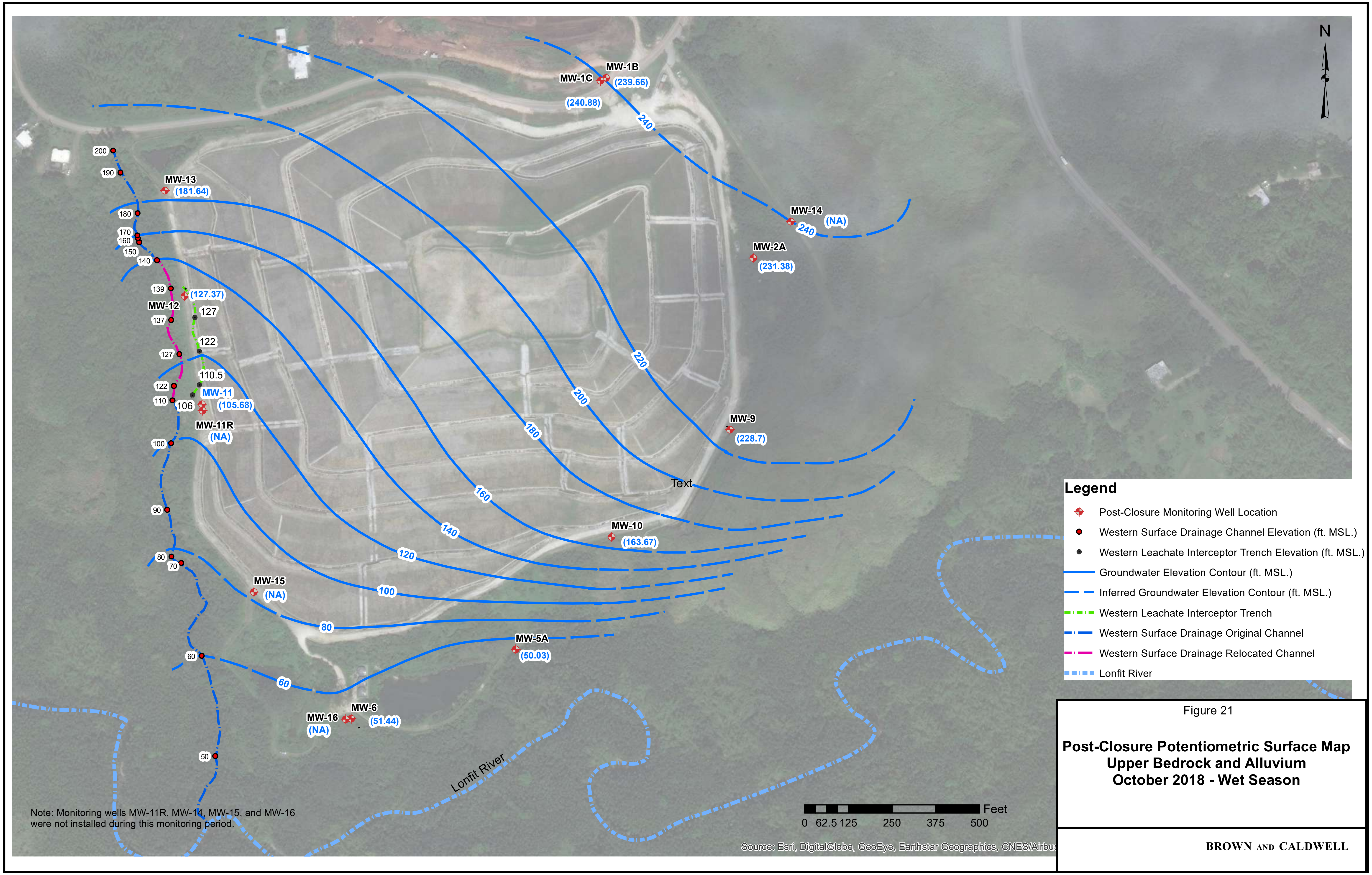


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

FIGURE 20
POST-CLOSURE MONITORING LOCATIONS

Author: TCaputi Path: V:\Ramsey\Ordot\CSM_Fig_20_Monitoring_Locations.mxd

Brown AND Caldwell



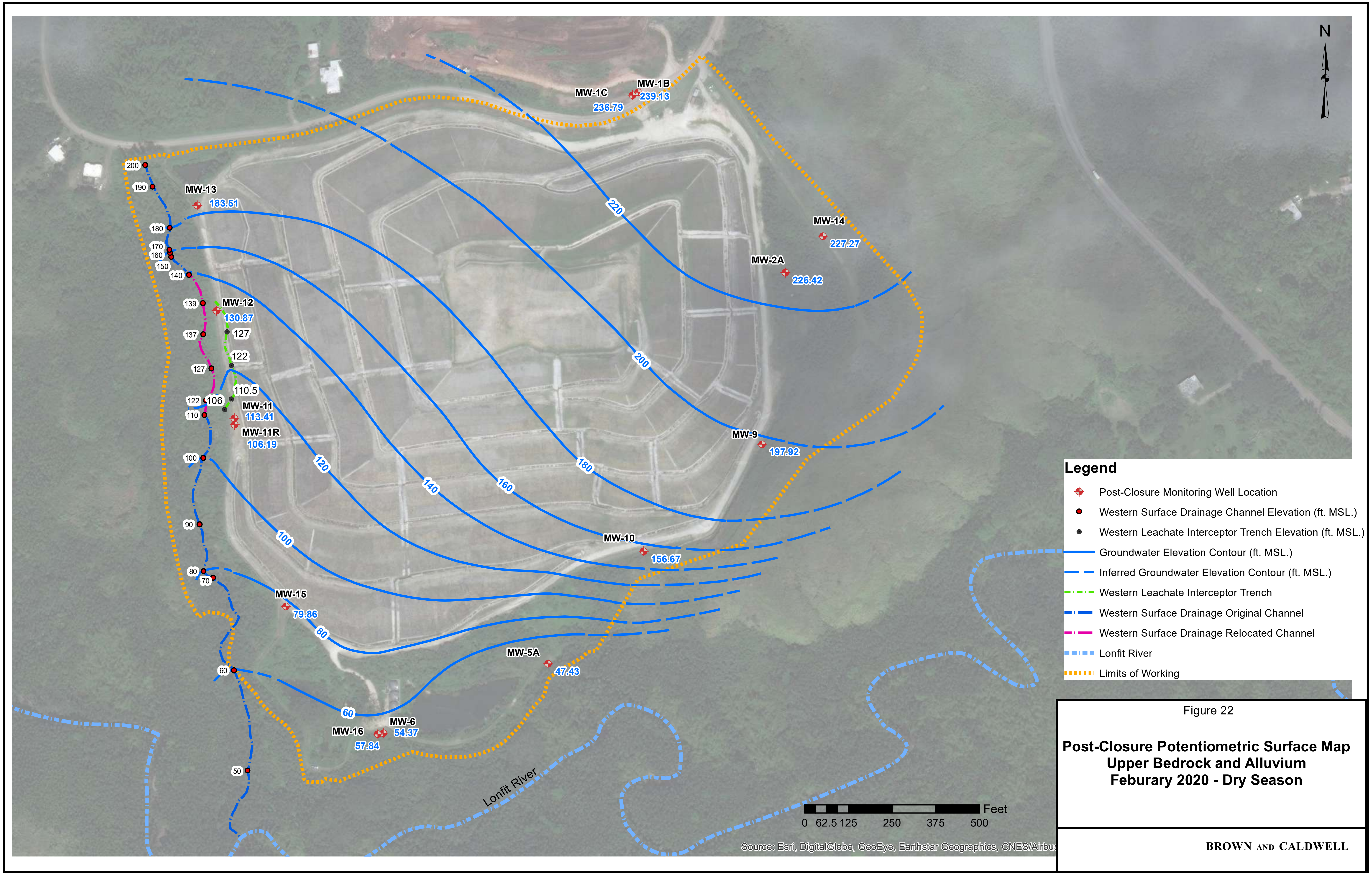
Note: Monitoring wells MW-11R, MW-14, MW-15, and MW-16 were not installed during this monitoring period.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

