



Prepared for:
WASTE CONNECTIONS, INC.
Connect with the Future

OMNI WASTE OF OSCEOLA COUNTY, LLC
1501 Omni Way
St. Cloud, Florida 34773

25th SEMI-ANNUAL WATER QUALITY MONITORING REPORT

J.E.D. Solid Waste Management Facility
1501 Omni Way
St. Cloud, Osceola County, Florida 34773

Prepared by:



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March 2017

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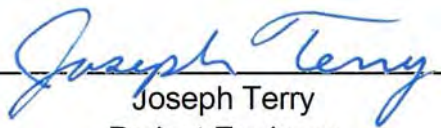
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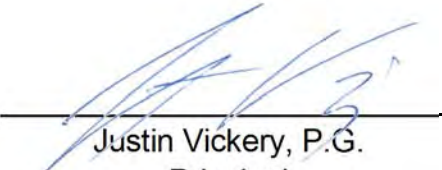
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March 2017

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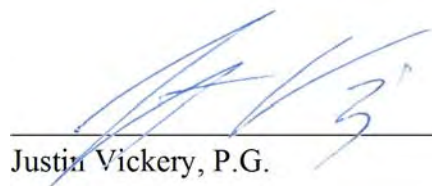
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REGISTERED PROFESSIONAL GEOLOGIST CERTIFICATION

I hereby certify that I have directed and supervised the field work and preparation of this document, in accordance with State Rules and Regulations. As a registered professional geologist, I certify that I am a qualified groundwater professional, as defined by the Florida State Board of Professional Geologists. All of the information and laboratory data in this document and in all of the attachments are true, accurate, complete, and in accordance with applicable state rules and regulations.



Justin Vickery, P.G.



Stamp

3/14/2017
Date

1 INTRODUCTION

1.1 Terms of Reference

Environmental Planning Specialists, Inc. (EPS), on behalf of Waste Connections, Inc. (WCI), is pleased to provide this report to the Florida Department of Environmental Protection (FDEP) for the J.E.D. Solid Waste Management (“JED”) facility. This report summarizes and provides interpretation of the water quality monitoring performed in accordance with the Monitoring Plan Implementation Schedule (MPIS) prepared as part of the JED facility permit application. The MPIS requirements are presented in Appendix 3) of the JED facility Operating Permit (Permit No.SO49-0199726-022) issued by the FDEP on July 12, 2012, that authorizes the development of Phases 1 through 4 at the JED facility.

EPS has prepared this report for WCI, parent company of Omni Waste of Osceola County, LLC, owner and operator of the JED facility. A completed water quality certification form (FDEP Form 62-701.900[31]) is included in **Appendix A**.

1.2 Overview

The MPIS establishes a water quality monitoring program that measures and reports groundwater and surface water conditions and groundwater flow direction across the JED facility. The 25th semi-annual water quality monitoring event was completed between November 14 and November 22, 2016. This report presents the sample locations, sampling procedures, laboratory analyses and results, field data measurements, groundwater level measurements, groundwater flow direction, and surface water quality monitoring. In addition, the current analytical results are compared to applicable Groundwater Cleanup Target Levels (GCTLs) as promulgated in Chapter 62-777, Florida Administrative Code (FAC).

1.3 Site Description

The JED facility is in eastern Osceola County, Florida, west of highway U.S. 441, and approximately 6.5 miles south of Holopaw. The facility is a Class I landfill which is linked to highway U.S. 441 by a 2.9-mile access road. The JED facility comprises a total of approximately 2,179 acres. The landfill footprint at build-out will be approximately 360 acres and consist of 23 landfill cells that will provide available waste capacity for a period of approximately 30 years.

In October 2003, the FDEP issued a permit to construct and operate Phase 1 of the JED facility. Phase 1 includes four landfill cells (Cells 1 through 4), located in the northern part of the landfill encompassing approximately 54 acres. All components of the Phase 1 development have been constructed. As part of Phase 1, 45 groundwater monitoring wells were installed in 15 clusters

(MW-1 through MW-15) around the perimeter of the Phase 1 development area. The baseline water quality report for the Phase 1 monitoring well network was submitted to the FDEP in May 2004.

In March 2007, the FDEP issued a permit to construct and operate Phases 2 (Cells 5 through 7) and 3 (Cells 8 through 10), which encompass a total footprint of approximately 72 acres. As part of Phases 2 and 3, and as approved by the FDEP, six existing Phase 1 monitoring wells (MW-14A, B, and C, and MW-15A, B, and C) were decommissioned to allow for the construction of future cells and the construction of a storm water retention basin located within Phases 2 and 3. The decommissioning of the monitoring wells was discussed in the *Phases 2 and 3 Groundwater Monitoring Report* (Geosyntec, January 2008). In September 2007, for the development of Phases 2 and 3, 24 additional monitoring wells were installed in eight well clusters (MW-16 through MW-23) around the perimeter of the Phases 2 and 3 development areas.

In April 2008, the FDEP issued a permit to construct and operate Phases 1 through 3 with vertical expansion. In April 2009, the MPIS for the semi-annual water quality monitoring well network was modified for Phases 1 through 3. The modification included a reduction in the number of Phase 3 monitoring wells requiring semi-annual sampling until such time that waste placement commences in one of the Phase 3 cells (i.e., Cells 8, 9, or 10), and the sampling schedule was modified for B-zone (intermediate depth) and C-zone (deep) monitoring wells. The new schedule included:

1. November sampling of C-zone monitoring wells (MW-1C through MW-13C, MW-16C, and MW-19C through MW-23C) and B-zone monitoring well MW-16B with January reporting.
2. May sampling of B-zone monitoring wells (MW-1B through MW-13B, MW-16B, and MW-19B through MW-23B) and C-zone monitoring well MW-16C, with July reporting.

Cell 1 was completed in January 2004, Cell 4 was completed in May 2005, Cell 2 was completed in April 2006, Cell 3 was completed in October 2006, Cell 5 was completed in October 2007, Cell 6 was completed in July 2008, and Cell 7 was completed in August 2010. In August 2011, the FDEP issued a permit to construct a lateral expansion of the facility, which authorized construction of Phases 3 through 8 (Cells 8 through 23). Cell 8 was completed in April 2012. During construction startup of Cell 8 in November 2011, monitoring well cluster MW-22 (A, B and C) was decommissioned to accommodate the perimeter road access to Cell 8. The MW-22 cluster abandonment report was submitted to the FDEP in April 2012. The well cluster was replaced in March 2012 and located on the perimeter access road approximately 800 feet south of well cluster MW-23. The shallow, intermediate and deep monitoring wells were designated MW-22AR, MW-22BR and MW-22CR, respectively. The *Initial Water Quality Report Monitoring Well Cluster MW-22R* (Geo-Services & Consulting, June 2012) was submitted to the FDEP in July 2012.

The Cell 9 disposal area construction was completed in October 2013. As with previous construction and expansion efforts (e.g., Cell 8 disposal area) well cluster MW-20 was installed in a temporary location on the Phase 3 storm water berm. Cell 9 construction activities included substantial modifications to the berm and as such, the MW-20 well cluster was abandoned on June 24, 2013. At the same time, the MW-16 well cluster was abandoned at its temporary

location. In October 2013, replacement wells MW-16AR, MW-16BR, and MW-16CR were installed in a permanent location on the backside of the perimeter berm near the Cell 9 sump. The monitoring well abandonment and installation report was submitted to the FDEP in November 2013.

On December 24, 2013, a permit minor modification application was submitted to the FDEP to request a modification to the MPIS prior to the initiation of construction of Cell 10 of Phase 3 and Cells 11-13 of Phase 4. The minor modification was approved by the FDEP in January 2014. The major changes include:

- the installation and sampling schedule of monitoring wells for the Phase 3, Cell 10 and Phase 4 construction (includes Cells 11, 12 and 13),
- the removal of the “C” zone wells from the semi-annual sampling schedule, and
- the installation of only “A” and “B” zone wells at the new monitoring well cluster locations.

The January 2014 MPIS modifications were implemented during the 20th semi-annual groundwater sampling event in May 2014. In an email dated May 14, 2014, the FDEP, based on review of past semi-annual water quality monitoring reports, removed total phenols analysis from the laboratory parameters list in requirement 9 of the MPIS.

Construction of the Cell 10 disposal area began in March 2014 which necessitated the abandonment of temporary groundwater monitoring well clusters MW-17, 18, 19 and 21. The wells were located on the Phase 3 interim storm water berm and were abandoned during Cell 10 construction on March 5, 2014. The monitoring well abandonment report was submitted to the FDEP on March 13, 2014. The installation of monitoring well clusters MW-17R, MW-24, MW-25 and MW-26, which are associated with the completion of Cell 10 and initiation of Phase 4 construction activities, was summarized in a report submitted to the FDEP on July 30, 2014.

Construction of the Cell 11 disposal area began in March 2015. As part of the construction, detection monitoring well clusters MW-27, MW-28, and MW-29 were installed along the outside perimeter of the cell in accordance with the MPIS (revised January 30, 2015, FDEP File No. 0199726-027-SO-MM). Per the FDEP Permit requirements, the well clusters included shallow surficial aquifer monitoring wells (MW-27A, MW-28A and MW-29A) and intermediate surficial aquifer monitoring wells (MW-27B, MW-28B and MW-29B). The monitoring well installation report was submitted to the FDEP in September 2015.

Construction of Cell 13 began in December 2015. Detection monitoring wells MW-26A and MW-26B, located on the interim Phase 4 storm water berm, required abandonment to accommodate cell construction. The MW-26 cluster was abandoned on June 15, 2016. Monitoring wells MW-31A and MW-31B were installed on June 16, 2016 as replacements for cluster MW-26 and are located along the west perimeter of Cell 13. A report summarizing the monitoring well abandonment and installation activity was submitted to the FDEP in October 2016.

2 MONITORING WELL DETAILS

2.1 Well Layout and Construction

For the Phase 1 development, 45 groundwater monitoring wells were installed in fifteen clusters (MW-1 through MW-15) around the perimeter of the Phase 1 development area. In accordance with the FDEP permit requirements, monitoring well clusters were located such that the spacing between clusters was no greater than 500 feet. For development of Phases 2 and 3, 24 groundwater monitoring wells were installed in eight clusters (MW-16 through MW-23) around the perimeter of the Phases 2 and 3 development areas. In accordance with the FDEP permit requirements, the monitoring well clusters were located such that the spacing between detection well clusters (MW-16 through MW-21) was approximately 500 feet, and the spacing between background well clusters (MW-22R and MW-23) was approximately 800 feet. Each of these well clusters consists of three groundwater monitoring wells installed: (i) across the water table to monitor the upper limit of the surficial aquifer (identified as A-zone [shallow] wells); (ii) within the lower limit of the upper surficial aquifer above the intermediate clay layer (identified as C-zone [deep] wells); and (iii) at an intermediate depth between the shallow and deep wells (identified as B-zone [intermediate] wells). During the Phase 4, Cell 10 construction, four well clusters (MW-17, MW-18, MW-19 and MW-21) were abandoned and three well clusters (MW-24, MW-25 and MW-26) installed along the Phase 4 interim storm water berm. Monitoring well clusters MW-24 through MW-26 were approximately 1,400 feet apart. In addition, replacement monitoring well cluster MW-17R was installed adjacent to Cell 10. In accordance with the January 2014 MPIS the three new and one replacement well cluster consist of two monitoring wells each, one installed in the A-zone and one in the B-zone.

A layout depicting the location of the shallow (A-zone) groundwater monitoring wells installed for Phases 1 through 4 are shown on **Figure 1**. As shown, groundwater monitoring well clusters MW-1 through MW-13, MW-16R, MW-17R, MW-22R, MW-23, MW-27 through MW-29, and MW-31 were installed along the top of the outer edge of the landfill perimeter berm. The ground surface at the location of the wells in the perimeter berm has an elevation of approximately 92 feet (ft) with respect to National Geodetic Vertical Datum of 1929 (NGVD, 1929). Groundwater monitoring well clusters MW-24 and MW-25 were installed along the Phase 4 interim storm water berm. The ground surface at these two well locations has an elevation of approximately 84 feet NGVD, 1929. The location of each well, in Florida state plane coordinates and latitude/longitude, and elevation were surveyed by a Florida-registered professional land surveyor.

Wells were constructed with 2-inch diameter Schedule 40 polyvinyl chloride (PVC) casing and 10 ft of #6-slot (0.006-in.) PVC screen. A 30/45 graded silica sand was placed around the screen to a height of 2 to 3 ft above the top of the screen. A seal of 30/65 graded fine silica sand was placed above the sand filter around the screen. The remaining annular space from the top of the fine sand filter seal to the existing ground surface was grouted using a tremie pipe with a cement/bentonite mixture containing no more than 5 percent bentonite by dry weight. The PVC

well casings were extended approximately 2.5 to 3 ft above the existing ground surface. Surface completion consisted of a protective aluminum casing with a lockable cover set in a concrete pad. Each well was provided with a well cap, padlock, and an identification label. A summary of the monitoring well construction details are presented in **Table 1**.

2.2 Turbidity Issues

As discussed in the baseline water quality reports for the Phases 1 through 4 monitoring networks, the formation around the screened intervals consists primarily of a fine, brown to dark brown, silty sand. Due to the subsurface formation properties, fine-grained and colloidal material are able to pass through the sand filter pack in many wells, primarily in the B-zone and C-zone wells. This is the case even though the wells are constructed using the smallest screen slot size (0.006 in.) commonly available. Most of the intermediate and deep wells had turbidity values in excess of the 20 nephelometric turbidity unit (NTU) criterion even after extended well development and the removal of multiple well volumes.

The difficulty in attaining the desired turbidity criterion was originally discussed at a meeting between Geosyntec Consultants (Geosyntec) and the FDEP on January 12, 2004 during the well development activities associated with the wells installed as part of the Phase 1 development. Geosyntec notified the FDEP again on September 14, 2007 of the elevated turbidity levels observed after extended well development during the Phases 2 and 3 monitoring well development. In accordance with these discussions, it was agreed to collect field-filtered (1-micron) and unfiltered samples for metals analyses for any sample with a turbidity value greater than 20 NTUs. The data generated by the dual sampling is expected to help demonstrate: (i) what effect turbidity may have on metal analyses (i.e., by comparing total and dissolved metals concentrations) and (ii) whether groundwater samples with turbidities greater than 20 NTUs show higher concentrations of metals than those samples with turbidities less than 20 NTUs.

3 MONITORING WELL SAMPLING

3.1 Sampling Locations and Procedures

In accordance with the MPIS, twenty-six monitoring wells installed as part of the Phase 1 development, eight of the monitoring wells installed as part of the Phase 2 and 3 developments, and twelve monitoring wells installed as part of the Phase 4 development were sampled during the 25th semi-annual sampling event. Monitoring wells sampled this event included A and B-zone wells MW-1 through MW-13, MW-16R, MW-17R, MW-22R, MW-23, MW-24, MW-25, MW-27 through MW-29, and MW-31. Low-flow sampling techniques were used for groundwater sample collection. Except for the turbidity considerations as described in the previous section, all groundwater sampling was performed in accordance with the current applicable FDEP Standard Operating Procedures (DEP-SOP-001-01, March 2014) for groundwater sampling. Additionally, for quality control (QC) purposes, one blind duplicate sample and one equipment blank were collected and analyzed. Peristaltic pumps were used to purge and sample forty of the monitoring wells, and electric submersible pumps were used to sample the remaining six wells. Each monitoring well was purged and sampled using new tubing (silicone and/or high density polyethylene).

During the purging process, a YSI 556 water quality meter equipped with a flow-through cell was used to monitor the following field parameters: pH; temperature; conductivity; oxidation-reduction potential (ORP); and dissolved oxygen. Turbidity levels were measured using a LaMotte 2020e turbidity meter. Field parameters were recorded on sample collection forms, which are included in **Appendix B**. When the field parameters stabilized within the acceptable tolerances required by the FDEP SOP, well purging was considered complete and groundwater samples were collected.

The calibration of the water quality monitoring instruments was checked daily and re-calibrated when necessary. Water quality instrument calibration forms are presented in **Appendix C**. Samples were placed in coolers and packed with bagged ice for transport to the analytical laboratory. Chain-of-Custody (COC) forms were completed and accompanied the samples to the analytical laboratory. All COC forms are included in **Appendix D**. Security seals were affixed to every cooler shipped.

3.2 Sample Analyses

Samples were analyzed by Advanced Environmental Laboratories (AEL) in Jacksonville, Florida in accordance with the National Environmental Laboratory Accreditation Conference (NELAC) standards. AEL holds certification from the Florida Department of Health (FDOH) for the analytical test methods used for this project and is certified in the State of Florida for analysis of environmental samples.

Groundwater samples were analyzed by AEL for total ammonia as nitrogen (N), chlorides, nitrate, total dissolved solids (TDS), iron, mercury, sodium, and the 40 Code of Federal Regulations (CFR) Part 258 Appendix I parameters. Other required parameters (i.e., pH; temperature; conductivity; turbidity; ORP; and dissolved oxygen) were measured in the field during collection of the groundwater samples.

4 SAMPLING RESULTS

4.1 Field Parameters

Table 2 provides a summary of the field measurements of selected water quality parameters utilized for determining sample stability for this semi-annual monitoring event. The secondary drinking water standard (SDWS) range for pH is 6.5 to 8.5 standard units (SU). The groundwater pH was below the SDWS in all site wells sampled this event with pH values ranging from 4.10 to 6.15 SU. The groundwater pH values measured at the site have historically been below the SDWS lower limit of 6.5 SU.

4.2 Laboratory Analytical Results

The analytical laboratory results for this groundwater sampling event are included in **Appendix E**. Analytical results have been summarized in **Table 3** to show all parameters where a constituent concentration was reported above the laboratory practical quantitation limit (PQL). Any parameter exceeding the applicable FDEP Groundwater Cleanup Target Level (GCTL) has been highlighted orange. Detections reported above the PQL but below the GCTL have been highlighted green and detections between the PQL and laboratory method detection limit (MDL) are highlighted blue. The following discussion regarding groundwater quality is limited to those parameters where the GCTL was exceeded in at least one groundwater monitoring well and has been organized by analytical method.

4.2.1 Total Metals (Methods 6020B and 6010B)

4.2.1.1 Iron

Iron was detected above the GCTL of 300 µg/L in nineteen of the A-zone monitoring wells sampled, with the concentrations ranging between 430 and 19,000 µg/L and the highest concentration being from MW-4A. Iron was detected above the GCTL in twenty of the B-zone monitoring wells sampled this event, with concentrations ranging between 440 and 40,000 µg/L and the highest concentration being from MW-2B. Iron has historically exceeded the GCTL in most wells at the site for all monitoring events, including the baseline events. The iron concentrations reported for the 25th semi-annual event are consistent with period of record data.

4.2.1.2 Lead

Lead was detected above the GCTL of 15 µg/L in monitoring well MW-31B (100 µg/L). MW-31B had a lead concentration of 130 µg/L during the baseline sampling event. These elevated lead detections are likely due to the high turbidity levels in the sample. As discussed in Section 2.2, high turbidity levels in newly installed B-zone wells at the JED facility have historically had

turbidities much greater than 20 NTU; however based on Phase 1 through 3 B-zone wells it is anticipated to improve with time.

4.2.1.3 Sodium

Sodium was detected above the GCTL of 160 mg/L in monitoring well MW-1A (280 mg/L) and MW-16AR (240 mg/L).

4.2.1.4 Vanadium

Vanadium was detected above the GCTL of 49 µg/L in monitoring well MW-31B (130 µg/L). MW-31B had a vanadium concentration of 211 µg/L during the baseline sampling event. These elevated lead detections are likely due to high turbidity levels in the sample.

4.2.2 Ammonia-N (Method 350.1)

Ammonia was detected above the groundwater cleanup target level (GCTL) of 2.8 mg/L in twelve of the shallow monitoring wells, with concentrations ranging from 3.8 mg/L to 17 mg/L and the highest concentration being from MW-3A. Ammonia was detected in six of the intermediate monitoring wells, with concentrations ranging from 3.3 mg/L to 8.9 mg/L and the highest concentration being from MW-4B. Ammonia has been detected in most of these wells during previous sampling events. Under reducing geochemical conditions, nitrogen containing compounds can be converted to ammonia. Reducing conditions are favorable in the shallow aquifer at the site and may develop in several ways such as the shadow effect of the lined disposal areas preventing the infiltration of oxygen-rich precipitation, displacement of oxygen by landfill gas immediately above the water table, or high organic matter content found in site soils which promotes the growth of oxygen consuming microorganisms (HDR Engineering, Inc., *Class I Permit Renewal Request for Additional Information*, January 2012). The elevated levels of ammonia are likely naturally occurring and have been discussed extensively in the 24th *Semi-Annual Water Quality Monitoring Report* (Geosyntec, August 2016), the 5th *Technical Report on Water Quality* (Geosyntec, July 2014) and in correspondence by HDR Engineering, Inc. (*Class I Permit Renewal Request for Additional Information*, January 2012).

4.2.3 TDS (Method SM 2540C)

TDS concentrations were detected above the GCTL of 500 mg/L in seven shallow monitoring wells, with concentrations ranging from 650 mg/L to 2,000 mg/L and the highest concentration being from MW-16AR. TDS concentrations were detected above the GCTL of 500 mg/L in ten intermediate monitoring wells, with concentrations ranging from 600 mg/L to 1,600 mg/L and the highest concentration being from MW-5B. TDS is an indicator parameter whose value can be attributable to the presence of major cations and anions, such as calcium, magnesium, sodium, chloride, and sulfate.

4.2.4 Chloride (Method 300.0)

Chloride was detected above the GCTL of 250 mg/L in shallow monitoring wells MW-1A (530 mg/L) and MW-16AR (420 mg/L). The remaining monitoring wells are consistent with period of record data.

4.2.5 Nitrate (Method 300.0)

Nitrate was detected above the GCTL of 10 mg/L in shallow monitoring wells MW-16AR (51 mg/L) and MW-17AR (17 mg/L). The remaining monitoring wells are consistent with period of record data.

4.2.6 40 CFR Part 258, Appendix I Volatile Compounds (Method 8260)

4.2.6.1 Benzene

Benzene was detected above the GCTL of 1.0 µg/L in seven A-zone monitoring wells, with concentrations ranging from 3.5 to 7.7 µg/L and the highest concentration being from MW-9A Duplicate. It was also detected in intermediate well MW-10B at a concentration of 5.6 µg/L. Benzene has been reported above the GCTL in most of these wells during previous monitoring events at similar concentrations.

As indicated in correspondence by HDR Engineering, Inc. (*Class I Permit Renewal Request for Additional Information*, January 2012) and by Geosyntec (*Groundwater Contamination and Landfill Gas Migration Investigation and Assessment*, December 2013) the source of benzene in groundwater is likely attributed to landfill gas. As discussed in the reports mentioned above, neither the constituents nor the concentrations of VOCs detected in groundwater appear to correlate well with leachate results.

4.2.6.2 1,2-Dibromo-3-chloropropane

1,2-Dibromo-3-chloropropane was reported above the GCTL of 0.2 µg/L in monitoring well MW-22AR (2.9 µg/L). This parameter has not been detected in site wells previously and may be anomalous.

4.3 Data Validation

All laboratory analyses were performed within the method-specified hold times with the exception of twelve nitrate analyses (MW-17AR, MW-17BR, MW-22AR, MW-22BR, MW-23A, MW-23B, MW-24A, MW-24B, MW-29A, MW-29B, MW-31A and MW-31B). This was caused by an inadvertent sample receiving error, and the laboratory states that they believe the impact on the data is minimal. These instances are noted in the laboratory case narratives.

One blind duplicate sample (16322-MW-Dup) was collected during the 25th semi-annual monitoring event. The duplicate sample was collected concurrently with the sample from monitoring well MW-9A. Results of the duplicate sample are included in **Table 3**. In addition,

following the collection of the sample from MW-25B, the stainless-steel submersible pump was decontaminated, a new length of HDPE tubing attached and using lab supplied de-ionized water, an equipment blank collected (16320-EB). The equipment blank was analyzed for the same parameters as the groundwater samples. Analysis of the equipment blank sample resulted in a detection of chromium (0.56 µg/L), zinc (9.7 µg/L), carbon disulfide (0.28 µg/L), chloromethane (0.74 µg/L) and ethylbenzene (0.25 µg/L) at concentrations below the PQL and toluene at a concentration of 2.9 µg/L. These detections may be attributed to laboratory artifacts, several of the constituents [e.g. carbon disulfide, chloromethane, ethylbenzene) were not detected in any of the wells sampled with the submersible pump. All other constituents analyzed for were not detected in the equipment blank sample.

4.4 Impact of Turbidity on Metals Concentrations

A turbidity of less than 20 NTUs was achieved in all but three monitoring wells this event. Monitoring wells exceeding the FDEP guidance of 20 NTUs were B-zone wells MW-25B (57.9 NTUs), MW-27B (49.2 NTUs) and MW-31B (112 NTUs). These wells were purged using a stainless-steel submersible pump, and more than five well volumes were removed from each well. Samples were collected after the third reading in which turbidity levels were within 5 NTUs or 10% (whichever was greater) as stipulated in the FDEP SOP. Of these wells, MW-31B had concentrations of lead and vanadium exceeding the GCTL. Lead and vanadium have not typically exceeded the GCTL in site wells and the concentrations seen in MW-31B are likely associated with the high turbidity levels in the sample.

5 GROUNDWATER LEVEL MEASUREMENTS AND FLOW DIRECTION

5.1 Field Measurements

Groundwater level measurements were obtained on November 14, 2016 from all Phase 1 through 4 monitoring wells and the remaining piezometers installed as part of the original site hydrogeological investigation. The groundwater level measurements were made within an approximate 4-hr period. **Table 4** contains the groundwater level measurements and calculated groundwater elevations from the monitoring wells and piezometers.

5.2 Water Level Contours

The water level contour map prepared from groundwater level measurements for the surficial aquifer in the A-zone (shallow) is presented in **Figure 1**. Historically, the direction of the horizontal component of groundwater flow for all three zones is predominantly east-northeast towards Bull Creek. The groundwater elevation data collected on November 14, 2016 from the A-zone monitoring well network indicates the general direction of groundwater flow on the northern portion of the site to the east-southeast; however, on the southern half of the site, groundwater flow is generally towards the west-southwest. The overall complexity of the water-table may be a reflection of anthropogenic features on site, which include storm water control structures (e.g., retention ponds and ditches) adjacent to the disposal cells. These features, particularly to the southeast of the disposal areas, are extensive and at times may potentially control shallow groundwater flows within their immediate vicinity.

6 SURFACE WATER SAMPLING

6.1 Sampling Locations and Procedures

Two surface water sampling locations (**Figure 1**) established during the initial hydrogeological investigation were selected by the FDEP for routine water quality monitoring. As stated in the Permit, surface water samples are only to be collected when there is flow in Bull Creek. During the 25th semi-annual water quality monitoring event, flow was observed in Bull Creek at the upstream (SW-4) and downstream (SW-3) monitoring locations and surface water samples were collected at each. Surface water samples were collected from the approximate center of Bull Creek at mid-depth. A YSI 556 water quality meter was used to measure field parameters including temperature, pH, dissolved oxygen and specific conductance at each sampling location. Turbidity levels were measured using a LaMotte 2020e turbidity meter. Surface water samples were collected in accordance with the FDEP surface water sampling SOPs.

6.2 Sample Analyses

Surface water samples were analyzed by AEL in accordance with the NELAC (National Environmental Laboratory Accreditation Conference) standards for unionized ammonia, total hardness as CaCO₃, total organic carbon (TOC), chlorides, nitrate, TDS, total suspended solids (TSS), biochemical oxygen demand (BOD), chemical oxygen demand (COD), total nitrogen, nitrate, total phosphates as P, chlorophyll A, iron, mercury, fecal coliform, and the 40 CFR, Part 258 Appendix I parameters. Other required parameters (e.g., pH, temperature, specific conductance, turbidity, and dissolved oxygen) were field-measured during collection of the surface water samples.

6.3 Field Measurements and Analytical Results

Table 5 provides a summary of the field parameter values and laboratory analytical results for the surface water samples. The analytical laboratory report is included in **Appendix E**. Parameters exceeding the Surface Water Quality Criteria (SWQC) Class III concentrations are discussed below:

6.3.1 pH

The pH at SW-3 (3.90 SU) and SW-4 (4.10 SU) were outside of the criteria designated in 62-302.530(96)(c) FAC, i.e., *if natural background is less than 6 units in predominantly fresh waters or 6.5 units in predominantly marine waters, the pH shall not vary below natural background or vary more than one unit above natural background of predominantly fresh waters and coastal waters, or more than two-tenths unit above natural background of open waters*. The pH at locations SW-3 and SW-4 measured in the initial site investigation conducted by Kubal-Furr &

Associates (Kubal-Furr) for the JED facility was 5.86 and 5.40 SU's, respectively (*Hydrogeologic Investigation Report and Water Quality Monitoring Plan*, April 2002). Please note that at the time the initial pH measurements were taken by Kubal-Furr, Bull Creek was not flowing. Bull Creek is a shallow, narrow waterway that is highly dependent on seasonal precipitation and given that the median pH for precipitation in Florida is 4.77 SU (Maddox, et.al., 1992), it would not be uncommon for the creek to see pH levels lower than what was observed in the initial investigation.

6.3.2 Iron

The SWQC for iron of 1 mg/L was exceeded in upstream surface water monitoring station SW-4 (1.4 mg/L), but the downstream sample, SW-3 (0.68 mg/L), was below the SWQC.

7 CONCLUSIONS AND RECOMMENDATIONS

7.1 Sampling Locations

The existing monitoring well network is adequate for monitoring purposes and no changes are recommended.

7.2 Sample Analyses

The detections of ammonia, iron, sodium, chloride and TDS above the GCTLs in specific groundwater monitoring wells have been discussed in detail in the 1st, 2nd, 3rd, 4th and 5th Technical Reports on Water Quality (November 2006, September 2008, November 2010, November 2011 and July 2014, respectively). As discussed in Section 4.2, it is likely that the iron and ammonia are not related to a leachate release from the disposal boundary, but rather mobilization of these constituents due to the presence of nitrogen containing compounds under reducing conditions. Our recommendation is to continue to monitor these constituents as part of the current MPIS.

The ammonia, sodium, chloride, nitrate and TDS in MW-16AR and nitrate in MW-17AR are elevated this sampling event. These are leachate indicator parameters; however, a release of leachate is not suspected to be the cause of the increase. Rather, these detections are likely due to storm water runoff and cover soil erosion from uncapped areas that occurred within the past year directly upslope between the Cell 6 and Cell 9 sump areas. Omni has assessed the storm water drainage issues in this area and is in the process of evaluating different control measures (e.g. geosynthetic tarps). Once control measures are implemented, concentrations of these constituents are expected to decrease in the well over time. Our recommendation is to continue to monitor these constituents as part of the current MPIS.

The detections of benzene have been consistent in select monitoring wells and, as discussed in Section 4.2 as well as prior submittals to the FDEP, may be attributable to landfill gas migration. Currently, our recommendation is to continue semi-annual monitoring of these constituents as part of the current MPIS.

8 REFERENCES

- Maddox, et.al., 1992, “Florida’s Groundwater Quality Monitoring Program: Background Hydrogeochemistry,” Florida Geological Survey Special Publication 34, 352p.
- Kubal-Furr & Associates, 2002, Hydrogeologic Investigation Report and Water Quality Monitoring Plan.
- Geosyntec Consultants, 2004, Baseline Groundwater Monitoring Report.
- Geosyntec Consultants, 2008, Phases 2 and 3 Groundwater Monitoring Report.
- HDR Engineering, Inc., 2012, Class I Permit Renewal Request for Additional Information.
- Geo-Services & Consulting, LLC, 2012, Initial Water Quality Report Monitoring Well Cluster MW-22R.
- Geosyntec Consultants, 2013, Groundwater Contamination and Landfill Gas Migration Investigation and Assessment.
- Geosyntec Consultants, 2014, 5th Technical Report on Water Quality.
- Geosyntec Consultants, 2016, 24th Semi-Annual Water Quality Monitoring Report.
- Weibu, LLC, 2016, Well Abandonment and Installation Baseline Water Quality Sampling.

TABLES

Table 1 (1 of 3)

SUMMARY OF MONITORING WELL CONSTRUCTION DETAILS
25th SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY

Well Designation	Latitude (NAD 1983)	Longitude (NAD 1983)	WACS ID	Date Installed	Top of Casing Elevation, TOC (feet)	Total Depth (feet BTOC)	Screen Setting				Sand Pack (feet BTOC)	Fine-Grained Sand Seal (feet BTOC)
							(feet BTOC)		(feet Elevation)			
							Top	Bottom	Top	Bottom		
MW-1A	28 03 48.55	81 05 59.88	19900	9-Dec-03	95.12	23.0	13.0	23.0	82.1	72.1	10.6	8.2
MW-2A	28 03 51.99	81 05 59.90	19903	10-Dec-03	95.21	22.6	12.6	22.6	82.6	72.6	10.3	8.9
MW-3A	28 03 55.34	81 05 59.91	19906	11-Dec-03	94.64	22.8	12.8	22.8	81.9	71.9	10.4	9.0
MW-4A	28 03 58.97	81 05 59.92	19909	12-Dec-03	95.48	23.1	13.1	23.1	82.4	72.4	10.8	9.4
MW-5A	28 04 02.92	81 05 59.95	19912	24-Nov-03	95.32	22.5	12.5	22.5	82.8	72.8	10.1	9.1
MW-6A	28 04 06.50	81 05 59.15	19915	25-Nov-03	94.72	22.6	12.6	22.6	82.2	72.2	10.6	8.6
MW-7A	28 04 07.13	81 05 54.78	19918	26-Nov-03	95.48	23.3	13.3	23.3	82.2	72.2	10.3	9.3
MW-8A	28 04 06.20	81 05 50.64	19921	5-Dec-03	94.67	22.5	12.5	22.5	82.2	72.2	10.2	8.6
MW-9A	28 04 04.34	81 05 46.60	19924	4-Dec-03	94.66	22.4	12.4	22.4	82.3	72.3	10.0	8.6
MW-10A	28 04 00.07	81 05 44.77	19927	3-Dec-03	96.25	22.1	12.1	22.1	84.1	74.1	9.8	7.6
MW-11A	28 03 55.43	81 05 43.27	19930	3-Dec-03	93.56	22.8	12.8	22.8	80.7	70.7	10.5	9.1
MW-12A	28 03 52.08	81 05 43.26	19933	2-Dec-03	95.10	23.0	13.0	23.0	82.1	72.1	10.7	9.3
MW-13A	28 03 48.67	81 05 43.25	19936	8-Dec-03	95.19	22.5	12.5	22.5	82.7	72.7	10.2	7.7
MW-14A	Monitoring Well Abandoned July 10, 2007											
MW-15A	Monitoring Well Abandoned July 10, 2007											
MW-16A	Monitoring Well Abandoned June 24, 2013											
MW-16AR	28 03 44.56	81 05 40.18	22342	15-Oct-13	95.01	23.9	13.5	23.5	81.5	71.5	9.0	8.0
MW-17A	Monitoring Well Abandoned March 5, 2014											
MW-17AR	28 03 42.3	82 05 35.2	22345	19-Jun-14	94.84	24.1	12.0	24.0	82.8	70.8	11.0	10.0
MW-18A	Monitoring Well Abandoned March 5, 2014											
MW-19A	Monitoring Well Abandoned March 5, 2014											
MW-20A	Monitoring Well Abandoned June 24, 2013											
MW-21A	Monitoring Well Abandoned March 5, 2014											
MW-22A	Monitoring Well Abandoned November 11, 2011											
MW-22AR	28 03 34.703	81 06 0.622	28685	14-Mar-12	95.00	23.7	13.0	23.0	82.0	72.0	10.5	9.5
MW-23A	28 03 42.41	81 05 59.79	22363	25-Sep-07	97.90	27.8	17.3	27.3	80.7	70.7	15.3	14.3
MW-24A	28 03 26.9	82 05 25.9	29170	18-Jun-14	87.06	23.5	13	23	74.1	64.1	12.0	11.0
MW-25A	28 03 26.6	82 05 42.6	29173	19-Jun-14	86.99	23.4	13	23	74.0	64.0	12	11
MW-26A	Monitoring Well Abandoned 15 June 2016											
MW-27A	28 03 32.956	81 05 26.032	29179	30-Jul-15	94.68	23.6	13	23	81.68	71.7	11	9
MW-28A	28 03 36.209	81 05 26.696	29186	30-Jul-15	94.77	24.0	14	24	80.77	70.77	11	9
MW-29A	28 03 39.981	81 05 30.307	29189	30-Jul-15	94.88	23.7	13	23	81.88	71.88	11	9
MW-31A	28 03 28.260	81 05 25.013	29195	15-Jun-16	94.15	25.0	15	25	79.15	69.15	11.4	10.4

Table 1 (2 of 3)

SUMMARY OF MONITORING WELL CONSTRUCTION DETAILS
25th SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY

Well Designation	Latitude (NAD 1983)	Longitude (NAD 1983)	WACS ID	Date Installed	Top of Casing Elevation, TOC (feet)	Total Depth (feet BTOC)	Screen Setting				Sand Pack (feet BTOC)	Fine-Grained Sand Seal (feet BTOC)
							(feet BTOC)		(feet Elevation)			
							Top	Bottom	Top	Bottom		
MW-1B	28 03 48.59	81 05 59.89	19901	9-Dec-03	95.00	47.9	37.9	47.9	57.1	47.1	35.6	33.1
MW-2B	28 03 51.94	81 05 59.90	19904	10-Dec-03	95.17	48.3	38.3	48.3	56.9	46.9	36.0	34.6
MW-3B	28 03 55.31	81 05 59.91	19907	11-Dec-03	94.68	47.6	37.6	47.6	57.1	47.1	35.3	33.9
MW-4B	28 03 59.01	81 05 59.92	19910	12-Dec-03	95.18	47.4	37.4	47.4	57.8	47.8	35.1	33.5
MW-5B	28 04 02.88	81 05 59.95	19913	24-Nov-03	95.30	47.1	37.1	47.1	58.2	48.2	34.4	32.7
MW-6B	28 04 06.48	81 05 59.18	19916	25-Nov-03	94.60	47.4	37.4	47.4	57.2	47.2	34.9	33.5
MW-7B	28 04 07.13	81 05 54.81	19919	26-Nov-03	95.27	47.5	37.5	47.5	57.8	47.8	34.5	33.5
MW-8B	28 04 06.19	81 05 50.60	19922	5-Dec-03	94.58	49.6	39.6	49.6	55.0	45.0	37.1	35.6
MW-9B	28 04 04.31	81 05 46.56	19925	4-Dec-03	94.63	49.1	39.1	49.1	55.5	45.5	36.8	35.3
MW-10B	28 04 00.04	81 05 44.75	19928	3-Dec-03	96.23	48.3	38.3	48.3	58.0	48.0	35.9	33.9
MW-11B	28 03 55.40	81 05 43.27	19931	2-Dec-03	93.59	47.9	37.9	47.9	55.7	45.7	35.5	34.0
MW-12B	28 03 52.05	81 05 43.27	19934	1-Dec-03	95.01	49.0	39.0	49.0	56.1	46.1	36.6	35.1
MW-13B	28 03 48.64	81 05 43.24	19937	8-Dec-03	95.12	47.2	37.2	47.2	58.0	48.0	34.8	33.4
MW-14B	Monitoring Well Abandoned July 10, 2007											
MW-15B	Monitoring Well Abandoned July 10, 2007											
MW-16B	Monitoring Well Abandoned June 24, 2013											
MW-16BR	28 03 44.54	81 05 40.14	22343	15-Oct-13	94.97	46.6	36.5	46.5	58.5	48.5	33.0	31.0
MW-17B	Monitoring Well Abandoned March 5, 2014											
MW-17BR	28 03 42.2	82 05 35.2	22346	19-Jun-14	94.78	48.5	38.0	48.0	56.8	46.8	37.0	36.0
MW-18B	Monitoring Well Abandoned March 5, 2014											
MW-19B	Monitoring Well Abandoned March 5, 2014											
MW-20B	Monitoring Well Abandoned June 24, 2013											
MW-21B	Monitoring Well Abandoned March 5, 2014											
MW-22B	Monitoring Well Abandoned November 11, 2011											
MW-22BR	28 03 34.665	81 05 59.850	28686	15-Mar-12	94.86	46.1	35.5	45.5	59.4	49.4	33.0	28.0
MW-23B	28 03 42.46	81 05 59.79	22364	25-Sep-07	97.91	42.8	32.3	42.3	65.7	55.7	30.3	29.3
MW-24B	28 03 26.5	82 05 58.5	29171	18-Jun-14	87.05	43.1	33	43	54.1	44.1	32.0	31.0
MW-25B	28 03 26.6	82 05 42.7	29174	19-Jun-14	86.67	41.5	31	41	55.7	45.7	30.0	29.0
MW-26B	Monitoring Well Abandoned 15 June 2016											
MW-27B	28 03 33.0	81 05 26.032	29180	30-Jul-15	94.66	46.8	36	46	58.66	48.66	34	32
MW-28B	28 03 36.252	81 05 26.696	29187	30-Jul-15	94.68	48.7	38	48	56.68	46.68	36	34
MW-29B	28 03 39.998	81 05 30.307	29190	30-Jul-15	94.67	48.8	38	48	56.67	46.67	36	34
MW-31B	28 03 28.304	81 05 25.029	29196	15-Jun-16	93.88	46.3	36	46	57.88	47.88	35	34

Table 1 (3 of 3)

SUMMARY OF MONITORING WELL CONSTRUCTION DETAILS
25th SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY

Well Designation	Latitude (NAD 1983)	Longitude (NAD 1983)	WACS ID	Date Installed	Top of Casing Elevation, TOC (feet)	Total Depth (feet BTOC)	Screen Setting				Sand Pack (feet BTOC)	Fine-Grained Sand Seal (feet BTOC)
							(feet BTOC)		(feet Elevation)			
							Top	Bottom	Top	Bottom		
MW-1C	28 03 48.63	81 05 59.88	19902	9-Dec-03	95.2	75.2	65.2	75.2	30.0	20.0	62.9	61.4
MW-2C	28 03 51.90	81 05 59.89	19905	10-Dec-03	95.3	68.4	58.4	68.4	36.9	26.9	56.1	53.7
MW-3C	28 03 55.28	81 05 59.91	19908	11-Dec-03	94.7	68.7	58.7	68.7	36.0	26.0	56.3	54.8
MW-4C	28 03 59.04	81 05 59.92	19911	12-Dec-03	95.4	72.5	62.5	72.5	32.9	22.9	61.2	59.6
MW-5C	28 04 02.83	81 05 59.95	19914	24-Nov-03	95.4	73.0	63.0	73.0	32.4	22.4	60.7	58.7
MW-6C	28 04 06.46	81 05 59.22	19917	25-Nov-03	94.6	73.2	63.2	73.2	31.4	21.4	60.2	57.7
MW-7C	28 04 07.13	81 05 54.86	19920	25-Nov-03	94.9	73.3	63.3	73.3	31.6	21.6	60.3	59.3
MW-8C	28 04 06.17	81 05 50.55	19923	5-Dec-03	94.5	73.9	63.9	73.9	30.6	20.6	61.6	59.8
MW-9C	28 04 04.29	81 05 46.53	19926	4-Dec-03	94.5	73.8	63.8	73.8	30.8	20.8	61.4	59.4
MW-10C	28 04 00.01	81 05 44.74	19929	3-Dec-03	96.4	73.7	63.7	73.7	32.7	22.7	61.4	60.0
MW-11C	28 03 55.36	81 05 43.26	19932	2-Dec-03	93.7	73.4	63.4	73.4	30.3	20.3	61.0	59.6
MW-12C	28 03 52.01	81 05 43.26	19935	1-Dec-03	95.1	73.6	63.6	73.6	31.5	21.5	60.2	58.7
MW-13C	28 03 48.60	81 05 43.25	19938	8-Dec-03	95.0	73.0	63.0	73.0	32.1	22.1	60.7	58.2
MW-14C	Monitoring Well Abandoned July 10, 2007											
MW-15C	Monitoring Well Abandoned July 10, 2007											
MW-16C	Monitoring Well Abandoned June 24, 2013											
MW-16RC	28 03 44.52	81 05 40.11	22344	16-Oct-13	95.0	75.3	65.0	75.0	30.0	20.0	60.0	59.0
MW-17C	Monitoring Well Abandoned March 5, 2014											
MW-18C	Monitoring Well Abandoned March 5, 2014											
MW-19C	Monitoring Well Abandoned March 5, 2014											
MW-20C	Monitoring Well Abandoned June 24, 2013											
MW-21C	Monitoring Well Abandoned March 5, 2014											
MW-22C	Monitoring Well Abandoned November 11, 2011											
MW-22RC	28 03 34.629	81 05 59.854	28687	15-Mar-12	95.1	66.6	56.0	66.0	39.1	29.1	50.0	49.0
MW-23C	28 03 42.51	81 05 59.80	22365	24-Sep-07	97.9	67.1	56.6	66.6	41.4	31.4	54.6	53.6

Table 2

SUMMARY OF FINAL FIELD PARAMETER RESULTS AND FIELD DATA
25th SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY
OSCEOLA COUNTY, FLORIDA

Monitoring Well	Temperature (°C) ¹	pH (Standard Units)	Specific Conductance (uS/cm) ²	Turbidity (NTUs) ³	Oxidation-Reduction Potential (mV) ⁴	Dissolved Oxygen (mg/L) ⁵	Purging Method
MW-1A	25.61	5.05	2,209	3.0	-4.5	0.32	Peristaltic Pump
MW-1B	24.87	4.30	1,621	0.3	6.1	0.47	Peristaltic Pump
MW-2A	26.25	4.33	1,026	0.8	116.8	1.26	Peristaltic Pump
MW-2B	25.40	4.21	1,180	1.7	107.7	0.94	Peristaltic Pump
MW-3A	26.57	5.44	1,750	8.7	48.0	0.95	Peristaltic Pump
MW-3B	26.10	4.57	1,690	1.0	91.5	1.28	Peristaltic Pump
MW-4A	26.18	5.05	1,481	4.7	12.0	0.58	Peristaltic Pump
MW-4B	25.82	4.44	1,918	1.3	100.4	0.72	Peristaltic Pump
MW-5A	25.10	5.33	347	9.1	-49.4	0.47	Peristaltic Pump
MW-5B	24.72	4.27	1,892	0.4	131.1	0.41	Peristaltic Pump
MW-6A	24.55	5.52	367	1.3	-51.9	0.52	Peristaltic Pump
MW-6B	24.73	4.64	134	0.2	26.2	0.67	Peristaltic Pump
MW-7A	23.18	5.27	240	0.4	-64.6	0.35	Peristaltic Pump
MW-7B	22.88	4.18	851	0.6	-17.5	0.69	Peristaltic Pump
MW-8A	25.36	4.30	1,603	1.2	48.2	0.55	Peristaltic Pump
MW-8B	24.77	4.35	1,038	3.2	61.1	1.31	Peristaltic Pump
MW-9A	27.42	5.18	375	3.5	-35.1	0.46	Peristaltic Pump
MW-9B	26.32	4.38	659	2.6	137.0	0.58	Peristaltic Pump
MW-10A	26.41	4.78	597	3.7	7.9	0.98	Peristaltic Pump
MW-10B	25.66	4.10	990	1.4	50.3	0.89	Peristaltic Pump
MW-11A	27.92	4.91	387	1.7	23.4	0.47	Peristaltic Pump
MW-11B	26.79	5.11	82	2.5	-13.2	0.38	Peristaltic Pump
MW-12A	26.11	4.75	202	0.3	127.4	0.51	Peristaltic Pump
MW-12B	25.09	5.11	82	0.5	115.3	0.94	Peristaltic Pump
MW-13A	26.30	5.05	671	0.8	5.1	0.33	Peristaltic Pump
MW-13B	25.75	4.90	115	0.6	32.8	0.75	Peristaltic Pump
MW-16AR	27.64	5.07	2,636	9.3	195.5	0.32	Peristaltic Pump
MW-16BR	26.72	5.17	87	2.4	34.6	0.52	Peristaltic Pump
MW-17AR	27.08	4.35	438	1.3	211.3	0.40	Peristaltic Pump
MW-17BR	25.70	5.22	156	1.4	5.2	0.35	Peristaltic Pump
MW-22AR	24.61	6.15	1,054	0.8	-195.6	0.68	Peristaltic Pump
MW-22BR	23.85	4.93	126	0.6	-67.6	0.52	Peristaltic Pump
MW-23A	26.94	6.06	541	2.3	-68.5	0.32	Peristaltic Pump
MW-23B	25.85	4.33	1,116	0.9	30.9	0.72	Peristaltic Pump
MW-24A	23.64	4.63	58	0.3	54.6	1.23	Peristaltic Pump
MW-24B	22.88	4.80	45	8.1	-5.6	0.54	Peristaltic Pump
MW-25A	25.29	4.58	688	0.0	-102.1	0.29	Peristaltic Pump
MW-25B	24.16	4.88	119	57.9	-98.7	0.16	Submersible Pump
MW-27A	24.97	4.72	110	1.2	-78.5	0.62	Peristaltic Pump
MW-27B	24.56	5.18	167	49.2	-116.7	0.18	Submersible Pump
MW-28A	26.27	5.09	80	8.7	-121.1	0.26	Peristaltic Pump
MW-28B	24.68	5.07	130	2.1	-136.4	0.19	Submersible Pump
MW-29A	26.83	4.53	160	1.7	127.4	0.96	Peristaltic Pump
MW-29B	25.55	4.88	277	3.5	-13.3	0.56	Peristaltic Pump
MW-31A	25.10	4.55	420	4.0	-112.9	0.68	Peristaltic Pump
MW-31B	24.10	5.56	127	112.0	-147.9	0.27	Submersible Pump
SW-3	15.72	3.90	195	2.6	389.4	4.03	NA
SW-4	15.33	4.10	196	0.0	357.0	3.10	NA

Notes:

¹ °C = degrees Celsius² uS/cm = micro Siemens per centimeter³ NTU = Nephelometric Turbidity Units⁴ mV = millivolts⁵ mg/L = milligram per liter