Figure 21

Post-Closure Potentiometric Surface Map
Upper Bedrock and Alluvium
October 2018 - Wet Season

BROWN AND CALDWELL



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus

Figure 22

Post-Closure Potentiometric Surface Map Upper Bedrock and Alluvium Feburary 2020 - Dry Season

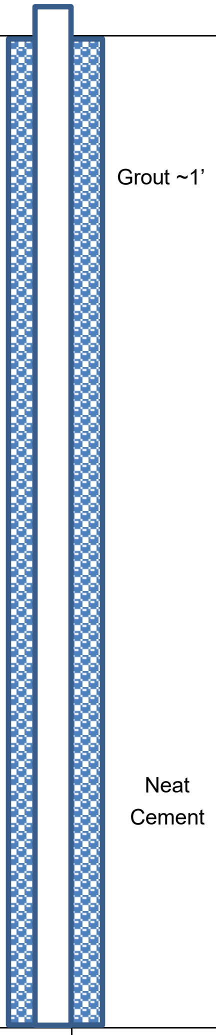
BROWN AND CALDWELL

Appendix A: Boring and Well Construction Logs

PROJECT: Ordot Closure Facility Monitoring Well Installation	**Log of Well No. MW-11R**
BORING LOCATION: N 633.677.4533, E 327.374.4662	GROUND SURFACE ELEVATION AND DATUM: 135.62' Guam 1993 Grid Coordinates
DRILLING CONTRACTOR: Allied Pacific Drilling, Inc. (APDI)	DATE STARTED: 12/07/19 DATE FINISHED 12/08/19:
DRILLING METHOD: Air Rotary – 12-inch diameter	TOTAL DEPTH (ft): 45.4 SCREEN INTERVAL (ft): 24.6' to 44.6' – Flush Thread
DRILLING EQUIPMENT: T-650-W Reich	DEPTH TO WATER ATD:19.45' BGS CASING: PVC 4" Sch. 40 – Flush Thread TOC Elevation: 137.97'
SAMPLING METHOD: Grab samples	LOGGED BY: Michael Douglas
HAMMER WEIGHT: NA DROP: NA	RESPONSIBLE PROFESSIONAL: Michael Douglas REG. NO.

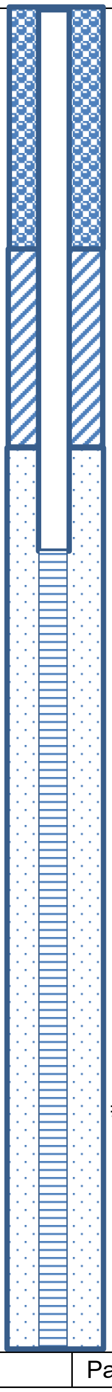
DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist % by weight, plast., density, structure, cementation, react w/HCl, geo. inter. Surface Elevation: 135.62'	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0-3					0-3' Limestone fill material for roadway	Grout ~1'
3-11					3-11' --- Clay, CL 10YR 7/1 Light Grey, Dry, Low Plastic, Oxidized in places, Mottled, Trace Fine Sand	
11-15					11-19' --- Clay, CM 5GY 5/1 Greenish Grey, Moist, Moderately Plastic, Trace Fine Sand	Neat Cement

Depth scale: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



PROJECT: Ordot Closure Facility Monitoring Well Installation	**Log of Well No. 11R**

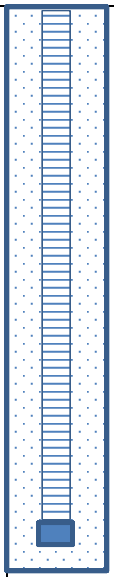
DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist % by weight, plast., density, structure, cementation, react w/HCl, geo. inter. Surface Elevation: 135.62’	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
16					Clay/Weathered Rock, CL, 5G 5/1 Greenish Grey Moist, Moderately Plastic, Very Stiff, Saprolitic, Fine To Medium Sand	
17						
18					19’ to TD ---	
19					Basalt Rock Fragments, Bedrock, Moderate to Strong, Blueish Grey, Aphanitic, Massive, Slightly Decomposed	
20						Bentonite 19.6’
21						Bentonite Chips
22						#3 Silica Sand 22.6’
23						
24						Screen 24.6’ Sch. 40 Flush Thread .010” slot size
25						
26						
27						
28						
29						
30						
31					Basalt Rock, Bedrock, Strong, Blueish Grey Aphanitic, Massive, Fresh	
32						
33						#3 Silica Sand
34						
35						
36						



	Project No. 62392.39	Page 2 of 3

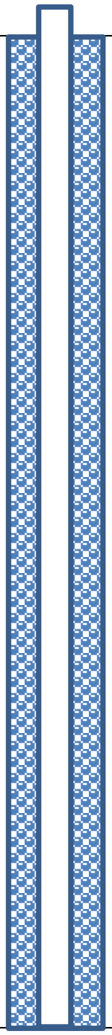
PROJECT: Ordot Closure Facility Monitoring Well Installation

Log of Well No. MW-11R

DEPTH (feet)	SAMPLES Sample No.	 Sample	 Blows/ Foot	PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist % by weight, plast., density, structure, cementation, react w/HCl, geo. inter. Surface Elevation: 135.62’	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
37						
38						
39						#3 Silica Sand
40					Basalt Rock, Bedrock, Strong, Dark Blueish Grey, Aphanitic, Massive, Fresh	
41						
42						
43						Bottom Screen 44.6’
44						End Cap 44.9’
45						Flush Thread
46					TD=45.4’	
47						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						

Project No. 62392.39

PROJECT: Ordot Closure Facility Monitoring Well Installation		**Log of Well No. MW-14**	
BORING LOCATION: N 634.235.0656, E 329.051.3704		GROUND SURFACE ELEVATION AND DATUM: 257.74’ Guam 1993 Grid Coordinates	
DRILLING CONTRACTOR: Allied Pacific Drilling, Inc. (APDI)		DATE STARTED: 12/07/19	DATE FINISHED 12/08/19:
DRILLING METHOD: Air Rotary – 12-inch diameter		TOTAL DEPTH (ft): 42	SCREEN INTERVAL (ft): 21’ to 41’ – Flush Thread
DRILLING EQUIPMENT: T-650-W Reich		DEPTH TO WATER ATD: 8.2’	CASING: PVC 4” Sch. 40 – Flush Thread TOC Elevation: 259.84
SAMPLING METHOD: Grab samples		LOGGED BY: Michael Douglas	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: Michael Douglas	REG. NO.