NA : Not Applicable

Table 3

**SUMMARY OF GROUNDWATER ANALYTICAL DATA
25TH SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY**

Well ID	1,2-Dibromo-3-chloropropane	Acetone	Benzene	Chloroethane	Toluene	Antimony	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Nickel	Mercury	Sodium	Selenium	Silver	Thallium	Vanadium	Zinc	Ammonia	Chloride	TDS	Nitrate (N)																				
	PDWS (ug/L)	GCTL (ug/L)	PDWS (ug/L)	GCTL (ug/L)	SDWS (ug/L)	PDWS (ug/L)	PDWS (ug/L)	PDWS (ug/L)	PDWS (ug/L)	PDWS (ug/L)	PDWS (ug/L)	SDWS (ug/L)	SDWS (ug/L)	PDWS (ug/L)	PDWS (ug/L)	GCTL (ug/L)	PDWS (mg/L)	PDWS (mg/L)	SDWS (ug/L)	SDWS (ug/L)	PDWS (ug/L)	GCTL (ug/L)	SDWS (mg/L)	GCTL (mg/L)	SDWS (mg/L)	SDWS (mg/L)																				
	0.2	6,300	1	12	40	6	2,000	4	5	100	140	1,000	300	15	100	2	160	50	100	2	40	5,000	2.8	250	800	10																				
MW-1A	0.11	U	2.7	1	0.16	U	0.33	U	0.23	U	0.11	1	66	0.14	1	0.32	U	1.5	1.8	1	2.5	U	16,000	1.3	U	1.4	1	0.011	U	260	6.8	U	0.44	U	0.057	U	21	8.4	1	7.4	530	1,200	0.25	U		
MW-1B	0.11	U	2.7	1	0.16	U	0.33	U	0.23	U	0.21	1	71	0.12	1	0.32	U	1.5	10	1	2.5	U	32,000	1.3	U	4.8	1	0.011	U	130	6.8	U	0.44	U	0.075	U	11	2	U	3.8	240	1,200	0.25	U		
MW-2A	0.11	U	2.3	1	0.16	U	0.33	U	0.23	U	0.05	U	65	0.23	1	0.34	1	2.7	3.7	1	2.5	U	5,300	1.3	U	2.8	1	0.011	U	64	6.8	U	0.44	U	0.057	U	4.8	6.2	1	2.7	120	650	0.25	U		
MW-2B	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.09	1	53	0.63	1	0.32	U	0.68	1	14	1	2.5	U	40,000	1.3	U	4.2	1	0.011	U	34	6.8	U	0.44	U	0.057	U	4.4	2	U	1	110	850	0.25	U	
MW-3A	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.05	U	66	0.13	U	0.33	1	3.4	1.4	1	2.5	U	12,000	1.3	U	1.1	U	0.011	U	19	6.8	U	0.44	U	0.057	U	4.5	4.9	1	17	8.3	1	1,300	0.25	U	
MW-3B	0.11	U	3.3	1	0.16	U	0.33	U	0.23	U	0.05	U	64	1.5	1	0.39	1	1.4	7.1	1	2.5	U	23,000	1.3	U	1.1	U	0.011	U	22	6.8	U	0.44	U	0.075	U	3.6	2	U	4.9	46	1,500	0.25	U		
MW-4A	0.11	U	2.8	1	0.16	U	0.33	U	0.23	U	0.05	U	120	0.13	U	0.44	1	2.2	2.7	1	2.5	U	19,000	1.3	U	3.2	1	0.011	U	35	6.8	U	0.44	U	0.057	U	2.6	6.9	1	7.9	16	1,200	0.25	U		
MW-4B	0.11	U	3.1	1	0.16	U	0.33	U	0.23	U	0.20	1	59	0.54	1	0.46	1	2.4	0.60	U	2.5	U	250	1.3	U	1.1	U	0.011	U	71	6.8	U	0.44	U	0.071	U	7.7	12	U	8.9	110	1,500	0.50	U		
MW-5A	0.11	U	3.0	1	0.16	U	0.33	U	0.23	U	0.12	1	20	0.13	U	0.32	U	3.1	0.60	U	2.9	1	980	1.3	U	1.1	U	0.027	U	1	22	6.8	U	0.44	U	0.057	U	2.3	14	U	6.4	23	1	280	0.25	U
MW-5B	0.11	U	2.7	1	0.16	U	0.33	U	0.23	U	0.13	1	46	0.35	1	0.30	U	2.7	0.60	U	2.5	U	350	1.3	U	1.1	U	0.011	U	93	6.8	U	0.44	U	0.057	U	4.2	8	1	5.1	95	1,600	0.50	U		
MW-6A	0.11	U	2.9	1	0.16	U	0.33	U	0.23	U	0.08	1	6.3	0.13	U	0.32	U	3.8	0.60	U	2.5	U	7,900	1.3	U	1.1	U	0.011	U	25	6.8	U	0.44	U	0.057	U	5.8	5.9	1	3.8	31	230	0.25	U		
MW-6B	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.05	U	49	0.25	1	0.32	U	1.2	0.60	U	2.5	U	1,400	1.3	U	1.1	U	0.011	U	9.9	6.8	U	0.44	U	0.057	U	1.8	8.7	1	0.27	26	75	0.25	U		
MW-7A	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.05	U	12	0.13	U	0.32	U	2.2	0.63	1	2.5	U	8,000	1.3	U	1.1	U	0.011	U	16	6.8	U	0.44	U	0.057	U	2.6	6.8	1	8.1	24	1	110	0.25	U	
MW-7B	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.06	1	28	1.30	1	0.32	U	1.3	4.3	1	2.5	U	25,000	1.3	U	3.6	1	0.011	U	25	6.8	U	0.44	U	0.085	U	1.3	2	U	3.3	2.5	U	680	0.25	U	
MW-8A	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.15	1	45	0.32	1	0.32	U	5.2	3.2	1	2.5	U	14,000	1.3	U	4	1	0.011	U	6.6	6.8	U	1.2	1	0.057	U	4.7	6.2	1	5.4	7.5	1	1,400	0.05	U	
MW-8B	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.06	1	12	0.12	1	0.32	U	0.84	1	6.4	1	2.5	U	38,000	1.3	U	5.8	1	0.011	U	35	6.8	U	0.44	U	0.064	U	6.1	2	U	0.84	47	800	0.05	U	
MW-9A	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.05	U	27	0.16	1	0.32	U	0.65	1	0.60	U	3.5	1	1,200	1.3	U	1.1	U	0.011	U	20	6.8	U	2.1	1	0.057	U	2.5	6.6	1	4.7	11	1	230	0.16	1
MW-9A Duplicate	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.071	1	26	0.14	1	0.32	U	0.99	1	0.61	U	3.4	1	1,200	1.3	U	1.1	U	0.011	U	19	6.8	U	2	1	0.057	U	2.7	9.8	1	4.9	12	1	220	0.05	U
MW-9B	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.06	1	38	1.1	1	0.32	U	1.8	3.8	1	2.5	U	14,000	1.3	U	1.5	1	0.011	U	24	6.8	U	1.9	1	0.063	U	4.9	5.5	1	1.2	53	440	0.05	U		
MW-10A	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.05	U	18	0.24	1	0.32	U	0.68	1	1.4	1	2.9	1	2,500	1.3	U	1.3	1	0.011	U	34	6.8	U	2.5	1	0.057	U	3	16	1	6	25	370	0.05	U	
MW-10B	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.06	1	14	1.4	1	0.40	1	1.1	9.2	1	2.5	U	8,500	1.3	U	1.1	U	0.011	U	30	6.8	U	2.1	1	0.069	U	4.3	6.4	1	5.8	31	750	0.05	U		
MW-11A	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.14	1	96	0.32	1	0.32	U	0.98	1	0.60	U	3.9	1	1,400	1.3	U	1.1	U	0.011	U	3.3	6.8	U	2.2	1	0.057	U	4.3	7.7	1	4.2	7.7	1	320	0.06	U
MW-11B	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.09	1	13	0.16	1	0.32	U	1.7	0.60	U	2.7	1	350	1.3	U	1.1	U	0.011	U	13	14	1	2.2	1	0.057	U	3.8	9	1	0.97	10	55	0.05	U		
MW-12A	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.11	1	26	0.23	1	0.32	U	0.84	1	1.1	1	2.5	U	2,400	1.3	U	2.4	1	0.011	U	17	9.3	1	1.7	1	0.057	U	3.3	7.1	1	1.1	35	110	0.05	U	
MW-12B	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.05	U	23	0.14	1	0.32	U	0.50	U	0.60	U	2.5	U	750	1.3	U	1.1	U	0.011	U	9.7	9.5	1	1.7	1	0.057	U	2.3	19	1	0.11	16	37	0.05	U	
MW-13A	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.06	1	12	0.19	1	0.32	U	1.3	0.60	U	2.5	U	6,000	1.3	U	1.1	U	0.011	U	34	6.8	U	1.9	1	0.057	U	3	10	1	1.7	140	380	0.05	U		
MW-13B	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.05	U	17	0.15	1	0.32	U	0.54	1	0.60	U	2.5	U	1,200	1.3	U	1.1	U	0.011	U	13	6.8	U	1.7	1	0.057	U	1.7	11	1	0.16	24	70	0.05	U	
MW-16AR	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.25	1	130	0.14	1	4.4	1	2.7	0.60	U	2.5	U	710	1.3	U	1.1	U	0.011	U	240	6.8	U	0.44	U	0.078	U	12	8.8	1	3.9	420	2,000	51	Q		
MW-16BR	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.25	1	19	0.13	U	0.32	U	1.1	0.60	U	2.5	U	1,300	1.3	U	1.1	U	0.011	U	7.3	6.8	U	0.44	U	0.057	U	0.74	1	2	U	0.25	16	84	0.14	1	
MW-17AR	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.44	1	120	0.31	1	1.8	1	1.3	0.60	U	2.5	U	200	1.3	U	1.1	U	0.011	U	16	6.8	U	0.44	U	0.057	U	3.7	2	U	0.05	100	200	17	Q		
MW-17BR	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.09	1	18	0.13	U	0.32	U	1.3	0.60	U	2.5	U	650	1.3	U	1.1	U	0.011	U	20	6.8	U	0.44	U	0.057	U	1.3	1	8.2	1	0.14	31	110	0.05	U	
MW-22AR	2.9	6.4	0.16	U	0.33	U	0.25	1	0.16	1	44	0.13	U	0.40	1	3.8	0.60	U	2.5	U	35	1	1.3	U	1.1	U	0.011	U	13	6.8	U	1.4	1	0.057	U	4.7	8.6	1	4.5	14	820	0.31	1			
MW-22BR	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.11	1	15	0.19	1	0.32	U	0.5	1	0.60	U	2.5	U	1,800	1.3	U	1.1	U	0.011	U	15	6.8	U	1.9	1	0.057	U	2.1	4.8	1	0.15	27	96	0.16	1	
MW-23A	0.11	U	2.1	U	0.16	U	0.33	U	0.23	U	0.10																																			

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GROUNDWATER LEVEL MEASUREMENTS
25th SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY

Site Name: JED Solid Waste Management Facility				Sampling Personnel: Joe Terry		
Location: Osceola County, Florida				Field Conditions: Overcast, 79°F, light rain		
Date: 14-Nov-2016						
Well ID	Time	TOC Elevation	Depth to Water (ft)	Well Depth (ft) ⁽¹⁾	GW Elevation	Field Observations
DP-1						Piezometer Abandoned October 3, 2003
DP-2						Piezometer Abandoned October 3, 2003
DP-3						Piezometer Abandoned January 16, 2006
DP-4						Piezometer Abandoned January 16, 2006
DP-5						Piezometer Abandoned July 10, 2007
DP-6						Piezometer Abandoned July 10, 2007
DP-7						Piezometer Abandoned July 10, 2007
DP-8						Piezometer Abandoned July 10, 2007
DP-9						Piezometer Abandoned July 10, 2007
DP-10						Piezometer Abandoned July 10, 2007
DP-11						Piezometer Abandoned July 10, 2007
DP-12						Piezometer Abandoned July 10, 2007
DP-13						Piezometer Abandoned July 11, 2007
DP-14						Piezometer Abandoned March 2, 2015
DP-15						Piezometer Abandoned March 2, 2015
DP-16						Piezometer Abandoned December 30, 2015
DP-17						Piezometer Abandoned December 30, 2015
DP-18	16:18	84.38	5.47	52.87	78.91	
DP-19	16:18	84.34	5.42	18.20	78.92	
DP-20	--	83.07	--	18.35	NM	not measured, area inaccessible (surface water)
DP-21	--	83.00	--	53.68	NM	not measured, area inaccessible (surface water)
DP-22	--	81.00	--	18.63	NM	not measured, area inaccessible (surface water)
DP-23	--	81.27	--	53.73	NM	not measured, area inaccessible (surface water)
DP-24						Piezometer Abandoned December 30, 2015
SZ-1						Piezometer Abandoned July 10, 2007
SZ-2	--	83.16	--	75.39	NM	not measured, area inaccessible (surface water)
SZ-3	--	81.27	--	78.85	NM	
MW-1A	16:00	95.12	15.63	23.15	79.49	
MW-1B	16:00	95.00	15.49	48.07	79.51	
MW-1C	16:00	95.18	15.75	74.58	79.43	
MW-2A	15:55	95.21	15.74	22.84	79.47	
MW-2B	15:55	95.17	15.70	48.26	79.47	
MW-2C	15:55	95.32	15.92	68.57	79.40	
MW-3A	15:50	94.64	14.77	22.97	79.87	
MW-3B	15:50	94.68	15.08	47.88	79.60	
MW-3C	15:50	94.66	15.13	68.95	79.53	

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GROUNDWATER LEVEL MEASUREMENTS
25th SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY

Site Name: <u>JED Solid Waste Management Facility</u>			Sampling Personnel: <u>Joe Terry</u>			
Location: <u>Osceola County, Florida</u>			Field Conditions: <u>Overcast, 79°F, light rain</u>			
Date: <u>14-Nov-2016</u>						
Well ID	Time	TOC Elevation	Depth to Water (ft)	Well Depth (ft) ⁽¹⁾	GW Elevation	Field Observations
MW-4A	15:45	95.48	15.78	23.28	79.70	
MW-4B	15:45	95.18	15.56	47.67	79.62	
MW-4C	15:45	95.39	15.79	72.70	79.60	
MW-5A	15:40	95.32	15.68	22.69	79.64	
MW-5B	15:40	95.30	15.72	47.32	79.58	
MW-5C	15:40	95.39	16.10	73.25	79.29	
MW-6A	15:35	94.72	15.53	22.60	79.19	
MW-6B	15:35	94.60	15.43	47.71	79.17	
MW-6C	15:35	94.58	15.77	73.25	78.81	
MW-7A	15:28	95.48	15.70	23.53	79.78	
MW-7B	15:28	95.27	15.54	48.14	79.73	
MW-7C	15:28	94.93	15.71	73.49	79.22	
MW-8A	15:24	94.67	15.54	22.71	79.13	
MW-8B	15:24	94.58	14.57	49.48	80.01	
MW-8C	15:24	94.50	15.10	73.95	79.40	
MW-9A	15:18	94.66	15.00	22.53	79.66	
MW-9B	15:18	94.63	15.13	49.30	79.50	
MW-9C	15:18	94.54	15.63	73.96	78.91	
MW-10A	15:13	96.25	17.08	22.37	79.17	
MW-10B	15:13	96.23	17.11	48.47	79.12	
MW-10C	15:13	96.36	17.63	73.76	78.73	
MW-11A	15:06	93.56	14.80	22.83	78.76	
MW-11B	15:06	93.59	15.10	48.03	78.49	
MW-11C	15:06	93.65	15.20	73.72	78.45	
MW-12A	15:00	95.10	16.30	23.20	78.80	
MW-12B	15:00	95.01	16.38	49.17	78.63	
MW-12C	15:00	95.10	16.53	73.75	78.57	
MW-13A	14:55	95.19	16.15	22.73	79.04	
MW-13B	14:55	95.12	16.15	47.43	78.97	
MW-13C	14:55	95.04	16.15	73.20	78.89	
MW-14A	Monitoring Well Abandoned July 10, 2007					
MW-14B	Monitoring Well Abandoned July 10, 2007					
MW-14C	Monitoring Well Abandoned July 10, 2007					
MW-15A	Monitoring Well Abandoned July 10, 2007					
MW-15B	Monitoring Well Abandoned July 10, 2007					
MW-15C	Monitoring Well Abandoned July 10, 2007					

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GROUNDWATER LEVEL MEASUREMENTS
25th SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY

Site Name: JED Solid Waste Management Facility				Sampling Personnel: Joe Terry		
Location: Osceola County, Florida				Field Conditions: Overcast, 79°F, light rain		
Date: 14-Nov-2016						
Well ID	Time	TOC Elevation	Depth to Water (ft)	Well Depth (ft) ⁽¹⁾	GW Elevation	Field Observations
MW-16A						Monitoring Well Abandoned June 24, 2013
MW-16B						Monitoring Well Abandoned June 24, 2013
MW-16C						Monitoring Well Abandoned June 24, 2013
MW-16AR	14:52	95.01	14.30	23.95	80.71	
MW-16BR	14:52	94.97	15.29	46.55	79.68	
MW-16CR	14:52	95.03	15.60	75.25	79.43	
MW-17AR	14:45	94.84	14.31	24.03	80.53	
MW-17BR	14:45	94.78	14.56	48.40	80.22	
MW-17A						Monitoring Well Abandoned March 5, 2014
MW-17B						Monitoring Well Abandoned March 5, 2014
MW-17C						Monitoring Well Abandoned March 5, 2014
MW-18A						Monitoring Well Abandoned March 5, 2014
MW-18B						Monitoring Well Abandoned March 5, 2014
MW-18C						Monitoring Well Abandoned March 5, 2014
MW-19A						Monitoring Well Abandoned March 5, 2014
MW-19B						Monitoring Well Abandoned March 5, 2014
MW-19C						Monitoring Well Abandoned March 5, 2014
MW-20A						Monitoring Well Abandoned June 24, 2013
MW-20B						Monitoring Well Abandoned June 24, 2013
MW-20C						Monitoring Well Abandoned June 24, 2013
MW-21A						Monitoring Well Abandoned March 5, 2014
MW-21B						Monitoring Well Abandoned March 5, 2014
MW-21C						Monitoring Well Abandoned March 5, 2014
MW-22A						Monitoring Well Abandoned November 11, 2011
MW-22B						Monitoring Well Abandoned November 11, 2011
MW-22C						Monitoring Well Abandoned November 11, 2011
MW-22AR	16:11	95.00	14.19	23.59	80.81	
MW-22BR	16:11	94.86	15.60	46.06	79.26	
MW-22CR	16:11	95.13	15.82	66.50	79.31	
MW-23A	16:05	97.90	18.13	27.95	79.77	
MW-23B	16:05	97.91	18.20	42.98	79.71	
MW-23C	16:05	97.93	18.30	67.19	79.63	
MW-24A	16:23	87.06	8.32	23.41	78.74	
MW-24B	16:23	87.05	8.31	43.05	78.74	
MW-25A	16:28	86.99	7.08	23.36	79.91	
MW-25B	16:28	86.67	6.67	41.41	80.00	
MW-26A						Monitoring Well Abandoned June 15, 2016
MW-26B						Monitoring Well Abandoned June 15, 2016
MW-24A Exp	16:40	86.97	6.94	24.14	80.03	
MW-25A Exp	14:17	82.36	2.54	24.71	79.82	
MW-26A Exp	--	82.01	--	24.03	NM	not measured, area inaccessible (surface water)
MW-27C Exp	--	81.66	--	58.37	NM	not measured, area inaccessible (surface water)

Table 4

(4 of 4)

GROUNDWATER LEVEL MEASUREMENTS
25th SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY

Site Name: JED Solid Waste Management Facility			Sampling Personnel: Joe Terry			
Location: Osceola County, Florida			Field Conditions: Overcast, 79°F, light rain			
Date: 14-Nov-2016						
Well ID	Time	TOC Elevation	Depth to Water (ft)	Well Depth (ft) ⁽¹⁾	GW Elevation	Field Observations
MW-27A	14:32	94.68	14.12	23.54	80.56	
MW-27B	14:32	94.66	14.58	46.50	80.08	
MW-28A	14:37	94.77	14.37	23.84	80.40	
MW-28B	14:37	94.68	14.94	48.82	79.74	
MW-29A	14:40	94.88	13.03	23.65	81.85	
MW-29B	14:40	94.67	14.47	48.90	80.20	
MW-31A	14:25	94.15	13.58	25.0	80.57	
MW-31B	14:25	93.88	13.46	46.3	80.42	

Notes: Well caps removed site wide and wells allowed to stabilize prior to measurements.

(1):Monitoring well total depths were measured following the November 2016 water quality monitoring event

Table 5

SUMMARY OF SURFACE WATER FIELD MEASUREMENTS AND ANALYTICAL RESULTS
25th SEMI-ANNUAL WATER QUALITY MONITORING EVENT
J.E.D. SOLID WASTE MANAGEMENT FACILITY
November 2016

Parameter Monitored	FL-SWQC Class III / or SWCTL	Units	Monitoring Results	
			SW-3 (Downstream)	SW-4 (Upstream)
Field Parameters				
Dissolved Oxygen	38% Saturation ⁽¹⁾	mg/l	4.03	3.10
pH	Not less than background ⁽²⁾	SU	3.90	4.10
Conductivity	< 50% above background or 1,275, whichever is >	μS/cm	195	196
Temperature at Sampling Time	--	°C	15.72	15.33
Turbidity	< 29 above background	NTU	2.6	0
Water Elevation ⁽³⁾	--	feet	73.30	77.45
Laboratory Parameters				
1,2-Dichlorobenzene	99	ug/L	1.6	0.18 U
1,4-Dichlorobenzene	3	ug/L	1.3	0.22 U
4-Methyl-2-pentanone (MIBK)	23,000	ug/L	1.6	0.47 U
Acetone	1,700	ug/L	6.3	2.1 U
1,2-Dibromo-3-Chloropropane	--	ug/L	3.3	0.11 UJ4
Ethylene Dibromide (EDB)	13	ug/L	0.79	0.02 UJ4
Barium	-	ug/L	22	35
Iron	1	mg/L	0.68	1.4
Zinc	61/120 ⁽⁴⁾	μg/L	12	18
BOD	-	mg/L	2.0 U	2.0 U
Chlorophyll a	-	mg/m ³	1.6	1.6
COD	-	mg/L	54	74
Fecal Coliform	800	#/100 mL	164	100
Hardness as CaCO3	-	mg/L	45	100
Nitrogen, Total as N	-	mg/L	0.82	1.5
Organic Carbon, Total	-	mg/L	18	22
Phosphorus, Total	-	mg/L	0.05 U	0.092 i
Total Dissolved Solids	-	mg/L	180	220
Total Suspended Solids	-	mg/L	2.8	2

Notes:

Only parameters with detections above the Method Reporting Limit are shown.

(1): Per 62-302.533(1)(a)2

(2): Per 62-302.530(96)(c); If natural background is less than 6 units, in predominantly fresh waters the pH shall not vary below natural background or vary more than one unit above natural background. The pH of SW-3 and SW-4 in the 1st Semi-Annual Water Quality Event (November 2004) was 4.37 and 3.72 SU's, respectively.

(3): Surface Water Elevations referenced to NGVD 1929

(4): Zinc criteria is less than or equal to: $e(0.8473[\ln H]+0.884)$ where $\ln H$ is the natural logarithm of total hardness as mg/L CaCO₃

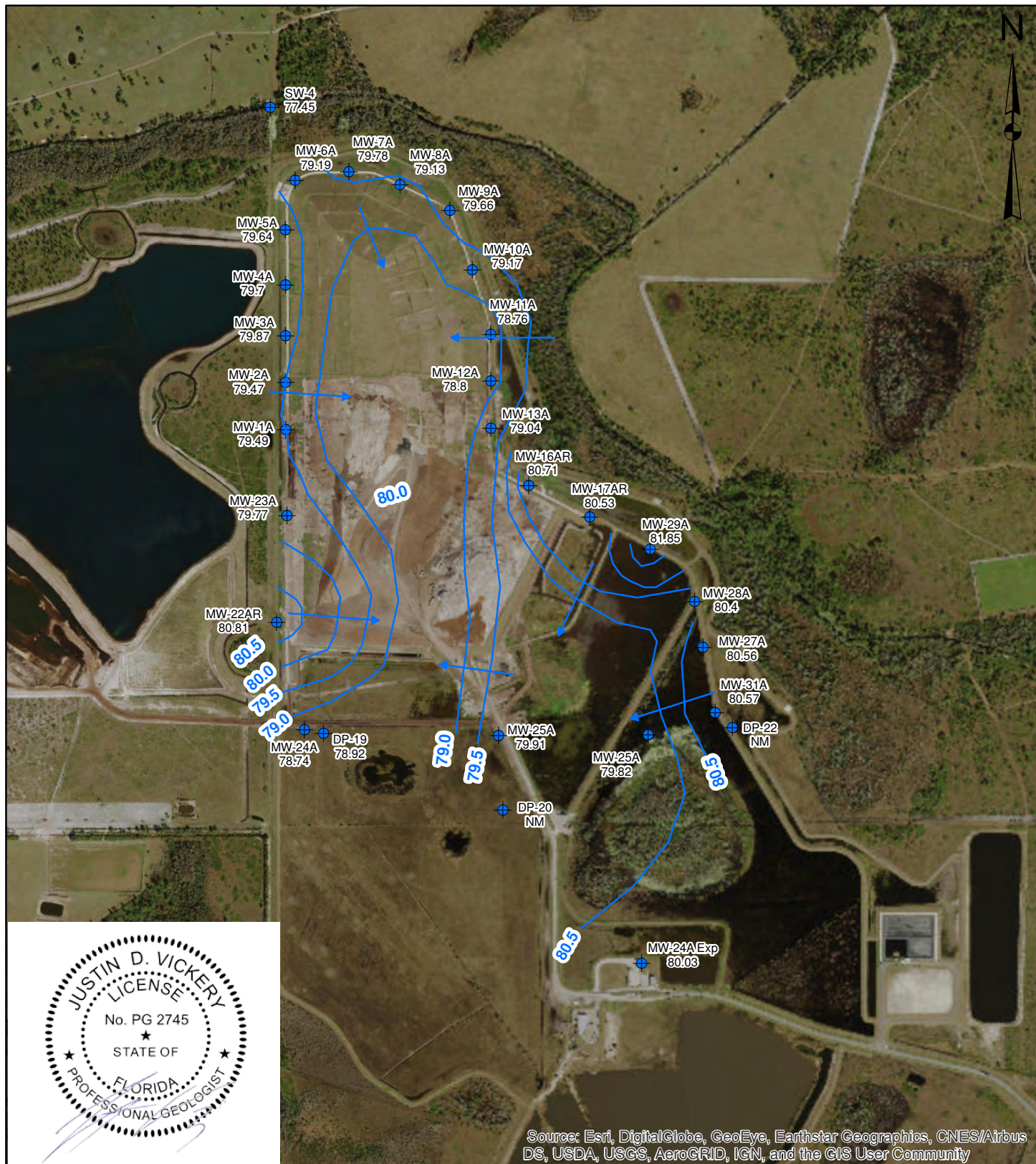
Concentrations in shaded cells did not meet the GCTL or FL-SWQC Class III Criteria.

i = The reported value is between the laboratory Method Detection Limit and the laboratory Practical Quantitation Limit

U = indicates that the compound was analyzed for but not detected at or above the value shown

J4 = Estimated Result

FIGURE



0 500 1,000
Feet

Note:
NM - Not Measured

Legend

- MW-28A 80.4 ● Monitoring Well and Groundwater Elevation (feet above NGVD)
- Groundwater Elevation Contour
- - - Assumed Groundwater Elevation Contour
- Groundwater Flow Direction

Potentiometric Surface Map December 2016

J.E.D. Solid Waste Management Facility
1501 Omni Way
St. Cloud, Osceola County, FL 34773

APPENDIX A
Water Quality Monitoring Certification
FDEP Form 62-701.900(31)



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

DEP Form #: 62-701.900(31), F.A.C.

Form Title: Water Quality Monitoring Certification

Effective Date: January 6, 2010

Incorporated in Rule 62-701.510(9), F.A.C.

WATER QUALITY MONITORING CERTIFICATION

PART I GENERAL INFORMATION

- (1) Facility Name J.E.D. Solid Waste Management Facility
Address 1501 Omni Way
City Saint Cloud Zip 34773 County Osceola
Telephone Number (407) 891-3720
- (2) WACS Facility ID 89544
- (3) DEP Permit Number SO49-0199726-022
- (4) Authorized Representative's Name Kirk Wills Title South Region Engineer
Address 5135 Madison Avenue
City Tampa Zip 33619 County Hillsborough
Telephone Number (813) 388-1026
Email address (if available) kirk.wills@wasteconnections.com

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submission of false information including the possibility of fine and imprisonment.

February 21, 2017
(Date)

Kirk Wills
(Owner or Authorized Representative's Signature)

PART II QUALITY ASSURANCE REQUIREMENTS

Sampling Organization Environmental Planning Specialists, Inc.
Analytical Lab NELAC / HRS Certification # E82574
Lab Name Advanced Environmental Laboratories, Inc.
Address 6681 Southpoint Parkway, Jacksonville, Florida 32216
Phone Number (904) 363-9350
Email address (if available) CMyers@AELLab.com

Northwest District
160 Government Center
Pensacola, FL 32501-5794
850-595-8360

Northeast District
7825 Baymeadows Way, Ste. 200 B
Jacksonville, FL 32256-7590
904-807-3300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
13051 N. Telecom Pky.
Temple Terrace, FL
813-632-7600

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33902-2549
239-332-6975

Southeast District
400 North Congress Ave.
West Palm Beach, FL 33401
561-681-6600

APPENDIX B

Monitoring Well Sampling Logs

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-1A	SAMPLE ID: 16327-MW-1A	DATE: 11-22-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 13 feet to 23 feet	STATIC DEPTH TO WATER (feet): 15.91	PURGE PUMP TYPE OR BAILER: PP
------------------------------	-----------------------------------	---	--	----------------------------------

(only fill out if applicable)

$$= (23 \text{ feet} - 15.91 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.1 \text{ gallons}$$

(only fill out if applicable)

$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times \text{feet}) + 0.12 \text{ gallons} = \text{gallons}$$

20

PURGING
ENDED AT:

TOTAL VOLUME
PURGED (gallons): 33

[illegible]

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 0940	SAMPLING ENDED AT: 0953
--	---	--------------------------------	----------------------------

TUBING
MATERIAL CODE: HDPE

SAMPLING
ENDED AT: 0952

TUBING
MATERIAL CODE: HDPE

FIELD-FILTERED: Y N
Filtration Equipment Type:

FILTER SIZE: _____ μm

FIELD DECONTAMINATION:	PUMP	No
------------------------	------	----

TUBING	No (replaced)
--------	---------------

DUPLICATE: ☐ Y ☐ N

N

SAMPLE CONTAINER SPECIFICATION

SAMPLE PRESERVATION (including wet ice)

INTENDED

SAMPLING	SAMPLE RUN
----------	------------

[illegible]

REMARKS: Weather: Clear, 56°F, N 5 mph

Odor: none

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-24	SAMPLE ID: 11-326-MW-24	DATE: 11-21-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 12.6 feet to 32.6 feet	STATIC DEPTH TO WATER (feet): 15.98	PURGE PUMP TYPE OR BAILER: PP
------------------------------	-----------------------------------	---	--	----------------------------------

(only fill out if applicable)

$$= (\text{feet} - \text{feet}) \times 0.16 \text{ gallons/foot} = \text{gallons}$$

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times \text{feet}) + 0.12 \text{ gallons} = \text{gallons}$$

INITIAL PUMP OR TUBING

FINAL PUMP OR TUBING

PURGING

PURGING

TOTAL VOLUME

[illegible]

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02: 1" = 0.04: 1.25" = 0.06: 2" = 0.16: 3" = 0.37: 4" = 0.65: 5" = 1.02: 6" = 1.47: 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 157913	SAMPLING ENDED AT: 158000
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PUMP OR TUBING
DEPTH IN WELL (feet):

TUBING
MATERIAL CODE: HDPE

SAMPLING
INITIATED AT: 1500

SAMPLING
ENDED AT: 1507

PUMP OR TUBING DEPTH IN WELL (feet): 20

TUBING
MATERIAL CODE: HDPE

FIELD-FILTERED: Y N
Filtration Equipment Type:

FILTER SIZE: _____ μm

FIELD DECONTAMINATION:	PUMP	No
------------------------	------	----

TUBING No (replaced)

DUPLICATE:	Y
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SAMPLE PRESERVATION (including wet ice)

INTENDED

SAMPLING

SAMPLE PLUMB

[illegible]

REMARKS: Weather: Clear, 68°F

Odor: none

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-2B	SAMPLE ID: 16326-MW-2B	DATE: 11-21-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 39 feet to 48 feet	STATIC DEPTH TO WATER (feet): 1596	PURGE PUMP TYPE OR BAILER: PP
------------------------------	-----------------------------------	---	---------------------------------------	----------------------------------

$$= (\text{feet} - \text{feet}) \times 0.16 \text{ gallons/foot} = \text{gallons}$$
$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times 50 \text{ feet}) + 0.12 \text{ gallons} = 0.2 \text{ gallons}$$

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 43	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 43	PURGING INITIATED AT: 1345	PURGING ENDED AT: 1428	TOTAL VOLUME PURGED (gallons): 3
--	--	-------------------------------	---------------------------	-------------------------------------

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 1430	SAMPLING ENDED AT: 1440
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PUMP OR TUBING DEPTH IN WELL (feet): 43	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: _____ μm
--	-------------------------------	---	-----------------------

FIELD DECONTAMINATION:	PUMP	No	TUBING	No (replaced)	DUPLICATE:	Y	(N)
------------------------	------	----	--------	---------------	------------	---	-----

SAMPLE CONTAINER SPECIFICATION	SAMPLE PRESERVATION (1, 2, 3, 4, 5)	INTEREST	FUNDING	
--------------------------------	-------------------------------------	----------	---------	--

16326-
MW-2B
↓

REMARKS: Weather: Clear, 68°/72°

Odor: none

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-34	SAMPLE ID: 16326-MW-34	DATE: 11-21-16	

PURGING DATA

[illegible]

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS				SAMPLER(S) SIGNATURE(S): 			SAMPLING INITIATED AT: 1250		SAMPLING ENDED AT: 1300	
PUMP OR TUBING DEPTH IN WELL (feet): 20				TUBING MATERIAL CODE: HDPE			FIELD-FILTERED: Y ☒ N ☐		FILTER SIZE: _____ µm	
FIELD DECONTAMINATION: PUMP No				TUBING No (replaced)			DUPLICATE: Y ☐ N ☒			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
6326-	3	CG	40 ml	HCL	Prefilled by lab		VOCs	APP	225	
new-34	1	PE	500 ml	HNO3	Prefilled by lab		Metals	APP	225	
↓	1	PE	250 ml	H2SO4	Prefilled by lab		NH3	APP	225	
	1	PE	500 ml	None	None		Cl, NO3, TDS	APP	225	
REMARKS: Weather: clear, 65°F, NW 5 mph										
Odor: none										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; RFPF = Reverse Flow Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-3B	SAMPLE ID: 16326-MW-3B	DATE: 11-21-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 37.6 feet to 47.6 feet	STATIC DEPTH TO WATER (feet): 15.38	PURGE PUMP TYPE OR BAILER: PP
------------------------------	-----------------------------------	---	--	----------------------------------

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

$$= (\quad \text{feet} - \quad \text{feet}) \times 0.16 \text{ gallons/foot} = \quad \text{gallons}$$

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times 50 \text{ feet}) + 0.12 \text{ gallons} = 0.2 \text{ gallons}$$

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 43	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 43	PURGING INITIATED AT: 1200	PURGING ENDED AT: 1233	TOTAL VOLUME PURGED (gallons): 1.5
--	--	-------------------------------	---------------------------	---------------------------------------

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02: 1" = 0.04: 1.25" = 0.06: 2" = 0.16: 3" = 0.37: 4" = 0.65: 5" = 1.02: 6" = 1.47: 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIALS/DATE: 12/25	SAMPLING SURVEIL: 12/25
--	---	----------------------------------	----------------------------

	Que Que	INITIATED AT: 1215	ENDED AT: 1234
--	---------	--------------------	----------------

PUMP OR TUBING DEPTH IN WELL (feet): 43	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y <u>N</u> Filtration Equipment Type:	FILTER SIZE: _____ μ m
--	-------------------------------	--	----------------------------

FIELD DECONTAMINATION:	PUMP	No	TUBING	No (replaced)	DUPLICATE:	Y	(N)
------------------------	------	----	--------	---------------	------------	---	-----

FILED DESCRIPTION:	FORM	NO	ISSUED	NO (replaced)	DUPLICATE:	1	(N)

16326-
MW-3B
16

REMARKS: Weather: Clear, 65°F, NW 5 mph

Odor: none

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-4A	SAMPLE ID: 16326-MW-4A	DATE: 11-21-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 13 feet to 23 feet	STATIC DEPTH TO WATER (feet): 16.06	PURGE PUMP TYPE OR BAILER: PP
------------------------------	-----------------------------------	---	--	----------------------------------

(only fill out if applicable)

$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times \text{feet}) + 0.12 \text{ gallons} = \text{gallons}$$
[illegible]

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 1120	SAMPLING ENDED AT: 1139
--	---	-----------------------------	-------------------------

FIELD DECONTAMINATION:		PUMP	No	TUBING	No (replaced)	DUPLICATE:	Y	(N)
------------------------	--	------	----	--------	---------------	------------	---	-----

SAMPLING	SAMPLE RUMB
----------	-------------

[illegible]

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-4R	SAMPLE ID: 16326-MW-4R	DATE: 11-21-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 37 feet to 47 feet	STATIC DEPTH TO WATER (feet): 15.86	PURGE PUMP TYPE OR BAILER: PP
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(only fill out if applicable)

$$= (\quad \text{feet} - \quad \text{feet}) \times 0.16 \text{ gallons/foot} = \quad \text{gallons}$$

(only fill out if applicable)

$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times 50 \text{ feet}) + 0.12 \text{ gallons} = 0.2 \text{ gallons}$$

TOTAL VOLUME
PURGED (gallons): 1.7

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 1055	SAMPLING ENDED AT: 1105
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PUMP OR TUBING

TUBING

SAMPLING
INITIATED AT: 1055

SAMPLING
ENDED AT: 1125

PUMP OR TUBING
DEPTH IN WELL (feet): 42

TUBING
MATERIAL CODE: HDPE

FIELD-FILTERED: Y N
Filtration Equipment Type:

FILTER SIZE: μm

FIELD DECONTAMINATION: PUMP No

TUBING	No (replaced)
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Equipment Type: ☐ DUPLICATE: ☐ Y ☒ N

SAMPLE PRESERVATION (including wet ice)

16326 -
MW-41F

REMARKS: Weather: clear, 61°F

Odor:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-5A	SAMPLE ID: 16326-MW-5A	DATE: 11-21-16	

PURGING DATA

[illegible]

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS				SAMPLER(S) SIGNATURE(S): <i>Joe Terry</i>			SAMPLING INITIATED AT: 0945		SAMPLING ENDED AT: 0954		
PUMP OR TUBING DEPTH IN WELL (feet): 20				TUBING MATERIAL CODE: HDPE			FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: _____ µm		
FIELD DECONTAMINATION: PUMP No TUBING No (replaced)							DUPLICATE: Y (N)				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
0326-	3	CG	40 ml	HCL	Prefilled by lab		VOCs		APP		300
hw-54	1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP		300
↓	1	PE	250 ml	H2SO4	Prefilled by lab		NH3		APP		300
↓	1	PE	500 ml	None	None		Cl, NO3, TDS		APP		300
REMARKS: Weather: Clear, 55°F											
Odor: Sulfur-like											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-5B	SAMPLE ID: 16326-MW-5B	DATE: 11-21-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 37 feet to 47 feet	STATIC DEPTH TO WATER (feet): 116.10	PURGE PUMP TYPE OR BAILER: PP
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(only fill out if applicable)

$$= (\text{feet} - \text{feet}) \times 0.16 \text{ gallons/foot} = \text{gallons}$$

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times 50 \text{ feet}) + 0.12 \text{ gallons} = 0.2 \text{ gallons}$$

INITIAL PUMP OR TUBING
DEPTH IN WELL (feet):

FINAL PUMP OR TUBING
DEPTH IN WELL (feet):

PURGING
INITIATED AT: 0845

PURGING
ENDED AT: 0920

TOTAL VOLUME
PURGED (gallons): 2.8

[illegible]

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 0930	SAMPLING ENDED AT: 1037
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PUMP OR TUBING DEPTH IN WELL (feet): 40

TUBING
MATERIAL CODE: HDPE

SAMPLING
INITIATED AT: 0920

SAMPLING
ENDED AT: 1937

PUMP OR TUBING DEPTH IN WELL (feet): 40

TUBING
MATERIAL CODE: HDPE

FIELD-FILTERED: Y (N)
Filtration Equipment Type:

FILTER SIZE: _____ μm

FIELD DECONTAMINATION:	PUMP	No	TUBING	No (replaced)
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DUPLICATE: Y ☒ N

[illegible]

REMARKS: Weather: Clear, 55°F

Odor: none

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; Q = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-6A		SAMPLE ID: 16326-MW-6A	
		DATE: 11-21-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 13.5 feet to 22.5 feet	STATIC DEPTH TO WATER (feet): 16.05	PURGE PUMP TYPE OR BAILER: PP
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(only fill out if applicable)

$$= (22.6 \text{ feet} - 16.05 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.05 \text{ gallons}$$

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times \text{feet}) + 0.12 \text{ gallons} = \text{gallons}$$

INITIAL PLUMP OR TUBING

FINAL PUMP OR TUBING

PURGING

PURGING

TOTAL VOLUME

[illegible]

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 08:45	SAMPLING ENDED AT: 09:05
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PUMP OR TUBING

SAMPLER(S) SIGNATURE(S):

SAMPLING
INITIATED AT: 0815

SAMPLING
ENDED AT: 17825

PUMP OR TUBING
DEPTH IN WELL (feet): 20

TUBING
MATERIAL CODE: HDPE

FIELD-FILTERED: Y N
Filtration Equipment Type:

FILTER SIZE: _____ μm

FIELD DECONTAMINATION:	PUMP	No
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TUBING	No (replaced)
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DUPLICATE: Y N

[illegible]

REMARKS: Weather: Clear, 42°F

Odor: none

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-6B	SAMPLE ID: 16326-MW-6B	DATE: 11-21-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 37 feet to 47 feet	STATIC DEPTH TO WATER (feet): 15.94	PURGE PUMP TYPE OR BAILER: PP
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$$= (\quad \text{feet} - \quad \text{feet}) \times 0.16 \quad \text{gallons/foot} = \quad \text{gallons}$$
$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times 50 \text{ feet}) + 0.12 \text{ gallons} = 0.2 \text{ gallons}$$

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
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WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Revision Date: March 1, 2014

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-7A	SAMPLE ID: 16326-MW-7A	DATE: 11-21-16	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 13 feet to 23 feet	STATIC DEPTH TO WATER (feet): 16.03	PURGE PUMP TYPE OR BAILER: PP
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (23.3 feet - 16.083 feet) X 0.16 gallons/foot = 1.2 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= 0 gallons + (0.0014 gallons/foot X feet) + 0.12 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 20	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 20	PURGING INITIATED AT: 0530	PURGING ENDED AT: 0630	TOTAL VOLUME PURGED (gallons): 4.8
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[illegible]

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 06:30	SAMPLING ENDED AT: 06:38
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PUMP OR TUBING DEPTH IN WELL (feet): 20	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y ☒ N ☐ Filtration Equipment Type:	INTEGRITY TEST: 1030 LEAK RATE: 0.038
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FIELD DECONTAMINATION:	PUMP	No	TUBING	No (replaced)	DUPLICATE:	Y	<u>N</u>
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SAMPLE CONTAINER SPECIFICATION	SAMPLE PRESERVATION (including wet ice)	INTENDED	SAMPLING	SAMPLE RUN
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SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR	SAMPLING EQUIPMENT	SAMPLE PUMP FLOW RATE
SAMPLE	#	MATERIAL	PRESERVATIVE	TOTAL VOL	FINAL			

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	ANALYSIS METHOD	EQUIPMENT CODE	FLOW RATE (mL per minute)
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6326-	3	CG	40 ml	HCL	Prefilled by lab		VOCs	APP	300
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1	PF	500 ml	HNO ₃	Prefilled by lab	Metals	APP	3-3
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W-7A	1	FE	500 nm	THINCS	Prepared by lab		Metals	APF	500
	1	BE	350 nm	USCC	Prepared by lab				

		1	PE	250 ml	H ₂ SO ₄	Prefilled by lab		NH ₃	APP	300
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1	PE	500 ml	None	None	Cl, NO ₃ , TDS	APP	300
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[illegible][illegible]

REMARKS: Weather: CLOUDY

Clear, 42%

Odor: Sulfur-like

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; G = Glass (Other than AG or CG)

S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing, Gravity Drain); S = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.S. & C.

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-7B	SAMPLE ID: 16326-MW-7B	DATE: 11-21-16	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 37.5 feet to 47.5 feet	STATIC DEPTH TO WATER (feet): 15.05	PURGE PUMP TYPE OR BAILER: PP
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

$$= (\quad \text{feet} - \quad \text{feet}) \times 0.16 \quad \text{gallons/foot} = \quad \text{gallons}$$

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times 50 \text{ feet}) + 0.12 \text{ gallons} = 0.3 \text{ gallons}$$

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 43	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 43	PURGING INITIATED AT: 0525	PURGING ENDED AT: 0600	TOTAL VOLUME PURGED (gallons): 2
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[illegible]

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 06/02	SAMPLING ENDED AT: 06/10
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PUMP OR TUBING DEPTH IN WELL (feet):	43	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N)	Filtration Equipment Type:	FILTER SIZE: _____ μm
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FIELD DECONTAMINATION:	PUMP	No	TUBING	No (replaced)	DUPLICATE:	Y	N
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SAMPLE CONTAINER SPECIFICATION	SAMPLE PRESERVATION (including wet ice)	INTENDED	SAMPLING	SAMPLE RUNS
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SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR	SAMPLING EQUIPMENT	SAMPLE PUMP FLOW RATE
SAMPLE	#	MATERIAL		PRESERVATIVE	TOTAL VOL	FINAL			

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	ANALYSIS METHOD	EQUIPMENT CODE	TEST RATE (mL per minute)
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6320-	3	CG	40 ml	HCL	Prefilled by lab		VOCs	APP	257
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HW-7B	1	PE	500 ml	HNO ₃	Prefilled by lab		Metals	APP	250
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1	PE	250 ml	H ₂ SO ₄	Prefilled by lab	NH ₄	APP	250
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1	PE	500 ml	None	None	CL NO. TDS	APP	250
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		PE	500 ml	None	None		Cl, NO ₃ , TDS	APP	250
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[illegible][illegible]

REMARKS: Weather: Clear, 42°F

Odor: none

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-BA	SAMPLE ID: 16322-MW-BA	DATE: 11-17-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 12.5 feet to 33.5 feet	STATIC DEPTH TO WATER (feet): 14.71	PURGE PUMP TYPE OR BAILER: PP
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$$= (22.5 \text{ feet} - 14.71 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.2 \text{ gallons}$$

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 19	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 19	PURGING INITIATED AT: 1400	PURGING ENDED AT: 1500 ST 1400	TOTAL VOLUME PURGED (gallons): 4.0
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WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-0B	SAMPLE ID: 16322-MW-0B	DATE: 11-17-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 39.6 feet to 44.6 feet	STATIC DEPTH TO WATER (feet): 14.73	PURGE PUMP TYPE OR BAILER: PP
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$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times 50 \text{ feet}) + 0.12 \text{ gallons} = 0.2 \text{ gallons}$$
[illegible]

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

[illegible]

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-9A	SAMPLE ID: 16322-MW-9A	DATE: 11-17-16	

PURGING DATA

[illegible]

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS				SAMPLER(S) SIGNATURE(S): <i>Joe Terry</i>			SAMPLING INITIATED AT: 1325		SAMPLING ENDED AT: 1340	
PUMP OR TUBING DEPTH IN WELL (feet): 19				TUBING MATERIAL CODE: HDPE		FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: _____ µm		
FIELD DECONTAMINATION: PUMP No				TUBING No (replaced)			DUPLICATE: Y (N)			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
6322-MW-9A	3	CG	40 ml	HCL	Prefilled by lab		VOCs		APP	200
	1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP	350
	1	PE	250 ml	H2SO4	Prefilled by lab		NH3		APP	350
	1	PE	500 ml	None	None		Cl, NO3, TDS		APP	350
REMARKS: Weather: Sunny, 71°F										
Odor: none										
Collected duplicate of MW-9A. ID: 16322-MW-Dupe 1200										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-9B	SAMPLE ID: 16322-MW-9B	DATE: 11-17-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 39 feet to 419 feet	STATIC DEPTH TO WATER (feet): 15.30	PURGE PUMP TYPE OR BAILER: PP
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$$= (\quad \text{feet} - \quad \text{feet}) \times 0.16 \text{ gallons/foot} = \quad \text{gallons}$$

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= 0 gallons + (0.0014 gallons/foot X 50 feet) + 0.12 gallons = 0.2 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
141	44	1215	1248	2.6

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Revision Date: March 1, 2014

pH: ± 0.2 units **Temperature:** $\pm 0.2^{\circ}\text{C}$ **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-10B	SAMPLE ID: 16322-MW-10B	DATE: 11-17-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 39 feet to 49 feet	STATIC DEPTH TO WATER (feet): 17.32	PURGE PUMP TYPE OR BAILER: PP
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$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times 55 \text{ feet}) + 0.12 \text{ gallons} = 0.2 \text{ gallons}$$

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
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	(gallons)	(gallons)	(gpm)	(feet)							
1100	1	1	0.07	17.40	41.10	25.70	990	1.89	5.2	clear	51.5
1105	0.4	1.4	0.07	17.40	41.10	25.66	989	1.07	1.2	clear	51.4
1110	0.4	1.8	0.07	17.40	41.10	25.67	989	0.93	1.1	clear	50.9
1113	0.2	2	0.07	17.40	41.10	25.66	990	0.89	1.4	clear	50.8

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 1115	SAMPLING ENDED AT: 1130
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PUMP OR TUBING DEPTH IN WELL (feet): 43	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: <u> </u> µm
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FIELD DECONTAMINATION:	PUMP	No	TUBING	No (replaced)	DUPLICATE:	Y	<u>N</u>
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SAMPLE PRESERVATION (including wet ice)

SAMPLING	SAMPLE PUMP
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SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	ANALYSIS AND/OR METHOD			SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
				PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		

322- nw-103	3	CG	40 ml	HCL	Prefilled by lab	VOCs	APP	275
	1	PE	500 ml	HNO3	Prefilled by lab	Metals	APP	275
↓	1	PE	250 ml	H2SO4	Prefilled by lab	NH3	APP	275
	1	PE	500 ml	None	None	Cl, NO3, TDS	APP	275

REMARKS: Weather: Sunny, 71°F

Odor: Sulfur-like

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-11A	SAMPLE ID: 16322-MW-11A	DATE: 11-17-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 12.8 feet to 23.8 feet	STATIC DEPTH TO WATER (feet): 14.97	PURGE PUMP TYPE OR BAILER: PP
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(only fill out if applicable)

$$= (22.9 \text{ feet} - 14.97 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.3 \text{ gallons}$$

EQUIPMENT VOLUME:
(only fill out if applicable)

$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times \text{feet}) + 0.12 \text{ gallons} = \text{gallons}$$

INITIAL PUMP OR TUBING
DEPTH IN WELL (feet):

FINAL PUMP OR TUBING
DEPTH IN WELL (feet):

PURGING
INITIATED AT: 0850

PURGING
ENDED AT: 0955

TOTAL VOLUME
PURGED (gallons): 3.9

[illegible]

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02: 1" = 0.04: 1.25" = 0.06: 2" = 0.16: 3" = 0.37: 4" = 0.65: 5" = 1.02: 6" = 1.47: 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 0955	SAMPLING ENDED AT: 1204
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PUMP OR TUBING DEPTH IN WELL (feet): 20

SAMPLING INITIATED AT: 0955

SAMPLING
ENDED AT: 1004

PUMP OR TUBING DEPTH IN WELL (feet): 20

TUBING
MATERIAL CODE: HDPE

FIELD-FILTERED: Y N
Filtration Equipment Type:

FILTER SIZE: μm

FIELD DECONTAMINATION:	PUMP	No
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TUBING	No (replaced)
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DUPLICATE:	Y	(N)
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(N)

[illegible]

REMARKS: Weather: Sunny, 64°F

Odor: none

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-11B	SAMPLE ID: 16322-MW-11B	DATE: 11-17-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 379 feet to 479 feet	STATIC DEPTH TO WATER (feet): 15.27	PURGE PUMP TYPE OR BAILER: PP
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$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times 50 \text{ feet}) + 0.12 \text{ gallons} = 0.2 \text{ gallons}$$

TOTAL VOLUME
PURGED (gallons): 2

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Baller; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

Revision Date: March 1, 2014

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-124	SAMPLE ID: 16322-MW-124		DATE: 11-17-16

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 13 feet to 23 feet	STATIC DEPTH TO WATER (feet): 16.48	PURGE PUMP TYPE OR BAILER: PP
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$$= (23 \text{ feet} - 16.48 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1 \text{ gallons}$$
$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times \text{feet}) + 0.12 \text{ gallons} = \text{gallons}$$

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 20	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 20	PURGING INITIATED AT: 0645	PURGING ENDED AT: 0740	TOTAL VOLUME PURGED (gallons): 5
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WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 1750	SAMPLING ENDED AT: 1800
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PUMP OR TUBING DEPTH IN WELL (feet): 20	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: _____ µm
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FIELD DECONTAMINATION:	PUMP	No	TUBING	No (replaced)	DUPLICATE:	Y	(N)
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SAMPLE CONTAINER SPECIFICATION	SAMPLE PRESERVATION (if any)	DATE OF ANALYSIS	ANALYST
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16322-MW-12A	3	CG	40 ml	HCL	Prefilled by lab	VOCs	APP	250
	1	PE	500 ml	HNO3	Prefilled by lab	Metals	APP	300
	1	PE	250 ml	H2SO4	Prefilled by lab	NH3	APP	300
	1	PE	500 ml	None	None	Cl, NO3, TDS	APP	300

REMARKS: Weather: Clear, 5301 =

Odor: none

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-12B	SAMPLE ID: 16322-MW-12B	DATE: 11-17-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 39 feet to 49 feet	STATIC DEPTH TO WATER (feet): 16.55	PURGE PUMP TYPE OR BAILER: PP
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$$= (\quad \text{feet} - \quad \text{feet}) \times 0.16 \text{ gallons/foot} = \quad \text{gallons}$$

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 44	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 44	PURGING INITIATED AT: 0645	PURGING ENDED AT: 0718	TOTAL VOLUME PURGED (gallons): 2.6
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WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-13A	SAMPLE ID: 16322-MW-13A	DATE: 11-17-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 12.5 feet to 22.5 feet	STATIC DEPTH TO WATER (feet): 16.30	PURGE PUMP TYPE OR BAILER: PP
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(only fill out if applicable)

$$= (22.5 \text{ feet} - 16.3 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1 \text{ gallons}$$

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times 84 \text{ feet}) + 0.12 \text{ gallons} = 0.13 \text{ gallons}$$

INITIAL PUMP OR TUBING
DEPTH IN WELL (feet):

FINAL PUMP OR TUBING
DEPTH IN WELL (feet):

PURGING
INITIATED AT: 0505

PURGING
ENDED AT: 0558

TOTAL VOLUME
PURGED (gallons): 39

[illegible]

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 0600	SAMPLING ENDED AT: 0600
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PUMP OR TUBING DEPTH IN WELL (feet): 20

TUBING MATERIAL CODE: HDPE

SAMPLING
INITIATED AT: 0600

SAMPLING
ENDED AT: 0600

PUMP OR TUBING DEPTH IN WELL (feet): 20

TUBING
MATERIAL CODE: HDPE

FIELD-FILTERED: Y **N**

FILTER SIZE: _____ μm

FIELD DECONTAMINATION:	PUMP	No
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TUBING	No (replaced)
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DUPLICATE:

(N)

[illegible]

REMARKS: Weather: clear, 53°F

Odor: none

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-13B	SAMPLE ID: 16322-MW-13B	DATE: 11-17-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 37 feet to 47 feet	STATIC DEPTH TO WATER (feet): 16.28	PURGE PUMP TYPE OR BAILER: PP
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$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times 55 \text{ feet}) + 0.12 \text{ gallons} = 0.2 \text{ gallons}$$

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
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0530	0.3	2	0.07	16.33	4.90	25.75	115	0.75	0.6	clear	32.8
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TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 0530	SAMPLING ENDED AT: 0540
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PUMP OR TUBING DEPTH IN WELL (feet):	42	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: — μm
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FIELD DECONTAMINATION:	PUMP	No	TUBING	No (replaced)	DUPLICATE:	Y	(N)
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SAMPLE CONTAINER SPECIFICATION	SAMPLE PRESERVATION (including cool pack)	INTERVIEW	TRANSPORT	STORAGE
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SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR	SAMPLING EQUIPMENT	SAMPLE PUMP FLOW RATE
SAMPLE	#	MATERIAL	PRESERVATIVE	TOTAL VOL	TEMP			

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (ml)	FINAL pH	ANALYSIS AND/OR METHOD	EQUIPMENT CODE	FLOW RATE (ml per minute)
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ID CODE	CONTAINERS	CODE		USED	ADDED IN FIELD (mL)	pH	ML FVCE	CODE	(mL per minute)
6322-	3	CG	40 ml	HCl	Pre-filled by lab		VCC	ADD	

0500	S	CG	40 ml	HCL	Prefilled by lab	VOCs	APP	275
1013								

NW-1313	1	PE	500 ml	HNO3	Prefilled by lab		Metals	APP	275
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1	PE	250 ml	H ₂ SO ₄	Prefilled by lab	NH ₃	APP	275
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✓	1	PE	500 ml	None	None		CLINO TDS	APP	275
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		FE	500 ml	None	None		Cl, NO ₃ , TDS	APP	275
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[illegible]

REMARKS: Weather: Clear 530F

200,000

Odor: None

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;

S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;

RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: $\pm 5\%$ Dissolved Oxygen: all readings $\leq 20\%$ saturation (see Table FS 2200-2)

optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

62-160.800 F.A.C. Revision Date: March 1, 2014

Revision Date: March 1, 2014

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-16AR	SAMPLE ID: 16321-MW-16AR	DATE: 11-16-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 13.5 feet to 23.5 feet	STATIC DEPTH TO WATER (feet): 14.35	PURGE PUMP TYPE OR BAILER: PP
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(only fill out if applicable)

$$= (23.5 \text{ feet} - 14.35 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.5 \text{ gallons}$$

(only fill out if applicable)

$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times \text{feet}) + 0.12 \text{ gallons} = \text{gallons}$$

TOTAL VOLUME
PURGED (gallons): 4.0

[illegible]

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 1510	SAMPLING ENDED AT: 1530
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SAMPLING
ENDED AT: 1520

FILTER SIZE: _____ μm

N

[illegible]

Odor: none

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-16RR	SAMPLE ID: 16321-MW-16RR	DATE: 11-16-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 26.5 feet to 46.5 feet	STATIC DEPTH TO WATER (feet): 15.35	PURGE PUMP TYPE OR BAILER: PP
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EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= 0 gallons + (0.0014 gallons/foot X 55 feet) + 0.12 gallons = 0.2 gallons

[illegible]

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 1425	SAMPLING ENDED AT: 1437
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FIELD DECONTAMINATION:	PUMP	No	TUBING	No (replaced)	DUPLICATE:	Y	(N)
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SAMPLE CONTAINER SPECIFICATION	SAMPLE PRESERVATION (if applicable)	INTERFERES	CONTAMINATES	SAMPLE TO SAMPLE
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SAMPLE CONTAINER SPECIFICATION

SAMPLE PRESERVATION (including wet ice)

INTENDED

SAMPLING	SAMPLE PUMP
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SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (ml)	FINAL pH	ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE FLOW RATE (mL per minute)
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6321-	3	CG	40 ml	HCl	Prefilled by lab		VOCs	APP	
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3	CS	40 ml	HCL	Furnished by lab	VOCs	APP	250
4	DE	500 ml	HNO3	Prepared by lab	PAHs	APP	

W-163A	1	PE	500 ml	HNO3	Prefilled by lab		Metals	APP	250
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1	PE	250 ml	H2SO4	Prefilled by lab	NH ₃	APP	250
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✓	1	PE	500 ml	None	None		Cl, NO ₃ , TDS	APP	250
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[illegible][illegible][illegible]

REMARKS: Weather: Clear, 75°F

Order: 0101

MATERIAL CODES: AG = Amber Glass; GG = Glass Glass; HDPE = High Density Polyethylene; LDPPE = Low Density Polyethylene; PS = Polystyrene

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

S = Silicone, T = Teflon, O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 60-100, F.A.C.