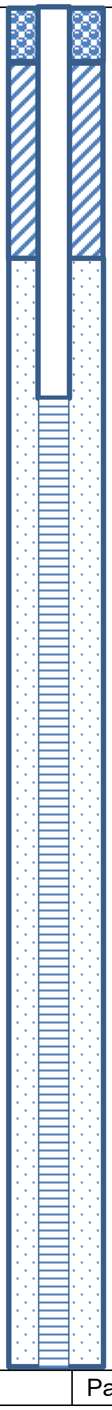
DEPTH (feet)	SAMPLES			PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist % by weight, plast., density, structure, cementation, react w/HCl, geo. inter. Surface Elevation: 257.74’	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample No.	Sample	Blows/ Foot			
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15					0’-3’ Topsoil/Fill 10 YR 4/2 Dark Greyish Brown, Moist, Highly Plastic Occasional roots 3’-5.5’ -- Clay, CM 2.5YR 4/2 Dusky Red, Wet, Moderately Plastic, Trace Fine Sand 5.5’-9’ -- Clay/Weathered Rock, CL, 5G 5/1 Greenish Grey Moist, Moderately Plastic, Very Stiff, Saprolitic, Fine To Medium Sand 9’ to TD -- Basalt Rock Fragments, Bedrock, Moderate to Strong, Blueish Grey, Aphanitic, Massive, Slightly Decomposed	 Grout ~1’ Neat Cement

Project No. 62392.39 | Page 1 of 3

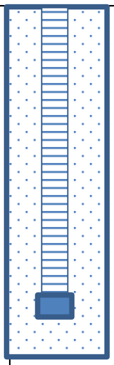
PROJECT: Ordot Closure Facility Monitoring Well Installation

Log of Well No. MW-14

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist % by weight, plast., density, structure, cementation, react w/HCl, geo. inter. Surface Elevation: 257.74’	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
16						Neat Cement Bentonite 16’
17					Basalt Rock, Bedrock, Strong Blueish Grey, Aphanitic, Massive, Fresh, Trace Oxidation	Bentonite
18						
19						#3 Silica Sand 19’
20						
21						Screen 21’
22						Sch. 40, Flush Thread .010” slot size
23						
24						
25						
26						
27						
28						
29						
30						
31					Basalt Rock, Bedrock, Strong, Dark Blueish Grey, Aphanitic, Massive, Fresh	
32						
33						#3 Silica Sand
34						
35						
36						



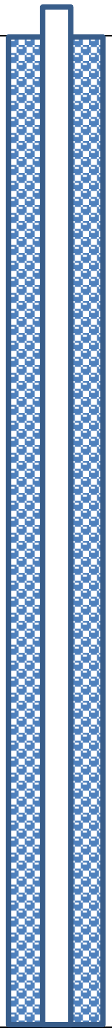
PROJECT: Ordot Closure Facility Monitoring Well Installation	**Log of Well No. MW-14**

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist % by weight, plast., density, structure, cementation, react w/HCl, geo. inter. Surface Elevation: 257.74’	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
37						
38						
39						#3 Silica Sand
40					Basalt Rock, Bedrock, Strong, Dark Blueish Grey, Aphanitic, Massive, Fresh	Bottom Screen 41’
41						End Cap 41.6’ Flush Thread
42					TD=42’	
43						
44						
45						
46						
47						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						

	Project No. 62392.39	Page 3 of 3

PROJECT: Ordot Closure Facility Monitoring Well Installation		**Log of Well No. MW-15**	
BORING LOCATION: N 633.161.8731, E 327.523.0021		GROUND SURFACE ELEVATION AND DATUM: 114.24’ Guam 1993 Grid Coordinates	
DRILLING CONTRACTOR: Allied Pacific Drilling, Inc. (APDI)		DATE STARTED: 11/30/19	DATE FINISHED 12/01/19:
DRILLING METHOD: Hollow Stem Auger (10.75-inch)/ Air Rotary (12-inch diameter)		TOTAL DEPTH (ft): 51	SCREEN INTERVAL (ft): 30’ to 50’ – Flush Thread
DRILLING EQUIPMENT: Mobile B-61, T-650-W Reich		DEPTH TO WATER ATD: 48.6	CASING: PVC 4” Sch. 40 – Flush Thread TOC Elevation: 116.32’
SAMPLING METHOD: Split Spoon, Grab Samples		LOGGED BY: Michael Douglas	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: Michael Douglas	REG. NO.

DEPTH (feet)	SAMPLES			PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist % by weight, plast., density, structure, cementation, react w/HCl, geo. inter. Surface Elevation: 114.24’	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample No.	Sample	Blows/ Foot			
1					0’ – 12’	
2						Grout ~2’
3		-- --				
4		-- --			Clay, CL, GN 6/1 Grey, Moist, Low Plastic, Stiff, Fill material	
5		--				
6						
7						
8		-- --				
9		-- --				
10		--				
11					12’- 19.5’ ---	
12					Clay, CL, 5BG 5/1 Greenish Grey, Dry, Not Plastic Weathered Rock,	Neat Cement
13					HSA Refusal, Switch to Air Rotary Rig	
14						
15						



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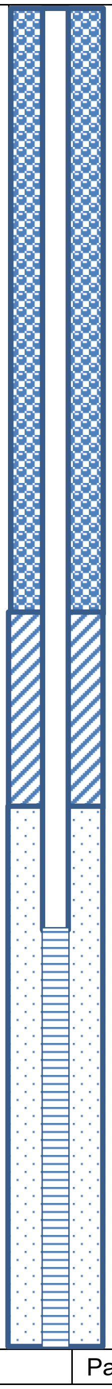
PROJECT: Ordot Closure Facility Monitoring Well Installation

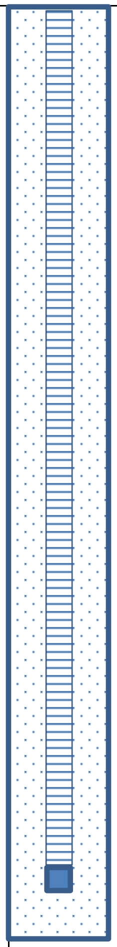
Log of Well No. MW-15



DEPTH (feet)	SAMPLES Sample No.	Sample	Blows/ Foot	PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist % by weight, plast., density, structure, cementation, react w/HCl, geo. inter. Surface Elevation: 114.24’	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
16					Clay, CM 5GY 5/1 Greenish Grey, Dry, Not Plastic, Weathered Rock	
17						
18						
19					19.5’-24’	
20					Clay/Weathered Rock, CL, 5G 5/1 Greenish Grey Moist, Moderately Plastic, Very Stiff, Saprolitic, Fine To Medium Sand	
21						Neat Cement
22						
23					24’ to TD	
24					Basalt Rock Fragments, Bedrock, Moderate to Strong, Blueish Grey, Aphanitic, Massive, Slightly Decomposed	
25						Bentonite 25’
26						Bentonite Chips
27						
28						#3 Silica Sand 28’
29						
30						Screen 30’ Sch. 40 Flush Thread .010” slot size
31						
32						
33						
34						
35						#3 Silica Sand
36						

Project No. 62392.39 | Page 2 of 3

PROJECT: Ordot Closure Facility Monitoring Well Installation	**Log of Well No. MW-15**



DEPTH (feet)	SAMPLES Sample No.	Sample	Blows/ Foot	PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist % by weight, plast., density, structure, cementation, react w/HCl, geo. inter. Surface Elevation: 114.24'	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
37						
38						
39						#3 Silica Sand
40						
41						
42						
43					Basalt Rock, Bedrock, Strong, Blueish Grey Aphanitic, Massive, Fresh	
44						
45						
46						
47						
48						
49						Bottom Screen 50'
50					Basalt Rock, Bedrock, Strong, Dark Blueish Grey, Aphanitic, Massive, Fresh	End Cap 50.6' Flush Thread
51					TD=51'	
52						
53						
54						
55						
56						
57						

Project No. 62392.39

PROJECT: Ordot Closure Facility Monitoring Well Installation

Log of Well No. MW-16

BORING LOCATION: N 632.801.4642, E 327.785.9518

GROUND SURFACE ELEVATION AND DATUM: 71.60' Guam 1993 Grid Coordinates

DRILLING CONTRACTOR: Allied Pacific Drilling, (APDI)

DATE STARTED: 11/23/19

DATE FINISHED 11/26/19:

DRILLING METHOD: Hollow Stem Auger – 10.75 inch diameter

TOTAL DEPTH (ft): 41.2

SCREEN INTERVAL (ft): 30.2' to 40.2' – Flush Thread

DRILLING EQUIPMENT: Mobile B-61

DEPTH TO WATER ATD: 15.8

CASING: PVC 4" Sch. 40 – Flush Thread TOC Elevation: 73.86'

SAMPLING METHOD: Split Spoon

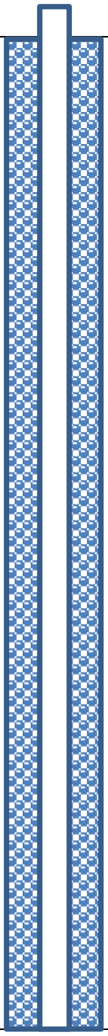
LOGGED BY: Michael Douglas

HAMMER WEIGHT: NA

DROP: NA

RESPONSIBLE PROFESSIONAL: Michael Douglas

REG. NO.



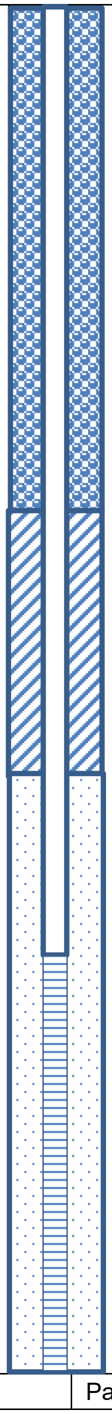
DEPTH (feet)	SAMPLES Sample No.	Sample	Blows/ Foot	PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist % by weight, plast., density, structure, cementation, react w/HCl, geo. inter. Surface Elevation: 71.60'	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					0'-3' Topsoil/Fill	
1						
2					3'-5'	Grout ~2'
3		-- --			-- 10 YR 4/2 Dark Greyish Brown, Moist, Highly Plastic	
4		-- -- --			Occasional roots	
5						
6						
7					8'-9.5'	
8		-- --			-- Clay, CH, 2.5YR 4/2 Dusky Red, Moist, Highly	
9		-- --			Plastic, Mottled w/ grey, Oxidized, Massive Bed, Trace Fine sand	
10						
11						
12		-- --				Neat Cement
13		-- --				
14						
15						

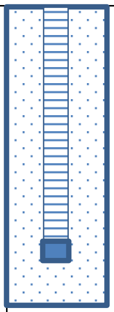
PROJECT: Ordot Closure Facility Monitoring Well Installation

Log of Well No. MW-16

DEPTH (feet)	SAMPLES Sample No.	Sample	Blows/ Foot	PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist % by weight, plast., density, structure, cementation, react w/HCl, geo. inter. Surface Elevation: 71.60’
16					9.5’ - 16.5’
17		-- --			Clay, CL 10YR 7/1 Light Reddish Grey, Wet, Low Plastic, Oxidized in places, Mottled, Trace Fine Sand
18		-- --			
19		--			
20					
21					16.5’ – 26.5’
22		-- --			Clay, CM 5GY 5/1 Greenish Grey, Wet, Moderately Plastic, Trace Fine Sand
23		-- --			
24		--			
25					
26					26.5’ – 33’
27		--			Clay, CH, 2.5YR 4/2 Dusky Red, Moist, Highly Plastic, Mottled w/ grey, Oxidized, Massive Bed, Trace Fine sand Alluvial Deposit
28		-- --			
29		-- --			
30					
31					
32					33’ – 37’
33		--			Clay, CL 5GY 5/1 Greenish Grey, Wet, Moderately Plastic, Saprolitic, Trace Sand Fine to Medium Alluvial
34		-- --			
35		-- --			
36					