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-17AR	SAMPLE ID: 16321-MW-17AR	DATE: 11-16-14	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 12 feet to 24 feet	STATIC DEPTH TO WATER (feet): 14.37	PURGE PUMP TYPE OR BAILER: PP
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(only fill out if applicable)

$$= (24.03 \text{ feet} - 14.37 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.5 \text{ gallons}$$

(only fill out if applicable)

$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times \text{feet}) + 0.12 \text{ gallons} = \text{gallons}$$

TOTAL VOLUME
PURGED (gallons): 3.7

[illegible]

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 1330	SAMPLING ENDED AT: 1330
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SAMPLING
ENDED AT: 1:33:30

FILTER SIZE: _____ μm

DUPLICATE: Y (N)

INTENDED	SAMPLE
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[illegible]

REMARKS: Weather: Clear, 75°F, N 10 mph

Odor: none

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump;
 RFPP = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO:	MW-17BR	SAMPLE ID:	16321-MW-17BR
		DATE:	11-16-16

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 38 feet to 48 feet	STATIC DEPTH TO WATER (feet): 14.62	PURGE PUMP TYPE OR BAILER: PP
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INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 43	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 43	PURGING INITIATED AT: 1225	PURGING ENDED AT: 1247	TOTAL VOLUME PURGED (gallons): 1.5
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PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS			SAMPLER(S) SIGNATURE(S): 		SAMPLING INITIATED AT: 1250	SAMPLING ENDED AT: 1250
PUMP OR TUBING DEPTH IN WELL (feet): 43			TUBING MATERIAL CODE: HDPE		FIELD-FILTERED: Y (N)	FILTER SIZE: _____ µm
FIELD DECONTAMINATION: PUMP No			TUBING No (replaced)		DUPLICATE: Y (N)	

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-22AR	SAMPLE ID: 16321-MW-22AR	DATE: 11-16-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 13 feet to 23 feet	STATIC DEPTH TO WATER (feet): 15.77	PURGE PUMP TYPE OR BAILER: PP
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

(only fill out if applicable) $= (23.7 \text{ feet} - 15.77 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.3 \text{ gallons}$

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times \text{feet}) + 0.12 \text{ gallons} = \text{gallons}$$

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 20	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 20	PURGING INITIATED AT: 0710	PURGING ENDED AT: 0812	TOTAL VOLUME PURGED (gallons): 4.4
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[illegible]

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 0815	SAMPLING ENDED AT: 0830
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PUMP OR TUBING DEPTH IN WELL (feet): 20	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: _____ μm
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FIELD DECONTAMINATION:		PUMP	No	TUBING	No (replaced)	DUPLICATE:	Y	(N)
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SAMPLE CONTAINER SPECIFICATION	SAMPLE PRESERVATION (including wet ice)	INTENDED	SAMPLING	SAMPLE RUN
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[illegible]

REMARKS: Weather: Clear, 55°/-

Odor: none

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPF = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-22BR	SAMPLE ID: 16321-MW-22BR	DATE: 11-16-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 35.5 feet to 45.5 feet	STATIC DEPTH TO WATER (feet): 15.60	PURGE PUMP TYPE OR BAILER: PP
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EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= 0 gallons + (0.0014 gallons/foot X 50 feet) + 0.12 gallons = 0.2 gallons

[illegible]

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) / SIGNATURE(S): 	SAMPLING INITIATED AT: 0740	SAMPLING ENDED AT: 0750
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FIELD DECONTAMINATION:	PUMP	No	TUBING	No (replaced)	DUPLICATE:	Y	(N)
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SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
				PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
16321- Mw-22BR	3	CG	40 ml	HCL	Prefilled by lab		VOCs	APP	225
↓	1	PE	500 ml	HNO3	Prefilled by lab		Metals	APP	225
	1	PE	250 ml	H2SO4	Prefilled by lab		NH ₃	APP	225
	1	PE	500 ml	None	None		Cl, NO ₃ , TDS	APP	225
REMARKS: Wet ice									

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-23A	SAMPLE ID: 16321-MW-23A	DATE: 11-16-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 17.3 feet to 23.3 feet	STATIC DEPTH TO WATER (feet): 18.31	PURGE PUMP TYPE OR BAILER: PP
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EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= 0 gallons + (0.0014 gallons/foot X feet) + 0.12 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 23	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 23	PURGING INITIATED AT: 0852	PURGING ENDED AT: 0957	TOTAL VOLUME PURGED (gallons): 3.8
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WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-23B	SAMPLE ID: 16321-MW-23B	DATE: 11-16-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 32.3 feet to 42.3 feet	STATIC DEPTH TO WATER (feet): 18.32	PURGE PUMP TYPE OR BAILER: PP
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$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times 45 \text{ feet}) + 0.12 \text{ gallons} = 0.2 \text{ gallons}$$

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
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	(gallons)	(gallons)	(gpm)	(feet)							
0910	1.3	1.3	0.07	18.34	4.34	25.75	1122	1.21	2.3	clean	13.4
0914	0.3	1.6	0.07	18.34	4.33	25.78	1119	1.14	1.3	clean	23.4
0920	0.4	2	0.07	18.34	4.34	25.82	1114	0.73	0.7	clean	29.4
0923	0.2	2.2	0.07	18.34	4.33	25.85	1116	0.72	0.9	clean	30.9

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 09:25	SAMPLING ENDED AT: 10:00
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INITIATED AT: 0925	ENDED AT: 0938
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PUMP OR TUBING DEPTH IN WELL (feet): 37	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) FILTER SIZE: _____ µm Filtration Equipment Type: _____
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FIELD DECONTAMINATION:	PUMP	No	TUBING	No (replaced)	DUPLICATE:	Y	N
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SAMPLE CONTAINER SPECIFICATION

SAMPLE PRESERVATION (including wet ice)

INTENDED

SAMPLING

SAMPLE PLIMP

[illegible]

REMARKS: Weather: Clear, 63°F, NNW 6 mph

Odor: none

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-24A	SAMPLE ID: 16321-MW-24A	DATE: 11-16-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 13 feet to 23 feet	STATIC DEPTH TO WATER (feet): 8.38	PURGE PUMP TYPE OR BAILER: PP
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(only fill out if applicable)

$$= (23 \text{ feet} - 8.38 \text{ feet}) \times 0.16 \text{ gallons/foot} = 2.3 \text{ gallons}$$

(only fill out if applicable)

$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times 25 \text{ feet}) + 0.12 \text{ gallons} = 0.2 \text{ gallons}$$

TOTAL VOLUME

TOTAL VOLUME
PURGED (gallons): 17

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02: 1" = 0.04: 1.25" = 0.06: 2" = 0.16: 3" = 0.37: 4" = 0.65: 5" = 1.02: 6" = 1.47: 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 06-00	SAMPLING ENDED AT: 06-08
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FILTER SIZE: μm

FILTER SIZE: _____ μm

Equipment Type.

SAMPLE PRESERVATION (including wet ice)

INTENDED	SAMPLE
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REMARKS: Weather: 912. 54015

Odor: ၇၀၈၉

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene

S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump: B = Bailer: BP = Bladder Pump: ESP = Electric Submersible Pump:

RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+5$ NTU or $+10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-24B	SAMPLE ID: 16321-MW-24B	DATE: 11-16-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 33 feet to 43 feet	STATIC DEPTH TO WATER (feet): 8.38	PURGE PUMP TYPE OR BAILER: PP
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$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times 50 \text{ feet}) + 0.12 \text{ gallons} = 0.2 \text{ gallons}$$

TOTAL VOLUME
PURGED (gallons): 3.5

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88									
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016									

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 0625	SAMPLING ENDED AT: 0738
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FILTER SIZE: _____ μ m

(N)

INTENDED	SAMPLE
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Odor: none Initial turbidity: 15 NTU

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-25A	SAMPLE ID: 16320-MW-25A	DATE: 11-15-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 13 feet to 23 feet	STATIC DEPTH TO WATER (feet): 7.12	PURGE PUMP TYPE OR BAILER: PP
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

$$= (23.4 \text{ feet} - 7.12 \text{ feet}) \times 0.16 \text{ gallons/foot} =$$

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times 30 \text{ feet}) + 0.12 \text{ gallons} = 0.2 \text{ gallons}$$

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 18	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18	PURGING INITIATED AT: 1340	PURGING ENDED AT: 1410	TOTAL VOLUME PURGED (gallons): 2.2
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[illegible]

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 1412	SAMPLING ENDED AT: 1418
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PUMP OR TUBING DEPTH IN WELL (feet): 18	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y <u>N</u> Filtration Equipment Type:	FILTER SIZE: _____ μ m
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FIELD DECONTAMINATION:	PUMP	No	TUBING	No (replaced)	DUPLICATE:	Y	N
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DATE	DESCRIPTION	FORM	NO	FORM	NO (replaced)	SUPPLIANT	1	2
10/10/2010	...							

[illegible]

REMARKS: Weather: Cloudy, 70°F, N 7 mph

Odor: none

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, $+0.2$ mg/L or $+10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally $+5$ NTU or $+10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-25B	SAMPLE ID: 16320-MW-25B	DATE: 11-15-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.375	WELL SCREEN INTERVAL DEPTH: 31 feet to 41 feet	STATIC DEPTH TO WATER (feet): 6.60	PURGE PUMP TYPE OR BAILER: ESP
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$$= 0 \text{ gallons} + (0.006 \text{ gallons/foot} \times 50 \text{ feet}) + 0.12 \text{ gallons} = 0.4 \text{ gallons}$$

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 36	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 36	PURGING INITIATED AT: 1/335	PURGING ENDED AT: 1/4/41	TOTAL VOLUME PURGED (gallons): 34.5
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PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 1445	SAMPLING ENDED AT: 1456
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FIELD DECONTAMINATION:	PUMP	Yes	TUBING	No (replaced)	DUPLICATE:	Y	(N)
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SAMPLE CONTAINER SPECIFICATION	SAMPLE PRESERVATION (Refrigeration or not)	INTENDED	SAMPLING	SAMPLE ANALYSIS
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REMARKS: Weather: Cloudy, 70°F, N Trph Collected an equipment blank (J6320-GB e1523) with lab
Odor: none initial turbidity: 87 NTU supplied DI water

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-274	SAMPLE ID: 16320-MW-274		DATE: 11-15-16

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 13 feet to 23 feet	STATIC DEPTH TO WATER (feet): 14.17	PURGE PUMP TYPE OR BAILER: PP
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$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times \text{feet}) + 0.12 \text{ gallons} = \text{gallons}$$

TOTAL VOLUME
PURGED (gallons): 2.2

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

Revision Date: March 1, 2014

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-27B	SAMPLE ID: 16320-MW-27B		DATE: 11-15-16

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.375	WELL SCREEN INTERVAL DEPTH: 36 feet to 46 feet	STATIC DEPTH TO WATER (feet): 14.62	PURGE PUMP TYPE OR BAILER: ESP
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EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME											
(only fill out if applicable)											
=	0	gallons +	(	0.006	gallons/foot X		feet) +	0.12	gallons =		gallons

[illegible][illegible]

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

Revision Date: March 1, 2014

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-28A	SAMPLE ID: 16320-MW-28A	DATE: 11-15-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 14 feet to 24 feet	STATIC DEPTH TO WATER (feet): 14.37	PURGE PUMP TYPE OR BAILER: PP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) $= (24 \text{ feet} - 14.37 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.5 \text{ gallons}$				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) $= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times \text{feet}) + 0.12 \text{ gallons} = \text{gallons}$				

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS				SAMPLER(S) SIGNATURE(S): <i>Joe Terry</i>			SAMPLING INITIATED AT: 1230		SAMPLING ENDED AT: 1241	
PUMP OR TUBING DEPTH IN WELL (feet): 20				TUBING MATERIAL CODE: HDPE			FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION: PUMP No				TUBING No (replaced)			DUPLICATE: Y (N)			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
16320-MW-284	3	CG	40 ml	HCL	Prefilled by lab		VOCs		APP	200
↓	1	PE	500 ml	HNO3	Prefilled by lab		Metals		APP	200
	1	PE	250 ml	H2SO4	Prefilled by lab		NH3		APP	200
	1	PE	500 ml	None	None		Cl, NO3, TDS		APP	200
REMARKS: Weather: Cloudy, 68°F, N 7 mph										
Odor: none										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-28B	SAMPLE ID: 16320-MW-28B	DATE: 11-15-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.375	WELL SCREEN INTERVAL DEPTH: 38 feet to 40 feet	STATIC DEPTH TO WATER (feet): 14.95	PURGE PUMP TYPE OR BAILER: ESP
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EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= 0 gallons + (0.006 gallons/foot X 50 feet) + 0.12 gallons = 0.4 gallons

[illegible]

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 1255	SAMPLING ENDED AT: 1305
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FIELD DECONTAMINATION:	PUMP	Yes	TUBING	No (replaced)	DUPLICATE:	Y	N
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SAMPLE CONTAINER SPECIFICATION	SAMPLE PRESERVATION	DATE	TIME	LOCATION

SAMPLE PRESERVATION (including wet ice)

INTENDED

SAMPLING	SAMPLE PUMP
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[illegible]

REMARKS: Weather: cloudy, 68°F, N 7 mph

Odor: none initial turbidity! 79 NTU

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
 RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, $+0.2$ mg/L or $+10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally $+5$ NTU or $+10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-29A	SAMPLE ID: 16321-MW-29A	DATE: 11-16-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 13 feet to 23 feet	STATIC DEPTH TO WATER (feet): 13.11	PURGE PUMP TYPE OR BAILER: PP
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(only fill out if applicable)

$$= (23.7 \text{ feet} - 13.11 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.7 \text{ gallons}$$

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable)

= 0 gallons + (0.0014 gallons/foot X feet) + 0.12 gallons = gallons

INITIAL PUMP OR TUBING
DEPTH IN WELL (feet):

FINAL PUMP OR TUBING
DEPTH IN WELL (feet):

PURGING
INITIATED AT: 1047

PURGING
ENDED AT: 1150

TOTAL VOLUME
PURGED (gallons): 41.41

[illegible]

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 1150	SAMPLING ENDED AT: 1200
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PUMP OR TUBING DEPTH IN WELL (feet): 18

TUBING
MATERIAL CODE: HDPE

SAMPLING INITIATED AT: 1150

SAMPLING
ENDED AT: 1200

PUMP OR TUBING DEPTH IN WELL (feet): 18

TUBING
MATERIAL CODE: HDPE

FIELD-FILTERED: Y (N)
Filtration Equipment Type:

FILTER SIZE: μm

FIELD DECONTAMINATION:	PUMP	No	TUBING	No (replaced)
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DUPLICATE: Y ☒ N

SAMPLE CONTAINER SPECIFICATION

SAMPLE PRESERVATION (including wet ice)

INTENDED

SAMPLING

SAMPLE PUMP

[illegible]

REMARKS: Weather: Clear, 72°F, NNE 9 mph

Odor: none

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: $\pm 5\%$ Dissolved Oxygen: all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, $+0.2$ mg/L or $+10\%$ (whichever is greater) Turbidity: all readings < 20 NTU; optionally $+5$ NTU or $+10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-29B	SAMPLE ID: 16321-MW-29B		DATE: 11-16-16

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 38 feet to 48 feet	STATIC DEPTH TO WATER (feet): 14.53	PURGE PUMP TYPE OR BAILER: PP
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INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 43	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 43	PURGING INITIATED AT: 1045	PURGING ENDED AT: 1115	TOTAL VOLUME PURGED (gallons): 1.8
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PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
 RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

Revision Date: March 1, 2014

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-31A	SAMPLE ID: 16320-MW-31A	DATE: 11-15-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 15 feet to 35 feet	STATIC DEPTH TO WATER (feet): 13.62	PURGE PUMP TYPE OR BAILER: PP
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(only fill out if applicable)

$$= (25 \text{ feet} - 13.62 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.8 \text{ gallons}$$

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

$$= 0 \text{ gallons} + (0.0014 \text{ gallons/foot} \times 25 \text{ feet}) + 0.12 \text{ gallons} = 0.2 \text{ gallons}$$

INITIAL PUMP OR TUBING
DEPTH IN WELL (feet):

FINAL PUMP OR TUBING
DEPTH IN WELL (feet):

PURGING
INITIATED AT: 0635

PURGING
ENDED AT: 0745

TOTAL VOLUME
PURGED (gallons): 42

[illegible]

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / EPS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 0745	SAMPLING ENDED AT: 0755
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PUMP OR TUBING DEPTH IN WELL (feet): 20

TUBING MATERIAL CODE: HDPE

FILTERED: Y (N)

FILTER SIZE: _____ μm

FIELD DECONTAMINATION: PUMP

TUBING	No (replaced)
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	Duplicate:
--	------------

SAMPLE CONTAINER SPECIFICATION:

POSITIVE	NO (REPLACED)
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

DUPLICATE: _____

[illegible]

REMARKS: Weather: cloudy, 59°=

Odor: sulfur-like initial turbidity: 210 NTU

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene;
S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally $+ 5$ NTU or $+ 10\%$ (whichever is greater)

SITE NAME: J.E.D. SWMF (WACs Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, Osceola County, Florida, 34773	
WELL NO: MW-31B		SAMPLE ID: 16320-MW-31B	
		DATE: 11-15-16	

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.375	WELL SCREEN INTERVAL DEPTH: 36 feet to 416 feet	STATIC DEPTH TO WATER (feet): 13.41	PURGE PUMP TYPE OR BAILER: ESP
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(only fill out if applicable)

$$= (\text{feet} - \text{feet}) \times 0.16 \text{ gallons/foot} = \text{gallons}$$

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

$$= 0 \text{ gallons} + (0.006 \text{ gallons/foot} \times 55 \text{ feet}) + 0.12 \text{ gallons} = 0.5 \text{ gallons}$$

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 41	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 41	PURGING INITIATED AT: 0630	PURGING ENDED AT: 0830	TOTAL VOLUME PURGED (gallons): 117.2
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[illegible]

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 0835	SAMPLING ENDED AT: 0843
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PUMP OR TUBING DEPTH IN WELL (feet): 41	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: _____ μm
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FIELD DECONTAMINATION:	PUMP	Yes	TUBING	No (replaced)	DUPLICATE:	Y	(N)
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[illegible]

REMARKS: Weather: Cloudy, 59°F

Odor: none

initial turbidity: $> 1,000$ NTU

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, $+0.2$ mg/L or $+10\%$ (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally $+5$ NTU or $+10\%$ (whichever is greater)

SURVEY/PROJECT: JED SWMP

SAMPLERS: J. Terry

METER #

DT 11-18-16
~~NA~~ 06A2173AL

[illegible]

ORP

mv

339.4

Note: This Sheet is used for recording Sample Data – Calibration information must also be documented

Form FD 9000-7: Field Parameter Data Sheet for Surface Water

SURVEY/PROJECT: JED SWMF

SAMPLERS: J. Tern

METER # 06A2173AL

[illegible]

Note: This Sheet is used for recording Sample Data – Calibration information must also be documented

APPENDIX C

Field Instrument Calibration Logs

Field Instrument Calibration Record

Site: J.E.D. SWMF

Date: 11-14-16

Water Quality Instrument Make: YSI

Instrument Model Number: 556

Instrument Serial Number: 06A2173AL

Turbidity Instrument Make: LaMotte

Instrument Model Number: 2020e

Instrument Serial Number: ME12953

Time: 1830

Calibration Standard			Instrument Response	Percent Deviation ⁽¹⁾ or Difference	Allowable Deviation ⁽²⁾	Calibrated? Yes or No	Type of Calibration ⁽³⁾	Calibration Performed By:
Lot No.	Expiration Date	Standard Value						
160212A	FEB 2017	pH = 4.00	4.00	0	0.2	Y	I	DT
C470240	JUN 2017	pH = 7.00	7.00	0	0.2	Y	I	DT
160212C	AUG 2017	pH = 10.00	9.98	0.02	0.2	Y	I	DT
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
C584140	12/2016	Turbidity = 10 NTU	10.00	0	10%	Y	I	DT
		Conductivity = 100 µS/cm			5%			
160212D	FEB 2017	Conductivity = 447 µS/cm	447	0	5%	Y	I	DT
C687488	MAY 2017	Conductivity = 1,413 µS/cm	1,413	0	5%	Y	I	DT
	Per Table →	D.O. = 8.97 mg/L @ 20.7 °C	8.95	0.02	0.2 mg/l	Y	I	DT

Date: 11-15-16

Time: 1845

Calibration Standard			Instrument Response	Percent Deviation ⁽¹⁾ or Difference	Allowable Deviation ⁽²⁾	Calibrated? Yes or No	Type of Calibration ⁽³⁾	Calibration Performed By:
Lot No.	Expiration Date	Standard Value						
160212A	FEB 2017	pH = 4.00	4.01	0.01	0.2	Y	C	DT
C470240	JUN 2017	pH = 7.00	7.04	0.04	0.2	Y	C	DT
160212C	AUG 2017	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
C584140	12/2016	Turbidity = 10 NTU	10.11	1.1	10%	Y	I	DT
		Conductivity = 100 µS/cm			5%			
160212D	FEB 2017	Conductivity = 447 µS/cm	448	0.2	5%	Y	C	DT
C687488	MAY 2017	Conductivity = 1,413 µS/cm	1,413	0	5%	Y	I	DT
	Per Table →	D.O. = 8.55 mg/L @ 23.2 °C	8.55	0	0.2 mg/l	Y	I	DT

Note (1): Percent Deviation = (Standard Value – Instrument Response) ÷ Standard Value x 100

Note (2): Allowable Deviation: pH ± 0.2 of Standard Value; Conductivity ± 5 % of Standard Value; Salinity ± 3 % of Standard Value; DO ± 0.2 mg/L;

Turbidity 0.1-10 NTU ± 10% of Standard Value, 11-40 NTU ± 8% of Standard Value, 41-100 NTU ± 6.5% of Standard Value, >100 NTU ± 5% of Standard Value

Note (3): Initial, Continual, Final

Field Instrument Calibration Record

Site: J.E.D. SWMF

Date: 11-16-16

Water Quality Instrument Make: YSI

Instrument Model Number: 556

Instrument Serial Number: 06A2173AL

Turbidity Instrument Make: LaMotte

Instrument Model Number: 2020e

Instrument Serial Number: ME12953

Time: 1900

Calibration Standard			Instrument Response	Percent Deviation ⁽¹⁾ or Difference	Allowable Deviation ⁽²⁾	Calibrated? Yes or No	Type of Calibration ⁽³⁾	Calibration Performed By:
Lot No.	Expiration Date	Standard Value						
160212A	FEB 2017	pH = 4.00	4.01	0.01	0.2	Y	C	JT
C470240	JUN 2017	pH = 7.00	7.10	0.1	0.2	Y	C	JT
160212C	AUG 2017	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
		Turbidity = 10 NTU	9.67	3.3	10%	Y	C	JT
		Conductivity = 100 µS/cm			5%			
160212D	FEB 2017	Conductivity = 447 µS/cm	448	1.6	5%	Y	C	JT
C687488	MAY 2017	Conductivity = 1,413 µS/cm	1409	0.3	5%	Y	C	JT
	Per Table →	D.O. = 8.34 mg/L @ 24.5 °C	8.23	0.11	0.2 mg/l	Y	C	JT

Date: 11-18-16

Time: 0523

Calibration Standard			Instrument Response	Percent Deviation ⁽¹⁾ or Difference	Allowable Deviation ⁽²⁾	Calibrated? Yes or No	Type of Calibration ⁽³⁾	Calibration Performed By:
Lot No.	Expiration Date	Standard Value						
160212A	FEB 2017	pH = 4.00	4.03	0.03	0.2	Y	C	JT
C470240	JUN 2017	pH = 7.00	7.11	0.11	0.2	Y	C	JT
160212C	AUG 2017	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
		Turbidity = 10 NTU	9.86	1.4	10%	Y	C	JT
		Conductivity = 100 µS/cm			5%			
160212D	FEB 2017	Conductivity = 447 µS/cm	442	1.1	5%	Y	C	JT
C687488	MAY 2017	Conductivity = 1,413 µS/cm	1410	0.2	5%	Y	C	JT
	Per Table →	D.O. = 8.56 mg/L @ 23.1 °C	8.63	0.07	0.2 mg/l	Y	I	JT

Note (1): Percent Deviation = (Standard Value – Instrument Response) ÷ Standard Value x 100

Note (2): Allowable Deviation: pH ± 0.2 of Standard Value; Conductivity ± 5 % of Standard Value; Salinity ± 3 % of Standard Value; DO ± 0.2 mg/L;

Turbidity 0.1-10 NTU ± 10% of Standard Value, 11-40 NTU ± 8% of Standard Value, 41-100 NTU ± 6.5% of Standard Value, >100 NTU ± 5% of Standard Value

Note (3): Initial, Continual, Final

Field Instrument Calibration Record

Site: J.E.D. SWMF

Date: 11-20-16

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AL

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME12953

Time: 2030

Calibration Standard			Instrument Response	Percent Deviation ⁽¹⁾ or Difference	Allowable Deviation ⁽²⁾	Calibrated? Yes or No	Type of Calibration ⁽³⁾	Calibration Performed By:
Lot No.	Expiration Date	Standard Value						
160212A	FEB 2017	pH = 4.00	4.05	0.05	0.2	Y	C	DT
C470240	JUN 2017	pH = 7.00	7.03	0.03	0.2	Y	C	DT
160212C	AUG 2017	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
C584140	12/2016	Turbidity = 10 NTU	10.12	1.2	10%	Y	C	DT
		Conductivity = 100 µS/cm			5%			
160212D	FEB 2017	Conductivity = 447 µS/cm	449	0.4	5%	Y	C	DT
C687488	MAY 2017	Conductivity = 1,413 µS/cm	1407	0.4	5%	Y	C	DT
	Per Table →	D.O. = 9.69 mg/L @ 22.3°C	8.59	0.1	0.2 mg/l	Y	C	DT

Date: 11-22-16

Time: 0600

Calibration Standard			Instrument Response	Percent Deviation ⁽¹⁾ or Difference	Allowable Deviation ⁽²⁾	Calibrated? Yes or No	Type of Calibration ⁽³⁾	Calibration Performed By:
Lot No.	Expiration Date	Standard Value						
160212A	FEB 2017	pH = 4.00	4.06	0.06	0.2	Y	C	DT
C470240	JUN 2017	pH = 7.00	7.04	0.04	0.2	Y	C	DT
160212C	AUG 2017	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
C584140	12/2016	Turbidity = 10 NTU	9.64	3.6	10%	Y	C	DT
		Conductivity = 100 µS/cm			5%			
160212D	FEB 2017	Conductivity = 447 µS/cm	450	0.7	5%	Y	C	DT
C687488	MAY 2017	Conductivity = 1,413 µS/cm	1410	0.2	5%	Y	C	DT
	Per Table →	D.O. = 9.15 mg/L @ 19.7°C	9.22	0.07	0.2 mg/l	Y	I	DT

Note (1): Percent Deviation = (Standard Value – Instrument Response) ÷ Standard Value x 100

Note (2): Allowable Deviation: pH ± 0.2 of Standard Value; Conductivity ± 5 % of Standard Value; Salinity ± 3 % of Standard Value; DO ± 0.2 mg/L;

Turbidity 0.1-10 NTU ± 10% of Standard Value, 11-40 NTU ± 8% of Standard Value, 41-100 NTU ± 6.5% of Standard Value, >100 NTU ± 5% of Standard Value

Note (3): Initial, Continual, Final

Field Instrument Calibration Record

Site: J.E.D. SWMF

Date: 11-23-16

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AL

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME12953

Time: 0900

Calibration Standard			Instrument Response	Percent Deviation ⁽¹⁾ or Difference	Allowable Deviation ⁽²⁾	Calibrated? Yes or No	Type of Calibration ⁽³⁾	Calibration Performed By:
Lot No.	Expiration Date	Standard Value						
160212A	FEB 2017	pH = 4.00	4.08	0.08	0.2	Y	C	JT
C470240	JUN 2017	pH = 7.00	7.09	0.09	0.2	Y	C	JT
160212C	AUG 2017	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
		Turbidity = 10 NTU	10.2	2	10%	Y	C	JT
		Conductivity = 100 µS/cm			5%			
160212D	FEB 2017	Conductivity = 447 µS/cm	451	0.9	5%	Y	C	JT
C687488	MAY 2017	Conductivity = 1,413 µS/cm	1420	0.5	5%	Y	C	JT
	Per Table →	D.O. = 9.02 mg/L @ 20.4°C	9.10	0.08	0.2 mg/l	Y	F	JT

Date: _____ Time: _____

Calibration Standard			Instrument Response	Percent Deviation ⁽¹⁾ or Difference	Allowable Deviation ⁽²⁾	Calibrated? Yes or No	Type of Calibration ⁽³⁾	Calibration Performed By:
Lot No.	Expiration Date	Standard Value						
160212A	FEB 2017	pH = 4.00			0.2			
C470240	JUN 2017	pH = 7.00			0.2			
160212C	AUG 2017	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
		Turbidity = 10 NTU			10%			
		Conductivity = 100 µS/cm			5%			
160212D	FEB 2017	Conductivity = 447 µS/cm			5%			
C687488	MAY 2017	Conductivity = 1,413 µS/cm			5%			
	Per Table →	D.O. = mg/L @ °C			0.2 mg/l			

Note (1): Percent Deviation = (Standard Value – Instrument Response) ÷ Standard Value x 100

Note (2): Allowable Deviation: pH ± 0.2 of Standard Value; Conductivity ± 5 % of Standard Value; Salinity ± 3 % of Standard Value; DO ± 0.2 mg/L;

Turbidity 0.1-10 NTU ± 10% of Standard Value, 11-40 NTU ± 8% of Standard Value, 41-100 NTU ± 6.5% of Standard Value, >100 NTU ± 5% of Standard Value

Note (3): Initial, Continual, Final

APPENDIX D

Chain-of-Custody Forms



- J1611402**

Matrix Code: WW = wastewater SW = surface water GW = ground water DW = drinking water O = oil A = air SO = soil SL = sludge Preservation Code: I = Ice H=(HCl) S = (H₂SO₄) N = (HNO₃) T = (Sodium Thiosulfate)

☐ Where required, pH checked Temperature when received 9 (in degrees celcius)

Device used for measuring Temp by unique identifier (circle IR temp gun used) J: 9A G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V

FOR DRINKING WATER USE:

(When PWS information not otherwise supplied) PWS ID: _____

Contact Person: _____ Phone : _____

Supplier of Water: _____

Site-Address: _____



- ☐ **Altamonte Springs:** 528 S. Northlake Blvd., Ste. 1016 • Altamonte Springs, FL 32714 • 407.352.3377
- ☐ **Gainesville:** 4965 SW 41st Blvd. • Gainesville, FL 32608 • 352.377.7777
- ☐ **Jacksonville:** 6881 Southpoint Pkwy. • Jacksonville, FL 32216 • 904.731.7777
- ☐ **Miramar:** 10200 USA Today Way, Miramar, FL 33025 • 954.889.2777
- ☐ **Tallahassee:** 1288 Cedar Canyon Drive, Tallahassee, FL 32301 • 904.433.7777
- ☐ **Tampa:** 9610 Princess Palm Ave. • Tampa, FL 33619 • 813.630.9677

J1611340

[illegible]

Received on Ice ☒ Yes ☐ No ☒ Temp taken from sample ☐ Temp from blank

☐ Where required, pH checked Temperature when received 9 (in degrees celcius)

DCN: AD-051 Form last revised 08/18/2014

Device used for measuring Temp by unique identifier (circle IR temp gun used) J: 9A G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V

	Relinquished by:	Date	Time	Received by:	Date	Time
1	<i>Joe King</i>	11-21-16	1600	UPS		
2	UPS	11-22-16	9:45	<i>Bush Andy</i>	11-27-16	9:45
3						
4						

FOR DRINKING WATER USE:	
(When PWS Information not otherwise supplied)	PWS ID: _____
Contact Person: _____	Phone : _____
Supplier of Water: _____	
Site-Address: _____	



- ☐ **Altamonte Springs:** 528 S. Northlake Blvd., Ste. 1016 • Allamo
- ☐ **Gainesville:** 4965 SW 41st Blvd. • Gainesville, FL 32608 • 352.37
- ☒ **Jacksonville:** 6681 Southpoint Pkwy. • Jacksonville, FL 32216 • 9
- ☐ **Miramar:** 10200 USA Today Way, Miramar, FL 33025 • 954.889.22
- ☐ **Tallahassee:** 1288 Cedar Center Drive, Tallahassee, FL 32301 •
- ☐ **Tampa:** 9610 Princess Palm Ave. • Tampa, FL 33619 • 813.630.961

J1611340

Matrix Code: WW = wastewater SW = surface water GW = ground water DW = drinking water O = oil A = air SO = soil SL = sludge Preservation Code: I = ice H=(HCl) S = (H2SO4) N = (HNO3) T = (Sodium Thiosulfate)

☐ Where required, pH checked _____ Temperature when received 4 (in degrees celcius)

Device used for measuring Temp by unique identifier (circle IR temp gun used) (J: 9A) G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V

FOR DRINKING WATER USE:
(When PWS Information not otherwise supplied) PWS ID: _____
Contact Person: _____ Phone: _____
Supplier of Water: _____
Site-Address: _____



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Environmental Laboratories, Inc.

- ☐ Altamonte Springs: 528 S. Northlake Blvd., Ste. 1016 • Altar
☐ Gainesville: 4965 SW 41st Blvd. • Gainesville, FL 32608 • 352.
☒ Jacksonville: 6681 Southpoint Pkwy. • Jacksonville, FL 32216
☐ Miramar: 10200 USA Today Way, Miramar, FL 33025 • 954.889.
☐ Tallahassee: 1288 Cedar Center Drive, Tallahassee, FL 32301
☐ Tampa: 9610 Princess Palm Ave. • Tampa, FL 33619 • 813.630.6

J1611270

Client Name: Waste Connections, Inc.		Project Name: J.E.D LANDFILL (F/K/A OAK HAMMOCK DISPOSAL)		BOTTLE SIZE & TYPE	40 mL Vials	500 mL Plastic	500 mL Plastic	250 mL Plastic	LABORATORY I.D. NUMBER
Address: 5135 Madison Avenue		P.O. Number/Project Number:		ANALYSIS REQUIRED	App I VOAs+EDB/DBCP	App I Metals+Fe,Hg,Na	C/NO3/TDS	NH3	
Tampa, Florida 33619		Project Location: St. Cloud, FL							
Phone: 813-388-1026		FDEP Facility No: 89544							
FAX:		Project Name and Address: JED SWDF 1501 Ocala Way St. Cloud, FL							
Contact: Kirk Wills		Special Instructions: Jax Profile: 31172							
Sampled By: Joe Terry		☒ ADaPT ☐ EQUIS							
Turn Around Time: ☒ STANDARD ☐ RUSH									
Page 1 of 1									

SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING		MATRIX	NO. COUNT	PRESERVATION	HCL	HNO3	Ice	H2SO4						
			DATE	TIME													
16322-MW-11A		G	11-17-16	0955	GW	6		X	X	X	X						001
16322-MW-11B				0935													002
16322-MW-12A				0750													003
16322-MW-12B				0720													004
16322-MW-13A				0600													005
16322-MW-13B		G	11-17-16	0530	GW	6		X	X	X	X						006

Matrix Code: WW = wastewater SW = surface water GW = ground water DW = drinking water O = oil A = air SO = soil SL = sludge Preservation Code: I = ice H=(HCl) S = (H2SO4) N = (HNO3) T = (Sodium Thiosulfate)

Received on Ice ☒ Yes ☐ No ☒ Temp taken from sample ☐ Temp from blank ☐ Where required, pH checked Temperature when received **9** (in degrees celcius)

DCN: AD-051 Form last revised 08/18/2014

Device used for measuring Temp by unique identifier (circle IR temp gun used) **J: 9A** G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V

Relinquished by:	Date	Time	Received by:	Date	Time
Joe Terry	11-17-16	1620	Fedex		
Fedex	11-18-16	8:30	Bill Ault	11-18-16	8:30

FOR DRINKING WATER USE:

(When PWS Information not otherwise supplied) PWS ID: _____
 Contact Person: _____ Phone: _____
 Supplier of Water: _____
 Site-Address: _____



- ☐ **Altamonte Springs:** 528 S. Northlake Blvd., Ste. 101
- ☐ **Gainesville:** 4965 SW 41st Blvd. • Gainesville, FL 32608
- ☒ **Jacksonville:** 6681 Southpoint Pkwy. • Jacksonville, FL
- ☐ **Miramar:** 10200 USA Today Way, Miramar, FL 33025 • 9
- ☐ **Tallahassee:** 1288 Cedar Center Drive, Tallahassee, FL
- ☐ **Tampa:** 9810 Princess Palm Ave. • Tampa, FL 33619 • 813

J1611270

7.1597

Received on Ice ☒ Yes ☐ No ☒ Temp taken from sample ☐ Temp from blank ☐ Where required, pH checked Temperature when received 4 (in degrees celcius)

DCN: AD-051 Form last revised 08/18/2014 Device used for measuring Temp by unique identifier (circle IR temp gun used) J: 9A G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V

	Relinquished by:	Date	Time	Received by:	Date	Time
1	<i>Joe T...</i>	11-17-16	16:20	Fedex		
2	<i>Fedex</i>	11-18-16	8:30	<i>B...</i>	11-18-16	8:30
3						
4						

FOR DRINKING WATER USE:
(When PWS Information not otherwise supplied) PWS ID: _____
Contact Person: _____ Phone: _____
Supplier of Water: _____
Site Address: _____



- ☐ **Altamonte Springs:** 528 S. Northlake Blvd., St
- ☐ **Gainesville:** 4965 SW 41st Blvd. • Gainesville, FL
- ☐ **Jacksonville:** 6681 Southpoint Pkwy. • Jacksonv
- ☐ **Miramar:** 10200 USA Today Way, Miramar, FL 331
- ☐ **Tallahassee:** 1288 Cedar Center Drive, Tallahas
- ☐ **Tampa:** 9610 Princess Palm Ave. • Tampa, FL 336

J1611175

107,937,1597

Received on ice ☒ Yes ☐ No ☒ Temp taken from sample ☐ Temp from blank ☐ Where required, pH checked Temperature when received 4 (in degrees celcius)

DCN: AD-051 Form last revised 08/18/2014

Device used for measuring Temp by unique identifier (circle IR temp gun used) J: 9A G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V

	Relinquished by:	Date	Time	Received by:	Date	Time
1	Joe Terry	11-16-16	1600	Fed Ex	11-16-16	1600
2	Fed Ex	11-17-16	0830	Bjals	11-17-16	0830
3						
4						

FOR DRINKING WATER USE:

(When PWS Information not otherwise supplied) PWS ID: _____

Contact Person: _____ Phone: _____

Supplier of Water: _____

Site-Address: _____



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- ☐ Altamonte Springs: 528 S. Northlake Blvd., Ste.
☐ Gainesville: 4965 SW 41st Blvd. • Gainesville, FL 3
☒ Jacksonville: 6681 Southpoint Pkwy. • Jacksonville
☐ Miramar: 10200 USA Today Way, Miramar, FL 3302
☐ Tallahassee: 1288 Cedar Center Drive, Tallahassee
☐ Tampa: 9610 Princess Palm Ave. • Tampa, FL 33619 • 813.630.9610 • FAX 813.630.9622

J1611176

7,937,1597

Client Name: Waste Connections, Inc.		Project Name: J.E.D LANDFILL (FK/A OAK HAMMOCK DISPOSAL)		BOTTLE SIZE & TYPE	40 mL Vials	500 mL Plastic	500 mL Plastic	250 mL Plastic										LABORATORY I.D. NUMBER
Address: 5135 Madison Avenue		P.O. Number/Project Number:																
Tampa, Florida 33619		Project Location:																
Phone: 913-388-1026		FDEP Facility No: 89544																
FAX:		Project Name and Address: JED SWDE 1501 Ocean Way St Cloud, FL																
Contact: Kirk Wills																		
Sampled By: Joe Terry		Special Instructions: Jax Profile: 31172		ANALYSIS REQUIRED	App 1 VOAs+EDB/DBCP	App 1 Metals+Fe,Hg,Na	C/NO3/TDS	NH3										
Turn Around Time: ☒ STANDARD ☐ RUSH																		
Page 1 of 1		☒ ADaPT ☐ EQUIS																
SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING DATE TIME	MATRIX	NO. COUNT	PRESERVATION	HCL	HNO3	Ice	H2SO4								
16321-MW-24A		G	11-16-16 0600	GW	6		X	X	X	X								001
16321-MW-24B																		002
16321-MW-22AR																		003
16321-MW-22BR																		004
16321-MW-23A																		005
16321-MW-23B		G	11-16-16 0925	GW	6		X	X	X	X								006

Matrix Code: WW = wastewater SW = surface water GW = ground water DW = drinking water O = oil A = air SO = soil SL = sludge Preservation Code: I = ice H = (HCl) S = (H2SO4) N = (HNO3) T = (Sodium Thiosulfate)

Received on Ice ☐ Yes ☐ No ☐ Temp taken from sample ☐ Temp from blank ☐ Where required, pH checked Temperature when received **9** (in degrees celsius)

DCN: AD-051 Form last revised 08/18/2014

Device used for measuring Temp by unique identifier (circle IR temp gun used) **(J: 9A)** G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V

Relinquished by:	Date	Time	Received by:	Date	Time
1 Joe Terry	11-16-16	1600	FedEx	11-16-16	1600
2 FedEx	11-17-16	0830	Bygones	11-17-16	0830
3					
4					

FOR DRINKING WATER USE:

(When PWS Information not otherwise supplied) PWS ID: _____

Contact Person: _____ Phone: _____

Supplier of Water: _____

Site Address: _____



- ☐ **Altamonte Springs:** 528 S. Northlake Blvd., Ste. 1016 • Altamonte Springs, FL 32714 • 407/251-1111
- ☐ **Gainesville:** 4965 SW 41st Blvd. • Gainesville, FL 32608 • 352/336-1111
- ☒ **Jacksonville:** 6681 Southpoint Pkwy. • Jacksonville, FL 32216 • 904/731-1111
- ☐ **Miramar:** 10200 USA Today Way, Miramar, FL 33025 • 954/889-1111
- ☐ **Tallahassee:** 1288 Cedar Canyon Drive, Tallahassee, FL 32301 • 904/433-1111
- ☐ **Tampa:** 9610 Princess Palm Ave. • Tampa, FL 33619 • 813/630.9610

J1611147

Client Name:		Waste Connections, Inc.		Project Name: J.E.D LANDFILL (F/K/A OAK HAMMOCK DISPOSAL)		BOTTLE SIZE & TYPE		40 mL Vials		500 mL Plastic		500 mL Plastic		250 mL Plastic																LABORATORY I.D. NUMBER	
Address:		5135 Madison Avenue		P.O. Number/Project Number:																											
Tampa, Florida 33619				Project Location: St. Cloud, FL																											
Phone: 813-388-1026				FDEP Facility No: 89544																											
FAX:				Project Name and Address: JED SWDF																											
Contact: Kirk Wills				1501 Orange Way																											
Sampled By:				St. Cloud, FL																											
Turn Around Time: ☒ STANDARD ☐ RUSH				Special Instructions: Jax Profile: 31172																											
Page 1 of 1				☒ ADaPT ☐ EQUIS																											
SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING		MATRIX	NO. COUNT	PRESER-VATION	HCL	HNO3	Ice	H2SO4																				
16320-MW-31A	MW-31A	G	11-15-16	0745	GW	6		X	X	X	X																			001	
16320-MW-31B	MW-31B			0835																										002	
16320-MW-27A	MW-27A			1005																										003	
16320-MW-27B	MW-27B			1100																										004	
16320-MW-28A	MW-28A			1230																										005	
16320-MW-28B	MW-28B			1255																										006	
16320-MW-25A	MW-25A			1412	↓																									007	
16320-MW-25B	MW-25B	↓	↓	1445	GW	↓		↓	↓	↓	↓																			008	
16320-EB	Equipment Blank	G	11-15-16	1525	DE H2O	6		X	X	X	X																			009	

Matrix Code: WW = waste water SW = surface water GW = ground water DW = drinking water O = oil A = air SO = soil SL = sludge

Preservation Code: I = Ice H = (HCl) S = (H2SO4) N = (HNO3) T = (Sodium Thiosulfate)

Received on Ice ☒ Yes ☐ No ☒ Temp taken from sample ☐ Temp from blank

☐ Where required, pH checked Temperature when received 9 (in degrees celcius)

DCN: AD-051 Form last revised 08/18/2014

Device used for measuring Temp by unique identifier (circle IR temp gun used) Q: 9A G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V

Relinquished by:		Date	Time	Received by:		Date	Time
1	Joe Terry	11-15-16	1615	UPS	1	11-15-16	11015
2	UPS	11-16-16	9:50	Bob Arnes		11-16-16	9:50
3							
4							

FOR DRINKING WATER USE:

(When PWS information not otherwise supplied) PWS ID: _____

Contact Person: _____ Phone : _____

Supplier of Water: _____

Site-Address: _____



☒ **Altamonte Springs:** 528 S. Northlake Blvd., Ste. 1016 • Altamonte Springs, FL 32701 • 407.937.1594 • Fax 407.937.1597
☐ **Gainesville:** 4965 SW 41st Blvd. • Gainesville, FL 32608 • 352.377.2349 • Fax 352.395.6639
☐ **Jacksonville:** 6681 Southpoint Pkwy. • Jacksonville, FL 32216 • 904.363.9350 • Fax 904.363.9354
☐ **Miramar:** 10200 USA Today Way, Miramar, FL 33025 • 954.889.2288 • Fax 954.889.2281
☐ **Tallahassee:** 1288 Cedar Center Drive, Tallahassee, FL 32301 • 850.219.6274 • Fax 850.219.6275
☐ **Tampa:** 9610 Princess Palm Ave. • Tampa, FL 33619 • 813.630.9616 • Fax 813.630.4327

[illegible]

Received on Ice ☒ Yes ☐ No ☒ Temp taken from sample ☐ Temp from blank

☐ Where required, pH checked Temperature when received 4 (in degrees celcius)

DCN: AD-051 Form last revised 08/18/2014

Device used for measuring Temp by unique identifier (circle IR temp gun used) J: 9A G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V

	Relinquished by:	Date	Time	Received by:	Date	Time
1	<i>Joe Terry</i>	11-18-06	1105	<i>KC</i>	11/18/06	1105
2						
3						
4						

FOR DRINKING WATER USE:
(When PWS Information not otherwise supplied) PWS ID: _____
Contact Person: _____ Phone: _____
Supplier of Water: _____
Site Address: _____

APPENDIX E

Analytical Laboratory Reports



Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

December 6, 2016

Kirk Wills
Waste Connections
5135 Madison Avenue
Tampa, FL 33619

RE: Workorder: J1611402 J.E.D. Landfill

Dear Kirk Wills:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, November 23, 2016. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. The analytical results for the samples contained in this report were submitted for analysis as outlined by the Chain of Custody and results pertain only to these samples.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Craig Myers', is positioned above the printed name.

Craig Myers - Client Services Manager
CMyers@AELLab.com

Enclosures

Report ID: 457578 - 7798103

Page 1 of 17

CERTIFICATE OF ANALYSIS

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SAMPLE SUMMARY

Workorder: J1611402 J.E.D. Landfill

Lab ID	Sample ID	Matrix	Date Collected	Date Received
J1611402001	16327-MW-1A	Water	11/22/2016 09:40	11/23/2016 09:45
J1611402002	16327-MW-1B	Water	11/22/2016 09:05	11/23/2016 09:45

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ANALYTICAL RESULTS

Workorder: J1611402 J.E.D. Landfill

Lab ID: **J1611402001**
Sample ID: **16327-MW-1A**

Date Received: 11/23/16 09:45 Matrix: Water
Date Collected: 11/22/16 09:40

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis, Water			Analytical Method: SW-846 6010					
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	12/1/2016 15:57	J
Barium	0.068		mg/L	1	0.0020	0.00028	12/1/2016 15:57	J
Beryllium	0.00014	I	mg/L	1	0.00030	0.00013	12/1/2016 15:57	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	12/1/2016 15:57	J
Chromium	0.0040		mg/L	1	0.0010	0.00050	12/1/2016 15:57	J
Cobalt	0.0018	I	mg/L	1	0.0040	0.00060	12/1/2016 15:57	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	12/1/2016 15:57	J
Iron	10		mg/L	1	0.20	0.030	12/1/2016 15:57	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	12/1/2016 15:57	J
Nickel	0.0014	I	mg/L	1	0.0065	0.0011	12/1/2016 15:57	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	12/1/2016 15:57	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	12/1/2016 15:57	J
Sodium	280		mg/L	1	0.20	0.16	12/1/2016 15:57	J
Vanadium	0.021	V	mg/L	1	0.0015	0.00018	12/1/2016 15:57	J
Zinc	0.0084	I	mg/L	1	0.010	0.0020	12/1/2016 15:57	J
Analysis Desc: SW846 6020B			Preparation Method: SW-846 3010A					
Analysis, Total			Analytical Method: SW-846 6020					
Antimony	0.11	I	ug/L	1	0.70	0.046	12/1/2016 15:03	J
Thallium	0.057	U	ug/L	1	0.20	0.057	12/1/2016 15:03	J
Analysis Desc: SW846 7470A			Preparation Method: SW-846 7470A					
Analysis, Water			Analytical Method: SW-846 7470A					
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/30/2016 13:56	J
VOLATILES								
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 19:05	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	12/3/2016 19:05	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 19:05	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 19:05	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	12/3/2016 19:05	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 19:05	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 19:05	J

Report ID: 457578 - 7798103

Page 3 of 17

CERTIFICATE OF ANALYSIS

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ANALYTICAL RESULTS

Workorder: J1611402 J.E.D. Landfill

Lab ID: **J1611402001**
Sample ID: **16327-MW-1A**

Date Received: 11/23/16 09:45 Matrix: Water
Date Collected: 11/22/16 09:40

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 19:05	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	12/3/2016 19:05	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 19:05	J
1,4-Dichlorobenzene	0.54	I	ug/L	1	1.0	0.22	12/3/2016 19:05	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	12/3/2016 19:05	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	12/3/2016 19:05	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	12/3/2016 19:05	J
Acetone	3.7	I	ug/L	1	5.0	2.1	12/3/2016 19:05	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	12/3/2016 19:05	J
Benzene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 19:05	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	12/3/2016 19:05	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	12/3/2016 19:05	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	12/3/2016 19:05	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	12/3/2016 19:05	J
Carbon Disulfide	0.42	I	ug/L	1	1.0	0.21	12/3/2016 19:05	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	12/3/2016 19:05	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	12/3/2016 19:05	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 19:05	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	12/3/2016 19:05	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	12/3/2016 19:05	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 19:05	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 19:05	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 19:05	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	12/3/2016 19:05	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	12/3/2016 19:05	J
Styrene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 19:05	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	12/3/2016 19:05	J
Toluene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 19:05	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	12/3/2016 19:05	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	12/3/2016 19:05	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	12/3/2016 19:05	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	12/3/2016 19:05	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	12/3/2016 19:05	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 19:05	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 19:05	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	12/3/2016 19:05	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 19:05	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	12/3/2016 19:05	J
1,2-Dichloroethane-d4 (S)	102		%	1	77-125		12/3/2016 19:05	
Toluene-d8 (S)	103		%	1	80-121		12/3/2016 19:05	

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ANALYTICAL RESULTS

Workorder: J1611402 J.E.D. Landfill

Lab ID: **J1611402001**
Sample ID: **16327-MW-1A**

Date Received: 11/23/16 09:45 Matrix: Water
Date Collected: 11/22/16 09:40

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Bromofluorobenzene (S)	113		%	1	80-129		12/3/2016 19:05	
Analysis Desc: 8260B SIM Analysis, Water Preparation Method: SW-846 5030B Analytical Method: SW-846 8260B (SIM)								
1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/25/2016 23:36	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/25/2016 23:36	J
1,2-Dichloroethane-d4 (S)	35	J4	%	1	77-125		11/25/2016 23:36	
Toluene-d8 (S)	149	J4	%	1	80-121		11/25/2016 23:36	
Bromofluorobenzene (S)	128		%	1	80-129		11/25/2016 23:36	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water Analytical Method: EPA 300.0								
Chloride	530		mg/L	5	25	2.5	11/23/2016 21:56	J
Nitrate	0.25	U	mg/L	5	2.5	0.25	11/23/2016 21:56	J
Analysis Desc: Ammonia,E350.1,Water Analytical Method: EPA 350.1								
Ammonia (N)	7.4		mg/L	20	0.20	0.16	12/1/2016 12:09	G
Analysis Desc: Tot Dissolved Solids,SM2540C Analytical Method: SM 2540 C								
Total Dissolved Solids	1200		mg/L	1	10	10	11/29/2016 16:45	J

Lab ID: **J1611402002**
Sample ID: **16327-MW-1B**

Date Received: 11/23/16 09:45 Matrix: Water
Date Collected: 11/22/16 09:05

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Water Preparation Method: SW-846 3010A Analytical Method: SW-846 6010								
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	12/2/2016 11:58	J
Barium	0.073		mg/L	1	0.0020	0.00028	12/2/2016 11:58	J
Beryllium	0.00072		mg/L	1	0.00030	0.00013	12/2/2016 11:58	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	12/2/2016 11:58	J
Chromium	0.0015		mg/L	1	0.0010	0.00050	12/2/2016 11:58	J

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ANALYTICAL RESULTS

Workorder: J1611402 J.E.D. Landfill

Lab ID: **J1611402002**
Sample ID: **16327-MW-1B**

Date Received: 11/23/16 09:45 Matrix: Water
Date Collected: 11/22/16 09:05

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Cobalt	0.010		mg/L	1	0.0040	0.00060	12/2/2016 11:58	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	12/2/2016 11:58	J
Iron	32		mg/L	1	0.20	0.030	12/2/2016 11:58	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	12/2/2016 11:58	J
Nickel	0.0048	I	mg/L	1	0.0065	0.0011	12/2/2016 11:58	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	12/2/2016 11:58	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	12/2/2016 11:58	J
Sodium	130		mg/L	1	0.20	0.16	12/2/2016 11:58	J
Vanadium	0.011	V	mg/L	1	0.0015	0.00018	12/2/2016 11:58	J
Zinc	0.0020	U	mg/L	1	0.010	0.0020	12/2/2016 11:58	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6020

Antimony	0.21	I	ug/L	1	0.70	0.046	12/1/2016 15:06	J
Thallium	0.075	I	ug/L	1	0.20	0.057	12/1/2016 15:06	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A
Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/30/2016 13:59	J
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VOLATILES

Analysis Desc: 8260B Analysis, Water

Preparation Method: SW-846 5030B
Analytical Method: SW-846 8260B

1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 19:32	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	12/3/2016 19:32	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 19:32	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 19:32	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	12/3/2016 19:32	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 19:32	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 19:32	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 19:32	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	12/3/2016 19:32	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 19:32	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	12/3/2016 19:32	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	12/3/2016 19:32	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	12/3/2016 19:32	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	12/3/2016 19:32	J
Acetone	2.2	I	ug/L	1	5.0	2.1	12/3/2016 19:32	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	12/3/2016 19:32	J

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ANALYTICAL RESULTS

Workorder: J1611402 J.E.D. Landfill

Lab ID: **J1611402002**
Sample ID: **16327-MW-1B**

Date Received: 11/23/16 09:45 Matrix: Water
Date Collected: 11/22/16 09:05

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Benzene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 19:32	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	12/3/2016 19:32	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	12/3/2016 19:32	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	12/3/2016 19:32	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	12/3/2016 19:32	J
Carbon Disulfide	0.29	I	ug/L	1	1.0	0.21	12/3/2016 19:32	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	12/3/2016 19:32	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	12/3/2016 19:32	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 19:32	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	12/3/2016 19:32	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	12/3/2016 19:32	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 19:32	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 19:32	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 19:32	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	12/3/2016 19:32	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	12/3/2016 19:32	J
Styrene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 19:32	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	12/3/2016 19:32	J
Toluene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 19:32	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	12/3/2016 19:32	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	12/3/2016 19:32	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	12/3/2016 19:32	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	12/3/2016 19:32	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	12/3/2016 19:32	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 19:32	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 19:32	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	12/3/2016 19:32	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 19:32	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	12/3/2016 19:32	J
1,2-Dichloroethane-d4 (S)	101		%	1	77-125		12/3/2016 19:32	
Toluene-d8 (S)	102		%	1	80-121		12/3/2016 19:32	
Bromofluorobenzene (S)	112		%	1	80-129		12/3/2016 19:32	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/26/2016 00:03	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/26/2016 00:03	J
1,2-Dichloroethane-d4 (S)	41	J4	%	1	77-125		11/26/2016 00:03	
Toluene-d8 (S)	142	J4	%	1	80-121		11/26/2016 00:03	
Bromofluorobenzene (S)	137	J4	%	1	80-129		11/26/2016 00:03	

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ANALYTICAL RESULTS

Workorder: J1611402 J.E.D. Landfill

Lab ID: **J1611402002**
Sample ID: **16327-MW-1B**

Date Received: 11/23/16 09:45 Matrix: Water
Date Collected: 11/22/16 09:05

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: IC,E300.0,Water			Analytical Method: EPA 300.0					
Chloride	240		mg/L	5	25	2.5	11/23/2016 21:40	J
Nitrate	0.25	U	mg/L	5	2.5	0.25	11/23/2016 21:40	J
Analysis Desc: Ammonia,E350.1,Water			Analytical Method: EPA 350.1					
Ammonia (N)	3.8		mg/L	10	0.10	0.08	12/1/2016 12:09	G
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540 C					
Total Dissolved Solids	1200		mg/L	1	10	10	11/29/2016 16:45	J

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ANALYTICAL RESULTS QUALIFIERS

Workorder: J1611402 J.E.D. Landfill

PARAMETER QUALIFIERS

- U The compound was analyzed for but not detected.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- V Method Blank Contamination
- J4 Estimated Result

LAB QUALIFIERS

- G DOH Certification #E82001(AEL-G)(FL NELAC Certification)
- J DOH Certification #E82574(AEL-JAX)(FL NELAC Certification)

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QUALITY CONTROL DATA

Workorder: J1611402 J.E.D. Landfill

QC Batch: DGMJ/2225 Analysis Method: SW-846 6020
QC Batch Method: SW-846 3010A Prepared: 11/29/0163 00:00
Associated Lab Samples: J1611402001, J1611402002

METHOD BLANK: 2207192

Parameter	Units	Blank Result	Reporting Limit Qualifiers
METALS			
Antimony	ug/L	0.046	0.046 U
Thallium	ug/L	0.057	0.057 U

QC Batch: DGMJ/2226 Analysis Method: SW-846 6010
QC Batch Method: SW-846 3010A Prepared: 11/30/2016 03:00
Associated Lab Samples: J1611402001, J1611402002

METHOD BLANK: 2207435

Parameter	Units	Blank Result	Reporting Limit Qualifiers
METALS			
Silver	mg/L	0.00044	0.00044 U
Arsenic	mg/L	0.0085	0.0085 U
Barium	mg/L	0.00028	0.00028 U
Beryllium	mg/L	0.00013	0.00013 U
Cadmium	mg/L	0.00032	0.00032 U
Cobalt	mg/L	0.00060	0.00060 U
Chromium	mg/L	0.00050	0.00050 U
Copper	mg/L	0.0025	0.0025 U
Iron	mg/L	0.030	0.030 U
Sodium	mg/L	0.16	0.16 U
Nickel	mg/L	0.0011	0.0011 U
Lead	mg/L	0.0013	0.0013 U
Selenium	mg/L	0.0068	0.0068 U
Zinc	mg/L	0.0020	0.0020 U

Parameter	Units	Blank Result	Reporting Limit Qualifiers
METALS			
Vanadium	mg/L	0.00043	0.00018 I

QC Batch: MSVJ/2870 Analysis Method: SW-846 8260B (SIM)
QC Batch Method: SW-846 5030B Prepared: 11/25/2016 19:33
Associated Lab Samples: J1611402001, J1611402002

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QUALITY CONTROL DATA

Workorder: J1611402 J.E.D. Landfill

METHOD BLANK: 2207698

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
VOLATILES				
Ethylene Dibromide (EDB)	ug/L	0.020	0.020	U
1,2-Dibromo-3-Chloropropane	ug/L	0.11	0.11	U
1,2-Dichloroethane-d4 (S)	%	80	77-125	
Toluene-d8 (S)	%	100	80-121	
Bromofluorobenzene (S)	%	109	80-129	

QC Batch: WCAj/3026 Analysis Method: SM 2540 C
QC Batch Method: SM 2540 C Prepared:
Associated Lab Samples: J1611402001, J1611402002

METHOD BLANK: 2208895

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Total Dissolved Solids	mg/L	10	10	U

QC Batch: DGMj/2237 Analysis Method: SW-846 7470A
QC Batch Method: SW-846 7470A Prepared: 11/30/2016 10:45
Associated Lab Samples: J1611402001, J1611402002

METHOD BLANK: 2209022

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
METALS				
Mercury	mg/L	0.000011	0.000011	U

QC Batch: WCAg/3664 Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 Prepared:
Associated Lab Samples: J1611402001, J1611402002

METHOD BLANK: 2210656

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				

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QUALITY CONTROL DATA

Workorder: J1611402 J.E.D. Landfill

METHOD BLANK: 2210656

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Ammonia (N)	mg/L	0.01	0.01	U

QC Batch: MSVJ/2903

Analysis Method: SW-846 8260B

QC Batch Method: SW-846 5030B

Prepared: 12/03/2016 08:43

Associated Lab Samples: J1611402001, J1611402002

METHOD BLANK: 2212702

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
VOLATILES				
Chloromethane	ug/L	0.21	0.21	U
Vinyl Chloride	ug/L	0.20	0.20	U
Bromomethane	ug/L	0.24	0.24	U
Chloroethane	ug/L	0.33	0.33	U
Trichlorofluoromethane	ug/L	0.32	0.32	U
Acetone	ug/L	2.1	2.1	U
1,1-Dichloroethylene	ug/L	0.18	0.18	U
Iodomethane (Methyl Iodide)	ug/L	0.16	0.16	U
Acrylonitrile	ug/L	1.1	1.1	U
Methylene Chloride	ug/L	2.5	2.5	U
Carbon Disulfide	ug/L	0.21	0.21	U
trans-1,2-Dichloroethylene	ug/L	0.20	0.20	U
1,1-Dichloroethane	ug/L	0.14	0.14	U
Vinyl Acetate	ug/L	0.19	0.19	U
2-Butanone (MEK)	ug/L	0.43	0.43	U
cis-1,2-Dichloroethylene	ug/L	0.24	0.24	U
Bromochloromethane	ug/L	0.17	0.17	U
Chloroform	ug/L	0.18	0.18	U
1,2-Dichloroethane	ug/L	0.23	0.23	U
1,1,1-Trichloroethane	ug/L	0.22	0.22	U
Carbon Tetrachloride	ug/L	0.36	0.36	U
Benzene	ug/L	0.16	0.16	U
Dibromomethane	ug/L	0.26	0.26	U
1,2-Dichloropropane	ug/L	0.20	0.20	U
Trichloroethene	ug/L	0.29	0.29	U
Bromodichloromethane	ug/L	0.25	0.25	U
cis-1,3-Dichloropropene	ug/L	0.16	0.16	U
4-Methyl-2-pentanone (MIBK)	ug/L	0.47	0.47	U
trans-1,3-Dichloropropylene	ug/L	0.18	0.18	U
1,1,2-Trichloroethane	ug/L	0.30	0.30	U
Toluene	ug/L	0.23	0.23	U
2-Hexanone	ug/L	0.44	0.44	U

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QUALITY CONTROL DATA

Workorder: J1611402 J.E.D. Landfill

METHOD BLANK: 2212702

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Dibromochloromethane	ug/L	0.33	0.33	U
Tetrachloroethylene (PCE)	ug/L	0.36	0.36	U
1,1,1,2-Tetrachloroethane	ug/L	0.26	0.26	U
Chlorobenzene	ug/L	0.21	0.21	U
Ethylbenzene	ug/L	0.24	0.24	U
Bromoform	ug/L	0.43	0.43	U
Styrene	ug/L	0.23	0.23	U
1,1,2,2-Tetrachloroethane	ug/L	0.20	0.20	U
1,2,3-Trichloropropane	ug/L	0.30	0.30	U
1,4-Dichlorobenzene	ug/L	0.22	0.22	U
1,2-Dichlorobenzene	ug/L	0.18	0.18	U
trans-1,4-Dichloro-2-butene	ug/L	1.8	1.8	U
Xylene (Total)	ug/L	0.53	0.53	U
1,2-Dichloroethane-d4 (S)	%	102	77-125	
Toluene-d8 (S)	%	103	80-121	
Bromofluorobenzene (S)	%	111	80-129	

QC Batch: WCAj/3059

Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0

Prepared:

Associated Lab Samples: J1611402001, J1611402002

METHOD BLANK: 2212761

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Chloride	mg/L	0.50	0.50	U
Nitrate	mg/L	0.050	0.050	U

QUALITY CONTROL DATA QUALIFIERS

Workorder: J1611402 J.E.D. Landfill

QUALITY CONTROL PARAMETER QUALIFIERS

- U The compound was analyzed for but not detected.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J1 Surrogate Failure

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QUALITY CONTROL DATA QUALIFIERS

Workorder: J1611402 J.E.D. Landfill

QUALITY CONTROL PARAMETER QUALIFIERS

- U The compound was analyzed for but not detected.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J4 Estimated Result
- V Method Blank Contamination

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: J1611402 J.E.D. Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
J1611402001	16327-MW-1A	SW-846 3010A	DGMj/2225	SW-846 6020	ICMj/1345
J1611402002	16327-MW-1B	SW-846 3010A	DGMj/2225	SW-846 6020	ICMj/1345
J1611402001	16327-MW-1A	SW-846 3010A	DGMj/2226	SW-846 6010	ICPj/1643
J1611402002	16327-MW-1B	SW-846 3010A	DGMj/2226	SW-846 6010	ICPj/1643
J1611402001	16327-MW-1A	SW-846 5030B	MSVj/2870	SW-846 8260B (SIM)	MSVj/2871
J1611402002	16327-MW-1B	SW-846 5030B	MSVj/2870	SW-846 8260B (SIM)	MSVj/2871
J1611402001	16327-MW-1A			SM 2540 C	WCAj/3026
J1611402002	16327-MW-1B			SM 2540 C	WCAj/3026
J1611402001	16327-MW-1A	SW-846 7470A	DGMj/2237	SW-846 7470A	CVAj/1265
J1611402002	16327-MW-1B	SW-846 7470A	DGMj/2237	SW-846 7470A	CVAj/1265
J1611402001	16327-MW-1A			EPA 350.1	WCAg/3664
J1611402002	16327-MW-1B			EPA 350.1	WCAg/3664
J1611402001	16327-MW-1A	SW-846 5030B	MSVj/2903	SW-846 8260B	MSVj/2904
J1611402002	16327-MW-1B	SW-846 5030B	MSVj/2903	SW-846 8260B	MSVj/2904
J1611402001	16327-MW-1A			EPA 300.0	WCAj/3059
J1611402002	16327-MW-1B			EPA 300.0	WCAj/3059

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- ☐ **Gainesville:** 4965 SW 41st Blvd. • Gainesville, FL 32608 • 352.377.1111
- ☒ **Jacksonville:** 6681 Southpoint Pkwy. • Jacksonville, FL 32216 • 904.731.1111
- ☐ **Miramar:** 10200 USA Today Way, Miramar, FL 33025 • 954.889.2727
- ☐ **Tallahassee:** 1288 Cedar Center Drive, Tallahassee, FL 32301 • 904.498.1111
- ☐ **Tampa:** 9610 Princess Palm Ave. • Tampa, FL 33619 • 813.630.9636

J1611402

[illegible]

Received on Ice ☒ Yes ☐ No ☒ Temp taken from sample ☐ Temp from blank

☐ Where required, pH checked Temperature when received 9 (in degrees celcius)

DCN: AD-051 Form last revised 08/18/2014

Device used for measuring Temp by unique identifier (circle IR temp gun used) J: 9A G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V

	Relinquished by:	Date	Time	Received by:	Date	Time
1	<i>Joe Terry</i>	11-22-16	11:00	<i>LIPS</i>		
2	<i>LIPS</i>	11-23-16	9:45	<i>Bob Andy</i>	11-23-16	9:45
3						
4						

FOR DRINKING WATER USE:
(When PWS Information not otherwise supplied) PWS ID: _____
Contact Person: _____ Phone: _____
Supplier of Water: _____
Site-Address: _____

Client: Waste ConnectionsProject name: J.E.D. LandfillDate/Time Rcvd: 11-23-16 09:45Log-In request number: J1611402Received by: PNCompleted by: Ry**Cooler/Shipping Information:**Courier: ☐ AEL ☐ Client ☒ UPS ☐ Blue Streak ☐ FedEx ☐ AES ☐ ASAP ☐ Other (describe): _____Type: ☒ Cooler ☐ Box ☐ Other (describe): _____

Cooler temperature: Identify the cooler and document the temperature blank or ice water measurement

Cooler ID					
Temp (°C)	<u>4</u>				
Temp taken from	☐ Sample Bottle ☒ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler
Temp measured with	☒ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):

Other Information:

Any discrepancies should be explained in the "Comments" section below.

CHECKLIST	YES	NO	NA
1. Were custody seals on shipping container(s) intact?			
2. Were custody papers properly included with samples?			
3. Were custody papers properly filled out (ink, signed, match labels)?			
4. Did all bottles arrive in good condition (unbroken)?			
5. Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?			
6. Did the sample labels agree with the chain of custody?			
7. Were correct bottles used for the tests indicated?			
8. Were proper sample preservation techniques indicated on the label?			
9. Were samples received within holding times?			
10. Were all VOA vials free of the presence of air bubbles?			
11. Have all Soil VOA Vials and Encores been placed in a freezer within 48 hours of collection?			
12. Were samples in direct contact with wet ice? If "No," check one: ☐ NO ICE ☐ BLUE ICE			
13. Was the cooler temperature less than 6°C?			
14. Where pH preservation is required, are sample pHs checked and any anomalies recorded by Sample control? Are all <2 or >10? Note: VOA samples are checked by laboratory analysts.			
15. Was sufficient sample volume provided to perform all tests?			
16. If for Bacteriological testing, were containers supplied by AEL? (See QA officer if answer is no)			
17. Were all sample containers provided by AEL? (Other than Bacteriological)			
18. Were samples accepted into the laboratory?			
19. When necessary to split samples into other bottles, is it noted in the comments?			

Comments: (Note all sample(s) and container (s)) with a "No" checklist response in this comment section)



Advanced
Environmental Laboratories, Inc.

6681 Southpoint Parkway
Jacksonville, Florida 32216
Office (904) 363-9350
Fax (904) 363-9354

Project No.: J1611340
Client Name: Waste Connections
ProjectID: J.E.D. Landfill

I. Receipt

II. Holding Times

Preparation:

Analysis:

III. Method

Analysis: SW-846 8260B (SIM)

Preparation: SW-846 5030B

IV. Preparation

V. Analysis

A. Calibration:

B. Blanks:

C. Surrogates: The control criteria were exceeded for surrogates 1,2-dichloroethane,d4 and toluene-d8 in LCSD and MS. The control criteria were exceeded for surrogates 1,2-dichloroethane,d4, toluene-d8, and bromofluorobenzene in LCS. No samples were analyzed following the LCSD. The associated QC analysis recoveries of target compounds in the LCS were in control, indicating the analysis was in control. The surrogate outliers were flagged accordingly. No further corrective action was required.

The control criterion was exceeded for the following surrogate in several samples due to matrix interferences: 1,2-dichloroethane-d4, toluene-d8, bromofluorobenzene. Due to the presence of non-target background components that prevented adequate resolution of the surrogate, accurate quantitation was not possible. The affected surrogate is qualified accordingly.

D. Spikes: The spike recovery of DBCP for the Laboratory Control Sample duplicate(LCSD) was outside the upper control criterion. The analyte in question was not detected in the associated client samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was required.

The matrix spike recoveries of DBCP for J161134009 was outside control criteria due to the presence of target analytes in the sample. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicates the analytical batch was in control. The matrix spike outlier suggests a potential high bias in this matrix. The affected sample is qualified to indicate matrix interference.

I certify that this data package is in compliance with the terms and conditions agreed to by Advanced Environmental Laboratories, Inc. and by the client, both technically and for completeness, except for the conditions detailed above. The Quality Assurance Officer, or designee, as verified by the following signature, has authorized release of the data contained in this data package:



Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

December 5, 2016

Kirk Wills
Waste Connections
5135 Madison Avenue
Tampa, FL 33619

RE: Workorder: J1611340 J.E.D. Landfill

Dear Kirk Wills:

Enclosed are the analytical results for sample(s) received by the laboratory on Tuesday, November 22, 2016. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. The analytical results for the samples contained in this report were submitted for analysis as outlined by the Chain of Custody and results pertain only to these samples.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Craig Myers', is positioned above the printed name and email address.

Craig Myers
CMyers@AELLab.com

Enclosures

Report ID: 457337 - 7792838

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SAMPLE SUMMARY

Workorder: J1611340 J.E.D. Landfill

Lab ID	Sample ID	Matrix	Date Collected	Date Received
J1611340001	16326-MW-5A	Water	11/21/2016 09:45	11/22/2016 09:45
J1611340002	16326-MW-5B	Water	11/21/2016 09:20	11/22/2016 09:45
J1611340003	16326-MW-6A	Water	11/21/2016 08:15	11/22/2016 09:45
J1611340004	16326-MW-6B	Water	11/21/2016 07:40	11/22/2016 09:45
J1611340005	16326-MW-7A	Water	11/21/2016 06:30	11/22/2016 09:45
J1611340006	16326-MW-7B	Water	11/21/2016 06:00	11/22/2016 09:45
J1611340007	16326-MW-2A	Water	11/21/2016 15:00	11/22/2016 09:45
J1611340008	16326-MW-2B	Water	11/21/2016 14:30	11/22/2016 09:45
J1611340009	16326-MW-3A	Water	11/21/2016 12:50	11/22/2016 09:45
J1611340010	16326-MW-3B	Water	11/21/2016 12:25	11/22/2016 09:45
J1611340011	16326-MW-4A	Water	11/21/2016 11:20	11/22/2016 09:45
J1611340012	16326-MW-4B	Water	11/21/2016 10:55	11/22/2016 09:45

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340001**
Sample ID: **16326-MW-5A**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 09:45

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis, Water			Analytical Method: SW-846 6010					
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	12/1/2016 14:38	J
Barium	0.020		mg/L	1	0.0020	0.00028	12/1/2016 14:38	J
Beryllium	0.00013	U	mg/L	1	0.00030	0.00013	12/1/2016 14:38	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	12/1/2016 14:38	J
Chromium	0.0037		mg/L	1	0.0010	0.00050	12/1/2016 14:38	J
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	12/1/2016 14:38	J
Copper	0.0029	I	mg/L	1	0.0040	0.0025	12/1/2016 14:38	J
Iron	0.88		mg/L	1	0.20	0.030	12/1/2016 14:38	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	12/1/2016 14:38	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	12/1/2016 14:38	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	12/1/2016 14:38	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	12/1/2016 14:38	J
Sodium	22		mg/L	1	0.20	0.16	12/1/2016 14:38	J
Vanadium	0.0022	V	mg/L	1	0.0015	0.00018	12/1/2016 14:38	J
Zinc	0.014		mg/L	1	0.010	0.0020	12/1/2016 14:38	J
Analysis Desc: SW846 6020B			Preparation Method: SW-846 3010A					
Analysis, Total			Analytical Method: SW-846 6020					
Antimony	0.12	I	ug/L	1	0.70	0.046	11/29/2016 18:09	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/29/2016 18:09	J
Analysis Desc: SW846 7470A			Preparation Method: SW-846 7470A					
Analysis, Water			Analytical Method: SW-846 7470A					
Mercury	0.000021	I	mg/L	1	0.00010	0.000011	11/29/2016 16:03	J
VOLATILES								
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 13:40	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	12/3/2016 13:40	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 13:40	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 13:40	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	12/3/2016 13:40	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 13:40	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 13:40	J

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340001**
Sample ID: **16326-MW-5A**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 09:45

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 13:40	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	12/3/2016 13:40	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 13:40	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	12/3/2016 13:40	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	12/3/2016 13:40	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	12/3/2016 13:40	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	12/3/2016 13:40	J
Acetone	5.0	I	ug/L	1	5.0	2.1	12/3/2016 13:40	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	12/3/2016 13:40	J
Benzene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 13:40	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	12/3/2016 13:40	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	12/3/2016 13:40	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	12/3/2016 13:40	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	12/3/2016 13:40	J
Carbon Disulfide	0.82	I	ug/L	1	1.0	0.21	12/3/2016 13:40	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	12/3/2016 13:40	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	12/3/2016 13:40	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 13:40	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	12/3/2016 13:40	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	12/3/2016 13:40	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 13:40	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 13:40	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 13:40	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	12/3/2016 13:40	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	12/3/2016 13:40	J
Styrene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 13:40	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	12/3/2016 13:40	J
Toluene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 13:40	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	12/3/2016 13:40	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	12/3/2016 13:40	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	12/3/2016 13:40	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	12/3/2016 13:40	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	12/3/2016 13:40	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 13:40	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 13:40	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	12/3/2016 13:40	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 13:40	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	12/3/2016 13:40	J
1,2-Dichloroethane-d4 (S)	102		%	1	77-125		12/3/2016 13:40	
Toluene-d8 (S)	101		%	1	80-121		12/3/2016 13:40	

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340001**
Sample ID: **16326-MW-5A**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 09:45

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Bromofluorobenzene (S)	110		%	1	80-129		12/3/2016 13:40	
Analysis Desc: 8260B SIM Analysis, Water Preparation Method: SW-846 5030B Analytical Method: SW-846 8260B (SIM)								
1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/24/2016 05:51	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/24/2016 05:51	J
1,2-Dichloroethane-d4 (S)	37	J4	%	1	77-125		11/24/2016 05:51	
Toluene-d8 (S)	156	J4	%	1	80-121		11/24/2016 05:51	
Bromofluorobenzene (S)	125		%	1	80-129		11/24/2016 05:51	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water Analytical Method: EPA 300.0								
Chloride	23	I	mg/L	5	25	2.5	11/22/2016 11:41	J
Nitrate	0.25	U	mg/L	5	2.5	0.25	11/22/2016 11:41	J
Analysis Desc: Ammonia,E350.1,Water Analytical Method: EPA 350.1								
Ammonia (N)	6.4		mg/L	20	0.20	0.16	11/30/2016 11:09	G
Analysis Desc: Tot Dissolved Solids,SM2540C Analytical Method: SM 2540 C								
Total Dissolved Solids	280		mg/L	1	10	10	11/28/2016 19:28	J

Lab ID: **J1611340002**
Sample ID: **16326-MW-5B**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 09:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Water Preparation Method: SW-846 3010A Analytical Method: SW-846 6010								
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	12/1/2016 14:56	J
Barium	0.046		mg/L	1	0.0020	0.00028	12/1/2016 14:56	J
Beryllium	0.00035		mg/L	1	0.00030	0.00013	12/1/2016 14:56	J
Cadmium	0.00050	I	mg/L	1	0.00060	0.00032	12/1/2016 14:56	J
Chromium	0.0022		mg/L	1	0.0010	0.00050	12/1/2016 14:56	J

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340002**
Sample ID: **16326-MW-5B**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 09:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	12/1/2016 14:56	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	12/1/2016 14:56	J
Iron	0.29		mg/L	1	0.20	0.030	12/1/2016 14:56	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	12/1/2016 14:56	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	12/1/2016 14:56	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	12/1/2016 14:56	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	12/1/2016 14:56	J
Sodium	83		mg/L	1	0.20	0.16	12/1/2016 14:56	J
Vanadium	0.0042	V	mg/L	1	0.0015	0.00018	12/1/2016 14:56	J
Zinc	0.0080	I	mg/L	1	0.010	0.0020	12/1/2016 14:56	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6020

Antimony	0.13	I	ug/L	1	0.70	0.046	11/29/2016 18:20	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/29/2016 18:20	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A
Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/29/2016 16:23	J
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VOLATILES

Analysis Desc: 8260B Analysis, Water

Preparation Method: SW-846 5030B
Analytical Method: SW-846 8260B

1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 14:07	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	12/3/2016 14:07	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 14:07	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 14:07	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	12/3/2016 14:07	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 14:07	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 14:07	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 14:07	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	12/3/2016 14:07	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 14:07	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	12/3/2016 14:07	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	12/3/2016 14:07	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	12/3/2016 14:07	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	12/3/2016 14:07	J
Acetone	2.7	I	ug/L	1	5.0	2.1	12/3/2016 14:07	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	12/3/2016 14:07	J

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340002**
Sample ID: **16326-MW-5B**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 09:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Benzene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 14:07	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	12/3/2016 14:07	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	12/3/2016 14:07	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	12/3/2016 14:07	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	12/3/2016 14:07	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	12/3/2016 14:07	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	12/3/2016 14:07	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	12/3/2016 14:07	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 14:07	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	12/3/2016 14:07	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	12/3/2016 14:07	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 14:07	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 14:07	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 14:07	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	12/3/2016 14:07	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	12/3/2016 14:07	J
Styrene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 14:07	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	12/3/2016 14:07	J
Toluene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 14:07	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	12/3/2016 14:07	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	12/3/2016 14:07	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	12/3/2016 14:07	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	12/3/2016 14:07	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	12/3/2016 14:07	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 14:07	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 14:07	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	12/3/2016 14:07	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 14:07	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	12/3/2016 14:07	J
1,2-Dichloroethane-d4 (S)	106		%	1	77-125		12/3/2016 14:07	
Toluene-d8 (S)	100		%	1	80-121		12/3/2016 14:07	
Bromofluorobenzene (S)	108		%	1	80-129		12/3/2016 14:07	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/24/2016 06:18	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/24/2016 06:18	J
1,2-Dichloroethane-d4 (S)	40	J4	%	1	77-125		11/24/2016 06:18	
Toluene-d8 (S)	144	J4	%	1	80-121		11/24/2016 06:18	
Bromofluorobenzene (S)	137	J4	%	1	80-129		11/24/2016 06:18	

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340002**
Sample ID: **16326-MW-5B**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 09:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: IC,E300.0,Water			Analytical Method: EPA 300.0					
Chloride	96		mg/L	10	50	5.0	11/22/2016 11:57	J
Nitrate	0.50	U	mg/L	10	5.0	0.50	11/22/2016 11:57	J
Analysis Desc: Ammonia,E350.1,Water			Analytical Method: EPA 350.1					
Ammonia (N)	5.1		mg/L	10	0.10	0.08	11/30/2016 11:09	G
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540 C					
Total Dissolved Solids	1600		mg/L	1	10	10	11/28/2016 19:28	J

Lab ID: **J1611340003**
Sample ID: **16326-MW-6A**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 08:15

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Water			Preparation Method: SW-846 3010A Analytical Method: SW-846 6010					
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	12/1/2016 15:00	J
Barium	0.0069		mg/L	1	0.0020	0.00028	12/1/2016 15:00	J
Beryllium	0.00013	U	mg/L	1	0.00030	0.00013	12/1/2016 15:00	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	12/1/2016 15:00	J
Chromium	0.0026		mg/L	1	0.0010	0.00050	12/1/2016 15:00	J
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	12/1/2016 15:00	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	12/1/2016 15:00	J
Iron	7.9		mg/L	1	0.20	0.030	12/1/2016 15:00	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	12/1/2016 15:00	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	12/1/2016 15:00	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	12/1/2016 15:00	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	12/1/2016 15:00	J
Sodium	25		mg/L	1	0.20	0.16	12/1/2016 15:00	J
Vanadium	0.0056	V	mg/L	1	0.0015	0.00018	12/1/2016 15:00	J
Zinc	0.0059	I	mg/L	1	0.010	0.0020	12/1/2016 15:00	J

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340003**
Sample ID: **16326-MW-6A**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 08:15

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: SW846 6020B		Preparation Method: SW-846 3010A						
Analysis, Total		Analytical Method: SW-846 6020						
Antimony	0.080	I	ug/L	1	0.70	0.046	11/29/2016 18:31	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/29/2016 18:31	J
Analysis Desc: SW846 7470A		Preparation Method: SW-846 7470A						
Analysis, Water		Analytical Method: SW-846 7470A						
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/29/2016 16:25	J

VOLATILES

Analysis Desc: 8260B Analysis, Water		Preparation Method: SW-846 5030B						
		Analytical Method: SW-846 8260B						
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 14:35	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	12/3/2016 14:35	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 14:35	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 14:35	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	12/3/2016 14:35	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 14:35	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 14:35	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 14:35	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	12/3/2016 14:35	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 14:35	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	12/3/2016 14:35	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	12/3/2016 14:35	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	12/3/2016 14:35	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	12/3/2016 14:35	J
Acetone	2.9	I	ug/L	1	5.0	2.1	12/3/2016 14:35	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	12/3/2016 14:35	J
Benzene	5.7	U	ug/L	1	1.0	0.16	12/3/2016 14:35	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	12/3/2016 14:35	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	12/3/2016 14:35	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	12/3/2016 14:35	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	12/3/2016 14:35	J
Carbon Disulfide	0.32	I	ug/L	1	1.0	0.21	12/3/2016 14:35	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	12/3/2016 14:35	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	12/3/2016 14:35	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 14:35	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	12/3/2016 14:35	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	12/3/2016 14:35	J

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340003**
Sample ID: **16326-MW-6A**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 08:15

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 14:35	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 14:35	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 14:35	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	12/3/2016 14:35	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	12/3/2016 14:35	J
Styrene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 14:35	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	12/3/2016 14:35	J
Toluene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 14:35	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	12/3/2016 14:35	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	12/3/2016 14:35	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	12/3/2016 14:35	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	12/3/2016 14:35	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	12/3/2016 14:35	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 14:35	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 14:35	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	12/3/2016 14:35	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 14:35	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	12/3/2016 14:35	J
1,2-Dichloroethane-d4 (S)	101		%	1	77-125		12/3/2016 14:35	
Toluene-d8 (S)	102		%	1	80-121		12/3/2016 14:35	
Bromofluorobenzene (S)	111		%	1	80-129		12/3/2016 14:35	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/24/2016 06:46	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/24/2016 06:46	J
1,2-Dichloroethane-d4 (S)	36	J4	%	1	77-125		11/24/2016 06:46	
Toluene-d8 (S)	144	J4	%	1	80-121		11/24/2016 06:46	
Bromofluorobenzene (S)	142	J4	%	1	80-129		11/24/2016 06:46	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	31		mg/L	5	25	2.5	11/22/2016 13:33	J
Nitrate	0.25	U	mg/L	5	2.5	0.25	11/22/2016 13:33	J

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	3.8		mg/L	10	0.10	0.08	11/30/2016 11:09	G
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Analysis Desc: Tot Dissolved
Solids,SM2540C

Analytical Method: SM 2540 C

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340003**
Sample ID: **16326-MW-6A**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 08:15

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Total Dissolved Solids	230		mg/L	1	10	10	11/28/2016 19:28	J

Lab ID: **J1611340004**
Sample ID: **16326-MW-6B**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 07:40

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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METALS

Analysis Desc: SW846 6010B
Analysis, Water

Preparation Method: SW-846 3010A

Analytical Method: SW-846 6010

Arsenic	0.0085	U	mg/L	1	0.010	0.0085	12/1/2016 15:23	J
Barium	0.049		mg/L	1	0.0020	0.00028	12/1/2016 15:23	J
Beryllium	0.00025	I	mg/L	1	0.00030	0.00013	12/1/2016 15:23	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	12/1/2016 15:23	J
Chromium	0.0012		mg/L	1	0.0010	0.00050	12/1/2016 15:23	J
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	12/1/2016 15:23	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	12/1/2016 15:23	J
Iron	1.4		mg/L	1	0.20	0.030	12/1/2016 15:23	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	12/1/2016 15:23	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	12/1/2016 15:23	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	12/1/2016 15:23	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	12/1/2016 15:23	J
Sodium	9.9		mg/L	1	0.20	0.16	12/1/2016 15:23	J
Vanadium	0.0016	V	mg/L	1	0.0015	0.00018	12/1/2016 15:23	J
Zinc	0.0097	I	mg/L	1	0.010	0.0020	12/1/2016 15:23	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A

Analytical Method: SW-846 6020

Antimony	0.046	U	ug/L	1	0.70	0.046	11/29/2016 18:35	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/29/2016 18:35	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A

Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/29/2016 16:27	J
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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340004**
Sample ID: **16326-MW-6B**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 07:40

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
VOLATILES								
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 15:01	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	12/3/2016 15:01	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 15:01	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 15:01	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	12/3/2016 15:01	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 15:01	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 15:01	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 15:01	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	12/3/2016 15:01	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 15:01	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	12/3/2016 15:01	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	12/3/2016 15:01	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	12/3/2016 15:01	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	12/3/2016 15:01	J
Acetone	2.1	U	ug/L	1	5.0	2.1	12/3/2016 15:01	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	12/3/2016 15:01	J
Benzene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 15:01	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	12/3/2016 15:01	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	12/3/2016 15:01	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	12/3/2016 15:01	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	12/3/2016 15:01	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	12/3/2016 15:01	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	12/3/2016 15:01	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	12/3/2016 15:01	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 15:01	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	12/3/2016 15:01	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	12/3/2016 15:01	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 15:01	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 15:01	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 15:01	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	12/3/2016 15:01	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	12/3/2016 15:01	J
Styrene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 15:01	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	12/3/2016 15:01	J
Toluene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 15:01	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	12/3/2016 15:01	J

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340004**
Sample ID: **16326-MW-6B**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 07:40

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	12/3/2016 15:01	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	12/3/2016 15:01	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	12/3/2016 15:01	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	12/3/2016 15:01	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 15:01	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 15:01	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	12/3/2016 15:01	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 15:01	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	12/3/2016 15:01	J
1,2-Dichloroethane-d4 (S)	102		%	1	77-125		12/3/2016 15:01	
Toluene-d8 (S)	102		%	1	80-121		12/3/2016 15:01	
Bromofluorobenzene (S)	108		%	1	80-129		12/3/2016 15:01	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/24/2016 07:12	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/24/2016 07:12	J
1,2-Dichloroethane-d4 (S)	40	J4	%	1	77-125		11/24/2016 07:12	
Toluene-d8 (S)	143	J4	%	1	80-121		11/24/2016 07:12	
Bromofluorobenzene (S)	136	J4	%	1	80-129		11/24/2016 07:12	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	28		mg/L	5	25	2.5	11/22/2016 13:49	J
Nitrate	0.25	U	mg/L	5	2.5	0.25	11/22/2016 13:49	J

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	0.27		mg/L	1	0.01	0.01	11/30/2016 11:09	G
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Analysis Desc: Tot Dissolved
Solids,SM2540C

Analytical Method: SM 2540 C

Total Dissolved Solids	75		mg/L	1	10	10	11/28/2016 19:28	J
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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340005**
Sample ID: **16326-MW-7A**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 06:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis, Water			Analytical Method: SW-846 6010					
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	12/1/2016 15:27	J
Barium	0.012		mg/L	1	0.0020	0.00028	12/1/2016 15:27	J
Beryllium	0.00013	U	mg/L	1	0.00030	0.00013	12/1/2016 15:27	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	12/1/2016 15:27	J
Chromium	0.0022		mg/L	1	0.0010	0.00050	12/1/2016 15:27	J
Cobalt	0.00063	I	mg/L	1	0.0040	0.00060	12/1/2016 15:27	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	12/1/2016 15:27	J
Iron	8.5		mg/L	1	0.20	0.030	12/1/2016 15:27	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	12/1/2016 15:27	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	12/1/2016 15:27	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	12/1/2016 15:27	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	12/1/2016 15:27	J
Sodium	14		mg/L	1	0.20	0.16	12/1/2016 15:27	J
Vanadium	0.0026	V	mg/L	1	0.0015	0.00018	12/1/2016 15:27	J
Zinc	0.0068	I	mg/L	1	0.010	0.0020	12/1/2016 15:27	J
Analysis Desc: SW846 6020B			Preparation Method: SW-846 3010A					
Analysis, Total			Analytical Method: SW-846 6020					
Antimony	0.046	U	ug/L	1	0.70	0.046	11/29/2016 18:38	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/29/2016 18:38	J
Analysis Desc: SW846 7470A			Preparation Method: SW-846 7470A					
Analysis, Water			Analytical Method: SW-846 7470A					
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/29/2016 16:30	J
VOLATILES								
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 15:28	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	12/3/2016 15:28	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 15:28	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 15:28	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	12/3/2016 15:28	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 15:28	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 15:28	J

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340005**
Sample ID: **16326-MW-7A**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 06:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 15:28	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	12/3/2016 15:28	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 15:28	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	12/3/2016 15:28	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	12/3/2016 15:28	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	12/3/2016 15:28	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	12/3/2016 15:28	J
Acetone	2.1	U	ug/L	1	5.0	2.1	12/3/2016 15:28	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	12/3/2016 15:28	J
Benzene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 15:28	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	12/3/2016 15:28	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	12/3/2016 15:28	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	12/3/2016 15:28	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	12/3/2016 15:28	J
Carbon Disulfide	0.34	I	ug/L	1	1.0	0.21	12/3/2016 15:28	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	12/3/2016 15:28	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	12/3/2016 15:28	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 15:28	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	12/3/2016 15:28	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	12/3/2016 15:28	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 15:28	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 15:28	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 15:28	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	12/3/2016 15:28	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	12/3/2016 15:28	J
Styrene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 15:28	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	12/3/2016 15:28	J
Toluene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 15:28	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	12/3/2016 15:28	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	12/3/2016 15:28	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	12/3/2016 15:28	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	12/3/2016 15:28	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	12/3/2016 15:28	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 15:28	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 15:28	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	12/3/2016 15:28	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 15:28	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	12/3/2016 15:28	J
1,2-Dichloroethane-d4 (S)	99		%	1	77-125		12/3/2016 15:28	
Toluene-d8 (S)	100		%	1	80-121		12/3/2016 15:28	

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340005**
Sample ID: **16326-MW-7A**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 06:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Bromofluorobenzene (S)	113		%	1	80-129		12/3/2016 15:28	
Analysis Desc: 8260B SIM Analysis, Water Preparation Method: SW-846 5030B Analytical Method: SW-846 8260B (SIM)								
1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/24/2016 07:40	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/24/2016 07:40	J
1,2-Dichloroethane-d4 (S)	35	J4	%	1	77-125		11/24/2016 07:40	
Toluene-d8 (S)	148	J4	%	1	80-121		11/24/2016 07:40	
Bromofluorobenzene (S)	134	J4	%	1	80-129		11/24/2016 07:40	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water Analytical Method: EPA 300.0								
Chloride	24	I	mg/L	5	25	2.5	11/22/2016 14:05	J
Nitrate	0.25	U	mg/L	5	2.5	0.25	11/22/2016 14:05	J
Analysis Desc: Ammonia,E350.1,Water Analytical Method: EPA 350.1								
Ammonia (N)	8.1		mg/L	20	0.20	0.16	11/30/2016 11:09	G
Analysis Desc: Tot Dissolved Solids,SM2540C Analytical Method: SM 2540 C								
Total Dissolved Solids	110		mg/L	1	10	10	11/28/2016 19:28	J

Lab ID: **J1611340006**
Sample ID: **16326-MW-7B**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 06:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Water Preparation Method: SW-846 3010A Analytical Method: SW-846 6010								
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	12/1/2016 15:31	J
Barium	0.028		mg/L	1	0.0020	0.00028	12/1/2016 15:31	J
Beryllium	0.0013		mg/L	1	0.00030	0.00013	12/1/2016 15:31	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	12/1/2016 15:31	J
Chromium	0.0013		mg/L	1	0.0010	0.00050	12/1/2016 15:31	J

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340006**
Sample ID: **16326-MW-7B**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 06:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Cobalt	0.0049		mg/L	1	0.0040	0.00060	12/1/2016 15:31	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	12/1/2016 15:31	J
Iron	29		mg/L	1	0.20	0.030	12/1/2016 15:31	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	12/1/2016 15:31	J
Nickel	0.0036	I	mg/L	1	0.0065	0.0011	12/1/2016 15:31	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	12/1/2016 15:31	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	12/1/2016 15:31	J
Sodium	25		mg/L	1	0.20	0.16	12/1/2016 15:31	J
Vanadium	0.0033	V	mg/L	1	0.0015	0.00018	12/1/2016 15:31	J
Zinc	0.0020	U	mg/L	1	0.010	0.0020	12/1/2016 15:31	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6020

Antimony	0.059	I	ug/L	1	0.70	0.046	11/29/2016 18:42	J
Thallium	0.085	I	ug/L	1	0.20	0.057	11/29/2016 18:42	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A
Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/29/2016 16:32	J
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VOLATILES

Analysis Desc: 8260B Analysis, Water

Preparation Method: SW-846 5030B
Analytical Method: SW-846 8260B

1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 15:56	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	12/3/2016 15:56	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 15:56	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 15:56	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	12/3/2016 15:56	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 15:56	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 15:56	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 15:56	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	12/3/2016 15:56	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 15:56	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	12/3/2016 15:56	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	12/3/2016 15:56	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	12/3/2016 15:56	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	12/3/2016 15:56	J
Acetone	2.1	U	ug/L	1	5.0	2.1	12/3/2016 15:56	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	12/3/2016 15:56	J

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340006**
Sample ID: **16326-MW-7B**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 06:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Benzene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 15:56	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	12/3/2016 15:56	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	12/3/2016 15:56	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	12/3/2016 15:56	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	12/3/2016 15:56	J
Carbon Disulfide	0.27	I	ug/L	1	1.0	0.21	12/3/2016 15:56	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	12/3/2016 15:56	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	12/3/2016 15:56	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 15:56	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	12/3/2016 15:56	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	12/3/2016 15:56	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 15:56	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 15:56	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 15:56	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	12/3/2016 15:56	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	12/3/2016 15:56	J
Styrene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 15:56	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	12/3/2016 15:56	J
Toluene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 15:56	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	12/3/2016 15:56	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	12/3/2016 15:56	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	12/3/2016 15:56	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	12/3/2016 15:56	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	12/3/2016 15:56	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 15:56	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 15:56	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	12/3/2016 15:56	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 15:56	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	12/3/2016 15:56	J
1,2-Dichloroethane-d4 (S)	104		%	1	77-125		12/3/2016 15:56	
Toluene-d8 (S)	100		%	1	80-121		12/3/2016 15:56	
Bromofluorobenzene (S)	110		%	1	80-129		12/3/2016 15:56	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/24/2016 08:07	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/24/2016 08:07	J
1,2-Dichloroethane-d4 (S)	43	J4	%	1	77-125		11/24/2016 08:07	
Toluene-d8 (S)	150	J4	%	1	80-121		11/24/2016 08:07	
Bromofluorobenzene (S)	127		%	1	80-129		11/24/2016 08:07	

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340006**
Sample ID: **16326-MW-7B**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 06:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: IC,E300.0,Water			Analytical Method: EPA 300.0					
Chloride	2.5	U	mg/L	5	25	2.5	11/22/2016 14:21	J
Nitrate	0.25	U	mg/L	5	2.5	0.25	11/22/2016 14:21	J
Analysis Desc: Ammonia,E350.1,Water			Analytical Method: EPA 350.1					
Ammonia (N)	3.3		mg/L	10	0.10	0.08	11/30/2016 11:09	G
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540 C					
Total Dissolved Solids	680		mg/L	1	10	10	11/28/2016 19:28	J

Lab ID: **J1611340007**
Sample ID: **16326-MW-2A**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 15:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Water			Preparation Method: SW-846 3010A Analytical Method: SW-846 6010					
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	12/1/2016 15:34	J
Barium	0.065		mg/L	1	0.0020	0.00028	12/1/2016 15:34	J
Beryllium	0.00023	I	mg/L	1	0.00030	0.00013	12/1/2016 15:34	J
Cadmium	0.00034	I	mg/L	1	0.00060	0.00032	12/1/2016 15:34	J
Chromium	0.0027		mg/L	1	0.0010	0.00050	12/1/2016 15:34	J
Cobalt	0.0037	I	mg/L	1	0.0040	0.00060	12/1/2016 15:34	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	12/1/2016 15:34	J
Iron	9.3		mg/L	1	0.20	0.030	12/1/2016 15:34	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	12/1/2016 15:34	J
Nickel	0.0028	I	mg/L	1	0.0065	0.0011	12/1/2016 15:34	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	12/1/2016 15:34	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	12/1/2016 15:34	J
Sodium	58		mg/L	1	0.20	0.16	12/1/2016 15:34	J
Vanadium	0.0048	V	mg/L	1	0.0015	0.00018	12/1/2016 15:34	J
Zinc	0.0062	I	mg/L	1	0.010	0.0020	12/1/2016 15:34	J

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340007**
Sample ID: **16326-MW-2A**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 15:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: SW846 6020B		Preparation Method: SW-846 3010A						
Analysis, Total		Analytical Method: SW-846 6020						
Antimony	0.046	U	ug/L	1	0.70	0.046	11/29/2016 18:46	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/29/2016 18:46	J
Analysis Desc: SW846 7470A		Preparation Method: SW-846 7470A						
Analysis, Water		Analytical Method: SW-846 7470A						
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/29/2016 16:34	J

VOLATILES

Analysis Desc: 8260B Analysis, Water		Preparation Method: SW-846 5030B						
		Analytical Method: SW-846 8260B						
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 16:22	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	12/3/2016 16:22	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 16:22	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 16:22	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	12/3/2016 16:22	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 16:22	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 16:22	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 16:22	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	12/3/2016 16:22	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 16:22	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	12/3/2016 16:22	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	12/3/2016 16:22	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	12/3/2016 16:22	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	12/3/2016 16:22	J
Acetone	2.3	I	ug/L	1	5.0	2.1	12/3/2016 16:22	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	12/3/2016 16:22	J
Benzene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 16:22	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	12/3/2016 16:22	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	12/3/2016 16:22	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	12/3/2016 16:22	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	12/3/2016 16:22	J
Carbon Disulfide	0.27	I	ug/L	1	1.0	0.21	12/3/2016 16:22	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	12/3/2016 16:22	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	12/3/2016 16:22	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 16:22	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	12/3/2016 16:22	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	12/3/2016 16:22	J

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340007**
Sample ID: **16326-MW-2A**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 15:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 16:22	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 16:22	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 16:22	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	12/3/2016 16:22	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	12/3/2016 16:22	J
Styrene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 16:22	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	12/3/2016 16:22	J
Toluene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 16:22	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	12/3/2016 16:22	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	12/3/2016 16:22	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	12/3/2016 16:22	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	12/3/2016 16:22	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	12/3/2016 16:22	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 16:22	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 16:22	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	12/3/2016 16:22	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 16:22	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	12/3/2016 16:22	J
1,2-Dichloroethane-d4 (S)	103		%	1	77-125		12/3/2016 16:22	
Toluene-d8 (S)	100		%	1	80-121		12/3/2016 16:22	
Bromofluorobenzene (S)	114		%	1	80-129		12/3/2016 16:22	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/24/2016 08:34	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/24/2016 08:34	J
1,2-Dichloroethane-d4 (S)	37	J4	%	1	77-125		11/24/2016 08:34	
Toluene-d8 (S)	148	J4	%	1	80-121		11/24/2016 08:34	
Bromofluorobenzene (S)	136	J4	%	1	80-129		11/24/2016 08:34	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	120		mg/L	5	25	2.5	11/22/2016 14:37	J
Nitrate	0.25	U	mg/L	5	2.5	0.25	11/22/2016 14:37	J

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	2.7		mg/L	5	0.05	0.04	11/30/2016 11:09	G
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Analysis Desc: Tot Dissolved
Solids,SM2540C

Analytical Method: SM 2540 C

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340007**
Sample ID: **16326-MW-2A**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 15:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Total Dissolved Solids	650		mg/L	1	10	10	11/28/2016 19:28	J

Lab ID: **J1611340008**
Sample ID: **16326-MW-2B**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 14:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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METALS

Analysis Desc: SW846 6010B
Analysis, Water

Preparation Method: SW-846 3010A

Analytical Method: SW-846 6010

Arsenic	0.0085	U	mg/L	1	0.010	0.0085	12/1/2016 15:38	J
Barium	0.063		mg/L	1	0.0020	0.00028	12/1/2016 15:38	J
Beryllium	0.00083		mg/L	1	0.00030	0.00013	12/1/2016 15:38	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	12/1/2016 15:38	J
Chromium	0.00088	I	mg/L	1	0.0010	0.00050	12/1/2016 15:38	J
Cobalt	0.013		mg/L	1	0.0040	0.00060	12/1/2016 15:38	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	12/1/2016 15:38	J
Iron	40		mg/L	1	0.20	0.030	12/1/2016 15:38	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	12/1/2016 15:38	J
Nickel	0.0042	I	mg/L	1	0.0065	0.0011	12/1/2016 15:38	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	12/1/2016 15:38	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	12/1/2016 15:38	J
Sodium	58		mg/L	1	0.20	0.16	12/1/2016 15:38	J
Vanadium	0.0044	V	mg/L	1	0.0015	0.00018	12/1/2016 15:38	J
Zinc	0.0020	U	mg/L	1	0.010	0.0020	12/1/2016 15:38	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A

Analytical Method: SW-846 6020

Antimony	0.092	I	ug/L	1	0.70	0.046	11/29/2016 18:50	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/29/2016 18:50	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A

Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/29/2016 16:37	J
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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340008**
Sample ID: **16326-MW-2B**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 14:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
VOLATILES								
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 16:49	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	12/3/2016 16:49	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 16:49	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 16:49	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	12/3/2016 16:49	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 16:49	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 16:49	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 16:49	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	12/3/2016 16:49	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 16:49	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	12/3/2016 16:49	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	12/3/2016 16:49	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	12/3/2016 16:49	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	12/3/2016 16:49	J
Acetone	2.1	U	ug/L	1	5.0	2.1	12/3/2016 16:49	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	12/3/2016 16:49	J
Benzene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 16:49	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	12/3/2016 16:49	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	12/3/2016 16:49	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	12/3/2016 16:49	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	12/3/2016 16:49	J
Carbon Disulfide	0.26	I	ug/L	1	1.0	0.21	12/3/2016 16:49	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	12/3/2016 16:49	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	12/3/2016 16:49	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 16:49	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	12/3/2016 16:49	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	12/3/2016 16:49	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 16:49	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 16:49	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 16:49	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	12/3/2016 16:49	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	12/3/2016 16:49	J
Styrene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 16:49	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	12/3/2016 16:49	J
Toluene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 16:49	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	12/3/2016 16:49	J