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS



PROJECT: Ordot Closure Facility Monitoring Well Installation					**Log of Well No. MW-16**	
DEPTH (feet)	SAMPLES			PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist % by weight, plast., density, structure, cementation, react w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
	Sample No.	Sample	Blows/ Foot		Surface Elevation: 71.60’	
37		-- --			37’ – 41.2’ Clay/Weathered Rock, CL, 5G 5/1 Greenish Grey Moist, Moderately Plastic, Very Stiff, Saprolitic, Fine To Medium Sand	 #3 Silica Sand Bottom Screen 40.2’ End Cap 40.8’ Flush Thread
38		-- --				
39		--				
40						
41						
42					Basalt Rock Fragments, Refusal TD=41.2 Feet	
43						
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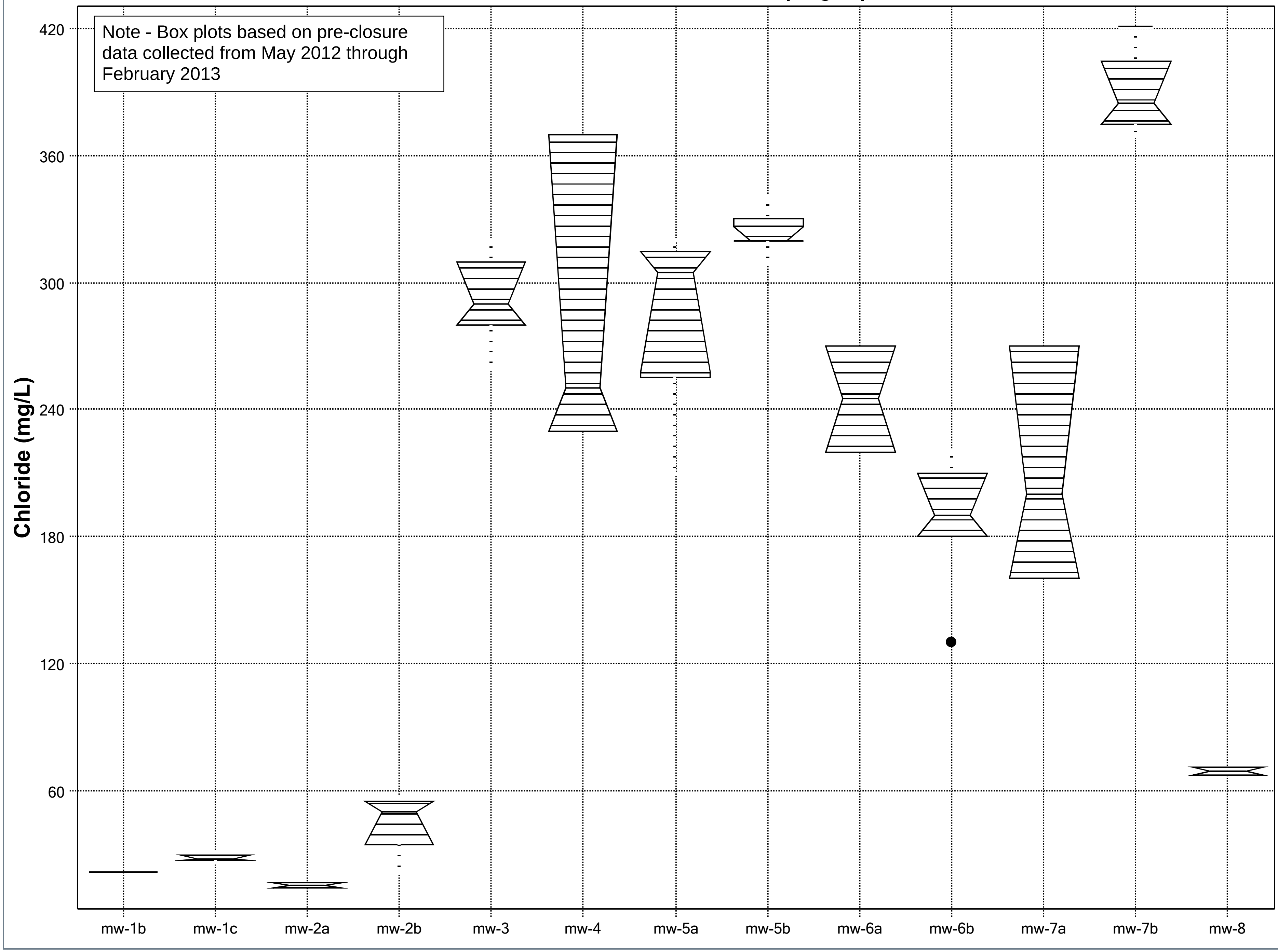
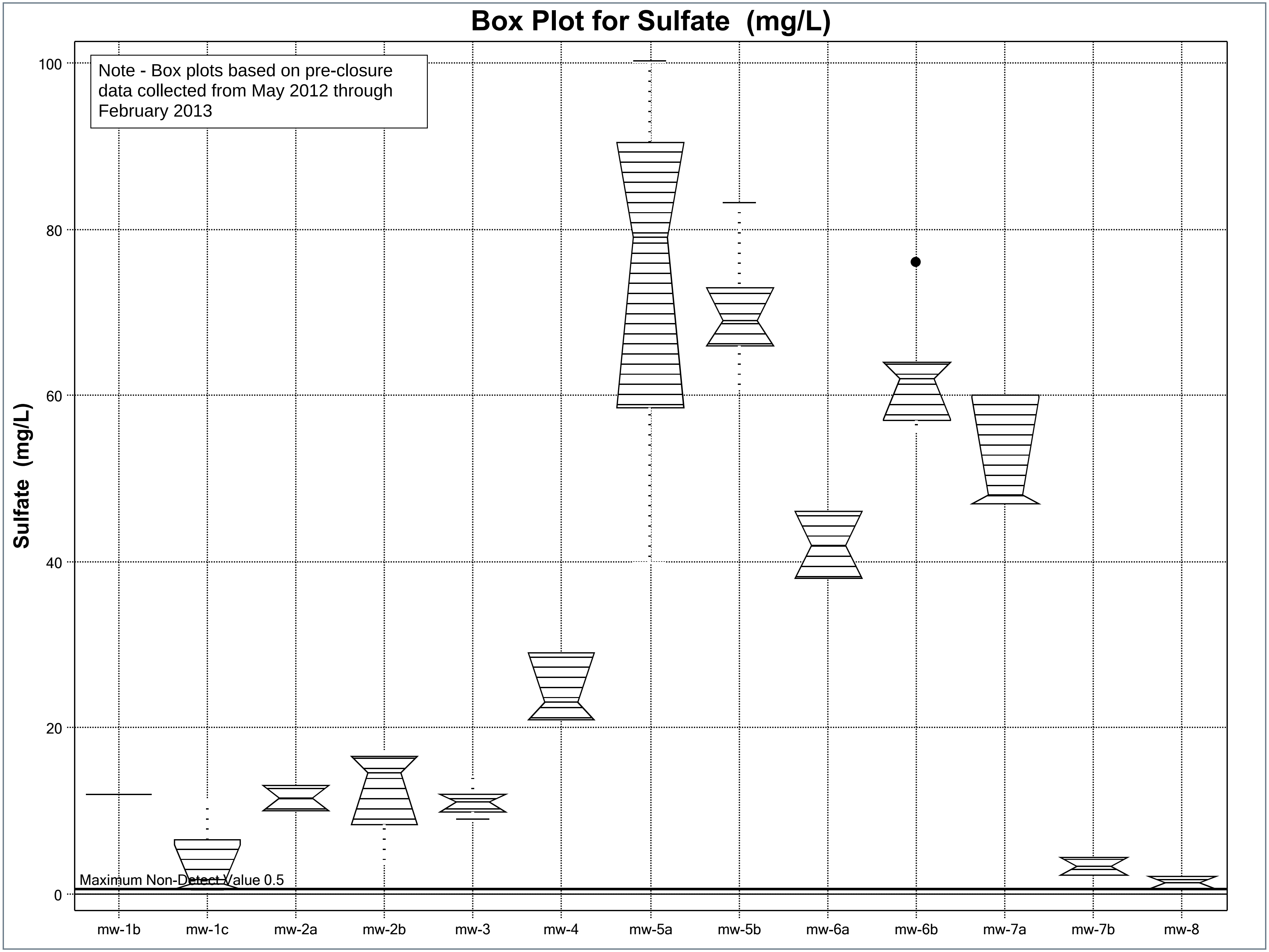
					Project No. 62392.39	Page 3 of 3