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340008**
Sample ID: **16326-MW-2B**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 14:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	12/3/2016 16:49	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	12/3/2016 16:49	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	12/3/2016 16:49	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	12/3/2016 16:49	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 16:49	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 16:49	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	12/3/2016 16:49	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 16:49	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	12/3/2016 16:49	J
1,2-Dichloroethane-d4 (S)	103		%	1	77-125		12/3/2016 16:49	
Toluene-d8 (S)	101		%	1	80-121		12/3/2016 16:49	
Bromofluorobenzene (S)	112		%	1	80-129		12/3/2016 16:49	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/24/2016 09:01	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/24/2016 09:01	J
1,2-Dichloroethane-d4 (S)	44	J4	%	1	77-125		11/24/2016 09:01	
Toluene-d8 (S)	140	J4	%	1	80-121		11/24/2016 09:01	
Bromofluorobenzene (S)	135	J4	%	1	80-129		11/24/2016 09:01	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	110		mg/L	5	25	2.5	11/22/2016 14:53	J
Nitrate	0.25	U	mg/L	5	2.5	0.25	11/22/2016 14:53	J

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	1.0		mg/L	2	0.02	0.02	11/30/2016 11:09	G
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Analysis Desc: Tot Dissolved
Solids,SM2540C

Analytical Method: SM 2540 C

Total Dissolved Solids	860		mg/L	1	10	10	11/28/2016 19:28	J
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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340009**
Sample ID: **16326-MW-3A**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 12:50

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis, Water			Analytical Method: SW-846 6010					
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	12/1/2016 15:42	J
Barium	0.098		mg/L	1	0.0020	0.00028	12/1/2016 15:42	J
Beryllium	0.00013	U	mg/L	1	0.00030	0.00013	12/1/2016 15:42	J
Cadmium	0.00033	I	mg/L	1	0.00060	0.00032	12/1/2016 15:42	J
Chromium	0.0034		mg/L	1	0.0010	0.00050	12/1/2016 15:42	J
Cobalt	0.0014	I	mg/L	1	0.0040	0.00060	12/1/2016 15:42	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	12/1/2016 15:42	J
Iron	12		mg/L	1	0.20	0.030	12/1/2016 15:42	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	12/1/2016 15:42	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	12/1/2016 15:42	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	12/1/2016 15:42	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	12/1/2016 15:42	J
Sodium	19		mg/L	1	0.20	0.16	12/1/2016 15:42	J
Vanadium	0.0049	V	mg/L	1	0.0015	0.00018	12/1/2016 15:42	J
Zinc	0.0046	I	mg/L	1	0.010	0.0020	12/1/2016 15:42	J
Analysis Desc: SW846 6020B			Preparation Method: SW-846 3010A					
Analysis, Total			Analytical Method: SW-846 6020					
Antimony	0.046	U	ug/L	1	0.70	0.046	11/29/2016 18:53	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/29/2016 18:53	J
Analysis Desc: SW846 7470A			Preparation Method: SW-846 7470A					
Analysis, Water			Analytical Method: SW-846 7470A					
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/29/2016 16:39	J
VOLATILES								
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 17:16	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	12/3/2016 17:16	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 17:16	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 17:16	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	12/3/2016 17:16	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 17:16	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 17:16	J

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340009**
Sample ID: **16326-MW-3A**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 12:50

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 17:16	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	12/3/2016 17:16	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 17:16	J
1,4-Dichlorobenzene	0.82	I	ug/L	1	1.0	0.22	12/3/2016 17:16	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	12/3/2016 17:16	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	12/3/2016 17:16	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	12/3/2016 17:16	J
Acetone	2.1	U	ug/L	1	5.0	2.1	12/3/2016 17:16	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	12/3/2016 17:16	J
Benzene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 17:16	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	12/3/2016 17:16	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	12/3/2016 17:16	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	12/3/2016 17:16	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	12/3/2016 17:16	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	12/3/2016 17:16	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	12/3/2016 17:16	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	12/3/2016 17:16	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 17:16	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	12/3/2016 17:16	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	12/3/2016 17:16	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 17:16	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 17:16	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 17:16	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	12/3/2016 17:16	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	12/3/2016 17:16	J
Styrene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 17:16	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	12/3/2016 17:16	J
Toluene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 17:16	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	12/3/2016 17:16	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	12/3/2016 17:16	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	12/3/2016 17:16	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	12/3/2016 17:16	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	12/3/2016 17:16	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 17:16	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 17:16	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	12/3/2016 17:16	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 17:16	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	12/3/2016 17:16	J
1,2-Dichloroethane-d4 (S)	103		%	1	77-125		12/3/2016 17:16	
Toluene-d8 (S)	100		%	1	80-121		12/3/2016 17:16	

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340009**
Sample ID: **16326-MW-3A**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 12:50

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Bromofluorobenzene (S)	113		%	1	80-129		12/3/2016 17:16	
Analysis Desc: 8260B SIM Analysis, Water Preparation Method: SW-846 5030B Analytical Method: SW-846 8260B (SIM)								
1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/25/2016 21:48	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/25/2016 21:48	J
1,2-Dichloroethane-d4 (S)	39	J4	%	1	77-125		11/25/2016 21:48	
Toluene-d8 (S)	143	J4	%	1	80-121		11/25/2016 21:48	
Bromofluorobenzene (S)	129		%	1	80-129		11/25/2016 21:48	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water Analytical Method: EPA 300.0								
Chloride	8.3	I	mg/L	5	25	2.5	11/22/2016 15:10	J
Nitrate	0.25	U	mg/L	5	2.5	0.25	11/22/2016 15:10	J
Analysis Desc: Ammonia,E350.1,Water Analytical Method: EPA 350.1								
Ammonia (N)	17		mg/L	50	0.50	0.40	11/30/2016 11:09	G
Analysis Desc: Tot Dissolved Solids,SM2540C Analytical Method: SM 2540 C								
Total Dissolved Solids	1300		mg/L	1	10	10	11/28/2016 19:28	J

Lab ID: **J1611340010**
Sample ID: **16326-MW-3B**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 12:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Water Preparation Method: SW-846 3010A Analytical Method: SW-846 6010								
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	12/1/2016 15:45	J
Barium	0.048		mg/L	1	0.0020	0.00028	12/1/2016 15:45	J
Beryllium	0.0016		mg/L	1	0.00030	0.00013	12/1/2016 15:45	J
Cadmium	0.00039	I	mg/L	1	0.00060	0.00032	12/1/2016 15:45	J
Chromium	0.0014		mg/L	1	0.0010	0.00050	12/1/2016 15:45	J

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340010**
Sample ID: **16326-MW-3B**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 12:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Cobalt	0.0071		mg/L	1	0.0040	0.00060	12/1/2016 15:45	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	12/1/2016 15:45	J
Iron	23		mg/L	1	0.20	0.030	12/1/2016 15:45	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	12/1/2016 15:45	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	12/1/2016 15:45	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	12/1/2016 15:45	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	12/1/2016 15:45	J
Sodium	22		mg/L	1	0.20	0.16	12/1/2016 15:45	J
Vanadium	0.0036	V	mg/L	1	0.0015	0.00018	12/1/2016 15:45	J
Zinc	0.0020	U	mg/L	1	0.010	0.0020	12/1/2016 15:45	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6020

Antimony	0.046	U	ug/L	1	0.70	0.046	11/29/2016 18:57	J
Thallium	0.075	I	ug/L	1	0.20	0.057	11/29/2016 18:57	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A
Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/29/2016 16:47	J
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VOLATILES

Analysis Desc: 8260B Analysis, Water

Preparation Method: SW-846 5030B
Analytical Method: SW-846 8260B

1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 17:44	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	12/3/2016 17:44	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 17:44	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 17:44	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	12/3/2016 17:44	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 17:44	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 17:44	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 17:44	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	12/3/2016 17:44	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 17:44	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	12/3/2016 17:44	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	12/3/2016 17:44	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	12/3/2016 17:44	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	12/3/2016 17:44	J
Acetone	3.3	I	ug/L	1	5.0	2.1	12/3/2016 17:44	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	12/3/2016 17:44	J

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340010**
Sample ID: **16326-MW-3B**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 12:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Benzene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 17:44	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	12/3/2016 17:44	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	12/3/2016 17:44	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	12/3/2016 17:44	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	12/3/2016 17:44	J
Carbon Disulfide	0.32	I	ug/L	1	1.0	0.21	12/3/2016 17:44	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	12/3/2016 17:44	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	12/3/2016 17:44	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 17:44	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	12/3/2016 17:44	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	12/3/2016 17:44	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 17:44	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 17:44	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 17:44	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	12/3/2016 17:44	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	12/3/2016 17:44	J
Styrene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 17:44	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	12/3/2016 17:44	J
Toluene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 17:44	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	12/3/2016 17:44	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	12/3/2016 17:44	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	12/3/2016 17:44	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	12/3/2016 17:44	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	12/3/2016 17:44	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 17:44	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 17:44	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	12/3/2016 17:44	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 17:44	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	12/3/2016 17:44	J
1,2-Dichloroethane-d4 (S)	101		%	1	77-125		12/3/2016 17:44	
Toluene-d8 (S)	100		%	1	80-121		12/3/2016 17:44	
Bromofluorobenzene (S)	111		%	1	80-129		12/3/2016 17:44	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/25/2016 22:15	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/25/2016 22:15	J
1,2-Dichloroethane-d4 (S)	36	J4	%	1	77-125		11/25/2016 22:15	
Toluene-d8 (S)	140	J4	%	1	80-121		11/25/2016 22:15	
Bromofluorobenzene (S)	167	J4	%	1	80-129		11/25/2016 22:15	

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340010**
Sample ID: **16326-MW-3B**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 12:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: IC,E300.0,Water			Analytical Method: EPA 300.0					
Chloride	46		mg/L	5	25	2.5	11/22/2016 15:26	J
Nitrate	0.25	U	mg/L	5	2.5	0.25	11/22/2016 15:26	J
Analysis Desc: Ammonia,E350.1,Water			Analytical Method: EPA 350.1					
Ammonia (N)	4.9		mg/L	10	0.10	0.08	11/30/2016 11:09	G
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540 C					
Total Dissolved Solids	1500		mg/L	1	10	10	11/28/2016 19:28	J

Lab ID: **J1611340011**
Sample ID: **16326-MW-4A**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 11:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B		Preparation Method: SW-846 3010A						
Analysis,Water		Analytical Method: SW-846 6010						
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	12/1/2016 15:49	J
Barium	0.13		mg/L	1	0.0020	0.00028	12/1/2016 15:49	J
Beryllium	0.00013	U	mg/L	1	0.00030	0.00013	12/1/2016 15:49	J
Cadmium	0.00044	I	mg/L	1	0.00060	0.00032	12/1/2016 15:49	J
Chromium	0.0022		mg/L	1	0.0010	0.00050	12/1/2016 15:49	J
Cobalt	0.0027	I	mg/L	1	0.0040	0.00060	12/1/2016 15:49	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	12/1/2016 15:49	J
Iron	19		mg/L	1	0.20	0.030	12/1/2016 15:49	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	12/1/2016 15:49	J
Nickel	0.0032	I	mg/L	1	0.0065	0.0011	12/1/2016 15:49	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	12/1/2016 15:49	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	12/1/2016 15:49	J
Sodium	35		mg/L	1	0.20	0.16	12/1/2016 15:49	J
Vanadium	0.0026	V	mg/L	1	0.0015	0.00018	12/1/2016 15:49	J
Zinc	0.0068	I	mg/L	1	0.010	0.0020	12/1/2016 15:49	J

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340011**
Sample ID: **16326-MW-4A**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 11:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: SW846 6020B		Preparation Method: SW-846 3010A						
Analysis, Total		Analytical Method: SW-846 6020						
Antimony	0.046	U	ug/L	1	0.70	0.046	11/29/2016 19:01	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/29/2016 19:01	J
Analysis Desc: SW846 7470A		Preparation Method: SW-846 7470A						
Analysis, Water		Analytical Method: SW-846 7470A						
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/29/2016 16:49	J

VOLATILES

Analysis Desc: 8260B Analysis, Water		Preparation Method: SW-846 5030B						
		Analytical Method: SW-846 8260B						
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 18:11	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	12/3/2016 18:11	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 18:11	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 18:11	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	12/3/2016 18:11	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 18:11	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 18:11	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 18:11	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	12/3/2016 18:11	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 18:11	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	12/3/2016 18:11	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	12/3/2016 18:11	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	12/3/2016 18:11	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	12/3/2016 18:11	J
Acetone	2.8	I	ug/L	1	5.0	2.1	12/3/2016 18:11	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	12/3/2016 18:11	J
Benzene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 18:11	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	12/3/2016 18:11	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	12/3/2016 18:11	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	12/3/2016 18:11	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	12/3/2016 18:11	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	12/3/2016 18:11	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	12/3/2016 18:11	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	12/3/2016 18:11	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 18:11	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	12/3/2016 18:11	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	12/3/2016 18:11	J

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340011**
Sample ID: **16326-MW-4A**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 11:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 18:11	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 18:11	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 18:11	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	12/3/2016 18:11	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	12/3/2016 18:11	J
Styrene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 18:11	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	12/3/2016 18:11	J
Toluene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 18:11	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	12/3/2016 18:11	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	12/3/2016 18:11	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	12/3/2016 18:11	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	12/3/2016 18:11	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	12/3/2016 18:11	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 18:11	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 18:11	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	12/3/2016 18:11	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 18:11	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	12/3/2016 18:11	J
1,2-Dichloroethane-d4 (S)	103		%	1	77-125		12/3/2016 18:11	
Toluene-d8 (S)	103		%	1	80-121		12/3/2016 18:11	
Bromofluorobenzene (S)	108		%	1	80-129		12/3/2016 18:11	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/25/2016 22:42	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/25/2016 22:42	J
1,2-Dichloroethane-d4 (S)	59	J4	%	1	77-125		11/25/2016 22:42	
Toluene-d8 (S)	112		%	1	80-121		11/25/2016 22:42	
Bromofluorobenzene (S)	115		%	1	80-129		11/25/2016 22:42	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	16	I	mg/L	5	25	2.5	11/22/2016 15:42	J
Nitrate	0.25	U	mg/L	5	2.5	0.25	11/22/2016 15:42	J

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	7.9		mg/L	20	0.20	0.16	11/30/2016 11:09	G
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Analysis Desc: Tot Dissolved
Solids,SM2540C

Analytical Method: SM 2540 C

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340011**
Sample ID: **16326-MW-4A**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 11:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Total Dissolved Solids	1200		mg/L	1	10	10	11/28/2016 19:28	J

Lab ID: **J1611340012**
Sample ID: **16326-MW-4B**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 10:55

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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METALS

Analysis Desc: SW846 6010B
Analysis, Water

Preparation Method: SW-846 3010A

Analytical Method: SW-846 6010

Arsenic	0.0085	U	mg/L	1	0.010	0.0085	12/1/2016 15:53	J
Barium	0.038		mg/L	1	0.0020	0.00028	12/1/2016 15:53	J
Beryllium	0.00058		mg/L	1	0.00030	0.00013	12/1/2016 15:53	J
Cadmium	0.00045	I	mg/L	1	0.00060	0.00032	12/1/2016 15:53	J
Chromium	0.0026		mg/L	1	0.0010	0.00050	12/1/2016 15:53	J
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	12/1/2016 15:53	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	12/1/2016 15:53	J
Iron	0.25		mg/L	1	0.20	0.030	12/1/2016 15:53	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	12/1/2016 15:53	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	12/1/2016 15:53	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	12/1/2016 15:53	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	12/1/2016 15:53	J
Sodium	71		mg/L	1	0.20	0.16	12/1/2016 15:53	J
Vanadium	0.0077	V	mg/L	1	0.0015	0.00018	12/1/2016 15:53	J
Zinc	0.012		mg/L	1	0.010	0.0020	12/1/2016 15:53	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A

Analytical Method: SW-846 6020

Antimony	0.20	I	ug/L	1	0.70	0.046	11/29/2016 19:04	J
Thallium	0.071	I	ug/L	1	0.20	0.057	11/29/2016 19:04	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A

Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/29/2016 16:52	J
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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340012**
Sample ID: **16326-MW-4B**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 10:55

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
VOLATILES								
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 18:38	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	12/3/2016 18:38	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 18:38	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 18:38	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	12/3/2016 18:38	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 18:38	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	12/3/2016 18:38	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 18:38	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	12/3/2016 18:38	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	12/3/2016 18:38	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	12/3/2016 18:38	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	12/3/2016 18:38	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	12/3/2016 18:38	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	12/3/2016 18:38	J
Acetone	3.1	I	ug/L	1	5.0	2.1	12/3/2016 18:38	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	12/3/2016 18:38	J
Benzene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 18:38	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	12/3/2016 18:38	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	12/3/2016 18:38	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	12/3/2016 18:38	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	12/3/2016 18:38	J
Carbon Disulfide	0.27	I	ug/L	1	1.0	0.21	12/3/2016 18:38	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	12/3/2016 18:38	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	12/3/2016 18:38	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 18:38	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	12/3/2016 18:38	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	12/3/2016 18:38	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	12/3/2016 18:38	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	12/3/2016 18:38	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 18:38	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	12/3/2016 18:38	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	12/3/2016 18:38	J
Styrene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 18:38	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	12/3/2016 18:38	J
Toluene	0.23	U	ug/L	1	1.0	0.23	12/3/2016 18:38	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	12/3/2016 18:38	J

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ANALYTICAL RESULTS

Workorder: J1611340 J.E.D. Landfill

Lab ID: **J1611340012**
Sample ID: **16326-MW-4B**

Date Received: 11/22/16 09:45 Matrix: Water
Date Collected: 11/21/16 10:55

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	12/3/2016 18:38	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	12/3/2016 18:38	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	12/3/2016 18:38	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	12/3/2016 18:38	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	12/3/2016 18:38	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	12/3/2016 18:38	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	12/3/2016 18:38	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	12/3/2016 18:38	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	12/3/2016 18:38	J
1,2-Dichloroethane-d4 (S)	105		%	1	77-125		12/3/2016 18:38	
Toluene-d8 (S)	98		%	1	80-121		12/3/2016 18:38	
Bromofluorobenzene (S)	110		%	1	80-129		12/3/2016 18:38	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/25/2016 23:09	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/25/2016 23:09	J
1,2-Dichloroethane-d4 (S)	34	J4	%	1	77-125		11/25/2016 23:09	
Toluene-d8 (S)	151	J4	%	1	80-121		11/25/2016 23:09	
Bromofluorobenzene (S)	165	J4	%	1	80-129		11/25/2016 23:09	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	110		mg/L	10	50	5.0	11/22/2016 15:58	J
Nitrate	0.50	U	mg/L	10	5.0	0.50	11/22/2016 15:58	J

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	8.9		mg/L	20	0.20	0.16	11/30/2016 11:09	G
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Analysis Desc: Tot Dissolved
Solids,SM2540C

Analytical Method: SM 2540 C

Total Dissolved Solids	1500		mg/L	1	10	10	11/28/2016 19:28	J
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ANALYTICAL RESULTS QUALIFIERS

Workorder: J1611340 J.E.D. Landfill

PARAMETER QUALIFIERS

- U The compound was analyzed for but not detected.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- V Method Blank Contamination
- J4 Estimated Result

LAB QUALIFIERS

- G DOH Certification #E82001(AEL-G)(FL NELAC Certification)
- J DOH Certification #E82574(AEL-JAX)(FL NELAC Certification)

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QUALITY CONTROL DATA

Workorder: J1611340 J.E.D. Landfill

QC Batch: WCAJ/2988 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Prepared:
Associated Lab Samples: J1611340001, J1611340002, J1611340003, J1611340004, J1611340005, J1611340006, J1611340007, J1611340008,

METHOD BLANK: 2204096

Parameter	Units	Blank Result	Reporting Limit Qualifiers
WET CHEMISTRY			
Chloride	mg/L	0.50	0.50 U
Nitrate	mg/L	0.050	0.050 U

QC Batch: DGMj/2214 Analysis Method: SW-846 6020
QC Batch Method: SW-846 3010A Prepared: 11/23/2016 07:35
Associated Lab Samples: J1611340001, J1611340002, J1611340003, J1611340004, J1611340005, J1611340006, J1611340007, J1611340008,

METHOD BLANK: 2204695

Parameter	Units	Blank Result	Reporting Limit Qualifiers
METALS			
Antimony	ug/L	0.046	0.046 U
Thallium	ug/L	0.057	0.057 U

QC Batch: DGMj/2226 Analysis Method: SW-846 6010
QC Batch Method: SW-846 3010A Prepared: 11/30/2016 03:00
Associated Lab Samples: J1611340001, J1611340002, J1611340003, J1611340004, J1611340005, J1611340006, J1611340007, J1611340008,

METHOD BLANK: 2207435

Parameter	Units	Blank Result	Reporting Limit Qualifiers
METALS			
Silver	mg/L	0.00044	0.00044 U
Arsenic	mg/L	0.0085	0.0085 U
Barium	mg/L	0.00028	0.00028 U
Beryllium	mg/L	0.00013	0.00013 U
Cadmium	mg/L	0.00032	0.00032 U
Cobalt	mg/L	0.00060	0.00060 U
Chromium	mg/L	0.00050	0.00050 U
Copper	mg/L	0.0025	0.0025 U
Iron	mg/L	0.030	0.030 U
Sodium	mg/L	0.16	0.16 U
Nickel	mg/L	0.0011	0.0011 U

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QUALITY CONTROL DATA

Workorder: J1611340 J.E.D. Landfill

METHOD BLANK: 2207435

Parameter	Units	Blank Result	Reporting Limit Qualifiers
Lead	mg/L	0.0013	0.0013 U
Selenium	mg/L	0.0068	0.0068 U
Zinc	mg/L	0.0020	0.0020 U
Parameter	Units	Blank Result	Reporting Limit Qualifiers
METALS			
Vanadium	mg/L	0.00043	0.00018 I

QC Batch: WCAj/3015

Analysis Method: SM 2540 C

QC Batch Method: SM 2540 C

Prepared:

Associated Lab Samples: J1611340001, J1611340002, J1611340003, J1611340004, J1611340005, J1611340006, J1611340007, J1611340008,

METHOD BLANK: 2207684

Parameter	Units	Blank Result	Reporting Limit Qualifiers
WET CHEMISTRY			
Total Dissolved Solids	mg/L	10	10 U

QC Batch: MSVj/2866

Analysis Method: SW-846 8260B (SIM)

QC Batch Method: SW-846 5030B

Prepared: 11/23/2016 09:32

Associated Lab Samples: J1611340001, J1611340002, J1611340003, J1611340004, J1611340005, J1611340006, J1611340007, J1611340008

METHOD BLANK: 2207690

Parameter	Units	Blank Result	Reporting Limit Qualifiers
VOLATILES			
Ethylene Dibromide (EDB)	ug/L	0.020	0.020 U
1,2-Dibromo-3-Chloropropane	ug/L	0.11	0.11 U
1,2-Dichloroethane-d4 (S)	%	86	77-125
Toluene-d8 (S)	%	104	80-121
Bromofluorobenzene (S)	%	111	80-129

QC Batch: MSVj/2870

Analysis Method: SW-846 8260B (SIM)

QC Batch Method: SW-846 5030B

Prepared: 11/25/2016 19:33

Associated Lab Samples: J1611340009, J1611340010, J1611340011, J1611340012

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QUALITY CONTROL DATA

Workorder: J1611340 J.E.D. Landfill

METHOD BLANK: 2207698

Parameter	Units	Blank Result	Reporting Limit Qualifiers
VOLATILES			
Ethylene Dibromide (EDB)	ug/L	0.020	0.020 U
1,2-Dibromo-3-Chloropropane	ug/L	0.11	0.11 U
1,2-Dichloroethane-d4 (S)	%	80	77-125
Toluene-d8 (S)	%	100	80-121
Bromofluorobenzene (S)	%	109	80-129

QC Batch: DGMj/2229

Analysis Method: SW-846 7470A

QC Batch Method: SW-846 7470A

Prepared: 11/29/2016 10:15

Associated Lab Samples: J1611340001, J1611340002, J1611340003, J1611340004, J1611340005, J1611340006, J1611340007, J1611340008,

METHOD BLANK: 2207865

Parameter	Units	Blank Result	Reporting Limit Qualifiers
METALS			
Mercury	mg/L	0.000011	0.000011 U

QC Batch: WCAg/3655

Analysis Method: EPA 350.1

QC Batch Method: EPA 350.1

Prepared:

Associated Lab Samples: J1611340001, J1611340002, J1611340003, J1611340004, J1611340005, J1611340006, J1611340007, J1611340008,

METHOD BLANK: 2209677

Parameter	Units	Blank Result	Reporting Limit Qualifiers
WET CHEMISTRY			
Ammonia (N)	mg/L	0.01	0.01 U

QC Batch: MSVj/2903

Analysis Method: SW-846 8260B

QC Batch Method: SW-846 5030B

Prepared: 12/03/2016 08:43

Associated Lab Samples: J1611340001, J1611340002, J1611340003, J1611340004, J1611340005, J1611340006, J1611340007, J1611340008,

METHOD BLANK: 2212702

Parameter	Units	Blank Result	Reporting Limit Qualifiers
VOLATILES			
Chloromethane	ug/L	0.21	0.21 U

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QUALITY CONTROL DATA

Workorder: J1611340 J.E.D. Landfill

METHOD BLANK: 2212702

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Vinyl Chloride	ug/L	0.20	0.20	U
Bromomethane	ug/L	0.24	0.24	U
Chloroethane	ug/L	0.33	0.33	U
Trichlorofluoromethane	ug/L	0.32	0.32	U
Acetone	ug/L	2.1	2.1	U
1,1-Dichloroethylene	ug/L	0.18	0.18	U
Iodomethane (Methyl Iodide)	ug/L	0.16	0.16	U
Acrylonitrile	ug/L	1.1	1.1	U
Methylene Chloride	ug/L	2.5	2.5	U
Carbon Disulfide	ug/L	0.21	0.21	U
trans-1,2-Dichloroethylene	ug/L	0.20	0.20	U
1,1-Dichloroethane	ug/L	0.14	0.14	U
Vinyl Acetate	ug/L	0.19	0.19	U
2-Butanone (MEK)	ug/L	0.43	0.43	U
cis-1,2-Dichloroethylene	ug/L	0.24	0.24	U
Bromochloromethane	ug/L	0.17	0.17	U
Chloroform	ug/L	0.18	0.18	U
1,2-Dichloroethane	ug/L	0.23	0.23	U
1,1,1-Trichloroethane	ug/L	0.22	0.22	U
Carbon Tetrachloride	ug/L	0.36	0.36	U
Benzene	ug/L	0.16	0.16	U
Dibromomethane	ug/L	0.26	0.26	U
1,2-Dichloropropane	ug/L	0.20	0.20	U
Trichloroethene	ug/L	0.29	0.29	U
Bromodichloromethane	ug/L	0.25	0.25	U
cis-1,3-Dichloropropene	ug/L	0.16	0.16	U
4-Methyl-2-pentanone (MIBK)	ug/L	0.47	0.47	U
trans-1,3-Dichloropropylene	ug/L	0.18	0.18	U
1,1,2-Trichloroethane	ug/L	0.30	0.30	U
Toluene	ug/L	0.23	0.23	U
2-Hexanone	ug/L	0.44	0.44	U
Dibromochloromethane	ug/L	0.33	0.33	U
Tetrachloroethylene (PCE)	ug/L	0.36	0.36	U
1,1,1,2-Tetrachloroethane	ug/L	0.26	0.26	U
Chlorobenzene	ug/L	0.21	0.21	U
Ethylbenzene	ug/L	0.24	0.24	U
Bromoform	ug/L	0.43	0.43	U
Styrene	ug/L	0.23	0.23	U
1,1,2,2-Tetrachloroethane	ug/L	0.20	0.20	U
1,2,3-Trichloropropane	ug/L	0.30	0.30	U
1,4-Dichlorobenzene	ug/L	0.22	0.22	U
1,2-Dichlorobenzene	ug/L	0.18	0.18	U
trans-1,4-Dichloro-2-butene	ug/L	1.8	1.8	U
Xylene (Total)	ug/L	0.53	0.53	U
1,2-Dichloroethane-d4 (S)	%	102	77-125	

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QUALITY CONTROL DATA

Workorder: J1611340 J.E.D. Landfill

METHOD BLANK: 2212702

Parameter	Units	Blank Result	Reporting Limit Qualifiers
Toluene-d8 (S)	%	103	80-121
Bromofluorobenzene (S)	%	111	80-129

QUALITY CONTROL DATA QUALIFIERS

Workorder: J1611340 J.E.D. Landfill

QUALITY CONTROL PARAMETER QUALIFIERS

- U The compound was analyzed for but not detected.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J1 Surrogate Failure
- J4 Estimated Result
- V Method Blank Contamination

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: J1611340 J.E.D. Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
J1611340001	16326-MW-5A			EPA 300.0	WCAj/2988
J1611340002	16326-MW-5B			EPA 300.0	WCAj/2988
J1611340003	16326-MW-6A			EPA 300.0	WCAj/2988
J1611340004	16326-MW-6B			EPA 300.0	WCAj/2988
J1611340005	16326-MW-7A			EPA 300.0	WCAj/2988
J1611340006	16326-MW-7B			EPA 300.0	WCAj/2988
J1611340007	16326-MW-2A			EPA 300.0	WCAj/2988
J1611340008	16326-MW-2B			EPA 300.0	WCAj/2988
J1611340009	16326-MW-3A			EPA 300.0	WCAj/2988
J1611340010	16326-MW-3B			EPA 300.0	WCAj/2988
J1611340011	16326-MW-4A			EPA 300.0	WCAj/2988
J1611340012	16326-MW-4B			EPA 300.0	WCAj/2988
J1611340001	16326-MW-5A	SW-846 3010A	DGMj/2214	SW-846 6020	ICMj/1343
J1611340002	16326-MW-5B	SW-846 3010A	DGMj/2214	SW-846 6020	ICMj/1343
J1611340003	16326-MW-6A	SW-846 3010A	DGMj/2214	SW-846 6020	ICMj/1343
J1611340004	16326-MW-6B	SW-846 3010A	DGMj/2214	SW-846 6020	ICMj/1343
J1611340005	16326-MW-7A	SW-846 3010A	DGMj/2214	SW-846 6020	ICMj/1343
J1611340006	16326-MW-7B	SW-846 3010A	DGMj/2214	SW-846 6020	ICMj/1343
J1611340007	16326-MW-2A	SW-846 3010A	DGMj/2214	SW-846 6020	ICMj/1343
J1611340008	16326-MW-2B	SW-846 3010A	DGMj/2214	SW-846 6020	ICMj/1343
J1611340009	16326-MW-3A	SW-846 3010A	DGMj/2214	SW-846 6020	ICMj/1343
J1611340010	16326-MW-3B	SW-846 3010A	DGMj/2214	SW-846 6020	ICMj/1343
J1611340011	16326-MW-4A	SW-846 3010A	DGMj/2214	SW-846 6020	ICMj/1343
J1611340012	16326-MW-4B	SW-846 3010A	DGMj/2214	SW-846 6020	ICMj/1343
J1611340001	16326-MW-5A	SW-846 3010A	DGMj/2226	SW-846 6010	ICPj/1643
J1611340002	16326-MW-5B	SW-846 3010A	DGMj/2226	SW-846 6010	ICPj/1643
J1611340003	16326-MW-6A	SW-846 3010A	DGMj/2226	SW-846 6010	ICPj/1643
J1611340004	16326-MW-6B	SW-846 3010A	DGMj/2226	SW-846 6010	ICPj/1643
J1611340005	16326-MW-7A	SW-846 3010A	DGMj/2226	SW-846 6010	ICPj/1643
J1611340006	16326-MW-7B	SW-846 3010A	DGMj/2226	SW-846 6010	ICPj/1643
J1611340007	16326-MW-2A	SW-846 3010A	DGMj/2226	SW-846 6010	ICPj/1643
J1611340008	16326-MW-2B	SW-846 3010A	DGMj/2226	SW-846 6010	ICPj/1643

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: J1611340 J.E.D. Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
J1611340009	16326-MW-3A	SW-846 3010A	DGMj/2226	SW-846 6010	ICPj/1643
J1611340010	16326-MW-3B	SW-846 3010A	DGMj/2226	SW-846 6010	ICPj/1643
J1611340011	16326-MW-4A	SW-846 3010A	DGMj/2226	SW-846 6010	ICPj/1643
J1611340012	16326-MW-4B	SW-846 3010A	DGMj/2226	SW-846 6010	ICPj/1643
J1611340001	16326-MW-5A			SM 2540 C	WCAj/3015
J1611340002	16326-MW-5B			SM 2540 C	WCAj/3015
J1611340003	16326-MW-6A			SM 2540 C	WCAj/3015
J1611340004	16326-MW-6B			SM 2540 C	WCAj/3015
J1611340005	16326-MW-7A			SM 2540 C	WCAj/3015
J1611340006	16326-MW-7B			SM 2540 C	WCAj/3015
J1611340007	16326-MW-2A			SM 2540 C	WCAj/3015
J1611340008	16326-MW-2B			SM 2540 C	WCAj/3015
J1611340009	16326-MW-3A			SM 2540 C	WCAj/3015
J1611340010	16326-MW-3B			SM 2540 C	WCAj/3015
J1611340011	16326-MW-4A			SM 2540 C	WCAj/3015
J1611340012	16326-MW-4B			SM 2540 C	WCAj/3015
J1611340001	16326-MW-5A	SW-846 5030B	MSVj/2866	SW-846 8260B (SIM)	MSVj/2867
J1611340002	16326-MW-5B	SW-846 5030B	MSVj/2866	SW-846 8260B (SIM)	MSVj/2867
J1611340003	16326-MW-6A	SW-846 5030B	MSVj/2866	SW-846 8260B (SIM)	MSVj/2867
J1611340004	16326-MW-6B	SW-846 5030B	MSVj/2866	SW-846 8260B (SIM)	MSVj/2867
J1611340005	16326-MW-7A	SW-846 5030B	MSVj/2866	SW-846 8260B (SIM)	MSVj/2867
J1611340006	16326-MW-7B	SW-846 5030B	MSVj/2866	SW-846 8260B (SIM)	MSVj/2867
J1611340007	16326-MW-2A	SW-846 5030B	MSVj/2866	SW-846 8260B (SIM)	MSVj/2867
J1611340008	16326-MW-2B	SW-846 5030B	MSVj/2866	SW-846 8260B (SIM)	MSVj/2867
J1611340009	16326-MW-3A	SW-846 5030B	MSVj/2870	SW-846 8260B (SIM)	MSVj/2871
J1611340010	16326-MW-3B	SW-846 5030B	MSVj/2870	SW-846 8260B (SIM)	MSVj/2871
J1611340011	16326-MW-4A	SW-846 5030B	MSVj/2870	SW-846 8260B (SIM)	MSVj/2871
J1611340012	16326-MW-4B	SW-846 5030B	MSVj/2870	SW-846 8260B (SIM)	MSVj/2871
J1611340001	16326-MW-5A	SW-846 7470A	DGMj/2229	SW-846 7470A	CVAj/1263

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: J1611340 J.E.D. Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
J1611340002	16326-MW-5B	SW-846 7470A	DGMj/2229	SW-846 7470A	CVAj/1263
J1611340003	16326-MW-6A	SW-846 7470A	DGMj/2229	SW-846 7470A	CVAj/1263
J1611340004	16326-MW-6B	SW-846 7470A	DGMj/2229	SW-846 7470A	CVAj/1263
J1611340005	16326-MW-7A	SW-846 7470A	DGMj/2229	SW-846 7470A	CVAj/1263
J1611340006	16326-MW-7B	SW-846 7470A	DGMj/2229	SW-846 7470A	CVAj/1263
J1611340007	16326-MW-2A	SW-846 7470A	DGMj/2229	SW-846 7470A	CVAj/1263
J1611340008	16326-MW-2B	SW-846 7470A	DGMj/2229	SW-846 7470A	CVAj/1263
J1611340009	16326-MW-3A	SW-846 7470A	DGMj/2229	SW-846 7470A	CVAj/1263
J1611340010	16326-MW-3B	SW-846 7470A	DGMj/2229	SW-846 7470A	CVAj/1263
J1611340011	16326-MW-4A	SW-846 7470A	DGMj/2229	SW-846 7470A	CVAj/1263
J1611340012	16326-MW-4B	SW-846 7470A	DGMj/2229	SW-846 7470A	CVAj/1263
J1611340001	16326-MW-5A			EPA 350.1	WCAg/3655
J1611340002	16326-MW-5B			EPA 350.1	WCAg/3655
J1611340003	16326-MW-6A			EPA 350.1	WCAg/3655
J1611340004	16326-MW-6B			EPA 350.1	WCAg/3655
J1611340005	16326-MW-7A			EPA 350.1	WCAg/3655
J1611340006	16326-MW-7B			EPA 350.1	WCAg/3655
J1611340007	16326-MW-2A			EPA 350.1	WCAg/3655
J1611340008	16326-MW-2B			EPA 350.1	WCAg/3655
J1611340009	16326-MW-3A			EPA 350.1	WCAg/3655
J1611340010	16326-MW-3B			EPA 350.1	WCAg/3655
J1611340011	16326-MW-4A			EPA 350.1	WCAg/3655
J1611340012	16326-MW-4B			EPA 350.1	WCAg/3655
J1611340001	16326-MW-5A	SW-846 5030B	MSVj/2903	SW-846 8260B	MSVj/2904
J1611340002	16326-MW-5B	SW-846 5030B	MSVj/2903	SW-846 8260B	MSVj/2904
J1611340003	16326-MW-6A	SW-846 5030B	MSVj/2903	SW-846 8260B	MSVj/2904
J1611340004	16326-MW-6B	SW-846 5030B	MSVj/2903	SW-846 8260B	MSVj/2904
J1611340005	16326-MW-7A	SW-846 5030B	MSVj/2903	SW-846 8260B	MSVj/2904
J1611340006	16326-MW-7B	SW-846 5030B	MSVj/2903	SW-846 8260B	MSVj/2904
J1611340007	16326-MW-2A	SW-846 5030B	MSVj/2903	SW-846 8260B	MSVj/2904
J1611340008	16326-MW-2B	SW-846 5030B	MSVj/2903	SW-846 8260B	MSVj/2904
J1611340009	16326-MW-3A	SW-846 5030B	MSVj/2903	SW-846 8260B	MSVj/2904

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: J1611340 J.E.D. Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
J1611340010	16326-MW-3B	SW-846 5030B	MSVj/2903	SW-846 8260B	MSVj/2904
J1611340011	16326-MW-4A	SW-846 5030B	MSVj/2903	SW-846 8260B	MSVj/2904
J1611340012	16326-MW-4B	SW-846 5030B	MSVj/2903	SW-846 8260B	MSVj/2904

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☐ **Miramar:** 10200 USA Today Way, Miramar, FL 33025 • 954.889.2
☐ **Tallahassee:** 1288 Cedar Center Drive, Tallahassee, FL 32301 • 904.37
☐ **Tampa:** 9610 Princess Palm Ave. • Tampa, FL 33619 • 813.630.96

J1611340

Client Name: Waste Connections, Inc.		Project Name: J.E.D LANDFILL (F/K/A OAK HAMMOCK DISPOSAL)		BOTTLE SIZE & TYPE	40 mL Vials	500 mL Plastic	500 mL Plastic	250 mL Plastic										LABORATORY I.D. NUMBER
Address: 5135 Madison Avenue		P.O. Number/Project Number:																
Tampa, Florida 33619		Project Location:																
Phone: 813-388-1026		FDEP Facility No: 89544																
FAX:		Project Name and Address: JED SWDF																
Contact: Kirk Willis		1501 Omni Way St. Cloud, FL		ANALYSIS REQUIRED	App 1	App 1												
Sampled By: Joe Terry / EPS					VOAs+EDB/DBCP	Metals+Fe,Hg,Na	Cl/NO3/TDS	NH3										
Turn Around Time: ☒ STANDARD ☐ RUSH		Special Instructions: Jax Profile: 31172																
Page 1 of 1		☒ ADaPT ☐ EQUIS																

SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING		MATRIX	NO. COUNT	PRESERVATION	HCL	HNO3	Ice	H2SO4							
			DATE	TIME														
16326-MW-5A		G	11-21-16	0945	GW	6		X	X	X	X							001
16326-MW-5B				0920														002
16326-MW-6A				0815														003
16326-MW-6B				0740														004
16326-MW-7A				0630														005
16326-MW-7B		G	11-21-16	0600	GW	6		X	X	X	X							006

Matrix Code: WW = wastewater SW = surface water GW = ground water DW = drinking water O = oil A = air SO = soil SL = sludge Preservation Code: I = Ice H = (HCl) S = (H2SO4) N = (HNO3) T = (Sodium Thiosulfate)

Received on Ice ☒ Yes ☐ No ☒ Temp taken from sample ☐ Temp from blank ☐ Where required, pH checked Temperature when received **4** (in degrees Celsius)

DCN: AD-051 Form last revised 08/18/2014

Device used for measuring Temp by unique identifier (circle IR temp gun used) **J: 9A** G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V

Relinquished by:	Date	Time	Received by:	Date	Time
Joe Terry	11-21-16	1600	UPS		
UPS	11-22-16	9:45	Beth Aubrey	11-27-16	9:45

FOR DRINKING WATER USE:

(When PWS information not otherwise supplied) PWS ID: _____
 Contact Person: _____ Phone: _____
 Supplier of Water: _____
 Site-Address: _____



Advanced
Environmental Laboratories, Inc.

- ☐ Altamonte Springs: 528 S. Northlake Blvd., Ste. 1018 • Altamonte Springs, FL 32608 • 352.37
☐ Gainesville: 4965 SW 41st Blvd. • Gainesville, FL 32608 • 352.37
☒ Jacksonville: 6881 Southpoint Pkwy. • Jacksonville, FL 32216 • 904.889.22
☐ Miramar: 10200 USA Today Way, Miramar, FL 33025 • 954.889.22
☐ Tallahassee: 1288 Cedar Center Drive, Tallahassee, FL 32301 • 904.889.22
☐ Tampa: 9610 Princess Palm Ave. • Tampa, FL 33619 • 813.630.961

J1611340

Client Name: Waste Connections, Inc.		Project Name: J.E.D LANDFILL (F/K/A OAK HAMMOCK DISPOSAL)		BOTTLE SIZE & TYPE						LABORATORY I.D. NUMBER
Address: 5135 Madison Avenue		P.O. Number/Project Number:		40 mL Vials	500 mL Plastic	500 mL Plastic	250 mL Plastic			
Tampa, Florida 33619		Project Location:		ANALYSIS REQUIRED	App I VOAs+EDB/DBCP	App I Metals+Fe,Hg,Na	C/NO3/TDS	NH3		
Phone: 813-943-8633		FDEP Facility No: 89544								
FAX:		Project Name and Address: JED SWDF								
Contact: Kirk Wills		1501 Omni Way								
Sampled By: Joe Terry / EPS		Special Instructions: Jax Profile: 31172								
Turn Around Time: ☒ STANDARD ☐ RUSH		☒ ADaPT ☐ EQUIS								
Page 1 of 1										

SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING		MATRIX	NO. COUNT	PRESERVATION	HCL	HNO3	Ice	H2SO4						
			DATE	TIME													
16326-MW-2A		G	11-21-16	1500	GW	6		X	X	X	X						007
16326-MW-2B				1430													008
16326-MW-3A				1250													009
16326-MW-3B				1225													010
16326-MW-4A		↓	↓	1120	↓	↓		↓	↓	↓	↓						011
16326-MW-4B		G	11-21-16	1055	GW	6		X	X	X	X						012

Matrix Code: WW = wastewater SW = surface water GW = ground water DW = drinking water O = oil A = air SO = soil SL = sludge Preservation Code: I = ice H=(HCl) S = (H2SO4) N = (HNO3) T = (Sodium Thiosulfate)

Received on Ice ☒ Yes ☐ No ☒ Temp taken from sample ☐ Temp from blank

☐ Where required, pH checked Temperature when received **4** (in degrees celcius)

DCN: AD-051 Form last revised 08/18/2014

Device used for measuring Temp by unique identifier (circle IR temp gun used) **(J: 9A)** G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V

Relinquished by:	Date	Time	Received by:	Date	Time
1 Joe Terry	11-21-16	1600	UPS		
2 UPS	11-22-16	9:45	Buck Andy	11-22-16	9:45
3					
4					

FOR DRINKING WATER USE:

(When PWS Information not otherwise supplied) PWS ID: _____

Contact Person: _____ Phone: _____

Supplier of Water: _____

Site Address: _____

Client: Waste ConnectionsProject name: J.E.D LandfillDate/Time Rcvd: 11-22-16 9:45Log-In request number: J1611340Received by: BACompleted by: BA**Cooler/Shipping Information:**Courier: ☐ AEL ☐ Client ☒ UPS ☐ Blue Streak ☐ FedEx ☐ AES ☐ ASAP ☐ Other (describe): _____Type: ☒ Cooler ☐ Box ☐ Other (describe): _____

Cooler temperature: Identify the cooler and document the temperature blank or ice water measurement

Cooler ID					
Temp (°C)	<u>4°C</u>				
Temp taken from	☒ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler
Temp measured with	☒ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):

Other Information:

Any discrepancies should be explained in the "Comments" section below.

CHECKLIST	YES	NO	NA
1. Were custody seals on shipping container(s) intact?	/		
2. Were custody papers properly included with samples?	/		
3. Were custody papers properly filled out (ink, signed, match labels)?	/		
4. Did all bottles arrive in good condition (unbroken)?	/		
5. Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?	/		
6. Did the sample labels agree with the chain of custody?	/		
7. Were correct bottles used for the tests indicated?	/		
8. Were proper sample preservation techniques indicated on the label?	/		
9. Were samples received within holding times?	/		
10. Were all VOA vials free of the presence of air bubbles?	/		
11. Have all Soil VOA Vials and Encores been placed in a freezer within 48 hours of collection?			/
12. Were samples in direct contact with wet ice? If "No," check one: ☐ NO ICE ☐ BLUE ICE	/		
13. Was the cooler temperature less than 6°C?	/		
14. Where pH preservation is required, are sample pHs checked and any anomalies recorded by Sample control? Are all <2 or >10? Note: VOA samples are checked by laboratory analysts.	/		
15. Was sufficient sample volume provided to perform all tests?	/		
16. If for Bacteriological testing, were containers supplied by AEL? (See QA officer if answer is no)			/
17. Were all sample containers provided by AEL? (Other than Bacteriological)	/		
18. Were samples accepted into the laboratory?	/		
19. When necessary to split samples into other bottles, is it noted in the comments?	/		

Comments: (Note all sample(s) and container (s)" with a "No" checklist response in this comment section)



Advanced
Environmental Laboratories, Inc.

6681 Southpoint Parkway
Jacksonville, Florida 32216
Office (904) 363-9350
Fax (904) 363-9354

Project No.: J1611340
Client Name: Waste Connections
ProjectID: J.E.D. Landfill

I. Receipt

No Exceptions were encountered.

II. Holding Times

Preparation: All holding times were met.
Analysis: All holding times were met.

III. Method

Analysis: SW-846 8260B (SIM)
Preparation: SW-846 5030B

IV. Preparation

Sample preparation proceeded normally.

V. Analysis

A. Calibration: All acceptance criteria were met.
B. Blanks: All acceptance criteria were met.
C. Surrogates: The control criteria were exceeded for surrogate 1,2-dichloroethane-d4 in the LCSD. The associated QC analysis recoveries of target compounds were in control, indicating the analysis was in control. The surrogate outliers were flagged according to the control criteria.
D. Spikes: The matrix spike (MS) recoveries of EDB, DBCP f2 J161276007 were outside control criteria. Recoveries in the Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) were acceptable, which indicates the analytical batch was in control.
E. Internal Standard: All acceptance criteria were met.
F. Samples: Sample analyses proceeded normally.
G. Other:

I certify that this data package is in compliance with the terms and conditions agreed to by Advanced Environmental Laboratories, Inc. and by the client, both technically and for completeness, except for the conditions detailed above. The Quality Assurance Officer, or designee, as verified by the following signature, has authorized release of the data contained in this data package:



Advanced
Environmental Laboratories, Inc.

6681 Southpoint Parkway
Jacksonville, Florida 32216
Office (904) 363-9350
Fax (904) 363-9354

Project No.: J1611340
Client Name: Waste Connections
ProjectID: J.E.D. Landfill

I. Receipt

II. Holding Times

Preparation:

Analysis:

III. Method

Analysis: SW-846 8260B (SIM)

Preparation: SW-846 5030B

IV. Preparation

V. Analysis

A. Calibration:

B. Blanks:

C. Surrogates: The control criteria were exceeded for surrogates 1,2-dichloroethane,d4 and toluene-d8 in LCSD and MS. The control criteria were exceeded for surrogates 1,2-dichloroethane,d4, toluene-d8, and bromofluorobenzene in LCS.

D. Spikes: The spike recovery of DBCP for the Laboratory Control Sample 5uplicate(LCSD) was outside the upper control criterion. The analyte in question was not detected in the associated client samples. The error associated with elevated recovery equates to a high

E. Internal Standard:

F. Samples:

G. Other:

I certify that this data package is in compliance with the terms and conditions agreed to by Advanced Environmental Laboratories, Inc. and by the client, both technically and for completeness, except for the conditions detailed above. The Quality Assurance Officer, or designee, as verified by the following signature, has authorized release of the data contained in this data package:



Advanced
Environmental Laboratories, Inc.

6681 Southpoint Parkway
Jacksonville, Florida 32216
Office (904) 363-9350
Fax (904) 363-9354

Project No.: J1611340
Client Name: Waste Connections
ProjectID: J.E.D. Landfill

I. Receipt

No Exceptions were encountered.

II. Holding Times

Preparation: All holding times were met.
Analysis: All holding times were met.

III. Method

Analysis: EPA 300.0
Preparation: None

IV. Preparation

Multiple samples in client project J1611340 were diluted prior to instrumental analysis. The extracts were highly colored which indicated the need to perform a dilution prior to injection into the instrument.

V. Analysis

A. Calibration: All acceptance criteria were met.
B. Blanks: All acceptance criteria were met.
C. Duplicates:
D. Spikes:
E. Serial Dilution:
F. Samples: Sample analyses proceeded normally.
G. Other:

I certify that this data package is in compliance with the terms and conditions agreed to by Advanced Environmental Laboratories, Inc. and by the client, both technically and for completeness, except for the conditions detailed above. The Quality Assurance Officer, or designee, as verified by the following signature, has authorized release of the data contained in this data package:



Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

December 5, 2016

Kirk Wills
Waste Connections
5135 Madison Avenue
Tampa, FL 33619

RE: Workorder: J1611270 J.E.D. Landfill

Dear Kirk Wills:

Enclosed are the analytical results for sample(s) received by the laboratory on Friday, November 18, 2016. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. The analytical results for the samples contained in this report were submitted for analysis as outlined by the Chain of Custody and results pertain only to these samples.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Craig Myers', is written over a light blue circular background.

Craig Myers
CMyers@AELLab.com

Enclosures

Report ID: 457039 - 7789750

Page 1 of 51

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SAMPLE SUMMARY

Workorder: J1611270 J.E.D. Landfill

Lab ID	Sample ID	Matrix	Date Collected	Date Received
J1611270001	16322-MW-11A	Water	11/17/2016 09:55	11/18/2016 08:30
J1611270002	16322-MW-11B	Water	11/17/2016 09:25	11/18/2016 08:30
J1611270003	16322-MW-12A	Water	11/17/2016 07:50	11/18/2016 08:30
J1611270004	16322-MW-12B	Water	11/17/2016 07:20	11/18/2016 08:30
J1611270005	16322-MW-13A	Water	11/17/2016 06:00	11/18/2016 08:30
J1611270006	16322-MW-13B	Water	11/17/2016 05:30	11/18/2016 08:30
J1611270007	16322-MW-10A	Water	11/17/2016 11:45	11/18/2016 08:30
J1611270008	16322-MW-10B	Water	11/17/2016 11:15	11/18/2016 08:30
J1611270009	16322-MW-9A	Water	11/17/2016 13:25	11/18/2016 08:30
J1611270010	16322-MW-9B	Water	11/17/2016 12:50	11/18/2016 08:30
J1611270011	16322-MW-8A	Water	11/17/2016 15:00	11/18/2016 08:30
J1611270012	16322-MW-8B	Water	11/17/2016 14:30	11/18/2016 08:30
J1611270013	16322-MW-Dup	Water	11/17/2016 12:00	11/18/2016 08:30

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270001**
Sample ID: **16322-MW-11A**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 09:55

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis, Water			Analytical Method: SW-846 6010					
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/23/2016 19:30	J
Barium	0.056		mg/L	1	0.0020	0.00028	11/23/2016 19:30	J
Beryllium	0.00032		mg/L	1	0.00030	0.00013	11/23/2016 19:30	J
Cadmium	0.00032	I	mg/L	1	0.00060	0.00032	11/23/2016 19:30	J
Chromium	0.00099	I	mg/L	1	0.0010	0.00050	11/23/2016 19:30	J
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/23/2016 19:30	J
Copper	0.0039	I	mg/L	1	0.0040	0.0025	11/23/2016 19:30	J
Iron	1.4		mg/L	1	0.20	0.030	11/23/2016 19:30	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/23/2016 19:30	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/23/2016 19:30	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/23/2016 19:30	J
Silver	0.0022	I	mg/L	1	0.0040	0.00044	11/23/2016 19:30	J
Sodium	8.3		mg/L	1	0.20	0.16	11/23/2016 19:30	J
Vanadium	0.0043	V	mg/L	1	0.0015	0.00018	11/23/2016 19:30	J
Zinc	0.0077	I	mg/L	1	0.010	0.0020	11/23/2016 19:30	J
Analysis Desc: SW846 6020B			Preparation Method: SW-846 3010A					
Analysis, Total			Analytical Method: SW-846 6020					
Antimony	0.14	I	ug/L	1	0.70	0.046	11/23/2016 16:55	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 16:55	J
Analysis Desc: SW846 7470A			Preparation Method: SW-846 7470A					
Analysis, Water			Analytical Method: SW-846 7470A					
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/23/2016 14:50	J
VOLATILES								
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 13:09	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/23/2016 13:09	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 13:09	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 13:09	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/23/2016 13:09	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 13:09	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 13:09	J

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270001**
Sample ID: **16322-MW-11A**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 09:55

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 13:09	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/23/2016 13:09	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 13:09	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/23/2016 13:09	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/23/2016 13:09	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/23/2016 13:09	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/23/2016 13:09	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/23/2016 13:09	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/23/2016 13:09	J
Benzene	6.2		ug/L	1	1.0	0.16	11/23/2016 13:09	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/23/2016 13:09	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/23/2016 13:09	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/23/2016 13:09	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/23/2016 13:09	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/23/2016 13:09	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/23/2016 13:09	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/23/2016 13:09	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 13:09	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/23/2016 13:09	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/23/2016 13:09	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 13:09	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 13:09	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 13:09	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/23/2016 13:09	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/23/2016 13:09	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 13:09	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/23/2016 13:09	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 13:09	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/23/2016 13:09	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/23/2016 13:09	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/23/2016 13:09	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/23/2016 13:09	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/23/2016 13:09	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 13:09	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/23/2016 13:09	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/23/2016 13:09	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 13:09	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/23/2016 13:09	J
1,2-Dichloroethane-d4 (S)	37	J4	%	1	77-125		11/23/2016 13:09	
Toluene-d8 (S)	146	J4	%	1	80-121		11/23/2016 13:09	

CERTIFICATE OF ANALYSIS

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270001**
Sample ID: **16322-MW-11A**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 09:55

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Bromofluorobenzene (S)	128	J4	%	1	80-129		11/23/2016 13:09	
Analysis Desc: 8260B SIM Analysis, Water		Preparation Method: SW-846 5030B Analytical Method: SW-846 8260B (SIM)						
1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/23/2016 13:09	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/23/2016 13:09	J
1,2-Dichloroethane-d4 (S)	37	J4	%	1	77-125		11/23/2016 13:09	
Toluene-d8 (S)	146	J4	%	1	80-121		11/23/2016 13:09	
Bromofluorobenzene (S)	128		%	1	80-129		11/23/2016 13:09	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water		Analytical Method: EPA 300.0						
Chloride	7.7		mg/L	1	5.0	0.50	11/19/2016 02:44	J
Nitrate	0.050	U	mg/L	1	0.50	0.050	11/19/2016 02:44	J
Analysis Desc: Ammonia,E350.1,Water		Analytical Method: EPA 350.1						
Ammonia (N)	4.2		mg/L	10	0.10	0.08	11/30/2016 11:09	G
Analysis Desc: Tot Dissolved Solids,SM2540C		Analytical Method: SM 2540 C						
Total Dissolved Solids	220		mg/L	1	10	10	11/23/2016 10:53	J

Lab ID: **J1611270002**
Sample ID: **16322-MW-11B**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 09:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: SW846 6010B Analysis,Water		Preparation Method: SW-846 3010A Analytical Method: SW-846 6010						
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/23/2016 19:35	J
Barium	0.013		mg/L	1	0.0020	0.00028	11/23/2016 19:35	J
Beryllium	0.00016	I	mg/L	1	0.00030	0.00013	11/23/2016 19:35	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/23/2016 19:35	J
Chromium	0.0017		mg/L	1	0.0010	0.00050	11/23/2016 19:35	J

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270002**
Sample ID: **16322-MW-11B**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 09:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/23/2016 19:35	J
Copper	0.0027	I	mg/L	1	0.0040	0.0025	11/23/2016 19:35	J
Iron	0.28		mg/L	1	0.20	0.030	11/23/2016 19:35	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/23/2016 19:35	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/23/2016 19:35	J
Selenium	0.014	I	mg/L	1	0.020	0.0068	11/23/2016 19:35	J
Silver	0.0022	I	mg/L	1	0.0040	0.00044	11/23/2016 19:35	J
Sodium	13		mg/L	1	0.20	0.16	11/23/2016 19:35	J
Vanadium	0.0038	V	mg/L	1	0.0015	0.00018	11/23/2016 19:35	J
Zinc	0.0090	I	mg/L	1	0.010	0.0020	11/23/2016 19:35	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6020

Antimony	0.063	I	ug/L	1	0.70	0.046	11/23/2016 16:59	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 16:59	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A
Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/23/2016 14:52	J
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VOLATILES

Analysis Desc: 8260B Analysis, Water

Preparation Method: SW-846 5030B
Analytical Method: SW-846 8260B

1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 13:36	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/23/2016 13:36	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 13:36	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 13:36	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/23/2016 13:36	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 13:36	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 13:36	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 13:36	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/23/2016 13:36	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 13:36	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/23/2016 13:36	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/23/2016 13:36	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/23/2016 13:36	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/23/2016 13:36	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/23/2016 13:36	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/23/2016 13:36	J

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270002**
Sample ID: **16322-MW-11B**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 09:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Benzene	0.16	U	ug/L	1	1.0	0.16	11/23/2016 13:36	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/23/2016 13:36	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/23/2016 13:36	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/23/2016 13:36	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/23/2016 13:36	J
Carbon Disulfide	0.34	I	ug/L	1	1.0	0.21	11/23/2016 13:36	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/23/2016 13:36	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/23/2016 13:36	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 13:36	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/23/2016 13:36	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/23/2016 13:36	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 13:36	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 13:36	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 13:36	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/23/2016 13:36	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/23/2016 13:36	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 13:36	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/23/2016 13:36	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 13:36	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/23/2016 13:36	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/23/2016 13:36	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/23/2016 13:36	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/23/2016 13:36	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/23/2016 13:36	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 13:36	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/23/2016 13:36	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/23/2016 13:36	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 13:36	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/23/2016 13:36	J
1,2-Dichloroethane-d4 (S)	85		%	1	77-125		11/23/2016 13:36	
Toluene-d8 (S)	102		%	1	80-121		11/23/2016 13:36	
Bromofluorobenzene (S)	109		%	1	80-129		11/23/2016 13:36	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/23/2016 13:36	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/23/2016 13:36	J
1,2-Dichloroethane-d4 (S)	85		%	1	77-125		11/23/2016 13:36	
Toluene-d8 (S)	102		%	1	80-121		11/23/2016 13:36	
Bromofluorobenzene (S)	109		%	1	80-129		11/23/2016 13:36	

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270002**
Sample ID: **16322-MW-11B**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 09:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: IC,E300.0,Water			Analytical Method: EPA 300.0					
Chloride	10		mg/L	1	5.0	0.50	11/19/2016 03:01	J
Nitrate	0.050	U	mg/L	1	0.50	0.050	11/19/2016 03:01	J
Analysis Desc: Ammonia,E350.1,Water			Analytical Method: EPA 350.1					
Ammonia (N)	0.07		mg/L	1	0.01	0.01	11/30/2016 11:09	G
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540 C					
Total Dissolved Solids	58		mg/L	1	10	10	11/23/2016 10:53	J

Lab ID: **J1611270003**
Sample ID: **16322-MW-12A**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 07:50

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B		Preparation Method: SW-846 3010A						
Analysis,Water		Analytical Method: SW-846 6010						
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/23/2016 19:39	J
Barium	0.026		mg/L	1	0.0020	0.00028	11/23/2016 19:39	J
Beryllium	0.00023	I	mg/L	1	0.00030	0.00013	11/23/2016 19:39	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/23/2016 19:39	J
Chromium	0.00084	I	mg/L	1	0.0010	0.00050	11/23/2016 19:39	J
Cobalt	0.0011	I	mg/L	1	0.0040	0.00060	11/23/2016 19:39	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/23/2016 19:39	J
Iron	2.4		mg/L	1	0.20	0.030	11/23/2016 19:39	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/23/2016 19:39	J
Nickel	0.0024	I	mg/L	1	0.0065	0.0011	11/23/2016 19:39	J
Selenium	0.0093	I	mg/L	1	0.020	0.0068	11/23/2016 19:39	J
Silver	0.0017	I	mg/L	1	0.0040	0.00044	11/23/2016 19:39	J
Sodium	17		mg/L	1	0.20	0.16	11/23/2016 19:39	J
Vanadium	0.0033	V	mg/L	1	0.0015	0.00018	11/23/2016 19:39	J
Zinc	0.0071	I	mg/L	1	0.010	0.0020	11/23/2016 19:39	J

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270003**
Sample ID: **16322-MW-12A**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 07:50

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: SW846 6020B		Preparation Method: SW-846 3010A						
Analysis, Total		Analytical Method: SW-846 6020						
Antimony	0.11	I	ug/L	1	0.70	0.046	11/23/2016 17:03	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 17:03	J
Analysis Desc: SW846 7470A		Preparation Method: SW-846 7470A						
Analysis, Water		Analytical Method: SW-846 7470A						
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/23/2016 14:55	J

VOLATILES

Analysis Desc: 8260B Analysis, Water		Preparation Method: SW-846 5030B						
		Analytical Method: SW-846 8260B						
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 14:03	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/23/2016 14:03	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 14:03	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 14:03	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/23/2016 14:03	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 14:03	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 14:03	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 14:03	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/23/2016 14:03	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 14:03	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/23/2016 14:03	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/23/2016 14:03	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/23/2016 14:03	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/23/2016 14:03	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/23/2016 14:03	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/23/2016 14:03	J
Benzene	7.0	U	ug/L	1	1.0	0.16	11/23/2016 14:03	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/23/2016 14:03	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/23/2016 14:03	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/23/2016 14:03	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/23/2016 14:03	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/23/2016 14:03	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/23/2016 14:03	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/23/2016 14:03	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 14:03	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/23/2016 14:03	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/23/2016 14:03	J

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270003**
Sample ID: **16322-MW-12A**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 07:50

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 14:03	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 14:03	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 14:03	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/23/2016 14:03	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/23/2016 14:03	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 14:03	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/23/2016 14:03	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 14:03	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/23/2016 14:03	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/23/2016 14:03	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/23/2016 14:03	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/23/2016 14:03	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/23/2016 14:03	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 14:03	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/23/2016 14:03	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/23/2016 14:03	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 14:03	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/23/2016 14:03	J
1,2-Dichloroethane-d4 (S)	67	J4	%	1	77-125		11/23/2016 14:03	
Toluene-d8 (S)	109		%	1	80-121		11/23/2016 14:03	
Bromofluorobenzene (S)	113		%	1	80-129		11/23/2016 14:03	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/23/2016 14:03	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/23/2016 14:03	J
1,2-Dichloroethane-d4 (S)	67	J4	%	1	77-125		11/23/2016 14:03	
Toluene-d8 (S)	109		%	1	80-121		11/23/2016 14:03	
Bromofluorobenzene (S)	113		%	1	80-129		11/23/2016 14:03	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	35		mg/L	1	5.0	0.50	11/19/2016 03:17	J
Nitrate	0.050	U	mg/L	1	0.50	0.050	11/19/2016 03:17	J

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	1.1		mg/L	2	0.02	0.02	11/30/2016 11:09	G
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Analysis Desc: Tot Dissolved
Solids,SM2540C

Analytical Method: SM 2540 C

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270003**
Sample ID: **16322-MW-12A**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 07:50

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Total Dissolved Solids	110		mg/L	1	10	10	11/23/2016 10:53	J

Lab ID: **J1611270004**
Sample ID: **16322-MW-12B**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 07:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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METALS

Analysis Desc: SW846 6010B
Analysis, Water

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6010

Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/23/2016 19:43	J
Barium	0.023		mg/L	1	0.0020	0.00028	11/23/2016 19:43	J
Beryllium	0.00014	I	mg/L	1	0.00030	0.00013	11/23/2016 19:43	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/23/2016 19:43	J
Chromium	0.00050	U	mg/L	1	0.0010	0.00050	11/23/2016 19:43	J
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/23/2016 19:43	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/23/2016 19:43	J
Iron	0.75		mg/L	1	0.20	0.030	11/23/2016 19:43	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/23/2016 19:43	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/23/2016 19:43	J
Selenium	0.0095	I	mg/L	1	0.020	0.0068	11/23/2016 19:43	J
Silver	0.0017	I	mg/L	1	0.0040	0.00044	11/23/2016 19:43	J
Sodium	8.7		mg/L	1	0.20	0.16	11/23/2016 19:43	J
Vanadium	0.0023	V	mg/L	1	0.0015	0.00018	11/23/2016 19:43	J
Zinc	0.013		mg/L	1	0.010	0.0020	11/23/2016 19:43	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6020

Antimony	0.046	U	ug/L	1	0.70	0.046	11/23/2016 17:06	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 17:06	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A
Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/23/2016 14:57	J
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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270004**
Sample ID: **16322-MW-12B**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 07:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
VOLATILES								
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 14:30	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/23/2016 14:30	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 14:30	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 14:30	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/23/2016 14:30	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 14:30	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 14:30	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 14:30	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/23/2016 14:30	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 14:30	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/23/2016 14:30	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/23/2016 14:30	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/23/2016 14:30	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/23/2016 14:30	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/23/2016 14:30	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/23/2016 14:30	J
Benzene	0.16	U	ug/L	1	1.0	0.16	11/23/2016 14:30	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/23/2016 14:30	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/23/2016 14:30	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/23/2016 14:30	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/23/2016 14:30	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/23/2016 14:30	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/23/2016 14:30	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/23/2016 14:30	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 14:30	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/23/2016 14:30	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/23/2016 14:30	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 14:30	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 14:30	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 14:30	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/23/2016 14:30	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/23/2016 14:30	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 14:30	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/23/2016 14:30	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 14:30	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/23/2016 14:30	J

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270004**
Sample ID: **16322-MW-12B**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 07:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/23/2016 14:30	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/23/2016 14:30	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/23/2016 14:30	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/23/2016 14:30	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 14:30	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/23/2016 14:30	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/23/2016 14:30	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 14:30	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/23/2016 14:30	J
1,2-Dichloroethane-d4 (S)	71	J4	%	1	77-125		11/23/2016 14:30	
Toluene-d8 (S)	108		%	1	80-121		11/23/2016 14:30	
Bromofluorobenzene (S)	111		%	1	80-129		11/23/2016 14:30	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/23/2016 14:30	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/23/2016 14:30	J
1,2-Dichloroethane-d4 (S)	71	J4	%	1	77-125		11/23/2016 14:30	
Toluene-d8 (S)	108		%	1	80-121		11/23/2016 14:30	
Bromofluorobenzene (S)	111		%	1	80-129		11/23/2016 14:30	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	15	J4	mg/L	1	5.0	0.50	11/19/2016 04:37	J
Nitrate	0.050	U	mg/L	1	0.50	0.050	11/19/2016 04:37	J

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	0.11		mg/L	1	0.01	0.01	11/30/2016 11:09	G
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Analysis Desc: Tot Dissolved
Solids,SM2540C

Analytical Method: SM 2540 C

Total Dissolved Solids	57		mg/L	1	10	10	11/23/2016 10:53	J
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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270005**
Sample ID: **16322-MW-13A**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 06:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis, Water			Analytical Method: SW-846 6010					
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/23/2016 19:48	J
Barium	0.072		mg/L	1	0.0020	0.00028	11/23/2016 19:48	J
Beryllium	0.00019	I	mg/L	1	0.00030	0.00013	11/23/2016 19:48	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/23/2016 19:48	J
Chromium	0.0013		mg/L	1	0.0010	0.00050	11/23/2016 19:48	J
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/23/2016 19:48	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/23/2016 19:48	J
Iron	6.5		mg/L	1	0.20	0.030	11/23/2016 19:48	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/23/2016 19:48	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/23/2016 19:48	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/23/2016 19:48	J
Silver	0.0018	I	mg/L	1	0.0040	0.00044	11/23/2016 19:48	J
Sodium	64		mg/L	1	0.20	0.16	11/23/2016 19:48	J
Vanadium	0.0050	V	mg/L	1	0.0015	0.00018	11/23/2016 19:48	J
Zinc	0.010		mg/L	1	0.010	0.0020	11/23/2016 19:48	J
Analysis Desc: SW846 6020B			Preparation Method: SW-846 3010A					
Analysis, Total			Analytical Method: SW-846 6020					
Antimony	0.048	I	ug/L	1	0.70	0.046	11/23/2016 17:10	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 17:10	J
Analysis Desc: SW846 7470A			Preparation Method: SW-846 7470A					
Analysis, Water			Analytical Method: SW-846 7470A					
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/23/2016 15:05	J
VOLATILES								
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 14:57	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/23/2016 14:57	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 14:57	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 14:57	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/23/2016 14:57	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 14:57	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 14:57	J

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270005**
Sample ID: **16322-MW-13A**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 06:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 14:57	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/23/2016 14:57	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 14:57	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/23/2016 14:57	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/23/2016 14:57	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/23/2016 14:57	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/23/2016 14:57	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/23/2016 14:57	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/23/2016 14:57	J
Benzene	3.9		ug/L	1	1.0	0.16	11/23/2016 14:57	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/23/2016 14:57	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/23/2016 14:57	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/23/2016 14:57	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/23/2016 14:57	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/23/2016 14:57	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/23/2016 14:57	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/23/2016 14:57	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 14:57	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/23/2016 14:57	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/23/2016 14:57	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 14:57	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 14:57	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 14:57	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/23/2016 14:57	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/23/2016 14:57	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 14:57	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/23/2016 14:57	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 14:57	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/23/2016 14:57	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/23/2016 14:57	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/23/2016 14:57	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/23/2016 14:57	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/23/2016 14:57	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 14:57	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/23/2016 14:57	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/23/2016 14:57	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 14:57	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/23/2016 14:57	J
1,2-Dichloroethane-d4 (S)	70	J4	%	1	77-125		11/23/2016 14:57	
Toluene-d8 (S)	110		%	1	80-121		11/23/2016 14:57	

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270005**
Sample ID: **16322-MW-13A**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 06:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Bromofluorobenzene (S)	115		%	1	80-129		11/23/2016 14:57	
Analysis Desc: 8260B SIM Analysis, Water Preparation Method: SW-846 5030B Analytical Method: SW-846 8260B (SIM)								
1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/23/2016 14:57	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/23/2016 14:57	J
1,2-Dichloroethane-d4 (S)	70	J4	%	1	77-125		11/23/2016 14:57	
Toluene-d8 (S)	110		%	1	80-121		11/23/2016 14:57	
Bromofluorobenzene (S)	115		%	1	80-129		11/23/2016 14:57	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water Analytical Method: EPA 300.0								
Chloride	140		mg/L	1	5.0	0.50	11/19/2016 05:09	J
Nitrate	0.050	U	mg/L	1	0.50	0.050	11/19/2016 05:09	J
Analysis Desc: Ammonia,E350.1,Water Analytical Method: EPA 350.1								
Ammonia (N)	1.7		mg/L	2	0.02	0.02	11/30/2016 11:09	G
Analysis Desc: Tot Dissolved Solids,SM2540C Analytical Method: SM 2540 C								
Total Dissolved Solids	380		mg/L	1	10	10	11/23/2016 10:53	J

Lab ID: **J1611270006**
Sample ID: **16322-MW-13B**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 05:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Water Preparation Method: SW-846 3010A Analytical Method: SW-846 6010								
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/23/2016 19:52	J
Barium	0.017		mg/L	1	0.0020	0.00028	11/23/2016 19:52	J
Beryllium	0.00015	I	mg/L	1	0.00030	0.00013	11/23/2016 19:52	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/23/2016 19:52	J
Chromium	0.00054	I	mg/L	1	0.0010	0.00050	11/23/2016 19:52	J

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270006**
Sample ID: **16322-MW-13B**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 05:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/23/2016 19:52	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/23/2016 19:52	J
Iron	1.2		mg/L	1	0.20	0.030	11/23/2016 19:52	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/23/2016 19:52	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/23/2016 19:52	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/23/2016 19:52	J
Silver	0.0017	I	mg/L	1	0.0040	0.00044	11/23/2016 19:52	J
Sodium	13		mg/L	1	0.20	0.16	11/23/2016 19:52	J
Vanadium	0.0017	V	mg/L	1	0.0015	0.00018	11/23/2016 19:52	J
Zinc	0.011		mg/L	1	0.010	0.0020	11/23/2016 19:52	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6020

Antimony	0.046	U	ug/L	1	0.70	0.046	11/23/2016 17:13	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 17:13	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A
Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/23/2016 15:07	J
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VOLATILES

Analysis Desc: 8260B Analysis, Water

Preparation Method: SW-846 5030B
Analytical Method: SW-846 8260B

1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 15:24	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/23/2016 15:24	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 15:24	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 15:24	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/23/2016 15:24	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 15:24	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 15:24	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 15:24	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/23/2016 15:24	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 15:24	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/23/2016 15:24	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/23/2016 15:24	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/23/2016 15:24	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/23/2016 15:24	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/23/2016 15:24	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/23/2016 15:24	J

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270006**
Sample ID: **16322-MW-13B**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 05:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Benzene	0.16	U	ug/L	1	1.0	0.16	11/23/2016 15:24	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/23/2016 15:24	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/23/2016 15:24	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/23/2016 15:24	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/23/2016 15:24	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/23/2016 15:24	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/23/2016 15:24	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/23/2016 15:24	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 15:24	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/23/2016 15:24	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/23/2016 15:24	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 15:24	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 15:24	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 15:24	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/23/2016 15:24	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/23/2016 15:24	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 15:24	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/23/2016 15:24	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 15:24	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/23/2016 15:24	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/23/2016 15:24	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/23/2016 15:24	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/23/2016 15:24	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/23/2016 15:24	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 15:24	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/23/2016 15:24	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/23/2016 15:24	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 15:24	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/23/2016 15:24	J
1,2-Dichloroethane-d4 (S)	38	J4	%	1	77-125		11/23/2016 15:24	
Toluene-d8 (S)	143	J4	%	1	80-121		11/23/2016 15:24	
Bromofluorobenzene (S)	128	J4	%	1	80-129		11/23/2016 15:24	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/23/2016 15:24	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/23/2016 15:24	J
1,2-Dichloroethane-d4 (S)	38	J4	%	1	77-125		11/23/2016 15:24	
Toluene-d8 (S)	143	J4	%	1	80-121		11/23/2016 15:24	
Bromofluorobenzene (S)	128		%	1	80-129		11/23/2016 15:24	

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270006**
Sample ID: **16322-MW-13B**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 05:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: IC,E300.0,Water			Analytical Method: EPA 300.0					
Chloride	24		mg/L	1	5.0	0.50	11/19/2016 05:25	J
Nitrate	0.050	U	mg/L	1	0.50	0.050	11/19/2016 05:25	J
Analysis Desc: Ammonia,E350.1,Water			Analytical Method: EPA 350.1					
Ammonia (N)	0.16		mg/L	1	0.01	0.01	11/30/2016 11:09	G
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540 C					
Total Dissolved Solids	70		mg/L	1	10	10	11/23/2016 10:53	J

Lab ID: **J1611270007**
Sample ID: **16322-MW-10A**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 11:45

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Water			Preparation Method: SW-846 3010A Analytical Method: SW-846 6010					
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/23/2016 19:56	J
Barium	0.058		mg/L	1	0.0020	0.00028	11/23/2016 19:56	J
Beryllium	0.00024	I	mg/L	1	0.00030	0.00013	11/23/2016 19:56	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/23/2016 19:56	J
Chromium	0.00068	I	mg/L	1	0.0010	0.00050	11/23/2016 19:56	J
Cobalt	0.0014	I	mg/L	1	0.0040	0.00060	11/23/2016 19:56	J
Copper	0.0029	I	mg/L	1	0.0040	0.0025	11/23/2016 19:56	J
Iron	2.5		mg/L	1	0.20	0.030	11/23/2016 19:56	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/23/2016 19:56	J
Nickel	0.0013	I	mg/L	1	0.0065	0.0011	11/23/2016 19:56	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/23/2016 19:56	J
Silver	0.0025	I	mg/L	1	0.0040	0.00044	11/23/2016 19:56	J
Sodium	34		mg/L	1	0.20	0.16	11/23/2016 19:56	J
Vanadium	0.0030	V	mg/L	1	0.0015	0.00018	11/23/2016 19:56	J
Zinc	0.010		mg/L	1	0.010	0.0020	11/23/2016 19:56	J

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270007**
Sample ID: **16322-MW-10A**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 11:45

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: SW846 6020B		Preparation Method: SW-846 3010A						
Analysis, Total		Analytical Method: SW-846 6020						
Antimony	0.046	U	ug/L	1	0.70	0.046	11/23/2016 17:17	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 17:17	J
Analysis Desc: SW846 7470A		Preparation Method: SW-846 7470A						
Analysis, Water		Analytical Method: SW-846 7470A						
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/23/2016 15:09	J

VOLATILES

Analysis Desc: 8260B Analysis, Water		Preparation Method: SW-846 5030B						
		Analytical Method: SW-846 8260B						
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 15:51	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/23/2016 15:51	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 15:51	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 15:51	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/23/2016 15:51	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 15:51	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 15:51	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 15:51	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/23/2016 15:51	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 15:51	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/23/2016 15:51	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/23/2016 15:51	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/23/2016 15:51	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/23/2016 15:51	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/23/2016 15:51	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/23/2016 15:51	J
Benzene	3.5	U	ug/L	1	1.0	0.16	11/23/2016 15:51	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/23/2016 15:51	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/23/2016 15:51	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/23/2016 15:51	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/23/2016 15:51	J
Carbon Disulfide	0.33	I	ug/L	1	1.0	0.21	11/23/2016 15:51	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/23/2016 15:51	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/23/2016 15:51	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 15:51	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/23/2016 15:51	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/23/2016 15:51	J

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270007**
Sample ID: **16322-MW-10A**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 11:45

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 15:51	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 15:51	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 15:51	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/23/2016 15:51	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/23/2016 15:51	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 15:51	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/23/2016 15:51	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 15:51	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/23/2016 15:51	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/23/2016 15:51	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/23/2016 15:51	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/23/2016 15:51	J
Xylene (Total)	0.62	I	ug/L	1	2.0	0.53	11/23/2016 15:51	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 15:51	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/23/2016 15:51	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/23/2016 15:51	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 15:51	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/23/2016 15:51	J
1,2-Dichloroethane-d4 (S)	70	J4	%	1	77-125		11/23/2016 15:51	
Toluene-d8 (S)	110		%	1	80-121		11/23/2016 15:51	
Bromofluorobenzene (S)	115		%	1	80-129		11/23/2016 15:51	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/23/2016 15:51	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/23/2016 15:51	J
1,2-Dichloroethane-d4 (S)	70	J4	%	1	77-125		11/23/2016 15:51	
Toluene-d8 (S)	110		%	1	80-121		11/23/2016 15:51	
Bromofluorobenzene (S)	115		%	1	80-129		11/23/2016 15:51	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	23		mg/L	1	5.0	0.50	11/19/2016 10:15	J
Nitrate	0.050	U	mg/L	1	0.50	0.050	11/19/2016 10:15	J

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	6.0		mg/L	20	0.20	0.16	11/30/2016 11:09	G
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Analysis Desc: Tot Dissolved
Solids,SM2540C

Analytical Method: SM 2540 C

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270007**
Sample ID: **16322-MW-10A**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 11:45

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Total Dissolved Solids	370		mg/L	1	10	10	11/23/2016 10:53	J

Lab ID: **J1611270008**
Sample ID: **16322-MW-10B**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 11:15

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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METALS

Analysis Desc: SW846 6010B
Analysis, Water

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6010

Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/23/2016 20:01	J
Barium	0.044		mg/L	1	0.0020	0.00028	11/23/2016 20:01	J
Beryllium	0.0018		mg/L	1	0.00030	0.00013	11/23/2016 20:01	J
Cadmium	0.00046	I	mg/L	1	0.00060	0.00032	11/23/2016 20:01	J
Chromium	0.0011		mg/L	1	0.0010	0.00050	11/23/2016 20:01	J
Cobalt	0.0052		mg/L	1	0.0040	0.00060	11/23/2016 20:01	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/23/2016 20:01	J
Iron	8.5		mg/L	1	0.20	0.030	11/23/2016 20:01	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/23/2016 20:01	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/23/2016 20:01	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/23/2016 20:01	J
Silver	0.0021	I	mg/L	1	0.0040	0.00044	11/23/2016 20:01	J
Sodium	30		mg/L	1	0.20	0.16	11/23/2016 20:01	J
Vanadium	0.0049	V	mg/L	1	0.0015	0.00018	11/23/2016 20:01	J
Zinc	0.0066	I	mg/L	1	0.010	0.0020	11/23/2016 20:01	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6020

Antimony	0.049	I	ug/L	1	0.70	0.046	11/23/2016 17:21	J
Thallium	0.059	I	ug/L	1	0.20	0.057	11/23/2016 17:21	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A
Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/23/2016 15:12	J
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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270008**
Sample ID: **16322-MW-10B**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 11:15

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
VOLATILES								
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 16:19	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/23/2016 16:19	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 16:19	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 16:19	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/23/2016 16:19	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 16:19	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 16:19	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 16:19	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/23/2016 16:19	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 16:19	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/23/2016 16:19	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/23/2016 16:19	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/23/2016 16:19	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/23/2016 16:19	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/23/2016 16:19	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/23/2016 16:19	J
Benzene	5.6		ug/L	1	1.0	0.16	11/23/2016 16:19	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/23/2016 16:19	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/23/2016 16:19	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/23/2016 16:19	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/23/2016 16:19	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/23/2016 16:19	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/23/2016 16:19	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/23/2016 16:19	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 16:19	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/23/2016 16:19	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/23/2016 16:19	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 16:19	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 16:19	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 16:19	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/23/2016 16:19	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/23/2016 16:19	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 16:19	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/23/2016 16:19	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 16:19	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/23/2016 16:19	J

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270008**
Sample ID: **16322-MW-10B**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 11:15

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/23/2016 16:19	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/23/2016 16:19	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/23/2016 16:19	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/23/2016 16:19	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 16:19	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/23/2016 16:19	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/23/2016 16:19	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 16:19	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/23/2016 16:19	J
1,2-Dichloroethane-d4 (S)	40	J4	%	1	77-125		11/23/2016 16:19	
Toluene-d8 (S)	145	J4	%	1	80-121		11/23/2016 16:19	
Bromofluorobenzene (S)	149	J4	%	1	80-129		11/23/2016 16:19	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/23/2016 16:19	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/23/2016 16:19	J
1,2-Dichloroethane-d4 (S)	40	J4	%	1	77-125		11/23/2016 16:19	
Toluene-d8 (S)	145	J4	%	1	80-121		11/23/2016 16:19	
Bromofluorobenzene (S)	149	J4	%	1	80-129		11/23/2016 16:19	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	31		mg/L	1	5.0	0.50	11/19/2016 09:59	J
Nitrate	0.050	U	mg/L	1	0.50	0.050	11/19/2016 09:59	J

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	5.8		mg/L	10	0.10	0.08	11/30/2016 11:09	G
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Analysis Desc: Tot Dissolved
Solids,SM2540C

Analytical Method: SM 2540 C

Total Dissolved Solids	700		mg/L	1	10	10	11/23/2016 10:53	J
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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270009**
Sample ID: **16322-MW-9A**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 13:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis, Water			Analytical Method: SW-846 6010					
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/23/2016 20:05	J
Barium	0.027		mg/L	1	0.0020	0.00028	11/23/2016 20:05	J
Beryllium	0.00018	I	mg/L	1	0.00030	0.00013	11/23/2016 20:05	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/23/2016 20:05	J
Chromium	0.00089	I	mg/L	1	0.0010	0.00050	11/23/2016 20:05	J
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/23/2016 20:05	J
Copper	0.0035	I	mg/L	1	0.0040	0.0025	11/23/2016 20:05	J
Iron	1.2		mg/L	1	0.20	0.030	11/23/2016 20:05	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/23/2016 20:05	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/23/2016 20:05	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/23/2016 20:05	J
Silver	0.0021	I	mg/L	1	0.0040	0.00044	11/23/2016 20:05	J
Sodium	20		mg/L	1	0.20	0.16	11/23/2016 20:05	J
Vanadium	0.0029	V	mg/L	1	0.0015	0.00018	11/23/2016 20:05	J
Zinc	0.0066	I	mg/L	1	0.010	0.0020	11/23/2016 20:05	J
Analysis Desc: SW846 6020B			Preparation Method: SW-846 3010A					
Analysis, Total			Analytical Method: SW-846 6020					
Antimony	0.055	I	ug/L	1	0.70	0.046	11/23/2016 17:24	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 17:24	J
Analysis Desc: SW846 7470A			Preparation Method: SW-846 7470A					
Analysis, Water			Analytical Method: SW-846 7470A					
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/23/2016 15:14	J
VOLATILES								
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 16:46	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/23/2016 16:46	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 16:46	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 16:46	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/23/2016 16:46	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 16:46	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 16:46	J

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270009**
Sample ID: **16322-MW-9A**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 13:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 16:46	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/23/2016 16:46	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 16:46	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/23/2016 16:46	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/23/2016 16:46	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/23/2016 16:46	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/23/2016 16:46	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/23/2016 16:46	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/23/2016 16:46	J
Benzene	7.6		ug/L	1	1.0	0.16	11/23/2016 16:46	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/23/2016 16:46	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/23/2016 16:46	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/23/2016 16:46	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/23/2016 16:46	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/23/2016 16:46	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/23/2016 16:46	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/23/2016 16:46	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 16:46	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/23/2016 16:46	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/23/2016 16:46	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 16:46	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 16:46	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 16:46	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/23/2016 16:46	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/23/2016 16:46	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 16:46	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/23/2016 16:46	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 16:46	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/23/2016 16:46	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/23/2016 16:46	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/23/2016 16:46	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/23/2016 16:46	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/23/2016 16:46	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 16:46	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/23/2016 16:46	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/23/2016 16:46	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 16:46	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/23/2016 16:46	J
1,2-Dichloroethane-d4 (S)	45	J4	%	1	77-125		11/23/2016 16:46	
Toluene-d8 (S)	141	J4	%	1	80-121		11/23/2016 16:46	

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270009**
Sample ID: **16322-MW-9A**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 13:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Bromofluorobenzene (S)	135	J4	%	1	80-129		11/23/2016 16:46	
Analysis Desc: 8260B SIM Analysis, Water		Preparation Method: SW-846 5030B Analytical Method: SW-846 8260B (SIM)						
1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/23/2016 16:46	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/23/2016 16:46	J
1,2-Dichloroethane-d4 (S)	45	J4	%	1	77-125		11/23/2016 16:46	
Toluene-d8 (S)	141	J4	%	1	80-121		11/23/2016 16:46	
Bromofluorobenzene (S)	135	J4	%	1	80-129		11/23/2016 16:46	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water		Analytical Method: EPA 300.0						
Chloride	11		mg/L	1	5.0	0.50	11/19/2016 10:31	J
Nitrate	0.16	I	mg/L	1	0.50	0.050	11/19/2016 10:31	J
Analysis Desc: Ammonia,E350.1,Water		Analytical Method: EPA 350.1						
Ammonia (N)	4.7		mg/L	10	0.10	0.08	11/30/2016 11:09	G
Analysis Desc: Tot Dissolved Solids,SM2540C		Analytical Method: SM 2540 C						
Total Dissolved Solids	230		mg/L	1	10	10	11/23/2016 10:53	J

Lab ID: **J1611270010**
Sample ID: **16322-MW-9B**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 12:50

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: SW846 6010B Analysis,Water		Preparation Method: SW-846 3010A Analytical Method: SW-846 6010						
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/23/2016 20:31	J
Barium	0.038		mg/L	1	0.0020	0.00028	11/23/2016 20:31	J
Beryllium	0.0011		mg/L	1	0.00030	0.00013	11/23/2016 20:31	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/23/2016 20:31	J
Chromium	0.0019		mg/L	1	0.0010	0.00050	11/23/2016 20:31	J

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270010**
Sample ID: **16322-MW-9B**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 12:50

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Cobalt	0.0038	I	mg/L	1	0.0040	0.00060	11/23/2016 20:31	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/23/2016 20:31	J
Iron	14		mg/L	1	0.20	0.030	11/23/2016 20:31	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/23/2016 20:31	J
Nickel	0.0015	I	mg/L	1	0.0065	0.0011	11/23/2016 20:31	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/23/2016 20:31	J
Silver	0.0019	I	mg/L	1	0.0040	0.00044	11/23/2016 20:31	J
Sodium	24		mg/L	1	0.20	0.16	11/23/2016 20:31	J
Vanadium	0.0049	V	mg/L	1	0.0015	0.00018	11/23/2016 20:31	J
Zinc	0.0055	I	mg/L	1	0.010	0.0020	11/23/2016 20:31	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6020

Antimony	0.047	I	ug/L	1	0.70	0.046	11/23/2016 17:28	J
Thallium	0.063	I	ug/L	1	0.20	0.057	11/23/2016 17:28	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A
Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/23/2016 15:16	J
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VOLATILES

Analysis Desc: 8260B Analysis, Water

Preparation Method: SW-846 5030B
Analytical Method: SW-846 8260B

1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 17:13	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/23/2016 17:13	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 17:13	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 17:13	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/23/2016 17:13	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 17:13	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 17:13	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 17:13	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/23/2016 17:13	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 17:13	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/23/2016 17:13	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/23/2016 17:13	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/23/2016 17:13	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/23/2016 17:13	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/23/2016 17:13	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/23/2016 17:13	J

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270010**
Sample ID: **16322-MW-9B**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 12:50

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Benzene	0.16	U	ug/L	1	1.0	0.16	11/23/2016 17:13	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/23/2016 17:13	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/23/2016 17:13	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/23/2016 17:13	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/23/2016 17:13	J
Carbon Disulfide	0.31	I	ug/L	1	1.0	0.21	11/23/2016 17:13	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/23/2016 17:13	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/23/2016 17:13	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 17:13	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/23/2016 17:13	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/23/2016 17:13	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 17:13	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 17:13	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 17:13	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/23/2016 17:13	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/23/2016 17:13	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 17:13	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/23/2016 17:13	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 17:13	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/23/2016 17:13	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/23/2016 17:13	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/23/2016 17:13	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/23/2016 17:13	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/23/2016 17:13	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 17:13	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/23/2016 17:13	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/23/2016 17:13	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 17:13	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/23/2016 17:13	J
1,2-Dichloroethane-d4 (S)	69	J4	%	1	77-125		11/23/2016 17:13	
Toluene-d8 (S)	108		%	1	80-121		11/23/2016 17:13	
Bromofluorobenzene (S)	113		%	1	80-129		11/23/2016 17:13	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/23/2016 17:13	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/23/2016 17:13	J
1,2-Dichloroethane-d4 (S)	69	J4	%	1	77-125		11/23/2016 17:13	
Toluene-d8 (S)	108		%	1	80-121		11/23/2016 17:13	
Bromofluorobenzene (S)	113		%	1	80-129		11/23/2016 17:13	

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270010**
Sample ID: **16322-MW-9B**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 12:50

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: IC,E300.0,Water			Analytical Method: EPA 300.0					
Chloride	53		mg/L	1	5.0	0.50	11/19/2016 10:47	J
Nitrate	0.050	U	mg/L	1	0.50	0.050	11/19/2016 10:47	J
Analysis Desc: Ammonia,E350.1,Water			Analytical Method: EPA 350.1					
Ammonia (N)	1.2		mg/L	2	0.02	0.02	11/30/2016 11:09	G
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540 C					
Total Dissolved Solids	440		mg/L	1	10	10	11/23/2016 10:53	J

Lab ID: **J1611270011**
Sample ID: **16322-MW-8A**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 15:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Water			Preparation Method: SW-846 3010A					
			Analytical Method: SW-846 6010					
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/23/2016 20:36	J
Barium	0.045		mg/L	1	0.0020	0.00028	11/23/2016 20:36	J
Beryllium	0.00032		mg/L	1	0.00030	0.00013	11/23/2016 20:36	J
Cadmium	0.00075		mg/L	1	0.00060	0.00032	11/23/2016 20:36	J
Chromium	0.0022		mg/L	1	0.0010	0.00050	11/23/2016 20:36	J
Cobalt	0.0032	I	mg/L	1	0.0040	0.00060	11/23/2016 20:36	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/23/2016 20:36	J
Iron	14		mg/L	1	0.20	0.030	11/23/2016 20:36	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/23/2016 20:36	J
Nickel	0.0040	I	mg/L	1	0.0065	0.0011	11/23/2016 20:36	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/23/2016 20:36	J
Silver	0.0012	I	mg/L	1	0.0040	0.00044	11/23/2016 20:36	J
Sodium	8.6		mg/L	1	0.20	0.16	11/23/2016 20:36	J
Vanadium	0.0047	V	mg/L	1	0.0015	0.00018	11/23/2016 20:36	J
Zinc	0.0062	I	mg/L	1	0.010	0.0020	11/23/2016 20:36	J

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270011**
Sample ID: **16322-MW-8A**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 15:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: SW846 6020B		Preparation Method: SW-846 3010A						
Analysis, Total		Analytical Method: SW-846 6020						
Antimony	0.15	I	ug/L	1	0.70	0.046	11/23/2016 17:39	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 17:39	J
Analysis Desc: SW846 7470A		Preparation Method: SW-846 7470A						
Analysis, Water		Analytical Method: SW-846 7470A						
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/23/2016 15:19	J

VOLATILES

Analysis Desc: 8260B Analysis, Water		Preparation Method: SW-846 5030B						
		Analytical Method: SW-846 8260B						
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 17:40	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/23/2016 17:40	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 17:40	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 17:40	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/23/2016 17:40	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 17:40	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 17:40	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 17:40	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/23/2016 17:40	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 17:40	J
1,4-Dichlorobenzene	0.97	I	ug/L	1	1.0	0.22	11/23/2016 17:40	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/23/2016 17:40	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/23/2016 17:40	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/23/2016 17:40	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/23/2016 17:40	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/23/2016 17:40	J
Benzene	4.9	U	ug/L	1	1.0	0.16	11/23/2016 17:40	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/23/2016 17:40	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/23/2016 17:40	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/23/2016 17:40	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/23/2016 17:40	J
Carbon Disulfide	0.48	I	ug/L	1	1.0	0.21	11/23/2016 17:40	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/23/2016 17:40	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/23/2016 17:40	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 17:40	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/23/2016 17:40	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/23/2016 17:40	J

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270011**
Sample ID: **16322-MW-8A**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 15:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 17:40	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 17:40	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 17:40	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/23/2016 17:40	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/23/2016 17:40	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 17:40	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/23/2016 17:40	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 17:40	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/23/2016 17:40	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/23/2016 17:40	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/23/2016 17:40	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/23/2016 17:40	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/23/2016 17:40	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 17:40	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/23/2016 17:40	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/23/2016 17:40	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 17:40	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/23/2016 17:40	J
1,2-Dichloroethane-d4 (S)	68	J4	%	1	77-125		11/23/2016 17:40	
Toluene-d8 (S)	108		%	1	80-121		11/23/2016 17:40	
Bromofluorobenzene (S)	113		%	1	80-129		11/23/2016 17:40	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/23/2016 17:40	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/23/2016 17:40	J
1,2-Dichloroethane-d4 (S)	68	J4	%	1	77-125		11/23/2016 17:40	
Toluene-d8 (S)	108		%	1	80-121		11/23/2016 17:40	
Bromofluorobenzene (S)	113		%	1	80-129		11/23/2016 17:40	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	7.5		mg/L	1	5.0	0.50	11/19/2016 11:03	J
Nitrate	0.050	U	mg/L	1	0.50	0.050	11/19/2016 11:03	J

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	5.4		mg/L	20	0.20	0.16	11/30/2016 11:09	G
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Analysis Desc: Tot Dissolved
Solids,SM2540C

Analytical Method: SM 2540 C

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270011**
Sample ID: **16322-MW-8A**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 15:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Total Dissolved Solids	1400		mg/L	1	10	10	11/23/2016 10:53	J

Lab ID: **J1611270012**
Sample ID: **16322-MW-8B**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 14:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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METALS

Analysis Desc: SW846 6010B
Analysis, Water

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6010

Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/23/2016 20:40	J
Barium	0.072		mg/L	1	0.0020	0.00028	11/23/2016 20:40	J
Beryllium	0.00072		mg/L	1	0.00030	0.00013	11/23/2016 20:40	J
Cadmium	0.00051	I	mg/L	1	0.00060	0.00032	11/23/2016 20:40	J
Chromium	0.00084	I	mg/L	1	0.0010	0.00050	11/23/2016 20:40	J
Cobalt	0.0065		mg/L	1	0.0040	0.00060	11/23/2016 20:40	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/23/2016 20:40	J
Iron	38		mg/L	1	0.20	0.030	11/23/2016 20:40	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/23/2016 20:40	J
Nickel	0.0058	I	mg/L	1	0.0065	0.0011	11/23/2016 20:40	J
Selenium	0.012	I	mg/L	1	0.020	0.0068	11/23/2016 20:40	J
Silver	0.0022	I	mg/L	1	0.0040	0.00044	11/23/2016 20:40	J
Sodium	39		mg/L	1	0.20	0.16	11/23/2016 20:40	J
Vanadium	0.0061	V	mg/L	1	0.0015	0.00018	11/23/2016 20:40	J
Zinc	0.0020	U	mg/L	1	0.010	0.0020	11/23/2016 20:40	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6020

Antimony	0.079	I	ug/L	1	0.70	0.046	11/23/2016 17:43	J
Thallium	0.064	I	ug/L	1	0.20	0.057	11/23/2016 17:43	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A
Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/23/2016 15:21	J
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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270012**
Sample ID: **16322-MW-8B**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 14:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
VOLATILES								
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 18:08	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/23/2016 18:08	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 18:08	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 18:08	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/23/2016 18:08	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 18:08	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 18:08	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 18:08	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/23/2016 18:08	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 18:08	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/23/2016 18:08	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/23/2016 18:08	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/23/2016 18:08	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/23/2016 18:08	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/23/2016 18:08	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/23/2016 18:08	J
Benzene	0.16	U	ug/L	1	1.0	0.16	11/23/2016 18:08	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/23/2016 18:08	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/23/2016 18:08	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/23/2016 18:08	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/23/2016 18:08	J
Carbon Disulfide	0.34	I	ug/L	1	1.0	0.21	11/23/2016 18:08	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/23/2016 18:08	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/23/2016 18:08	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 18:08	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/23/2016 18:08	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/23/2016 18:08	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 18:08	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 18:08	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 18:08	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/23/2016 18:08	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/23/2016 18:08	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 18:08	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/23/2016 18:08	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 18:08	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/23/2016 18:08	J

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270012**
Sample ID: **16322-MW-8B**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 14:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/23/2016 18:08	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/23/2016 18:08	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/23/2016 18:08	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/23/2016 18:08	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 18:08	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/23/2016 18:08	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/23/2016 18:08	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 18:08	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/23/2016 18:08	J
1,2-Dichloroethane-d4 (S)	71	J4	%	1	77-125		11/23/2016 18:08	
Toluene-d8 (S)	109		%	1	80-121		11/23/2016 18:08	
Bromofluorobenzene (S)	115		%	1	80-129		11/23/2016 18:08	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/23/2016 18:08	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/23/2016 18:08	J
1,2-Dichloroethane-d4 (S)	71	J4	%	1	77-125		11/23/2016 18:08	
Toluene-d8 (S)	109		%	1	80-121		11/23/2016 18:08	
Bromofluorobenzene (S)	115		%	1	80-129		11/23/2016 18:08	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	47		mg/L	1	5.0	0.50	11/19/2016 11:19	J
Nitrate	0.050	U	mg/L	1	0.50	0.050	11/19/2016 11:19	J

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	0.84		mg/L	1	0.01	0.01	11/30/2016 11:09	G
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Analysis Desc: Tot Dissolved
Solids,SM2540C

Analytical Method: SM 2540 C

Total Dissolved Solids	800		mg/L	1	10	10	11/23/2016 10:53	J
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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270013**
Sample ID: **16322-MW-Dup**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 12:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis, Water			Analytical Method: SW-846 6010					
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/23/2016 20:44	J
Barium	0.026		mg/L	1	0.0020	0.00028	11/23/2016 20:44	J
Beryllium	0.00014	I	mg/L	1	0.00030	0.00013	11/23/2016 20:44	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/23/2016 20:44	J
Chromium	0.00099	I	mg/L	1	0.0010	0.00050	11/23/2016 20:44	J
Cobalt	0.00061	I	mg/L	1	0.0040	0.00060	11/23/2016 20:44	J
Copper	0.0034	I	mg/L	1	0.0040	0.0025	11/23/2016 20:44	J
Iron	1.2		mg/L	1	0.20	0.030	11/23/2016 20:44	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/23/2016 20:44	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/23/2016 20:44	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/23/2016 20:44	J
Silver	0.0020	I	mg/L	1	0.0040	0.00044	11/23/2016 20:44	J
Sodium	19		mg/L	1	0.20	0.16	11/23/2016 20:44	J
Vanadium	0.0027	V	mg/L	1	0.0015	0.00018	11/23/2016 20:44	J
Zinc	0.0096	I	mg/L	1	0.010	0.0020	11/23/2016 20:44	J
Analysis Desc: SW846 6020B			Preparation Method: SW-846 3010A					
Analysis, Total			Analytical Method: SW-846 6020					
Antimony	0.071	I	ug/L	1	0.70	0.046	11/23/2016 17:47	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 17:47	J
Analysis Desc: SW846 7470A			Preparation Method: SW-846 7470A					
Analysis, Water			Analytical Method: SW-846 7470A					
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/23/2016 15:23	J
VOLATILES								
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 18:35	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/23/2016 18:35	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 18:35	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 18:35	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/23/2016 18:35	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 18:35	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 18:35	J

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270013**
Sample ID: **16322-MW-Dup**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 12:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 18:35	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/23/2016 18:35	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 18:35	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/23/2016 18:35	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/23/2016 18:35	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/23/2016 18:35	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/23/2016 18:35	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/23/2016 18:35	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/23/2016 18:35	J
Benzene	7.7		ug/L	1	1.0	0.16	11/23/2016 18:35	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/23/2016 18:35	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/23/2016 18:35	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/23/2016 18:35	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/23/2016 18:35	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/23/2016 18:35	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/23/2016 18:35	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/23/2016 18:35	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 18:35	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/23/2016 18:35	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/23/2016 18:35	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 18:35	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 18:35	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 18:35	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/23/2016 18:35	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/23/2016 18:35	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 18:35	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/23/2016 18:35	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 18:35	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/23/2016 18:35	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/23/2016 18:35	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/23/2016 18:35	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/23/2016 18:35	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/23/2016 18:35	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 18:35	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/23/2016 18:35	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/23/2016 18:35	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 18:35	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/23/2016 18:35	J
1,2-Dichloroethane-d4 (S)	38	J4	%	1	77-125		11/23/2016 18:35	
Toluene-d8 (S)	143	J4	%	1	80-121		11/23/2016 18:35	

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ANALYTICAL RESULTS

Workorder: J1611270 J.E.D. Landfill

Lab ID: **J1611270013**
Sample ID: **16322-MW-Dup**

Date Received: 11/18/16 08:30 Matrix: Water
Date Collected: 11/17/16 12:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Bromofluorobenzene (S)	132	J4	%	1	80-129		11/23/2016 18:35	
Analysis Desc: 8260B SIM Analysis, Water		Preparation Method: SW-846 5030B Analytical Method: SW-846 8260B (SIM)						
1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/23/2016 18:35	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/23/2016 18:35	J
1,2-Dichloroethane-d4 (S)	38	J4	%	1	77-125		11/23/2016 18:35	
Toluene-d8 (S)	143	J4	%	1	80-121		11/23/2016 18:35	
Bromofluorobenzene (S)	132	J4	%	1	80-129		11/23/2016 18:35	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water		Analytical Method: EPA 300.0						
Chloride	12		mg/L	1	5.0	0.50	11/19/2016 11:35	J
Nitrate	0.050	U	mg/L	1	0.50	0.050	11/19/2016 11:35	J
Analysis Desc: Ammonia,E350.1,Water		Analytical Method: EPA 350.1						
Ammonia (N)	4.9		mg/L	10	0.10	0.08	11/30/2016 11:09	G
Analysis Desc: Tot Dissolved Solids,SM2540C		Analytical Method: SM 2540 C						
Total Dissolved Solids	220		mg/L	1	10	10	11/23/2016 10:53	J

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ANALYTICAL RESULTS QUALIFIERS

Workorder: J1611270 J.E.D. Landfill

PARAMETER QUALIFIERS

- U The compound was analyzed for but not detected.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- V Method Blank Contamination
- J4 Estimated Result

LAB QUALIFIERS

- G DOH Certification #E82001(AEL-G)(FL NELAC Certification)
- J DOH Certification #E82574(AEL-JAX)(FL NELAC Certification)

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QUALITY CONTROL DATA

Workorder: J1611270 J.E.D. Landfill

QC Batch: WCAJ/2964 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Prepared:
Associated Lab Samples: J1611270001, J1611270002, J1611270003, J1611270004, J1611270005, J1611270006

METHOD BLANK: 2202564

Parameter	Units	Blank Result	Reporting Limit Qualifiers
WET CHEMISTRY			
Chloride	mg/L	0.50	0.50 U
Nitrate	mg/L	0.050	0.050 U

QC Batch: WCAJ/2965 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Prepared:
Associated Lab Samples: J1611270007, J1611270008, J1611270009, J1611270010, J1611270011, J1611270012, J1611270013

METHOD BLANK: 2202613

Parameter	Units	Blank Result	Reporting Limit Qualifiers
WET CHEMISTRY			
Chloride	mg/L	0.50	0.50 U
Nitrate	mg/L	0.050	0.050 U

QC Batch: DGMJ/2206 Analysis Method: SW-846 6020
QC Batch Method: SW-846 3010A Prepared: 11/22/2016 03:00
Associated Lab Samples: J1611270001, J1611270002, J1611270003, J1611270004, J1611270005, J1611270006, J1611270007, J1611270008,

METHOD BLANK: 2203239

Parameter	Units	Blank Result	Reporting Limit Qualifiers
METALS			
Antimony	ug/L	0.046	0.046 U
Thallium	ug/L	0.057	0.057 U

QC Batch: DGMJ/2212 Analysis Method: SW-846 6010
QC Batch Method: SW-846 3010A Prepared: 11/23/2016 07:35
Associated Lab Samples: J1611270001, J1611270002, J1611270003, J1611270004, J1611270005, J1611270006, J1611270007, J1611270008,

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QUALITY CONTROL DATA

Workorder: J1611270 J.E.D. Landfill

METHOD BLANK: 2204391

Parameter	Units	Blank Result	Reporting Limit Qualifiers
METALS			
Silver	mg/L	0.00044	0.00044 U
Arsenic	mg/L	0.0085	0.0085 U
Barium	mg/L	0.00028	0.00028 U
Beryllium	mg/L	0.00013	0.00013 U
Cadmium	mg/L	0.00032	0.00032 U
Cobalt	mg/L	0.00060	0.00060 U
Chromium	mg/L	0.00050	0.00050 U
Copper	mg/L	0.0025	0.0025 U
Iron	mg/L	0.030	0.030 U
Sodium	mg/L	0.16	0.16 U
Nickel	mg/L	0.0011	0.0011 U
Lead	mg/L	0.0013	0.0013 U
Selenium	mg/L	0.0068	0.0068 U
Vanadium	mg/L	0.00024	0.00018 I
Zinc	mg/L	0.0020	0.0020 U