Appendix B: Pre-Closure Data Sets Box Plots

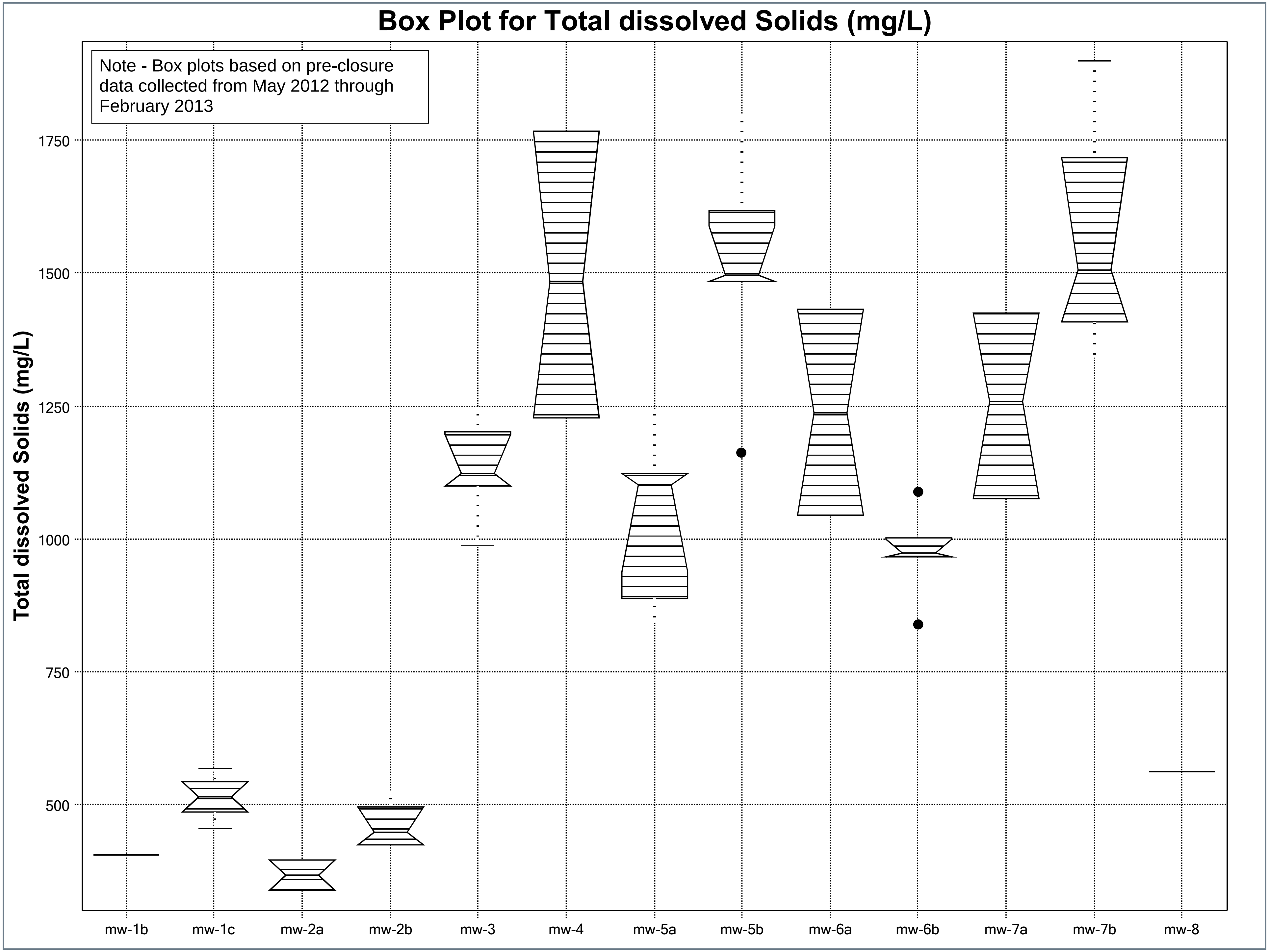
Box Plot for Chloride (mg/L)