QC Batch: DGMj/2215

Analysis Method: SW-846 7470A

QC Batch Method: SW-846 7470A

Prepared: 11/23/2016 10:21

Associated Lab Samples: J1611270001, J1611270002, J1611270003, J1611270004, J1611270005, J1611270006, J1611270007, J1611270008,

METHOD BLANK: 2205117

Parameter	Units	Blank Result	Reporting Limit Qualifiers
METALS			
Mercury	mg/L	0.000011	0.000011 U

QC Batch: WCAj/2997

Analysis Method: SM 2540 C

QC Batch Method: SM 2540 C

Prepared:

Associated Lab Samples: J1611270001, J1611270002, J1611270003, J1611270004, J1611270005, J1611270006, J1611270007, J1611270008,

METHOD BLANK: 2205479

Parameter	Units	Blank Result	Reporting Limit Qualifiers
WET CHEMISTRY			
Total Dissolved Solids	mg/L	10	10 U

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QUALITY CONTROL DATA

Workorder: J1611270 J.E.D. Landfill

QC Batch:	MSVj/2862	Analysis Method:	SW-846 8260B
QC Batch Method:	SW-846 5030B	Prepared:	11/23/2016 09:32
Associated Lab Samples:	J1611270001, J1611270002, J1611270003, J1611270004, J1611270005, J1611270006, J1611270007, J1611270008,		

METHOD BLANK: 2207680

Parameter	Units	Blank Result	Reporting Limit Qualifiers
VOLATILES			
Chloromethane	ug/L	0.21	0.21 U
Vinyl Chloride	ug/L	0.20	0.20 U
Bromomethane	ug/L	0.24	0.24 U
Chloroethane	ug/L	0.33	0.33 U
Trichlorofluoromethane	ug/L	0.32	0.32 U
Acetone	ug/L	2.1	2.1 U
1,1-Dichloroethylene	ug/L	0.18	0.18 U
Iodomethane (Methyl Iodide)	ug/L	0.16	0.16 U
Acrylonitrile	ug/L	1.1	1.1 U
Methylene Chloride	ug/L	2.5	2.5 U
Carbon Disulfide	ug/L	0.21	0.21 U
trans-1,2-Dichloroethylene	ug/L	0.20	0.20 U
1,1-Dichloroethane	ug/L	0.14	0.14 U
Vinyl Acetate	ug/L	0.19	0.19 U
2-Butanone (MEK)	ug/L	0.43	0.43 U
cis-1,2-Dichloroethylene	ug/L	0.24	0.24 U
Bromochloromethane	ug/L	0.17	0.17 U
Chloroform	ug/L	0.18	0.18 U
1,2-Dichloroethane	ug/L	0.23	0.23 U
1,1,1-Trichloroethane	ug/L	0.22	0.22 U
Carbon Tetrachloride	ug/L	0.36	0.36 U
Benzene	ug/L	0.16	0.16 U
Dibromomethane	ug/L	0.26	0.26 U
1,2-Dichloropropane	ug/L	0.20	0.20 U
Trichloroethene	ug/L	0.29	0.29 U
Bromodichloromethane	ug/L	0.25	0.25 U
cis-1,3-Dichloropropene	ug/L	0.16	0.16 U
4-Methyl-2-pentanone (MIBK)	ug/L	0.47	0.47 U
trans-1,3-Dichloropropylene	ug/L	0.18	0.18 U
1,1,2-Trichloroethane	ug/L	0.30	0.30 U
Toluene	ug/L	0.23	0.23 U
2-Hexanone	ug/L	0.44	0.44 U
Dibromochloromethane	ug/L	0.33	0.33 U
Tetrachloroethylene (PCE)	ug/L	0.36	0.36 U
1,1,1,2-Tetrachloroethane	ug/L	0.26	0.26 U
Chlorobenzene	ug/L	0.21	0.21 U
Ethylbenzene	ug/L	0.24	0.24 U
Bromoform	ug/L	0.43	0.43 U
Styrene	ug/L	0.23	0.23 U

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QUALITY CONTROL DATA

Workorder: J1611270 J.E.D. Landfill

METHOD BLANK: 2207680

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	0.20	0.20	U
1,2,3-Trichloropropane	ug/L	0.30	0.30	U
1,4-Dichlorobenzene	ug/L	0.22	0.22	U
1,2-Dichlorobenzene	ug/L	0.18	0.18	U
trans-1,4-Dichloro-2-butene	ug/L	1.8	1.8	U
Xylene (Total)	ug/L	0.53	0.53	U
1,2-Dichloroethane-d4 (S)	%	86	77-125	
Toluene-d8 (S)	%	104	80-121	
Bromofluorobenzene (S)	%	111	80-129	

QC Batch: MSVj/2864

Analysis Method: SW-846 8260B (SIM)

QC Batch Method: SW-846 5030B

Prepared: 11/23/2016 09:32

Associated Lab Samples: J1611270001, J1611270002, J1611270003, J1611270004, J1611270005, J1611270006, J1611270007, J1611270008,

METHOD BLANK: 2207686

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
VOLATILES				
Ethylene Dibromide (EDB)	ug/L	0.020	0.020	U
1,2-Dibromo-3-Chloropropane	ug/L	0.11	0.11	U
1,2-Dichloroethane-d4 (S)	%	86	77-125	
Toluene-d8 (S)	%	104	80-121	
Bromofluorobenzene (S)	%	111	80-129	

QC Batch: WCAg/3655

Analysis Method: EPA 350.1

QC Batch Method: EPA 350.1

Prepared:

Associated Lab Samples: J1611270001, J1611270002, J1611270003, J1611270004, J1611270005, J1611270006, J1611270007, J1611270008,

METHOD BLANK: 2209677

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Ammonia (N)	mg/L	0.01	0.01	U

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QUALITY CONTROL DATA QUALIFIERS

Workorder: J1611270 J.E.D. Landfill

QUALITY CONTROL PARAMETER QUALIFIERS

- U The compound was analyzed for but not detected.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J1 Surrogate Failure
- J4 Estimated Result
- V Method Blank Contamination

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: J1611270 J.E.D. Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
J1611270001	16322-MW-11A			EPA 300.0	WCAj/2964
J1611270002	16322-MW-11B			EPA 300.0	WCAj/2964
J1611270003	16322-MW-12A			EPA 300.0	WCAj/2964
J1611270004	16322-MW-12B			EPA 300.0	WCAj/2964
J1611270005	16322-MW-13A			EPA 300.0	WCAj/2964
J1611270006	16322-MW-13B			EPA 300.0	WCAj/2964
J1611270007	16322-MW-10A			EPA 300.0	WCAj/2965
J1611270008	16322-MW-10B			EPA 300.0	WCAj/2965
J1611270009	16322-MW-9A			EPA 300.0	WCAj/2965
J1611270010	16322-MW-9B			EPA 300.0	WCAj/2965
J1611270011	16322-MW-8A			EPA 300.0	WCAj/2965
J1611270012	16322-MW-8B			EPA 300.0	WCAj/2965
J1611270013	16322-MW-Dup			EPA 300.0	WCAj/2965
J1611270001	16322-MW-11A	SW-846 3010A	DGMj/2206	SW-846 6020	ICMj/1341
J1611270002	16322-MW-11B	SW-846 3010A	DGMj/2206	SW-846 6020	ICMj/1341
J1611270003	16322-MW-12A	SW-846 3010A	DGMj/2206	SW-846 6020	ICMj/1341
J1611270004	16322-MW-12B	SW-846 3010A	DGMj/2206	SW-846 6020	ICMj/1341
J1611270005	16322-MW-13A	SW-846 3010A	DGMj/2206	SW-846 6020	ICMj/1341
J1611270006	16322-MW-13B	SW-846 3010A	DGMj/2206	SW-846 6020	ICMj/1341
J1611270007	16322-MW-10A	SW-846 3010A	DGMj/2206	SW-846 6020	ICMj/1341
J1611270008	16322-MW-10B	SW-846 3010A	DGMj/2206	SW-846 6020	ICMj/1341
J1611270009	16322-MW-9A	SW-846 3010A	DGMj/2206	SW-846 6020	ICMj/1341
J1611270010	16322-MW-9B	SW-846 3010A	DGMj/2206	SW-846 6020	ICMj/1341
J1611270011	16322-MW-8A	SW-846 3010A	DGMj/2206	SW-846 6020	ICMj/1341
J1611270012	16322-MW-8B	SW-846 3010A	DGMj/2206	SW-846 6020	ICMj/1341
J1611270013	16322-MW-Dup	SW-846 3010A	DGMj/2206	SW-846 6020	ICMj/1341
J1611270001	16322-MW-11A	SW-846 3010A	DGMj/2212	SW-846 6010	ICPj/1632
J1611270002	16322-MW-11B	SW-846 3010A	DGMj/2212	SW-846 6010	ICPj/1632
J1611270003	16322-MW-12A	SW-846 3010A	DGMj/2212	SW-846 6010	ICPj/1632
J1611270004	16322-MW-12B	SW-846 3010A	DGMj/2212	SW-846 6010	ICPj/1632
J1611270005	16322-MW-13A	SW-846 3010A	DGMj/2212	SW-846 6010	ICPj/1632

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: J1611270 J.E.D. Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
J1611270006	16322-MW-13B	SW-846 3010A	DGMj/2212	SW-846 6010	ICPj/1632
J1611270007	16322-MW-10A	SW-846 3010A	DGMj/2212	SW-846 6010	ICPj/1632
J1611270008	16322-MW-10B	SW-846 3010A	DGMj/2212	SW-846 6010	ICPj/1632
J1611270009	16322-MW-9A	SW-846 3010A	DGMj/2212	SW-846 6010	ICPj/1632
J1611270010	16322-MW-9B	SW-846 3010A	DGMj/2212	SW-846 6010	ICPj/1632
J1611270011	16322-MW-8A	SW-846 3010A	DGMj/2212	SW-846 6010	ICPj/1632
J1611270012	16322-MW-8B	SW-846 3010A	DGMj/2212	SW-846 6010	ICPj/1632
J1611270013	16322-MW-Dup	SW-846 3010A	DGMj/2212	SW-846 6010	ICPj/1632
J1611270001	16322-MW-11A	SW-846 7470A	DGMj/2215	SW-846 7470A	CVAj/1259
J1611270002	16322-MW-11B	SW-846 7470A	DGMj/2215	SW-846 7470A	CVAj/1259
J1611270003	16322-MW-12A	SW-846 7470A	DGMj/2215	SW-846 7470A	CVAj/1259
J1611270004	16322-MW-12B	SW-846 7470A	DGMj/2215	SW-846 7470A	CVAj/1259
J1611270005	16322-MW-13A	SW-846 7470A	DGMj/2215	SW-846 7470A	CVAj/1259
J1611270006	16322-MW-13B	SW-846 7470A	DGMj/2215	SW-846 7470A	CVAj/1259
J1611270007	16322-MW-10A	SW-846 7470A	DGMj/2215	SW-846 7470A	CVAj/1259
J1611270008	16322-MW-10B	SW-846 7470A	DGMj/2215	SW-846 7470A	CVAj/1259
J1611270009	16322-MW-9A	SW-846 7470A	DGMj/2215	SW-846 7470A	CVAj/1259
J1611270010	16322-MW-9B	SW-846 7470A	DGMj/2215	SW-846 7470A	CVAj/1259
J1611270011	16322-MW-8A	SW-846 7470A	DGMj/2215	SW-846 7470A	CVAj/1259
J1611270012	16322-MW-8B	SW-846 7470A	DGMj/2215	SW-846 7470A	CVAj/1259
J1611270013	16322-MW-Dup	SW-846 7470A	DGMj/2215	SW-846 7470A	CVAj/1259
J1611270001	16322-MW-11A			SM 2540 C	WCAj/2997
J1611270002	16322-MW-11B			SM 2540 C	WCAj/2997
J1611270003	16322-MW-12A			SM 2540 C	WCAj/2997
J1611270004	16322-MW-12B			SM 2540 C	WCAj/2997
J1611270005	16322-MW-13A			SM 2540 C	WCAj/2997
J1611270006	16322-MW-13B			SM 2540 C	WCAj/2997
J1611270007	16322-MW-10A			SM 2540 C	WCAj/2997
J1611270008	16322-MW-10B			SM 2540 C	WCAj/2997
J1611270009	16322-MW-9A			SM 2540 C	WCAj/2997
J1611270010	16322-MW-9B			SM 2540 C	WCAj/2997
J1611270011	16322-MW-8A			SM 2540 C	WCAj/2997

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: J1611270 J.E.D. Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
J1611270012	16322-MW-8B			SM 2540 C	WCAj/2997
J1611270013	16322-MW-Dup			SM 2540 C	WCAj/2997
J1611270001	16322-MW-11A	SW-846 5030B	MSVj/2862	SW-846 8260B	MSVj/2863
J1611270002	16322-MW-11B	SW-846 5030B	MSVj/2862	SW-846 8260B	MSVj/2863
J1611270003	16322-MW-12A	SW-846 5030B	MSVj/2862	SW-846 8260B	MSVj/2863
J1611270004	16322-MW-12B	SW-846 5030B	MSVj/2862	SW-846 8260B	MSVj/2863
J1611270005	16322-MW-13A	SW-846 5030B	MSVj/2862	SW-846 8260B	MSVj/2863
J1611270006	16322-MW-13B	SW-846 5030B	MSVj/2862	SW-846 8260B	MSVj/2863
J1611270007	16322-MW-10A	SW-846 5030B	MSVj/2862	SW-846 8260B	MSVj/2863
J1611270008	16322-MW-10B	SW-846 5030B	MSVj/2862	SW-846 8260B	MSVj/2863
J1611270009	16322-MW-9A	SW-846 5030B	MSVj/2862	SW-846 8260B	MSVj/2863
J1611270010	16322-MW-9B	SW-846 5030B	MSVj/2862	SW-846 8260B	MSVj/2863
J1611270011	16322-MW-8A	SW-846 5030B	MSVj/2862	SW-846 8260B	MSVj/2863
J1611270012	16322-MW-8B	SW-846 5030B	MSVj/2862	SW-846 8260B	MSVj/2863
J1611270013	16322-MW-Dup	SW-846 5030B	MSVj/2862	SW-846 8260B	MSVj/2863
J1611270001	16322-MW-11A	SW-846 5030B	MSVj/2864	SW-846 8260B (SIM)	MSVj/2865
J1611270002	16322-MW-11B	SW-846 5030B	MSVj/2864	SW-846 8260B (SIM)	MSVj/2865
J1611270003	16322-MW-12A	SW-846 5030B	MSVj/2864	SW-846 8260B (SIM)	MSVj/2865
J1611270004	16322-MW-12B	SW-846 5030B	MSVj/2864	SW-846 8260B (SIM)	MSVj/2865
J1611270005	16322-MW-13A	SW-846 5030B	MSVj/2864	SW-846 8260B (SIM)	MSVj/2865
J1611270006	16322-MW-13B	SW-846 5030B	MSVj/2864	SW-846 8260B (SIM)	MSVj/2865
J1611270007	16322-MW-10A	SW-846 5030B	MSVj/2864	SW-846 8260B (SIM)	MSVj/2865
J1611270008	16322-MW-10B	SW-846 5030B	MSVj/2864	SW-846 8260B (SIM)	MSVj/2865
J1611270009	16322-MW-9A	SW-846 5030B	MSVj/2864	SW-846 8260B (SIM)	MSVj/2865
J1611270010	16322-MW-9B	SW-846 5030B	MSVj/2864	SW-846 8260B (SIM)	MSVj/2865
J1611270011	16322-MW-8A	SW-846 5030B	MSVj/2864	SW-846 8260B (SIM)	MSVj/2865
J1611270012	16322-MW-8B	SW-846 5030B	MSVj/2864	SW-846 8260B (SIM)	MSVj/2865
J1611270013	16322-MW-Dup	SW-846 5030B	MSVj/2864	SW-846 8260B (SIM)	MSVj/2865
J1611270001	16322-MW-11A			EPA 350.1	WCAg/3655
J1611270002	16322-MW-11B			EPA 350.1	WCAg/3655
J1611270003	16322-MW-12A			EPA 350.1	WCAg/3655

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: J1611270 J.E.D. Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
J1611270004	16322-MW-12B			EPA 350.1	WCAg/3655
J1611270005	16322-MW-13A			EPA 350.1	WCAg/3655
J1611270006	16322-MW-13B			EPA 350.1	WCAg/3655
J1611270007	16322-MW-10A			EPA 350.1	WCAg/3655
J1611270008	16322-MW-10B			EPA 350.1	WCAg/3655
J1611270009	16322-MW-9A			EPA 350.1	WCAg/3655
J1611270010	16322-MW-9B			EPA 350.1	WCAg/3655
J1611270011	16322-MW-8A			EPA 350.1	WCAg/3655
J1611270012	16322-MW-8B			EPA 350.1	WCAg/3655
J1611270013	16322-MW-Dup			EPA 350.1	WCAg/3655

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☐ Gainesville: 4965 SW 41st Blvd. • Gainesville, FL 32608 • 352.
☒ Jacksonville: 6681 Southpoint Pkwy. • Jacksonville, FL 32216
☐ Miramar: 10200 USA Today Way, Miramar, FL 33025 • 954.889.
☐ Tallahassee: 1288 Cedar Center Drive, Tallahassee, FL 32301
☐ Tampa: 9610 Princess Palm Ave. • Tampa, FL 33619 • 813.630.6

J1611270

Client Name: Waste Connections, Inc.		Project Name: J.E.D LANDFILL (F/K/A OAK HAMMOCK DISPOSAL)		BOTTLE SIZE & TYPE	40 mL Vials	500 mL Plastic	500 mL Plastic	250 mL Plastic	LABORATORY I.D. NUMBER
Address: 5135 Madison Avenue		P.O. Number/Project Number:		ANALYSIS REQUIRED	App I VOAs+EDB/DBCP	App I Metals+Fe,Hg,Na	C/NO3/TDS	NH3	
Tampa, Florida 33619		Project Location: St. Cloud, FL							
Phone: 813-388-1026		FDEP Facility No: 89544							
FAX:		Project Name and Address: JED SWDF 1501 Ocala Way St. Cloud, FL							
Contact: Kirk Wills		Special Instructions: Jax Profile: 31172							
Sampled By: Joe Terry		☒ ADaPT ☐ EQUIS							
Turn Around Time: ☒ STANDARD ☐ RUSH									
Page 1 of 1									

SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING		MATRIX	NO. COUNT	PRESERVATION	HCL	HNO3	Ice	H2SO4						
			DATE	TIME													
16322-MW-11A		G	11-17-16	0955	GW	6		X	X	X	X						001
16322-MW-11B				0935													002
16322-MW-12A				0750													003
16322-MW-12B				0720													004
16322-MW-13A				0600													005
16322-MW-13B		G	11-17-16	0530	GW	6		X	X	X	X						006

Matrix Code: WW = wastewater SW = surface water GW = ground water DW = drinking water O = oil A = air SO = soil SL = sludge Preservation Code: I = ice H=(HCl) S = (H2SO4) N = (HNO3) T = (Sodium Thiosulfate)

Received on Ice ☒ Yes ☐ No ☒ Temp taken from sample ☐ Temp from blank ☐ Where required, pH checked Temperature when received **9** (in degrees celcius)

DCN: AD-051 Form last revised 08/18/2014

Device used for measuring Temp by unique identifier (circle IR temp gun used) **J: 9A** G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V

Relinquished by:	Date	Time	Received by:	Date	Time
Joe Terry	11-17-16	1620	Fedex		
Fedex	11-18-16	8:30	Bill Ault	11-18-16	8:30

FOR DRINKING WATER USE:

(When PWS Information not otherwise supplied) PWS ID: _____
 Contact Person: _____ Phone: _____
 Supplier of Water: _____
 Site-Address: _____



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- ☐ **Altamonte Springs:** 528 S. Northlake Blvd., Ste. 1011
☐ **Gainesville:** 4965 SW 41st Blvd. • Gainesville, FL 32601
☒ **Jacksonville:** 6681 Southpoint Pkwy. • Jacksonville, FL
☐ **Miramar:** 10200 USA Today Way, Miramar, FL 33025 • 9
☐ **Tallahassee:** 1288 Cedar Center Drive, Tallahassee, FL
☐ **Tampa:** 9610 Princess Palm Ave. • Tampa, FL 33619 • 813...

J1611270

7.1597

Client Name: Waste Connections, Inc.		Project Name: J.E.D LANDFILL (F/K/A OAK HAMMOCK DISPOSAL)		BOTTLE SIZE & TYPE	40 mL Vials	500 mL Plastic	500 mL Plastic	250 mL Plastic									LABORATORY I.D. NUMBER
Address: 5135 Madison Avenue		P.O. Number/Project Number:															
Tampa, Florida 33619		Project Location: S. Cloud, FL															
Phone: 813-388-1026		FDEP Facility No: 89544															
FAX:		Project Name and Address: JED SWDF 1501 Omni Way S. Cloud, FL															
Contact: Kirk Wills		Special Instructions: Jax Profile: 31172		ANALYSIS REQUIRED	App I VOAs+EDB/DBCP	App I Metals+Fe,Hg,Na	C/NO3/TDS	NH3									
Sampled By: Joe Terry																	
Turn Around Time: ☒ STANDARD ☐ RUSH		Special Instructions: Jax Profile: 31172		PRESERVATION	HCL	HNO3	Ice	H2SO4									
Page 1 of 1		☒ XADaPT ☐ EQUIS															
SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING		MATRIX	NO. COUNT											
			DATE	TIME													
16322-MW-10A		G	11.17.16	1145	GW	6	X	X	X	X						007	
16322-MW-10B				1115												008	
16322-MW-9A				1325												009	
16322-MW-9B				1250												010	
16322-MW-8A				1500												011	
16322-MW-8B				1430												012	
16322-MW-Dup		G	11.17.16	1200	GW	6	X	X	X	X						013	
Matrix Code: WW = wastewater SW = surface water GW = ground water DW = drinking water O = oil A = air SO = soil SL = sludge Preservation Code: I = ice H=(HCl) S = (H2SO4) N = (HNO3) T = (Sodium Thiosulfate)																	

Received on Ice ☒ Yes ☐ No ☒ Temp taken from sample ☐ Temp from blank ☐ Where required, pH checked Temperature when received **4** (in degrees celcius)

DCN: AD-051 Form last revised 08/18/2014

Device used for measuring Temp by unique identifier (circle IR temp gun used) **(J: 9A)** G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V

Relinquished by:		Date	Time	Received by:		Date	Time
1	<i>Joe Terry</i>	11.17.16	1620	<i>Fedex</i>			
2	<i>Fedex</i>	11-18-16	8:30	<i>Brian</i>	11-18-16	8:30	
3							
4							

FOR DRINKING WATER USE:

(When PWS Information not otherwise supplied) PWS ID: _____

Contact Person: _____ Phone: _____

Supplier of Water: _____

Site-Address: _____

Client: Worstar ConnectionsProject name: J.F.D. LandfillDate/Time Rcvd: 11-18-16 0830Log-In request number: JI611270Received by: BACompleted by: Bj**Cooler/Shipping Information:**Courier: ☐ AEL ☐ Client ☐ UPS ☐ Blue Streak ☒ FedEx ☐ AES ☐ ASAP ☐ Other (describe): _____Type: ☒ Cooler ☐ Box ☐ Other (describe) _____

Cooler temperature: Identify the cooler and document the temperature blank or ice water measurement

Cooler ID					
Temp (°C)	<u>4</u>				
Temp taken from	☐ Sample Bottle ☒ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler
Temp measured with	☒ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):

Other Information:

Any discrepancies should be explained in the "Comments" section below.

CHECKLIST	YES	NO	NA
1. Were custody seals on shipping container(s) intact?	☒	☐	☐
2. Were custody papers properly included with samples?	☒	☐	☐
3. Were custody papers properly filled out (ink, signed, match labels)?	☒	☐	☐
4. Did all bottles arrive in good condition (unbroken)?	☒	☐	☐
5. Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?	☒	☐	☐
6. Did the sample labels agree with the chain of custody?	☒	☐	☐
7. Were correct bottles used for the tests indicated?	☒	☐	☐
8. Were proper sample preservation techniques indicated on the label?	☒	☐	☐
9. Were samples received within holding times?	☒	☐	☐
10. Were all VOA vials free of the presence of air bubbles?	☒	☐	☐
11. Have all Soil VOA Vials and Encores been placed in a freezer within 48 hours of collection?	☒	☐	☐
12. Were samples in direct contact with wet ice? If "No," check one: ☐ NO ICE ☐ BLUE ICE	☒	☐	☐
13. Was the cooler temperature less than 6°C?	☒	☐	☐
14. Where pH preservation is required, are sample pHs checked and any anomalies recorded by Sample control? Are all <2 or >10? Note: VOA samples are checked by laboratory analysts.	☒	☐	☐
15. Was sufficient sample volume provided to perform all tests?	☒	☐	☐
16. If for Bacteriological testing, were containers supplied by AEL? (See QA officer if answer is no)	☒	☐	☐
17. Were all sample containers provided by AEL? (Other than Bacteriological)	☒	☐	☐
18. Were samples accepted into the laboratory?	☒	☐	☐
19. When necessary to split samples into other bottles, is it noted in the comments?	☒	☐	☐

Comments: (Note all sample(s) and container (s)" with a "No" checklist response in this comment section)



Advanced
Environmental Laboratories, Inc.

6681 Southpoint Parkway
Jacksonville, Florida 32216
Office (904) 363-9350
Fax (904) 363-9354

Project No.: J1611270
Client Name: Waste Connections
ProjectID: J.E.D. Landfill

I. Receipt

II. Holding Times

Preparation:

Analysis:

III. Method

Analysis: SW-846 6010

Preparation: SW-846 3010A

IV. Preparation

V. Analysis

A. Calibration:

B. Blanks: The Method Blank (MB) contained low levels of Vanadium above the Method Detection Limit (MDL). In accordance with AEL QA, all sample results found in the Method Blank are flagged with a V qualifier to indicate the data is an estimate.

C. Duplicates:

D. Spikes:

E. Serial Dilution:

F. Samples:

G. Other:

I certify that this data package is in compliance with the terms and conditions agreed to by Advanced Environmental Laboratories, Inc. and by the client, both technically and for completeness, except for the conditions detailed above. The Quality Assurance Officer, or designee, as verified by the following signature, has authorized release of the data contained in this data package:



Advanced
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6681 Southpoint Parkway
Jacksonville, Florida 32216
Office (904) 363-9350
Fax (904) 363-9354

Project No.: J1611270
Client Name: Waste Connections
ProjectID: J.E.D. Landfill

I. Receipt

No Exceptions were encountered.

II. Holding Times

Preparation: All holding times were met.
Analysis: All holding times were met.

III. Method

Analysis: SW-846 8260B
Preparation: SW-846 5030B

IV. Preparation

Sample preparation proceeded normally.

V. Analysis

A. Calibration: All acceptance criteria were met.
B. Blanks: All acceptance criteria were met.
C. Surrogates:
D. Spikes: The spike recovery of PCE for the Laboratory Control Sample (LCS) was outside the upper control criterion. The analyte in question was not detected in the associated client samples. The error associated with elevated recovery equates to a high bias.
E. Internal Standard:
F. Samples: Sample analyses proceeded normally.
G. Other:

I certify that this data package is in compliance with the terms and conditions agreed to by Advanced Environmental Laboratories, Inc. and by the client, both technically and for completeness, except for the conditions detailed above. The Quality Assurance Officer, or designee, as verified by the following signature, has authorized release of the data contained in this data package:



Advanced
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6681 Southpoint Parkway
Jacksonville, Florida 32216
Office (904) 363-9350
Fax (904) 363-9354

Project No.: J1611270
Client Name: Waste Connections
ProjectID: J.E.D. Landfill

I. Receipt

No Exceptions were encountered.

II. Holding Times

Preparation: All holding times were met.
Analysis: All holding times were met.

III. Method

Analysis: SW-846 8260B (SIM)
Preparation: SW-846 5030B

IV. Preparation

Sample preparation proceeded normally.

V. Analysis

A. Calibration: All acceptance criteria were met.
B. Blanks: All acceptance criteria were met.
C. Surrogates: The control criteria were exceeded for surrogate 1,2-dichloroethane-d4 in the LCSD. The associated QC analysis recoveries of target compounds were in control, indicating the analysis was in control. The surrogate outliers were flagged accordingly.
D. Spikes: The matrix spike (MS) recoveries of EDB, DBCP for A1608292001 were outside control criteria. Recoveries in the Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) were acceptable, which indicates the analytical batch was in control.
E. Internal Standard: All acceptance criteria were met.
F. Samples: Sample analyses proceeded normally.
G. Other:

I certify that this data package is in compliance with the terms and conditions agreed to by Advanced Environmental Laboratories, Inc. and by the client, both technically and for completeness, except for the conditions detailed above. The Quality Assurance Officer, or designee, as verified by the following signature, has authorized release of the data contained in this data package:



Advanced
Environmental Laboratories, Inc.

6681 Southpoint Parkway
Jacksonville, Florida 32216
Office (904) 363-9350
Fax (904) 363-9354

Project No.: J1611270
Client Name: Waste Connections
ProjectID: J.E.D. Landfill

I. Receipt

No Exceptions were encountered.

II. Holding Times

Preparation: All holding times were met.
Analysis: All holding times were met.

III. Method

Analysis: EPA 300.0
Preparation: None

IV. Preparation

Sample preparation proceeded normally.

V. Analysis

A. Calibration: All acceptance criteria were met.
B. Blanks: All acceptance criteria were met.
C. Duplicates:
D. Spikes: The relative percent difference (RPD) for the following analyte in the replicate laboratory control spike analyses was outside control criteria: Fluoride. All spike recoveries in the LCS, LCSD, and MS samples were within acceptable limits, indicating the analysis was in control.
E. Serial Dilution:
F. Samples: Sample analyses proceeded normally.
G. Other:

I certify that this data package is in compliance with the terms and conditions agreed to by Advanced Environmental Laboratories, Inc. and by the client, both technically and for completeness, except for the conditions detailed above. The Quality Assurance Officer, or designee, as verified by the following signature, has authorized release of the data contained in this data package:



Advanced
Environmental Laboratories, Inc.

6681 Southpoint Parkway
Jacksonville, Florida 32216
Office (904) 363-9350
Fax (904) 363-9354

Project No.: J1611270
Client Name: Waste Connections
ProjectID: J.E.D. Landfill

I. Receipt

No Exceptions were encountered.

II. Holding Times

Preparation: All holding times were met.
Analysis: Samples J1611276-005 and -006 were analyzed outside the recommended 48 hour hold time for unpreserved nitrate.
Preserved samples were analyzed by SM 4500NO3-F for total nitrate.
Results confirm nitrate values reported past hold time.

III. Method

Analysis: EPA 300.0
Preparation: None

IV. Preparation

Sample preparation proceeded normally.

V. Analysis

A. Calibration: All acceptance criteria were met.
B. Blanks: All acceptance criteria were met.
C. Duplicates: All acceptance criteria were met.
D. Spikes: The matrix spike recovery of Sulfate in J1611274001 was outside control criteria. Recoveries in the Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) were acceptable, which indicates the analytical batch was in control.
E. Serial Dilution:
F. Samples: Multiple samples in client project J1611276 were analyzed at the lowest possible dilution due to yellow color in the sample that could affect the instrument.
G. Other:

I certify that this data package is in compliance with the terms and conditions agreed to by Advanced Environmental Laboratories, Inc. and by the client, both technically and for completeness, except for the conditions detailed above. The Quality Assurance Officer, or designee, as verified by the following signature, has authorized release of the data contained in this data package:



Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

November 28, 2016

Kirk Wills
Waste Connections
5135 Madison Avenue
Tampa, FL 33619

RE: Workorder: J1611175 J.E.D. Landfill

Dear Kirk Wills:

Enclosed are the analytical results for sample(s) received by the laboratory on Thursday, November 17, 2016. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. The analytical results for the samples contained in this report were submitted for analysis as outlined by the Chain of Custody and results pertain only to these samples.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Craig Myers', is positioned above the printed name and email address.

Craig Myers
CMyers@AELLab.com

Enclosures

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SAMPLE SUMMARY

Workorder: J1611175 J.E.D. Landfill

Lab ID	Sample ID	Matrix	Date Collected	Date Received
J1611175001	16321-MW-16AR	Water	11/16/2016 15:10	11/17/2016 08:30
J1611175002	16321-MW-16BR	Water	11/16/2016 14:25	11/17/2016 08:30
J1611175003	16321-MW-17AR	Water	11/16/2016 13:20	11/17/2016 08:30
J1611175004	16321-MW-17BR	Water	11/16/2016 12:50	11/17/2016 08:30
J1611175005	16321-MW-29A	Water	11/16/2016 11:50	11/17/2016 08:30
J1611175006	16321-MW-29B	Water	11/16/2016 11:20	11/17/2016 08:30

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ANALYTICAL RESULTS

Workorder: J1611175 J.E.D. Landfill

Lab ID: **J1611175001**
Sample ID: **16321-MW-16AR**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 15:10

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis, Water			Analytical Method: SW-846 6010					
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/18/2016 20:52	J
Barium	0.13		mg/L	1	0.0020	0.00028	11/18/2016 20:52	J
Beryllium	0.00014	I	mg/L	1	0.00030	0.00013	11/18/2016 20:52	J
Cadmium	0.0044		mg/L	1	0.00060	0.00032	11/18/2016 20:52	J
Chromium	0.0027		mg/L	1	0.0010	0.00050	11/18/2016 20:52	J
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/18/2016 20:52	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/18/2016 20:52	J
Iron	0.71		mg/L	1	0.20	0.030	11/18/2016 20:52	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/18/2016 20:52	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/18/2016 20:52	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/18/2016 20:52	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	11/18/2016 20:52	J
Sodium	240		mg/L	1	0.20	0.16	11/18/2016 20:52	J
Vanadium	0.012		mg/L	1	0.0015	0.00018	11/18/2016 20:52	J
Zinc	0.0088	I	mg/L	1	0.010	0.0020	11/18/2016 20:52	J
Analysis Desc: SW846 6020B			Preparation Method: SW-846 3010A					
Analysis, Total			Analytical Method: SW-846 6020					
Antimony	1.7		ug/L	1	0.70	0.046	11/23/2016 15:05	J
Thallium	0.078	I	ug/L	1	0.20	0.057	11/23/2016 15:05	J
Analysis Desc: SW846 7470A			Preparation Method: SW-846 7470A					
Analysis, Water			Analytical Method: SW-846 7470A					
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/21/2016 15:59	J
VOLATILES								
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/21/2016 17:43	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/21/2016 17:43	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/21/2016 17:43	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/21/2016 17:43	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/21/2016 17:43	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 17:43	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/21/2016 17:43	J

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ANALYTICAL RESULTS

Workorder: J1611175 J.E.D. Landfill

Lab ID: **J1611175001**
Sample ID: **16321-MW-16AR**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 15:10

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 17:43	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/21/2016 17:43	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/21/2016 17:43	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/21/2016 17:43	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/21/2016 17:43	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/21/2016 17:43	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/21/2016 17:43	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/21/2016 17:43	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/21/2016 17:43	J
Benzene	0.16	U	ug/L	1	1.0	0.16	11/21/2016 17:43	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/21/2016 17:43	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/21/2016 17:43	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/21/2016 17:43	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/21/2016 17:43	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/21/2016 17:43	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/21/2016 17:43	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/21/2016 17:43	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/21/2016 17:43	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/21/2016 17:43	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/21/2016 17:43	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/21/2016 17:43	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/21/2016 17:43	J
Ethylbenzene	0.42	I	ug/L	1	1.0	0.24	11/21/2016 17:43	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/21/2016 17:43	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/21/2016 17:43	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/21/2016 17:43	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/21/2016 17:43	J
Toluene	0.25	I	ug/L	1	1.0	0.23	11/21/2016 17:43	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/21/2016 17:43	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/21/2016 17:43	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/21/2016 17:43	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/21/2016 17:43	J
Xylene (Total)	0.83	I	ug/L	1	2.0	0.53	11/21/2016 17:43	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/21/2016 17:43	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/21/2016 17:43	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/21/2016 17:43	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 17:43	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/21/2016 17:43	J
1,2-Dichloroethane-d4 (S)	94		%	1	77-125		11/21/2016 17:43	
Toluene-d8 (S)	100		%	1	80-121		11/21/2016 17:43	

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ANALYTICAL RESULTS

Workorder: J1611175 J.E.D. Landfill

Lab ID: **J1611175001**
Sample ID: **16321-MW-16AR**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 15:10

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Bromofluorobenzene (S)	107		%	1	80-129		11/21/2016 17:43	
Analysis Desc: 8260B SIM Analysis, Water Preparation Method: SW-846 5030B Analytical Method: SW-846 8260B (SIM)								
1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/21/2016 17:43	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/21/2016 17:43	J
1,2-Dichloroethane-d4 (S)	98		%	1	77-125		11/21/2016 17:43	
Toluene-d8 (S)	102		%	1	80-121		11/21/2016 17:43	
Bromofluorobenzene (S)	107		%	1	80-129		11/21/2016 17:43	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water Analytical Method: EPA 300.0								
Chloride	420		mg/L	10	50	5.0	11/18/2016 15:24	J
Nitrate	51		mg/L	10	5.0	0.50	11/18/2016 15:24	J
Analysis Desc: Ammonia,E350.1,Water Analytical Method: EPA 350.1								
Ammonia (N)	3.9		mg/L	10	0.10	0.08	11/22/2016 10:40	G
Analysis Desc: Tot Dissolved Solids,SM2540C Analytical Method: SM 2540 C								
Total Dissolved Solids	2000		mg/L	1	10	10	11/22/2016 12:34	J

Lab ID: **J1611175002**
Sample ID: **16321-MW-16BR**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 14:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Water Preparation Method: SW-846 3010A Analytical Method: SW-846 6010								
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/18/2016 20:56	J
Barium	0.019		mg/L	1	0.0020	0.00028	11/18/2016 20:56	J
Beryllium	0.00013	U	mg/L	1	0.00030	0.00013	11/18/2016 20:56	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/18/2016 20:56	J
Chromium	0.0011		mg/L	1	0.0010	0.00050	11/18/2016 20:56	J

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ANALYTICAL RESULTS

Workorder: J1611175 J.E.D. Landfill

Lab ID: **J1611175002**
Sample ID: **16321-MW-16BR**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 14:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/18/2016 20:56	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/18/2016 20:56	J
Iron	1.3		mg/L	1	0.20	0.030	11/18/2016 20:56	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/18/2016 20:56	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/18/2016 20:56	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/18/2016 20:56	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	11/18/2016 20:56	J
Sodium	7.3		mg/L	1	0.20	0.16	11/18/2016 20:56	J
Vanadium	0.00074	I	mg/L	1	0.0015	0.00018	11/18/2016 20:56	J
Zinc	0.0020	U	mg/L	1	0.010	0.0020	11/18/2016 20:56	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6020

Antimony	0.046	U	ug/L	1	0.70	0.046	11/23/2016 15:09	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 15:09	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A
Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/21/2016 16:02	J
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VOLATILES

Analysis Desc: 8260B Analysis, Water

Preparation Method: SW-846 5030B
Analytical Method: SW-846 8260B

1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/21/2016 18:10	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/21/2016 18:10	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/21/2016 18:10	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/21/2016 18:10	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/21/2016 18:10	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 18:10	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/21/2016 18:10	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 18:10	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/21/2016 18:10	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/21/2016 18:10	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/21/2016 18:10	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/21/2016 18:10	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/21/2016 18:10	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/21/2016 18:10	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/21/2016 18:10	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/21/2016 18:10	J

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ANALYTICAL RESULTS

Workorder: J1611175 J.E.D. Landfill

Lab ID: **J1611175002**
Sample ID: **16321-MW-16BR**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 14:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Benzene	0.16	U	ug/L	1	1.0	0.16	11/21/2016 18:10	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/21/2016 18:10	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/21/2016 18:10	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/21/2016 18:10	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/21/2016 18:10	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/21/2016 18:10	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/21/2016 18:10	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/21/2016 18:10	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/21/2016 18:10	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/21/2016 18:10	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/21/2016 18:10	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/21/2016 18:10	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/21/2016 18:10	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/21/2016 18:10	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/21/2016 18:10	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/21/2016 18:10	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/21/2016 18:10	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/21/2016 18:10	J
Toluene	0.29	I	ug/L	1	1.0	0.23	11/21/2016 18:10	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/21/2016 18:10	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/21/2016 18:10	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/21/2016 18:10	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/21/2016 18:10	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/21/2016 18:10	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/21/2016 18:10	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/21/2016 18:10	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/21/2016 18:10	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 18:10	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/21/2016 18:10	J
1,2-Dichloroethane-d4 (S)	85		%	1	77-125		11/21/2016 18:10	
Toluene-d8 (S)	102		%	1	80-121		11/21/2016 18:10	
Bromofluorobenzene (S)	109		%	1	80-129		11/21/2016 18:10	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/21/2016 18:10	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/21/2016 18:10	J
1,2-Dichloroethane-d4 (S)	90		%	1	77-125		11/21/2016 18:10	
Toluene-d8 (S)	104		%	1	80-121		11/21/2016 18:10	
Bromofluorobenzene (S)	110		%	1	80-129		11/21/2016 18:10	

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ANALYTICAL RESULTS

Workorder: J1611175 J.E.D. Landfill

Lab ID: **J1611175002**
Sample ID: **16321-MW-16BR**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 14:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: IC,E300.0,Water			Analytical Method: EPA 300.0					
Chloride	15		mg/L	1	5.0	0.50	11/18/2016 15:08	J
Nitrate	0.14	I	mg/L	1	0.50	0.050	11/18/2016 15:08	J
Analysis Desc: Ammonia,E350.1,Water			Analytical Method: EPA 350.1					
Ammonia (N)	0.23		mg/L	1	0.01	0.01	11/22/2016 10:40	G
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540 C					
Total Dissolved Solids	84		mg/L	1	10	10	11/22/2016 12:34	J

Lab ID: **J1611175003**
Sample ID: **16321-MW-17AR**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 13:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B		Preparation Method: SW-846 3010A						
Analysis,Water		Analytical Method: SW-846 6010						
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/18/2016 21:23	J
Barium	0.15		mg/L	1	0.0020	0.00028	11/18/2016 21:23	J
Beryllium	0.00031		mg/L	1	0.00030	0.00013	11/18/2016 21:23	J
Cadmium	0.0018		mg/L	1	0.00060	0.00032	11/18/2016 21:23	J
Chromium	0.0013		mg/L	1	0.0010	0.00050	11/18/2016 21:23	J
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/18/2016 21:23	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/18/2016 21:23	J
Iron	0.26		mg/L	1	0.20	0.030	11/18/2016 21:23	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/18/2016 21:23	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/18/2016 21:23	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/18/2016 21:23	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	11/18/2016 21:23	J
Sodium	15		mg/L	1	0.20	0.16	11/18/2016 21:23	J
Vanadium	0.0087		mg/L	1	0.0015	0.00018	11/18/2016 21:23	J
Zinc	0.0020	U	mg/L	1	0.010	0.0020	11/18/2016 21:23	J

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ANALYTICAL RESULTS

Workorder: J1611175 J.E.D. Landfill

Lab ID: **J1611175003**
Sample ID: **16321-MW-17AR**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 13:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: SW846 6020B		Preparation Method: SW-846 3010A						
Analysis, Total		Analytical Method: SW-846 6020						
Antimony	0.44	I	ug/L	1	0.70	0.046	11/23/2016 15:13	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 15:13	J
Analysis Desc: SW846 7470A		Preparation Method: SW-846 7470A						
Analysis, Water		Analytical Method: SW-846 7470A						
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/21/2016 16:04	J

VOLATILES

Analysis Desc: 8260B Analysis, Water		Preparation Method: SW-846 5030B						
		Analytical Method: SW-846 8260B						
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/21/2016 18:37	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/21/2016 18:37	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/21/2016 18:37	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/21/2016 18:37	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/21/2016 18:37	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 18:37	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/21/2016 18:37	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 18:37	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/21/2016 18:37	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/21/2016 18:37	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/21/2016 18:37	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/21/2016 18:37	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/21/2016 18:37	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/21/2016 18:37	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/21/2016 18:37	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/21/2016 18:37	J
Benzene	0.16	U	ug/L	1	1.0	0.16	11/21/2016 18:37	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/21/2016 18:37	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/21/2016 18:37	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/21/2016 18:37	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/21/2016 18:37	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/21/2016 18:37	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/21/2016 18:37	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/21/2016 18:37	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/21/2016 18:37	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/21/2016 18:37	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/21/2016 18:37	J

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ANALYTICAL RESULTS

Workorder: J1611175 J.E.D. Landfill

Lab ID: **J1611175003**
Sample ID: **16321-MW-17AR**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 13:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/21/2016 18:37	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/21/2016 18:37	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/21/2016 18:37	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/21/2016 18:37	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/21/2016 18:37	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/21/2016 18:37	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/21/2016 18:37	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/21/2016 18:37	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/21/2016 18:37	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/21/2016 18:37	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/21/2016 18:37	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/21/2016 18:37	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/21/2016 18:37	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/21/2016 18:37	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/21/2016 18:37	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/21/2016 18:37	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 18:37	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/21/2016 18:37	J
1,2-Dichloroethane-d4 (S)	90		%	1	77-125		11/21/2016 18:37	
Toluene-d8 (S)	99		%	1	80-121		11/21/2016 18:37	
Bromofluorobenzene (S)	112		%	1	80-129		11/21/2016 18:37	

Analysis Desc: 8260B SIM Analysis, Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/21/2016 18:37	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/21/2016 18:37	J
1,2-Dichloroethane-d4 (S)	94		%	1	77-125		11/21/2016 18:37	
Toluene-d8 (S)	101		%	1	80-121		11/21/2016 18:37	
Bromofluorobenzene (S)	112		%	1	80-129		11/21/2016 18:37	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	100		mg/L	10	50	5.0	11/18/2016 16:44	J
Nitrate	17	Q	mg/L	10	5.0	0.50	11/18/2016 16:44	J

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	0.28		mg/L	1	0.01	0.01	11/22/2016 10:40	G
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Analysis Desc: Tot Dissolved Solids,SM2540C

Analytical Method: SM 2540 C

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ANALYTICAL RESULTS

Workorder: J1611175 J.E.D. Landfill

Lab ID: **J1611175003**
Sample ID: **16321-MW-17AR**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 13:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Total Dissolved Solids	260		mg/L	1	10	10	11/22/2016 12:34	J

Lab ID: **J1611175004**
Sample ID: **16321-MW-17BR**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 12:50

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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METALS

Analysis Desc: SW846 6010B
Analysis, Water

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6010

Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/18/2016 21:27	J
Barium	0.018		mg/L	1	0.0020	0.00028	11/18/2016 21:27	J
Beryllium	0.00013	U	mg/L	1	0.00030	0.00013	11/18/2016 21:27	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/18/2016 21:27	J
Chromium	0.0013		mg/L	1	0.0010	0.00050	11/18/2016 21:27	J
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/18/2016 21:27	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/18/2016 21:27	J
Iron	0.85		mg/L	1	0.20	0.030	11/18/2016 21:27	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/18/2016 21:27	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/18/2016 21:27	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/18/2016 21:27	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	11/18/2016 21:27	J
Sodium	20		mg/L	1	0.20	0.16	11/18/2016 21:27	J
Vanadium	0.0013	I	mg/L	1	0.0015	0.00018	11/18/2016 21:27	J
Zinc	0.0082	I	mg/L	1	0.010	0.0020	11/18/2016 21:27	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6020

Antimony	0.085	I	ug/L	1	0.70	0.046	11/23/2016 15:24	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 15:24	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A
Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/21/2016 16:06	J
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ANALYTICAL RESULTS

Workorder: J1611175 J.E.D. Landfill

Lab ID: **J1611175004**
Sample ID: **16321-MW-17BR**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 12:50

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
VOLATILES								
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/21/2016 19:04	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/21/2016 19:04	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/21/2016 19:04	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/21/2016 19:04	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/21/2016 19:04	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 19:04	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/21/2016 19:04	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 19:04	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/21/2016 19:04	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/21/2016 19:04	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/21/2016 19:04	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/21/2016 19:04	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/21/2016 19:04	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/21/2016 19:04	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/21/2016 19:04	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/21/2016 19:04	J
Benzene	0.16	U	ug/L	1	1.0	0.16	11/21/2016 19:04	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/21/2016 19:04	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/21/2016 19:04	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/21/2016 19:04	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/21/2016 19:04	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/21/2016 19:04	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/21/2016 19:04	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/21/2016 19:04	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/21/2016 19:04	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/21/2016 19:04	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/21/2016 19:04	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/21/2016 19:04	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/21/2016 19:04	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/21/2016 19:04	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/21/2016 19:04	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/21/2016 19:04	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/21/2016 19:04	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/21/2016 19:04	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/21/2016 19:04	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/21/2016 19:04	J

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ANALYTICAL RESULTS

Workorder: J1611175 J.E.D. Landfill

Lab ID: **J1611175004**
Sample ID: **16321-MW-17BR**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 12:50

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/21/2016 19:04	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/21/2016 19:04	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/21/2016 19:04	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/21/2016 19:04	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/21/2016 19:04	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/21/2016 19:04	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/21/2016 19:04	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 19:04	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/21/2016 19:04	J
1,2-Dichloroethane-d4 (S)	98		%	1	77-125		11/21/2016 19:04	
Toluene-d8 (S)	97		%	1	80-121		11/21/2016 19:04	
Bromofluorobenzene (S)	104		%	1	80-129		11/21/2016 19:04	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/21/2016 19:04	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/21/2016 19:04	J
1,2-Dichloroethane-d4 (S)	80		%	1	77-125		11/21/2016 19:04	
Toluene-d8 (S)	100		%	1	80-121		11/21/2016 19:04	
Bromofluorobenzene (S)	104		%	1	80-129		11/21/2016 19:04	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	33		mg/L	1	5.0	0.50	11/18/2016 14:52	J
Nitrate	0.050	U,Q	mg/L	1	0.50	0.050	11/18/2016 14:52	J

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	0.14		mg/L	1	0.01	0.01	11/22/2016 10:40	G
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Analysis Desc: Tot Dissolved
Solids,SM2540C

Analytical Method: SM 2540 C

Total Dissolved Solids	110		mg/L	1	10	10	11/22/2016 12:34	J
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ANALYTICAL RESULTS

Workorder: J1611175 J.E.D. Landfill

Lab ID: **J1611175005**
Sample ID: **16321-MW-29A**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 11:50

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis, Water			Analytical Method: SW-846 6010					
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/18/2016 21:32	J
Barium	0.035		mg/L	1	0.0020	0.00028	11/18/2016 21:32	J
Beryllium	0.00013	I	mg/L	1	0.00030	0.00013	11/18/2016 21:32	J
Cadmium	0.0013		mg/L	1	0.00060	0.00032	11/18/2016 21:32	J
Chromium	0.0014		mg/L	1	0.0010	0.00050	11/18/2016 21:32	J
Cobalt	0.00074	I	mg/L	1	0.0040	0.00060	11/18/2016 21:32	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/18/2016 21:32	J
Iron	1.4		mg/L	1	0.20	0.030	11/18/2016 21:32	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/18/2016 21:32	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/18/2016 21:32	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/18/2016 21:32	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	11/18/2016 21:32	J
Sodium	12		mg/L	1	0.20	0.16	11/18/2016 21:32	J
Vanadium	0.024		mg/L	1	0.0015	0.00018	11/18/2016 21:32	J
Zinc	0.0059	I	mg/L	1	0.010	0.0020	11/18/2016 21:32	J
Analysis Desc: SW846 6020B			Preparation Method: SW-846 3010A					
Analysis, Total			Analytical Method: SW-846 6020					
Antimony	0.97		ug/L	1	0.70	0.046	11/23/2016 15:27	J
Thallium	0.48		ug/L	1	0.20	0.057	11/23/2016 15:27	J
Analysis Desc: SW846 7470A			Preparation Method: SW-846 7470A					
Analysis, Water			Analytical Method: SW-846 7470A					
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/21/2016 16:09	J
VOLATILES								
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/21/2016 19:31	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/21/2016 19:31	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/21/2016 19:31	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/21/2016 19:31	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/21/2016 19:31	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 19:31	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/21/2016 19:31	J

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ANALYTICAL RESULTS

Workorder: J1611175 J.E.D. Landfill

Lab ID: **J1611175005**
Sample ID: **16321-MW-29A**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 11:50

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 19:31	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/21/2016 19:31	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/21/2016 19:31	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/21/2016 19:31	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/21/2016 19:31	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/21/2016 19:31	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/21/2016 19:31	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/21/2016 19:31	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/21/2016 19:31	J
Benzene	0.16	U	ug/L	1	1.0	0.16	11/21/2016 19:31	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/21/2016 19:31	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/21/2016 19:31	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/21/2016 19:31	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/21/2016 19:31	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/21/2016 19:31	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/21/2016 19:31	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/21/2016 19:31	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/21/2016 19:31	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/21/2016 19:31	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/21/2016 19:31	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/21/2016 19:31	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/21/2016 19:31	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/21/2016 19:31	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/21/2016 19:31	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/21/2016 19:31	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/21/2016 19:31	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/21/2016 19:31	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/21/2016 19:31	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/21/2016 19:31	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/21/2016 19:31	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/21/2016 19:31	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/21/2016 19:31	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/21/2016 19:31	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/21/2016 19:31	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/21/2016 19:31	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/21/2016 19:31	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 19:31	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/21/2016 19:31	J
Bromofluorobenzene (S)	110		%	1	80-129		11/21/2016 19:31	

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ANALYTICAL RESULTS

Workorder: J1611175 J.E.D. Landfill

Lab ID: **J1611175005**
Sample ID: **16321-MW-29A**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 11:50

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: 8260B SIM Analysis, Water		Preparation Method: SW-846 5030B						
		Analytical Method: SW-846 8260B (SIM)						
1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/21/2016 19:31	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/21/2016 19:31	J
Bromofluorobenzene (S)	111		%	1	80-129		11/21/2016 19:31	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water		Analytical Method: EPA 300.0						
Chloride	7.3		mg/L	1	5.0	0.50	11/18/2016 14:35	J
Nitrate	1.6	Q	mg/L	1	0.50	0.050	11/18/2016 14:35	J
Analysis Desc: Ammonia,E350.1,Water		Analytical Method: EPA 350.1						
Ammonia (N)	0.34		mg/L	1	0.01	0.01	11/22/2016 10:40	G
Analysis Desc: Tot Dissolved Solids,SM2540C		Analytical Method: SM 2540 C						
Total Dissolved Solids	100		mg/L	1	10	10	11/22/2016 12:34	J