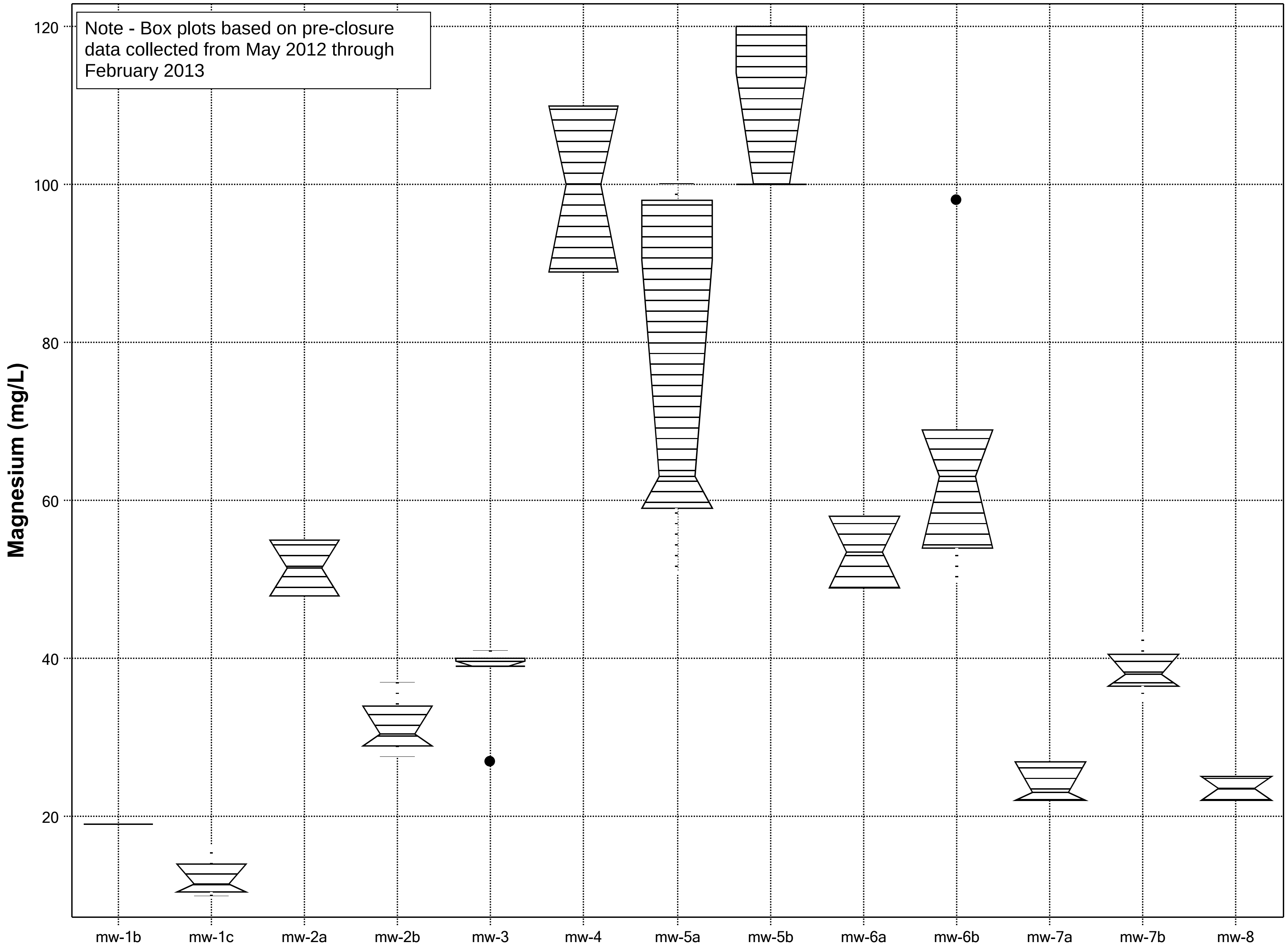


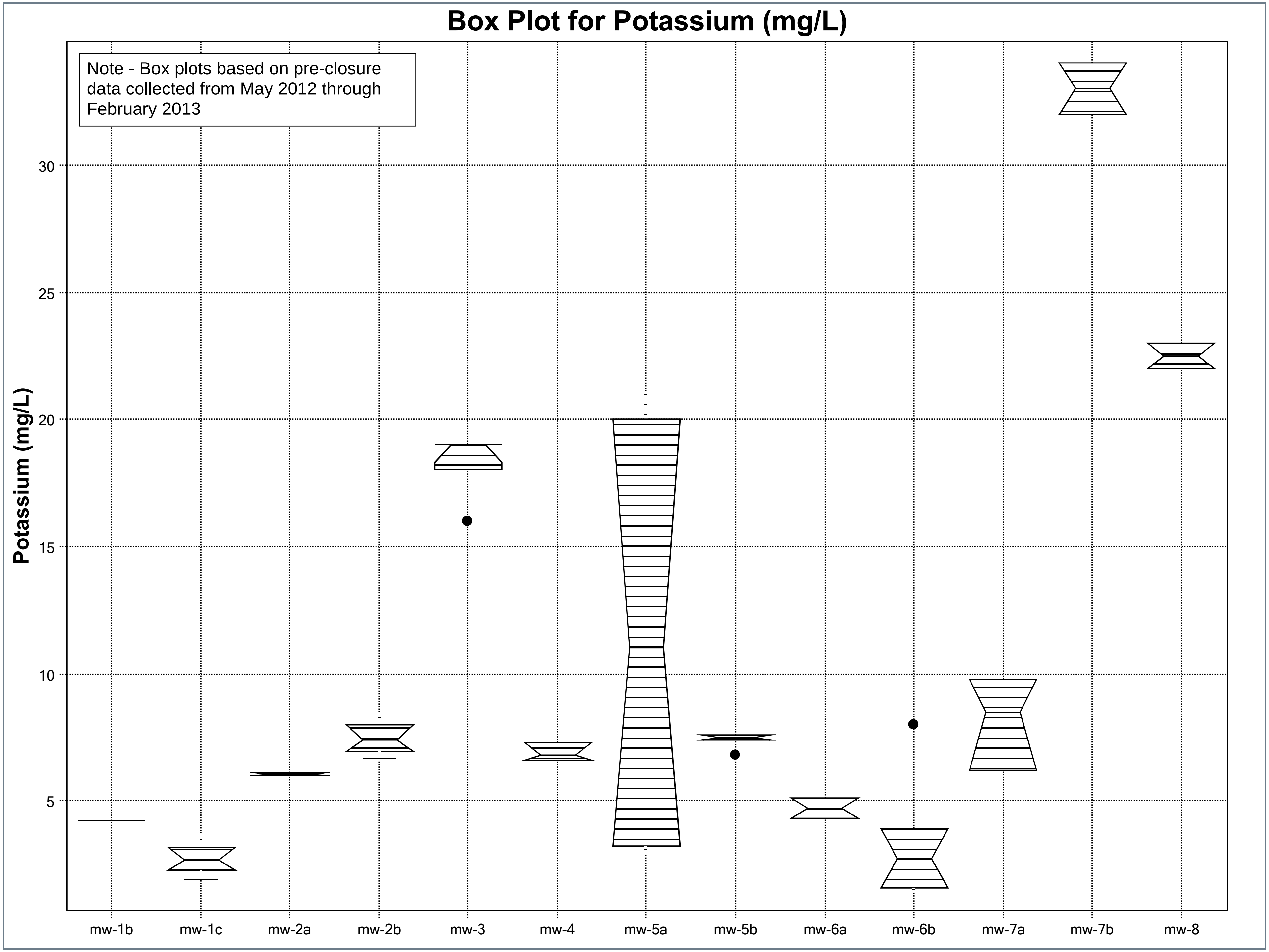
Box Plot for Sulfate (mg/L)

Note - Box plots based on pre-closure data collected from May 2012 through February 2013

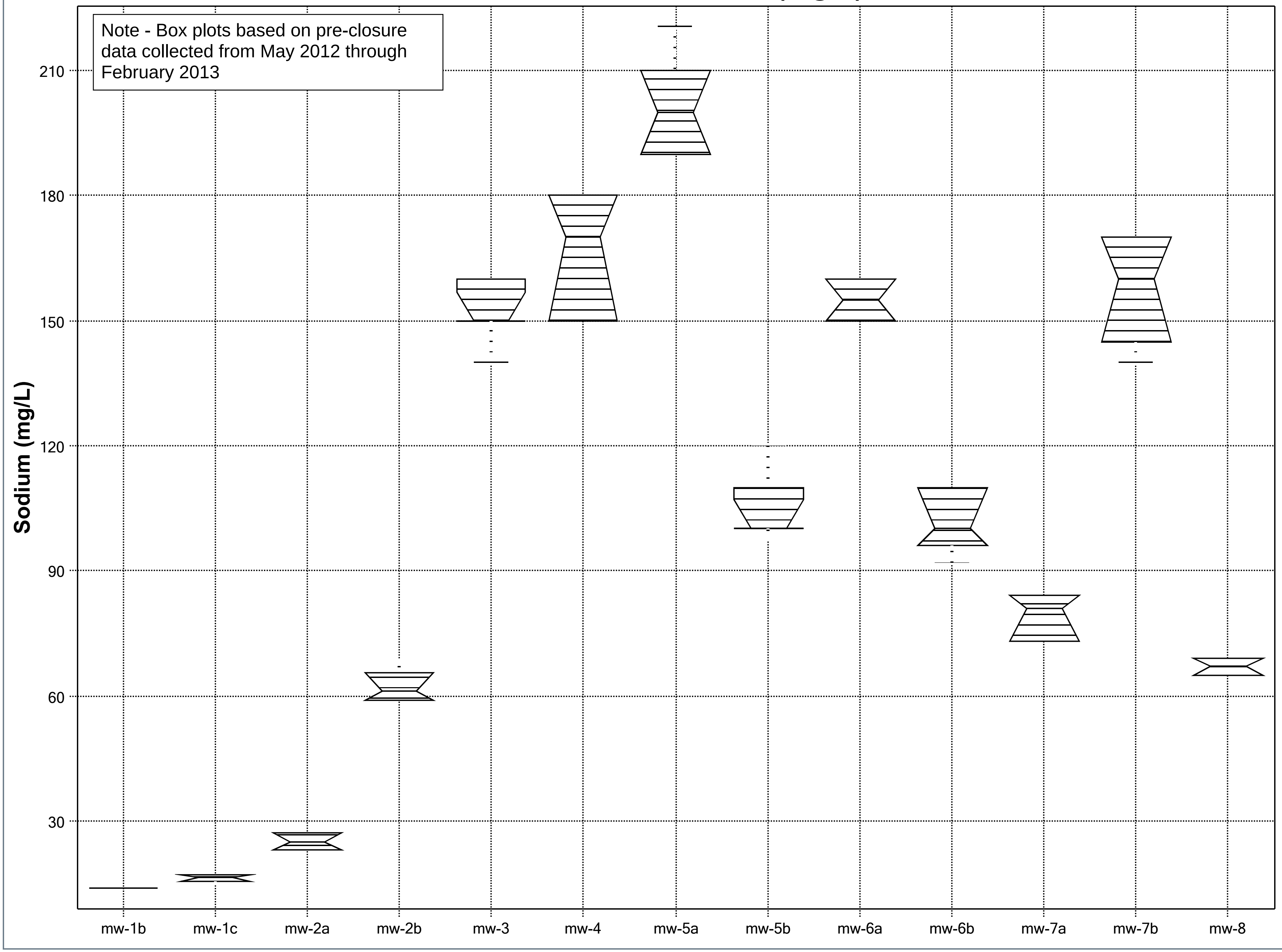

Box Plot for Total dissolved Solids (mg/L)
Note - Box plots based on pre-closure data collected from May 2012 through February 2013
Total dissolved Solids (mg/L)
1750
1500
1250
1000
750
500
mw-1b
mw-1c
mw-2a
mw-2b
mw-3
mw-4
mw-5a
mw-5b
mw-6a
mw-6b
mw-7a
mw-7b
mw-8

Box Plot for Magnesium (mg/L)

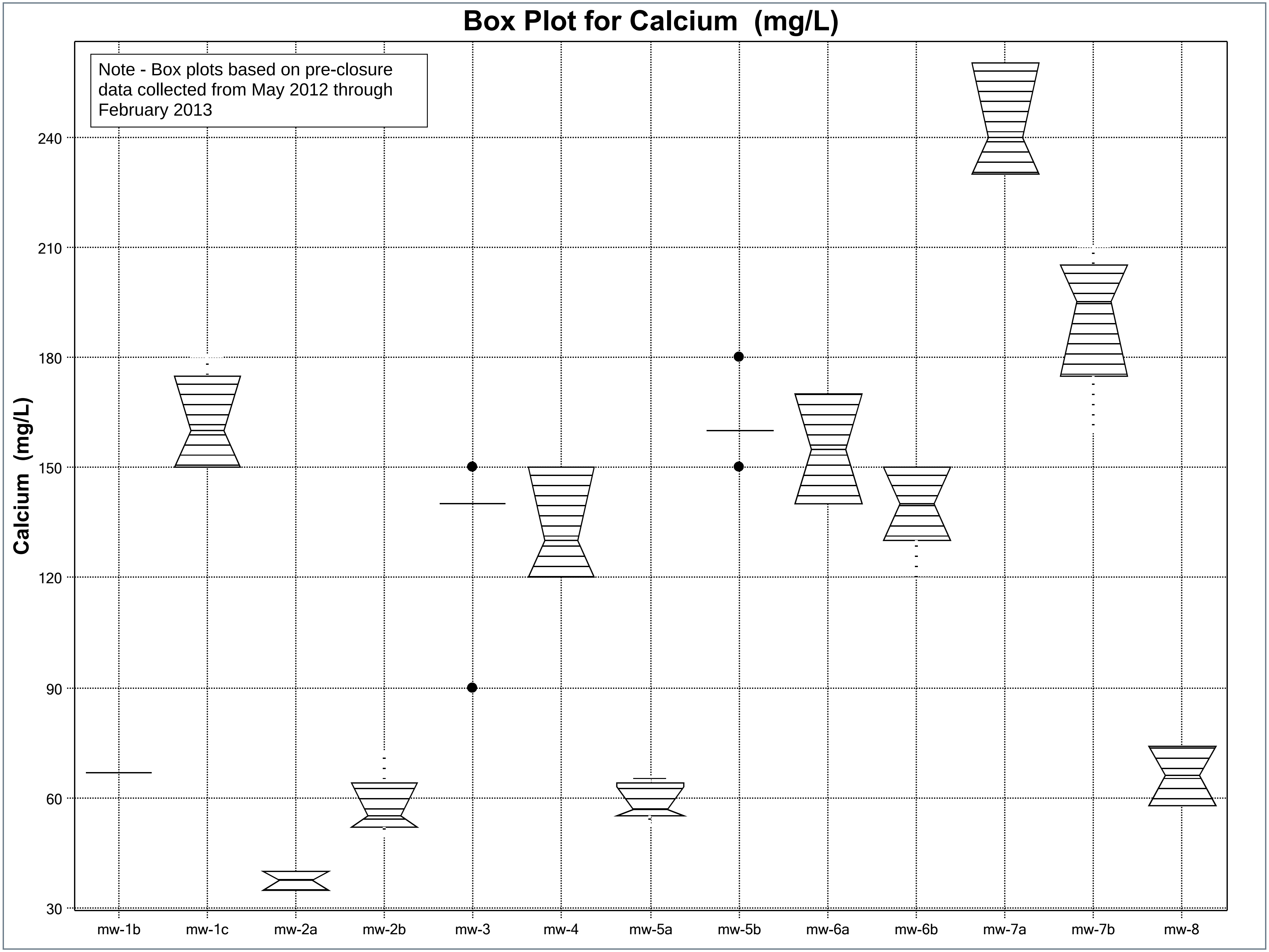



Box Plot for Potassium (mg/L)
Note - Box plots based on pre-closure data collected from May 2012 through February 2013
Potassium (mg/L)
30
25
20
15
10
5
mw-1b
mw-1c
mw-2a
mw-2b
mw-3
mw-4
mw-5a
mw-5b
mw-6a
mw-6b
mw-7a
mw-7b
mw-8

Box Plot for Sodium (mg/L)



Note - Box plots based on pre-closure data collected from May 2012 through February 2013


Box Plot for Calcium (mg/L)
Note - Box plots based on pre-closure data collected from May 2012 through February 2013
Calcium (mg/L)
240
210
180
150
120
90
60
30
mw-1b
mw-1c
mw-2a
mw-2b
mw-3
mw-4
mw-5a
mw-5b
mw-6a
mw-6b
mw-7a
mw-7b
mw-8

Box Plot for Alkalinity (mg/L)