WET CHEMISTRY

Analysis Desc: 8260B Analysis, Water		Preparation Method: SW-846 5030B						
		Analytical Method: SW-846 8260B						
1,2-Dichloroethane-d4 (S)	84		%	1	77-125		11/22/2016 15:37	
Toluene-d8 (S)	99		%	1	80-121		11/22/2016 15:37	
Analysis Desc: 8260B SIM Analysis, Water		Preparation Method: SW-846 5030B						
		Analytical Method: SW-846 8260B (SIM)						
1,2-Dichloroethane-d4 (S)	84		%	1	77-125		11/22/2016 15:37	
Toluene-d8 (S)	99		%	1	80-121		11/22/2016 15:37	

Lab ID: **J1611175006**
Sample ID: **16321-MW-29B**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 11:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								

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ANALYTICAL RESULTS

Workorder: J1611175 J.E.D. Landfill

Lab ID: **J1611175006**
Sample ID: **16321-MW-29B**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 11:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: SW846 6010B		Preparation Method: SW-846 3010A						
Analysis, Water		Analytical Method: SW-846 6010						
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/18/2016 21:36	J
Barium	0.099		mg/L	1	0.0020	0.00028	11/18/2016 21:36	J
Beryllium	0.00029	I	mg/L	1	0.00030	0.00013	11/18/2016 21:36	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/18/2016 21:36	J
Chromium	0.0017		mg/L	1	0.0010	0.00050	11/18/2016 21:36	J
Cobalt	0.00062	I	mg/L	1	0.0040	0.00060	11/18/2016 21:36	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/18/2016 21:36	J
Iron	3.5		mg/L	1	0.20	0.030	11/18/2016 21:36	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/18/2016 21:36	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/18/2016 21:36	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/18/2016 21:36	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	11/18/2016 21:36	J
Sodium	25		mg/L	1	0.20	0.16	11/18/2016 21:36	J
Vanadium	0.0033		mg/L	1	0.0015	0.00018	11/18/2016 21:36	J
Zinc	0.0072	I	mg/L	1	0.010	0.0020	11/18/2016 21:36	J

Analysis Desc: SW846 6020B Preparation Method: SW-846 3010A
Analysis, Total Analytical Method: SW-846 6020

Antimony	0.046	I	ug/L	1	0.70	0.046	11/23/2016 15:31	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 15:31	J

Analysis Desc: SW846 7470A Preparation Method: SW-846 7470A
Analysis, Water Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/21/2016 16:11	J
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VOLATILES

Analysis Desc: 8260B Analysis, Water Preparation Method: SW-846 5030B
Analytical Method: SW-846 8260B

1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/21/2016 19:58	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/21/2016 19:58	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/21/2016 19:58	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/21/2016 19:58	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/21/2016 19:58	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 19:58	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/21/2016 19:58	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 19:58	J

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ANALYTICAL RESULTS

Workorder: J1611175 J.E.D. Landfill

Lab ID: **J1611175006**
Sample ID: **16321-MW-29B**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 11:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/21/2016 19:58	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/21/2016 19:58	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/21/2016 19:58	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/21/2016 19:58	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/21/2016 19:58	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/21/2016 19:58	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/21/2016 19:58	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/21/2016 19:58	J
Benzene	0.16	U	ug/L	1	1.0	0.16	11/21/2016 19:58	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/21/2016 19:58	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/21/2016 19:58	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/21/2016 19:58	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/21/2016 19:58	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/21/2016 19:58	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/21/2016 19:58	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/21/2016 19:58	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/21/2016 19:58	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/21/2016 19:58	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/21/2016 19:58	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/21/2016 19:58	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/21/2016 19:58	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/21/2016 19:58	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/21/2016 19:58	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/21/2016 19:58	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/21/2016 19:58	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/21/2016 19:58	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/21/2016 19:58	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/21/2016 19:58	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/21/2016 19:58	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/21/2016 19:58	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/21/2016 19:58	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/21/2016 19:58	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/21/2016 19:58	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/21/2016 19:58	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/21/2016 19:58	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 19:58	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/21/2016 19:58	J
1,2-Dichloroethane-d4 (S)	98		%	1	77-125		11/21/2016 19:58	
Toluene-d8 (S)	96		%	1	80-121		11/21/2016 19:58	
Bromofluorobenzene (S)	104		%	1	80-129		11/21/2016 19:58	

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ANALYTICAL RESULTS

Workorder: J1611175 J.E.D. Landfill

Lab ID: **J1611175006**
Sample ID: **16321-MW-29B**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 11:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: 8260B SIM Analysis, Water		Preparation Method: SW-846 5030B						
		Analytical Method: SW-846 8260B (SIM)						
1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/21/2016 19:58	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/21/2016 19:58	J
1,2-Dichloroethane-d4 (S)	81		%	1	77-125		11/21/2016 19:58	
Toluene-d8 (S)	98		%	1	80-121		11/21/2016 19:58	
Bromofluorobenzene (S)	104		%	1	80-129		11/21/2016 19:58	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water		Analytical Method: EPA 300.0						
Chloride	30		mg/L	1	5.0	0.50	11/18/2016 14:19	J
Nitrate	0.050	U,Q	mg/L	1	0.50	0.050	11/18/2016 14:19	J
Analysis Desc: Ammonia,E350.1,Water		Analytical Method: EPA 350.1						
Ammonia (N)	0.10		mg/L	1	0.01	0.01	11/22/2016 10:40	G
Analysis Desc: Tot Dissolved Solids,SM2540C		Analytical Method: SM 2540 C						
Total Dissolved Solids	200		mg/L	1	10	10	11/22/2016 12:34	J

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ANALYTICAL RESULTS QUALIFIERS

Workorder: J1611175 J.E.D. Landfill

PARAMETER QUALIFIERS

- U The compound was analyzed for but not detected.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- Q Missed Hold Time

LAB QUALIFIERS

- G DOH Certification #E82001(AEL-G)(FL NELAC Certification)
- J DOH Certification #E82574(AEL-JAX)(FL NELAC Certification)

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QUALITY CONTROL DATA

Workorder: J1611175 J.E.D. Landfill

QC Batch: DGMj/2193 Analysis Method: SW-846 6010
QC Batch Method: SW-846 3010A Prepared: 11/18/2016 08:45
Associated Lab Samples: J1611175001, J1611175002, J1611175003, J1611175004, J1611175005, J1611175006

METHOD BLANK: 2201307

Parameter	Units	Blank Result	Reporting Limit Qualifiers
METALS			
Silver	mg/L	0.00044	0.00044 U
Arsenic	mg/L	0.0085	0.0085 U
Barium	mg/L	0.00028	0.00028 U
Beryllium	mg/L	0.00013	0.00013 U
Cadmium	mg/L	0.00032	0.00032 U
Cobalt	mg/L	0.00060	0.00060 U
Chromium	mg/L	0.00050	0.00050 U
Copper	mg/L	0.0025	0.0025 U
Iron	mg/L	0.030	0.030 U
Sodium	mg/L	0.16	0.16 U
Nickel	mg/L	0.0011	0.0011 U
Lead	mg/L	0.0013	0.0013 U
Selenium	mg/L	0.0068	0.0068 U
Vanadium	mg/L	0.00018	0.00018 U
Zinc	mg/L	0.0020	0.0020 U

QC Batch: DGMj/2198 Analysis Method: SW-846 6020
QC Batch Method: SW-846 3010A Prepared: 11/21/2016 07:30
Associated Lab Samples: J1611175001, J1611175002, J1611175003, J1611175004, J1611175005, J1611175006

METHOD BLANK: 2201781

Parameter	Units	Blank Result	Reporting Limit Qualifiers
METALS			
Antimony	ug/L	0.046	0.046 U
Thallium	ug/L	0.057	0.057 U

QC Batch: WCAj/2962 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Prepared:
Associated Lab Samples: J1611175001, J1611175002, J1611175003, J1611175004, J1611175005, J1611175006

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QUALITY CONTROL DATA

Workorder: J1611175 J.E.D. Landfill

METHOD BLANK: 2202554

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Chloride	mg/L	0.50	0.50	U
Nitrate	mg/L	0.050	0.050	U

QC Batch: DGMj/2204 Analysis Method: SW-846 7470A
QC Batch Method: SW-846 7470A Prepared: 11/21/2016 11:35
Associated Lab Samples: J1611175001, J1611175002, J1611175003, J1611175004, J1611175005, J1611175006

METHOD BLANK: 2202879

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
METALS				
Mercury	mg/L	0.000011	0.000011	U

QC Batch: MSVj/2838 Analysis Method: SW-846 8260B
QC Batch Method: SW-846 5030B Prepared: 11/21/2016 10:56
Associated Lab Samples: J1611175001, J1611175002, J1611175003, J1611175004, J1611175005, J1611175006

METHOD BLANK: 2203857

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
VOLATILES				
Chloromethane	ug/L	0.21	0.21	U
Vinyl Chloride	ug/L	0.20	0.20	U
Bromomethane	ug/L	0.24	0.24	U
Chloroethane	ug/L	0.33	0.33	U
Trichlorofluoromethane	ug/L	0.32	0.32	U
Acetone	ug/L	2.1	2.1	U
1,1-Dichloroethylene	ug/L	0.18	0.18	U
Iodomethane (Methyl Iodide)	ug/L	0.16	0.16	U
Acrylonitrile	ug/L	1.1	1.1	U
Methylene Chloride	ug/L	2.5	2.5	U
Carbon Disulfide	ug/L	0.21	0.21	U
trans-1,2-Dichloroethylene	ug/L	0.20	0.20	U
1,1-Dichloroethane	ug/L	0.14	0.14	U
Vinyl Acetate	ug/L	0.19	0.19	U
2-Butanone (MEK)	ug/L	0.43	0.43	U
cis-1,2-Dichloroethylene	ug/L	0.24	0.24	U
Bromochloromethane	ug/L	0.17	0.17	U

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QUALITY CONTROL DATA

Workorder: J1611175 J.E.D. Landfill

METHOD BLANK: 2203857

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Chloroform	ug/L	0.18	0.18	U
1,2-Dichloroethane	ug/L	0.23	0.23	U
1,1,1-Trichloroethane	ug/L	0.22	0.22	U
Carbon Tetrachloride	ug/L	0.36	0.36	U
Benzene	ug/L	0.16	0.16	U
Dibromomethane	ug/L	0.26	0.26	U
1,2-Dichloropropane	ug/L	0.20	0.20	U
Trichloroethene	ug/L	0.29	0.29	U
Bromodichloromethane	ug/L	0.25	0.25	U
cis-1,3-Dichloropropene	ug/L	0.16	0.16	U
4-Methyl-2-pentanone (MIBK)	ug/L	0.47	0.47	U
trans-1,3-Dichloropropylene	ug/L	0.18	0.18	U
1,1,2-Trichloroethane	ug/L	0.30	0.30	U
Toluene	ug/L	0.23	0.23	U
2-Hexanone	ug/L	0.44	0.44	U
Dibromochloromethane	ug/L	0.33	0.33	U
Tetrachloroethylene (PCE)	ug/L	0.36	0.36	U
1,1,1,2-Tetrachloroethane	ug/L	0.26	0.26	U
Chlorobenzene	ug/L	0.21	0.21	U
Ethylbenzene	ug/L	0.24	0.24	U
Bromoform	ug/L	0.43	0.43	U
Styrene	ug/L	0.23	0.23	U
1,1,2,2-Tetrachloroethane	ug/L	0.20	0.20	U
1,2,3-Trichloropropane	ug/L	0.30	0.30	U
1,4-Dichlorobenzene	ug/L	0.22	0.22	U
1,2-Dichlorobenzene	ug/L	0.18	0.18	U
trans-1,4-Dichloro-2-butene	ug/L	1.8	1.8	U
Xylene (Total)	ug/L	0.53	0.53	U
1,2-Dichloroethane-d4 (S)	%	89	77-125	
Toluene-d8 (S)	%	101	80-121	
Bromofluorobenzene (S)	%	107	80-129	

QC Batch: MSVJ/2840 Analysis Method: SW-846 8260B (SIM)
QC Batch Method: SW-846 5030B Prepared: 11/21/2016 10:56
Associated Lab Samples: J1611175001, J1611175002, J1611175003, J1611175004, J1611175005, J1611175006

METHOD BLANK: 2203861

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
VOLATILES				
Ethylene Dibromide (EDB)	ug/L	0.020	0.020	U
1,2-Dibromo-3-Chloropropane	ug/L	0.11	0.11	U

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QUALITY CONTROL DATA

Workorder: J1611175 J.E.D. Landfill

METHOD BLANK: 2203861

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,2-Dichloroethane-d4 (S)	%	89	77-125	
Toluene-d8 (S)	%	101	80-121	
Bromofluorobenzene (S)	%	107	80-129	

QC Batch: WCAj/2989

Analysis Method: SM 2540 C

QC Batch Method: SM 2540 C

Prepared:

Associated Lab Samples: J1611175001, J1611175002, J1611175003, J1611175004, J1611175005, J1611175006

METHOD BLANK: 2204273

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Total Dissolved Solids	mg/L	10	10	U

QC Batch: WCAg/3605

Analysis Method: EPA 350.1

QC Batch Method: EPA 350.1

Prepared:

Associated Lab Samples: J1611175001, J1611175002, J1611175003, J1611175004, J1611175005, J1611175006

METHOD BLANK: 2204908

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Ammonia (N)	mg/L	0.01	0.01	U

QUALITY CONTROL DATA QUALIFIERS

Workorder: J1611175 J.E.D. Landfill

QUALITY CONTROL PARAMETER QUALIFIERS

- U The compound was analyzed for but not detected.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- Q Missed Hold Time

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: J1611175 J.E.D. Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
J1611175001	16321-MW-16AR	SW-846 3010A	DGMj/2193	SW-846 6010	ICPj/1622
J1611175002	16321-MW-16BR	SW-846 3010A	DGMj/2193	SW-846 6010	ICPj/1622
J1611175003	16321-MW-17AR	SW-846 3010A	DGMj/2193	SW-846 6010	ICPj/1622
J1611175004	16321-MW-17BR	SW-846 3010A	DGMj/2193	SW-846 6010	ICPj/1622
J1611175005	16321-MW-29A	SW-846 3010A	DGMj/2193	SW-846 6010	ICPj/1622
J1611175006	16321-MW-29B	SW-846 3010A	DGMj/2193	SW-846 6010	ICPj/1622
J1611175001	16321-MW-16AR	SW-846 3010A	DGMj/2198	SW-846 6020	ICMj/1339
J1611175002	16321-MW-16BR	SW-846 3010A	DGMj/2198	SW-846 6020	ICMj/1339
J1611175003	16321-MW-17AR	SW-846 3010A	DGMj/2198	SW-846 6020	ICMj/1339
J1611175004	16321-MW-17BR	SW-846 3010A	DGMj/2198	SW-846 6020	ICMj/1339
J1611175005	16321-MW-29A	SW-846 3010A	DGMj/2198	SW-846 6020	ICMj/1339
J1611175006	16321-MW-29B	SW-846 3010A	DGMj/2198	SW-846 6020	ICMj/1339
J1611175001	16321-MW-16AR			EPA 300.0	WCAj/2962
J1611175002	16321-MW-16BR			EPA 300.0	WCAj/2962
J1611175003	16321-MW-17AR			EPA 300.0	WCAj/2962
J1611175004	16321-MW-17BR			EPA 300.0	WCAj/2962
J1611175005	16321-MW-29A			EPA 300.0	WCAj/2962
J1611175006	16321-MW-29B			EPA 300.0	WCAj/2962
J1611175001	16321-MW-16AR	SW-846 7470A	DGMj/2204	SW-846 7470A	CVAj/1256
J1611175002	16321-MW-16BR	SW-846 7470A	DGMj/2204	SW-846 7470A	CVAj/1256
J1611175003	16321-MW-17AR	SW-846 7470A	DGMj/2204	SW-846 7470A	CVAj/1256
J1611175004	16321-MW-17BR	SW-846 7470A	DGMj/2204	SW-846 7470A	CVAj/1256
J1611175005	16321-MW-29A	SW-846 7470A	DGMj/2204	SW-846 7470A	CVAj/1256
J1611175006	16321-MW-29B	SW-846 7470A	DGMj/2204	SW-846 7470A	CVAj/1256
J1611175001	16321-MW-16AR	SW-846 5030B	MSVj/2838	SW-846 8260B	MSVj/2839
J1611175002	16321-MW-16BR	SW-846 5030B	MSVj/2838	SW-846 8260B	MSVj/2839
J1611175003	16321-MW-17AR	SW-846 5030B	MSVj/2838	SW-846 8260B	MSVj/2839
J1611175004	16321-MW-17BR	SW-846 5030B	MSVj/2838	SW-846 8260B	MSVj/2839
J1611175005	16321-MW-29A	SW-846 5030B	MSVj/2838	SW-846 8260B	MSVj/2839

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: J1611175 J.E.D. Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
J1611175006	16321-MW-29B	SW-846 5030B	MSVj/2838	SW-846 8260B	MSVj/2839
J1611175001	16321-MW-16AR	SW-846 5030B	MSVj/2840	SW-846 8260B (SIM)	MSVj/2841
J1611175002	16321-MW-16BR	SW-846 5030B	MSVj/2840	SW-846 8260B (SIM)	MSVj/2841
J1611175003	16321-MW-17AR	SW-846 5030B	MSVj/2840	SW-846 8260B (SIM)	MSVj/2841
J1611175004	16321-MW-17BR	SW-846 5030B	MSVj/2840	SW-846 8260B (SIM)	MSVj/2841
J1611175005	16321-MW-29A	SW-846 5030B	MSVj/2840	SW-846 8260B (SIM)	MSVj/2841
J1611175006	16321-MW-29B	SW-846 5030B	MSVj/2840	SW-846 8260B (SIM)	MSVj/2841
J1611175001	16321-MW-16AR			SM 2540 C	WCAj/2989
J1611175002	16321-MW-16BR			SM 2540 C	WCAj/2989
J1611175003	16321-MW-17AR			SM 2540 C	WCAj/2989
J1611175004	16321-MW-17BR			SM 2540 C	WCAj/2989
J1611175005	16321-MW-29A			SM 2540 C	WCAj/2989
J1611175006	16321-MW-29B			SM 2540 C	WCAj/2989
J1611175001	16321-MW-16AR			EPA 350.1	WCAg/3605
J1611175002	16321-MW-16BR			EPA 350.1	WCAg/3605
J1611175003	16321-MW-17AR			EPA 350.1	WCAg/3605
J1611175004	16321-MW-17BR			EPA 350.1	WCAg/3605
J1611175005	16321-MW-29A			EPA 350.1	WCAg/3605
J1611175006	16321-MW-29B			EPA 350.1	WCAg/3605

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- ☐ **Altamonte Springs:** 528 S. Northlake Blvd., St
- ☐ **Gainesville:** 4965 SW 41st Blvd. • Gainesville, FL
- ☐ **Jacksonville:** 6681 Southpoint Pkwy. • Jacksonv
- ☐ **Miramar:** 10200 USA Today Way, Miramar, FL 331
- ☐ **Tallahassee:** 1288 Cedar Center Drive, Tallahas
- ☐ **Tampa:** 9610 Princess Palm Ave. • Tampa, FL 336

J1611175

107,937,1597

Received on Ice ☒ Yes ☐ No ☒ Temp taken from sample ☐ Temp from blank ☐ Where required, pH checked Temperature when received 4 (in degrees celcius)

DCN: AD-051 Form last revised 08/18/2014 Device used for measuring Temp by unique identifier (circle IR temp gun used) J: 9A G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V

	Relinquished by:	Date	Time	Received by:	Date	Time
1	<i>Joe Terry</i>	11-16-16	1600	Fed Ex	11-16-16	1600
2	<i>Fed Ex</i>	11-17-16	0830	<i>Bjels</i>	11-17-16	0830
3						
4						

FOR DRINKING WATER USE:
(When PWS Information not otherwise supplied) PWS ID: _____
Contact Person: _____ Phone: _____
Supplier of Water: _____
Site Address: _____

Client: Waste ConnectionsProject name: J.E.D LandfillDate/Time Rcvd: 11-17-16 0830Log-In request number: J1161175Received by: RyCompleted by: Ry**Cooler/Shipping Information:**Courier: ☐ AEL ☐ Client ☐ UPS ☐ Blue Streak ☒ FedEx ☐ AES ☐ ASAP ☐ Other (describe): _____Type: ☒ Cooler ☐ Box ☐ Other (describe): _____

Cooler temperature: Identify the cooler and document the temperature blank or ice water measurement

Cooler ID					
Temp (°C)	<u>4</u>				
Temp taken from	☒ Sample Bottle ☒ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler
Temp measured with	☒ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):

Other Information:

Any discrepancies should be explained in the "Comments" section below.

CHECKLIST	YES	NO	NA
1. Were custody seals on shipping container(s) intact?			☒
2. Were custody papers properly included with samples?	☒		
3. Were custody papers properly filled out (ink, signed, match labels)?	☒		
4. Did all bottles arrive in good condition (unbroken)?	☒		
5. Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?	☒		
6. Did the sample labels agree with the chain of custody?	☒		
7. Were correct bottles used for the tests indicated?	☒		
8. Were proper sample preservation techniques indicated on the label?	☒		
9. Were samples received within holding times?	☒		
10. Were all VOA vials free of the presence of air bubbles?	☒		
11. Have all Soil VOA Vials and Encores been placed in a freezer within 48 hours of collection?			☒
12. Were samples in direct contact with wet ice? If "No," check one: ☐ NO ICE ☐ BLUE ICE	☒		
13. Was the cooler temperature less than 6°C?	☒		
14. Where pH preservation is required, are sample pHs checked and any anomalies recorded by Sample control? Are all <2 or >10? Note: VOA samples are checked by laboratory analysts.	☒		
15. Was sufficient sample volume provided to perform all tests?	☒		
16. If for Bacteriological testing, were containers supplied by AEL? (See QA officer if answer is no)			☒
17. Were all sample containers provided by AEL? (Other than Bacteriological)	☒		
18. Were samples accepted into the laboratory?	☒		
19. When necessary to split samples into other bottles, is it noted in the comments?	☒		

Comments: (Note all sample(s) and container (s)" with a "No" checklist response in this comment section)



Advanced
Environmental Laboratories, Inc.

6681 Southpoint Parkway
Jacksonville, Florida 32216
Office (904) 363-9350
Fax (904) 363-9354

Project No.: J1611175
Client Name: Waste Connections
ProjectID: J.E.D. Landfill

I. Receipt

Due to an inadvertent sample receiving error, samples J1611175003, J1611175004, J1611175005, and J1611175006 were logged in and provided to the laboratory without sufficient time remaining to perform the analysis within the recommended hold time. The analysis was performed as soon as possible after receipt by the laboratory. Since the analysis was not performed significantly past the hold time, it is our opinion that the impact on the data is minimal. The data is qualified to indicate the holding time violation.

II. Holding Times

Preparation:

Analysis:

III. Method

Analysis: EPA 300.0

Preparation: None

IV. Preparation

V. Analysis

A. Calibration:

B. Blanks:

C. Duplicates:

D. Spikes: The matrix spike (MS) recoveries of Chloride for sample J1611176001 were outside control criteria. Recoveries in the Laboratory Control Sample (LCS) were acceptable, which indicates the analytical batch was in control. No further corrective action was required.

E. Serial Dilution:

F. Samples:

G. Other:

I certify that this data package is in compliance with the terms and conditions agreed to by Advanced Environmental Laboratories, Inc. and by the client, both technically and for completeness, except for the conditions detailed above. The Quality Assurance Officer, or designee, as verified by the following signature, has authorized release of the data contained in this data package:



Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

November 28, 2016

Kirk Wills
Waste Connections
5135 Madison Avenue
Tampa, FL 33619

RE: Workorder: J1611176 J.E.D. Landfill

Dear Kirk Wills:

Enclosed are the analytical results for sample(s) received by the laboratory on Thursday, November 17, 2016. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. The analytical results for the samples contained in this report were submitted for analysis as outlined by the Chain of Custody and results pertain only to these samples.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Craig Myers', is positioned above the printed name and email address.

Craig Myers
CMyers@AELLab.com

Enclosures

Report ID: 456738 - 7758264

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SAMPLE SUMMARY

Workorder: J1611176 J.E.D. Landfill

Lab ID	Sample ID	Matrix	Date Collected	Date Received
J1611176001	16321-MW-24A	Water	11/16/2016 06:00	11/17/2016 08:30
J1611176002	16321-MW-24B	Water	11/16/2016 06:25	11/17/2016 08:30
J1611176003	16321-MW-22AR	Water	11/16/2016 08:15	11/17/2016 08:30
J1611176004	16321-MW-22BR	Water	11/16/2016 07:40	11/17/2016 08:30
J1611176005	16321-MW-23A	Water	11/16/2016 10:00	11/17/2016 08:30
J1611176006	16321-MW-23B	Water	11/16/2016 09:25	11/17/2016 08:30

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ANALYTICAL RESULTS

Workorder: J1611176 J.E.D. Landfill

Lab ID: **J1611176001**
Sample ID: **16321-MW-24A**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 06:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis, Water			Analytical Method: SW-846 6010					
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/21/2016 16:48	J
Barium	0.0050		mg/L	1	0.0020	0.0028	11/21/2016 16:48	J
Beryllium	0.00013	U	mg/L	1	0.00030	0.00013	11/21/2016 16:48	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/21/2016 16:48	J
Chromium	0.0012		mg/L	1	0.0010	0.00050	11/21/2016 16:48	J
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/21/2016 16:48	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/21/2016 16:48	J
Iron	0.21		mg/L	1	0.20	0.030	11/21/2016 16:48	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/21/2016 16:48	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/21/2016 16:48	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/21/2016 16:48	J
Silver	0.0016	I	mg/L	1	0.0040	0.00044	11/21/2016 16:48	J
Sodium	6.7		mg/L	1	0.20	0.16	11/21/2016 16:48	J
Vanadium	0.0017		mg/L	1	0.0015	0.00018	11/21/2016 16:48	J
Zinc	0.011		mg/L	1	0.010	0.0020	11/21/2016 16:48	J
Analysis Desc: SW846 6020B			Preparation Method: SW-846 3010A					
Analysis, Total			Analytical Method: SW-846 6020					
Antimony	0.11	I	ug/L	1	0.70	0.046	11/23/2016 16:11	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 16:11	J
Analysis Desc: SW846 7470A			Preparation Method: SW-846 7470A					
Analysis, Water			Analytical Method: SW-846 7470A					
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/23/2016 14:19	J
VOLATILES								
Analysis Desc: IC,E300.0, Water			Analytical Method: EPA 300.0					
Chloride	11		mg/L	1	5.0	0.50	11/18/2016 10:51	J
Nitrate	0.13	I,Q	mg/L	1	0.50	0.050	11/18/2016 10:51	J
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/21/2016 20:26	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/21/2016 20:26	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/21/2016 20:26	J

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ANALYTICAL RESULTS

Workorder: J1611176 J.E.D. Landfill

Lab ID: **J1611176001**
Sample ID: **16321-MW-24A**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 06:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/21/2016 20:26	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/21/2016 20:26	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 20:26	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/21/2016 20:26	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 20:26	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/21/2016 20:26	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/21/2016 20:26	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/21/2016 20:26	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/21/2016 20:26	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/21/2016 20:26	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/21/2016 20:26	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/21/2016 20:26	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/21/2016 20:26	J
Benzene	0.16	U	ug/L	1	1.0	0.16	11/21/2016 20:26	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/21/2016 20:26	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/21/2016 20:26	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/21/2016 20:26	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/21/2016 20:26	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/21/2016 20:26	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/21/2016 20:26	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/21/2016 20:26	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/21/2016 20:26	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/21/2016 20:26	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/21/2016 20:26	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/21/2016 20:26	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/21/2016 20:26	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/21/2016 20:26	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/21/2016 20:26	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/21/2016 20:26	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/21/2016 20:26	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/21/2016 20:26	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/21/2016 20:26	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/21/2016 20:26	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/21/2016 20:26	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/21/2016 20:26	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/21/2016 20:26	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/21/2016 20:26	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/21/2016 20:26	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/21/2016 20:26	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/21/2016 20:26	J

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ANALYTICAL RESULTS

Workorder: J1611176 J.E.D. Landfill

Lab ID: **J1611176001**
Sample ID: **16321-MW-24A**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 06:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 20:26	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/21/2016 20:26	J
1,2-Dichloroethane-d4 (S)	94		%	1	77-125		11/21/2016 20:26	
Toluene-d8 (S)	100		%	1	80-121		11/21/2016 20:26	
Bromofluorobenzene (S)	107		%	1	80-129		11/21/2016 20:26	

Analysis Desc: 8260B SIM Analysis, Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/21/2016 20:26	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/21/2016 20:26	J
1,2-Dichloroethane-d4 (S)	97		%	1	77-125		11/21/2016 20:26	
Toluene-d8 (S)	102		%	1	80-121		11/21/2016 20:26	
Bromofluorobenzene (S)	107		%	1	80-129		11/21/2016 20:26	

VOLATILES

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	0.06		mg/L	1	0.01	0.01	11/22/2016 10:40	G
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Analysis Desc: Tot Dissolved Solids,SM2540C

Analytical Method: SM 2540 C

Total Dissolved Solids	70		mg/L	1	10	10	11/22/2016 12:34	J
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Lab ID: **J1611176002**
Sample ID: **16321-MW-24B**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 06:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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METALS

Analysis Desc: SW846 6010B Analysis,Water

Preparation Method: SW-846 3010A

Analytical Method: SW-846 6010

Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/21/2016 16:52	J
Barium	0.0099		mg/L	1	0.0020	0.00028	11/21/2016 16:52	J
Beryllium	0.00013	U	mg/L	1	0.00030	0.00013	11/21/2016 16:52	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/21/2016 16:52	J
Chromium	0.0016		mg/L	1	0.0010	0.00050	11/21/2016 16:52	J

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ANALYTICAL RESULTS

Workorder: J1611176 J.E.D. Landfill

Lab ID: **J1611176002**
Sample ID: **16321-MW-24B**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 06:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/21/2016 16:52	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/21/2016 16:52	J
Iron	0.44		mg/L	1	0.20	0.030	11/21/2016 16:52	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/21/2016 16:52	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/21/2016 16:52	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/21/2016 16:52	J
Silver	0.0011	I	mg/L	1	0.0040	0.00044	11/21/2016 16:52	J
Sodium	4.6		mg/L	1	0.20	0.16	11/21/2016 16:52	J
Vanadium	0.0025		mg/L	1	0.0015	0.00018	11/21/2016 16:52	J
Zinc	0.010		mg/L	1	0.010	0.0020	11/21/2016 16:52	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6020

Antimony	0.066	I	ug/L	1	0.70	0.046	11/23/2016 16:15	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 16:15	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A
Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/23/2016 14:21	J
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VOLATILES

Analysis Desc: 8260B Analysis, Water

Preparation Method: SW-846 5030B
Analytical Method: SW-846 8260B

1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/21/2016 20:53	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/21/2016 20:53	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/21/2016 20:53	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/21/2016 20:53	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/21/2016 20:53	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 20:53	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/21/2016 20:53	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 20:53	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/21/2016 20:53	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/21/2016 20:53	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/21/2016 20:53	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/21/2016 20:53	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/21/2016 20:53	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/21/2016 20:53	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/21/2016 20:53	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/21/2016 20:53	J

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ANALYTICAL RESULTS

Workorder: J1611176 J.E.D. Landfill

Lab ID: **J1611176002**
Sample ID: **16321-MW-24B**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 06:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Benzene	0.16	U	ug/L	1	1.0	0.16	11/21/2016 20:53	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/21/2016 20:53	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/21/2016 20:53	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/21/2016 20:53	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/21/2016 20:53	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/21/2016 20:53	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/21/2016 20:53	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/21/2016 20:53	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/21/2016 20:53	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/21/2016 20:53	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/21/2016 20:53	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/21/2016 20:53	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/21/2016 20:53	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/21/2016 20:53	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/21/2016 20:53	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/21/2016 20:53	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/21/2016 20:53	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/21/2016 20:53	J
Toluene	0.41	I	ug/L	1	1.0	0.23	11/21/2016 20:53	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/21/2016 20:53	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/21/2016 20:53	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/21/2016 20:53	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/21/2016 20:53	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/21/2016 20:53	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/21/2016 20:53	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/21/2016 20:53	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/21/2016 20:53	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/21/2016 20:53	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/21/2016 20:53	J
1,2-Dichloroethane-d4 (S)	86		%	1	77-125		11/21/2016 20:53	
Toluene-d8 (S)	102		%	1	80-121		11/21/2016 20:53	
Bromofluorobenzene (S)	108		%	1	80-129		11/21/2016 20:53	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/21/2016 20:53	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/21/2016 20:53	J
1,2-Dichloroethane-d4 (S)	91		%	1	77-125		11/21/2016 20:53	
Toluene-d8 (S)	104		%	1	80-121		11/21/2016 20:53	
Bromofluorobenzene (S)	108		%	1	80-129		11/21/2016 20:53	

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ANALYTICAL RESULTS

Workorder: J1611176 J.E.D. Landfill

Lab ID: **J1611176002**
Sample ID: **16321-MW-24B**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 06:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: IC,E300.0,Water			Analytical Method: EPA 300.0					
Chloride	6.4		mg/L	1	5.0	0.50	11/18/2016 11:23	J
Nitrate	0.13	I,Q	mg/L	1	0.50	0.050	11/18/2016 11:23	J
Analysis Desc: Ammonia,E350.1,Water			Analytical Method: EPA 350.1					
Ammonia (N)	0.08		mg/L	1	0.01	0.01	11/22/2016 10:40	G
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540 C					
Total Dissolved Solids	100		mg/L	1	10	10	11/22/2016 12:34	J

Lab ID: **J1611176003**
Sample ID: **16321-MW-22AR**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 08:15

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B		Preparation Method: SW-846 3010A						
Analysis,Water		Analytical Method: SW-846 6010						
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/21/2016 16:56	J
Barium	0.044		mg/L	1	0.0020	0.00028	11/21/2016 16:56	J
Beryllium	0.00013	U	mg/L	1	0.00030	0.00013	11/21/2016 16:56	J
Cadmium	0.00049	I	mg/L	1	0.00060	0.00032	11/21/2016 16:56	J
Chromium	0.0029		mg/L	1	0.0010	0.00050	11/21/2016 16:56	J
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/21/2016 16:56	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/21/2016 16:56	J
Iron	0.035	I	mg/L	1	0.20	0.030	11/21/2016 16:56	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/21/2016 16:56	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/21/2016 16:56	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/21/2016 16:56	J
Silver	0.0014	I	mg/L	1	0.0040	0.00044	11/21/2016 16:56	J
Sodium	13		mg/L	1	0.20	0.16	11/21/2016 16:56	J
Vanadium	0.0047		mg/L	1	0.0015	0.00018	11/21/2016 16:56	J
Zinc	0.0086	I	mg/L	1	0.010	0.0020	11/21/2016 16:56	J

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ANALYTICAL RESULTS

Workorder: J1611176 J.E.D. Landfill

Lab ID: **J1611176003**
Sample ID: **16321-MW-22AR**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 08:15

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: SW846 6020B		Preparation Method: SW-846 3010A						
Analysis, Total		Analytical Method: SW-846 6020						
Antimony	0.16	I	ug/L	1	0.70	0.046	11/23/2016 16:19	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 16:19	J
Analysis Desc: SW846 7470A		Preparation Method: SW-846 7470A						
Analysis, Water		Analytical Method: SW-846 7470A						
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/23/2016 14:41	J

VOLATILES

Analysis Desc: 8260B Analysis, Water		Preparation Method: SW-846 5030B						
		Analytical Method: SW-846 8260B						
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/22/2016 00:57	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/22/2016 00:57	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/22/2016 00:57	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/22/2016 00:57	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/22/2016 00:57	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/22/2016 00:57	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/22/2016 00:57	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/22/2016 00:57	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/22/2016 00:57	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/22/2016 00:57	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/22/2016 00:57	J
2-Butanone (MEK)	2.4	I	ug/L	1	5.0	0.43	11/22/2016 00:57	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/22/2016 00:57	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/22/2016 00:57	J
Acetone	6.4		ug/L	1	5.0	2.1	11/22/2016 00:57	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/22/2016 00:57	J
Benzene	0.16	U	ug/L	1	1.0	0.16	11/22/2016 00:57	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/22/2016 00:57	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/22/2016 00:57	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/22/2016 00:57	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/22/2016 00:57	J
Carbon Disulfide	0.82	I	ug/L	1	1.0	0.21	11/22/2016 00:57	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/22/2016 00:57	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/22/2016 00:57	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/22/2016 00:57	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/22/2016 00:57	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/22/2016 00:57	J

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ANALYTICAL RESULTS

Workorder: J1611176 J.E.D. Landfill

Lab ID: **J1611176003**
Sample ID: **16321-MW-22AR**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 08:15

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/22/2016 00:57	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/22/2016 00:57	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/22/2016 00:57	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/22/2016 00:57	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/22/2016 00:57	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/22/2016 00:57	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/22/2016 00:57	J
Toluene	0.25	I	ug/L	1	1.0	0.23	11/22/2016 00:57	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/22/2016 00:57	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/22/2016 00:57	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/22/2016 00:57	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/22/2016 00:57	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/22/2016 00:57	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/22/2016 00:57	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/22/2016 00:57	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/22/2016 00:57	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/22/2016 00:57	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/22/2016 00:57	J
1,2-Dichloroethane-d4 (S)	82		%	1	77-125		11/22/2016 00:57	
Toluene-d8 (S)	101		%	1	80-121		11/22/2016 00:57	
Bromofluorobenzene (S)	108		%	1	80-129		11/22/2016 00:57	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	2.9		ug/L	1	0.20	0.11	11/22/2016 00:57	J
Ethylene Dibromide (EDB)	0.36		ug/L	1	0.10	0.020	11/22/2016 00:57	J
1,2-Dichloroethane-d4 (S)	88		%	1	77-125		11/22/2016 00:57	
Toluene-d8 (S)	103		%	1	80-121		11/22/2016 00:57	
Bromofluorobenzene (S)	108		%	1	80-129		11/22/2016 00:57	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	14		mg/L	1	5.0	0.50	11/18/2016 11:55	J
Nitrate	0.31	I,Q	mg/L	1	0.50	0.050	11/18/2016 11:55	J

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	4.5		mg/L	10	0.10	0.08	11/22/2016 10:40	G
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Analysis Desc: Tot Dissolved
Solids,SM2540C

Analytical Method: SM 2540 C

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ANALYTICAL RESULTS

Workorder: J1611176 J.E.D. Landfill

Lab ID: **J1611176003**
Sample ID: **16321-MW-22AR**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 08:15

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Total Dissolved Solids	820		mg/L	1	10	10	11/22/2016 12:34	J

Lab ID: **J1611176004**
Sample ID: **16321-MW-22BR**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 07:40

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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METALS

Analysis Desc: SW846 6010B
Analysis, Water

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6010

Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/21/2016 17:19	J
Barium	0.015		mg/L	1	0.0020	0.00028	11/21/2016 17:19	J
Beryllium	0.00019	I	mg/L	1	0.00030	0.00013	11/21/2016 17:19	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/21/2016 17:19	J
Chromium	0.00050	I	mg/L	1	0.0010	0.00050	11/21/2016 17:19	J
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/21/2016 17:19	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/21/2016 17:19	J
Iron	1.8		mg/L	1	0.20	0.030	11/21/2016 17:19	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/21/2016 17:19	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/21/2016 17:19	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/21/2016 17:19	J
Silver	0.0019	I	mg/L	1	0.0040	0.00044	11/21/2016 17:19	J
Sodium	15		mg/L	1	0.20	0.16	11/21/2016 17:19	J
Vanadium	0.0021		mg/L	1	0.0015	0.00018	11/21/2016 17:19	J
Zinc	0.0048	I	mg/L	1	0.010	0.0020	11/21/2016 17:19	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6020

Antimony	0.11	I	ug/L	1	0.70	0.046	11/23/2016 16:37	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 16:37	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A
Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/23/2016 14:43	J
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ANALYTICAL RESULTS

Workorder: J1611176 J.E.D. Landfill

Lab ID: **J1611176004**
Sample ID: **16321-MW-22BR**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 07:40

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
VOLATILES								
Analysis Desc: 8260B Analysis, Water		Preparation Method: SW-846 5030B						
Analytical Method: SW-846 8260B								
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/22/2016 01:24	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/22/2016 01:24	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/22/2016 01:24	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/22/2016 01:24	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/22/2016 01:24	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/22/2016 01:24	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/22/2016 01:24	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/22/2016 01:24	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/22/2016 01:24	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/22/2016 01:24	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/22/2016 01:24	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/22/2016 01:24	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/22/2016 01:24	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/22/2016 01:24	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/22/2016 01:24	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/22/2016 01:24	J
Benzene	0.16	U	ug/L	1	1.0	0.16	11/22/2016 01:24	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/22/2016 01:24	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/22/2016 01:24	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/22/2016 01:24	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/22/2016 01:24	J
Carbon Disulfide	0.29	I	ug/L	1	1.0	0.21	11/22/2016 01:24	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/22/2016 01:24	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/22/2016 01:24	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/22/2016 01:24	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/22/2016 01:24	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/22/2016 01:24	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/22/2016 01:24	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/22/2016 01:24	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/22/2016 01:24	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/22/2016 01:24	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/22/2016 01:24	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/22/2016 01:24	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/22/2016 01:24	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/22/2016 01:24	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/22/2016 01:24	J

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ANALYTICAL RESULTS

Workorder: J1611176 J.E.D. Landfill

Lab ID: **J1611176004**
Sample ID: **16321-MW-22BR**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 07:40

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/22/2016 01:24	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/22/2016 01:24	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/22/2016 01:24	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/22/2016 01:24	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/22/2016 01:24	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/22/2016 01:24	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/22/2016 01:24	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/22/2016 01:24	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/22/2016 01:24	J
1,2-Dichloroethane-d4 (S)	90		%	1	77-125		11/22/2016 01:24	
Toluene-d8 (S)	99		%	1	80-121		11/22/2016 01:24	
Bromofluorobenzene (S)	106		%	1	80-129		11/22/2016 01:24	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/22/2016 01:24	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/22/2016 01:24	J
1,2-Dichloroethane-d4 (S)	94		%	1	77-125		11/22/2016 01:24	
Toluene-d8 (S)	101		%	1	80-121		11/22/2016 01:24	
Bromofluorobenzene (S)	107		%	1	80-129		11/22/2016 01:24	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	27		mg/L	1	5.0	0.50	11/18/2016 11:39	J
Nitrate	0.15	I,Q	mg/L	1	0.50	0.050	11/18/2016 11:39	J

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	0.13		mg/L	1	0.01	0.01	11/22/2016 10:40	G
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Analysis Desc: Tot Dissolved
Solids,SM2540C

Analytical Method: SM 2540 C

Total Dissolved Solids	96		mg/L	1	10	10	11/22/2016 12:34	J
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ANALYTICAL RESULTS

Workorder: J1611176 J.E.D. Landfill

Lab ID: **J1611176005**
Sample ID: **16321-MW-23A**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 10:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis, Water			Analytical Method: SW-846 6010					
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/21/2016 17:23	J
Barium	0.015		mg/L	1	0.0020	0.00028	11/21/2016 17:23	J
Beryllium	0.00013	U	mg/L	1	0.00030	0.00013	11/21/2016 17:23	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/21/2016 17:23	J
Chromium	0.0015		mg/L	1	0.0010	0.00050	11/21/2016 17:23	J
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/21/2016 17:23	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/21/2016 17:23	J
Iron	0.082	I	mg/L	1	0.20	0.030	11/21/2016 17:23	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/21/2016 17:23	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/21/2016 17:23	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/21/2016 17:23	J
Silver	0.0021	I	mg/L	1	0.0040	0.00044	11/21/2016 17:23	J
Sodium	20		mg/L	1	0.20	0.16	11/21/2016 17:23	J
Vanadium	0.0028		mg/L	1	0.0015	0.00018	11/21/2016 17:23	J
Zinc	0.0050	I	mg/L	1	0.010	0.0020	11/21/2016 17:23	J
Analysis Desc: SW846 6020B			Preparation Method: SW-846 3010A					
Analysis, Total			Analytical Method: SW-846 6020					
Antimony	0.10	I	ug/L	1	0.70	0.046	11/23/2016 16:41	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 16:41	J
Analysis Desc: SW846 7470A			Preparation Method: SW-846 7470A					
Analysis, Water			Analytical Method: SW-846 7470A					
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/23/2016 14:45	J
VOLATILES								
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/22/2016 01:51	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/22/2016 01:51	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/22/2016 01:51	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/22/2016 01:51	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/22/2016 01:51	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/22/2016 01:51	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/22/2016 01:51	J

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ANALYTICAL RESULTS

Workorder: J1611176 J.E.D. Landfill

Lab ID: **J1611176005**
Sample ID: **16321-MW-23A**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 10:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/22/2016 01:51	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/22/2016 01:51	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/22/2016 01:51	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/22/2016 01:51	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/22/2016 01:51	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/22/2016 01:51	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/22/2016 01:51	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/22/2016 01:51	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/22/2016 01:51	J
Benzene	0.16	U	ug/L	1	1.0	0.16	11/22/2016 01:51	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/22/2016 01:51	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/22/2016 01:51	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/22/2016 01:51	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/22/2016 01:51	J
Carbon Disulfide	0.53	I	ug/L	1	1.0	0.21	11/22/2016 01:51	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/22/2016 01:51	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/22/2016 01:51	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/22/2016 01:51	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/22/2016 01:51	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/22/2016 01:51	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/22/2016 01:51	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/22/2016 01:51	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/22/2016 01:51	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/22/2016 01:51	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/22/2016 01:51	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/22/2016 01:51	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/22/2016 01:51	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/22/2016 01:51	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/22/2016 01:51	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/22/2016 01:51	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/22/2016 01:51	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/22/2016 01:51	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/22/2016 01:51	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/22/2016 01:51	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/22/2016 01:51	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/22/2016 01:51	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/22/2016 01:51	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/22/2016 01:51	J
1,2-Dichloroethane-d4 (S)	85		%	1	77-125		11/22/2016 01:51	
Toluene-d8 (S)	102		%	1	80-121		11/22/2016 01:51	

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ANALYTICAL RESULTS

Workorder: J1611176 J.E.D. Landfill

Lab ID: **J1611176005**
Sample ID: **16321-MW-23A**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 10:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Bromofluorobenzene (S)	108		%	1	80-129		11/22/2016 01:51	
Analysis Desc: 8260B SIM Analysis, Water		Preparation Method: SW-846 5030B Analytical Method: SW-846 8260B (SIM)						
1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/22/2016 01:51	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/22/2016 01:51	J
1,2-Dichloroethane-d4 (S)	90		%	1	77-125		11/22/2016 01:51	
Toluene-d8 (S)	104		%	1	80-121		11/22/2016 01:51	
Bromofluorobenzene (S)	108		%	1	80-129		11/22/2016 01:51	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water		Analytical Method: EPA 300.0						
Chloride	37		mg/L	1	5.0	0.50	11/18/2016 14:03	J
Nitrate	0.28	I,Q	mg/L	1	0.50	0.050	11/18/2016 14:03	J
Analysis Desc: Ammonia,E350.1,Water		Analytical Method: EPA 350.1						
Ammonia (N)	2.7		mg/L	5	0.05	0.04	11/22/2016 10:40	G
Analysis Desc: Tot Dissolved Solids,SM2540C		Analytical Method: SM 2540 C						
Total Dissolved Solids	370		mg/L	1	10	10	11/22/2016 12:34	J

Lab ID: **J1611176006**
Sample ID: **16321-MW-23B**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 09:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: SW846 6010B Analysis,Water		Preparation Method: SW-846 3010A Analytical Method: SW-846 6010						
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/21/2016 17:28	J
Barium	0.092		mg/L	1	0.0020	0.00028	11/21/2016 17:28	J
Beryllium	0.00055		mg/L	1	0.00030	0.00013	11/21/2016 17:28	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/21/2016 17:28	J
Chromium	0.0012		mg/L	1	0.0010	0.00050	11/21/2016 17:28	J

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ANALYTICAL RESULTS

Workorder: J1611176 J.E.D. Landfill

Lab ID: **J1611176006**
Sample ID: **16321-MW-23B**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 09:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/21/2016 17:28	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/21/2016 17:28	J
Iron	2.1		mg/L	1	0.20	0.030	11/21/2016 17:28	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/21/2016 17:28	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/21/2016 17:28	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/21/2016 17:28	J
Silver	0.0018	I	mg/L	1	0.0040	0.00044	11/21/2016 17:28	J
Sodium	100		mg/L	1	0.20	0.16	11/21/2016 17:28	J
Vanadium	0.0057		mg/L	1	0.0015	0.00018	11/21/2016 17:28	J
Zinc	0.0072	I	mg/L	1	0.010	0.0020	11/21/2016 17:28	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6020

Antimony	0.10	I	ug/L	1	0.70	0.046	11/23/2016 16:44	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 16:44	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A
Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/23/2016 14:48	J
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VOLATILES

Analysis Desc: 8260B Analysis, Water

Preparation Method: SW-846 5030B
Analytical Method: SW-846 8260B

1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/22/2016 02:19	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/22/2016 02:19	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/22/2016 02:19	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/22/2016 02:19	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/22/2016 02:19	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/22/2016 02:19	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/22/2016 02:19	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/22/2016 02:19	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/22/2016 02:19	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/22/2016 02:19	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/22/2016 02:19	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/22/2016 02:19	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/22/2016 02:19	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/22/2016 02:19	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/22/2016 02:19	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/22/2016 02:19	J

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ANALYTICAL RESULTS

Workorder: J1611176 J.E.D. Landfill

Lab ID: **J1611176006**
Sample ID: **16321-MW-23B**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 09:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Benzene	0.16	U	ug/L	1	1.0	0.16	11/22/2016 02:19	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/22/2016 02:19	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/22/2016 02:19	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/22/2016 02:19	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/22/2016 02:19	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/22/2016 02:19	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/22/2016 02:19	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/22/2016 02:19	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/22/2016 02:19	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/22/2016 02:19	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/22/2016 02:19	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/22/2016 02:19	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/22/2016 02:19	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/22/2016 02:19	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/22/2016 02:19	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/22/2016 02:19	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/22/2016 02:19	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/22/2016 02:19	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/22/2016 02:19	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/22/2016 02:19	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/22/2016 02:19	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/22/2016 02:19	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/22/2016 02:19	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/22/2016 02:19	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/22/2016 02:19	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/22/2016 02:19	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/22/2016 02:19	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/22/2016 02:19	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/22/2016 02:19	J
1,2-Dichloroethane-d4 (S)	84		%	1	77-125		11/22/2016 02:19	
Toluene-d8 (S)	100		%	1	80-121		11/22/2016 02:19	
Bromofluorobenzene (S)	110		%	1	80-129		11/22/2016 02:19	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/22/2016 02:19	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/22/2016 02:19	J
1,2-Dichloroethane-d4 (S)	89		%	1	77-125		11/22/2016 02:19	
Toluene-d8 (S)	102		%	1	80-121		11/22/2016 02:19	
Bromofluorobenzene (S)	110		%	1	80-129		11/22/2016 02:19	

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ANALYTICAL RESULTS

Workorder: J1611176 J.E.D. Landfill

Lab ID: **J1611176006**
Sample ID: **16321-MW-23B**

Date Received: 11/17/16 08:30 Matrix: Water
Date Collected: 11/16/16 09:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: IC,E300.0,Water			Analytical Method: EPA 300.0					
Chloride	220		mg/L	1	5.0	0.50	11/18/2016 12:27	J
Nitrate	0.13	I,Q	mg/L	1	0.50	0.050	11/18/2016 12:27	J
Analysis Desc: Ammonia,E350.1,Water			Analytical Method: EPA 350.1					
Ammonia (N)	2.2		mg/L	5	0.05	0.04	11/22/2016 10:40	G
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540 C					
Total Dissolved Solids	600		mg/L	1	10	10	11/22/2016 12:34	J

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ANALYTICAL RESULTS QUALIFIERS

Workorder: J1611176 J.E.D. Landfill

PARAMETER QUALIFIERS

- U The compound was analyzed for but not detected.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- Q Missed Hold Time

LAB QUALIFIERS

- G DOH Certification #E82001(AEL-G)(FL NELAC Certification)
- J DOH Certification #E82574(AEL-JAX)(FL NELAC Certification)

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QUALITY CONTROL DATA

Workorder: J1611176 J.E.D. Landfill

QC Batch: DGMj/2195 Analysis Method: SW-846 6010
QC Batch Method: SW-846 3010A Prepared: 11/18/2016 09:35
Associated Lab Samples: J1611176001, J1611176002, J1611176003, J1611176004, J1611176005, J1611176006

METHOD BLANK: 2201346

Parameter	Units	Blank Result	Reporting Limit Qualifiers
METALS			
Silver	mg/L	0.00044	0.00044 U
Arsenic	mg/L	0.0085	0.0085 U
Barium	mg/L	0.00028	0.00028 U
Beryllium	mg/L	0.00013	0.00013 U
Cadmium	mg/L	0.00032	0.00032 U
Cobalt	mg/L	0.00060	0.00060 U
Chromium	mg/L	0.00050	0.00050 U
Copper	mg/L	0.0025	0.0025 U
Iron	mg/L	0.030	0.030 U
Sodium	mg/L	0.16	0.16 U
Nickel	mg/L	0.0011	0.0011 U
Lead	mg/L	0.0013	0.0013 U
Selenium	mg/L	0.0068	0.0068 U
Vanadium	mg/L	0.00018	0.00018 U
Zinc	mg/L	0.0020	0.0020 U

QC Batch: WCAj/2962 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Prepared:
Associated Lab Samples: J1611176001, J1611176002, J1611176003, J1611176004, J1611176005, J1611176006

METHOD BLANK: 2202554

Parameter	Units	Blank Result	Reporting Limit Qualifiers
WET CHEMISTRY			
Chloride	mg/L	0.50	0.50 U
Nitrate	mg/L	0.050	0.050 U

QC Batch: DGMj/2206 Analysis Method: SW-846 6020
QC Batch Method: SW-846 3010A Prepared: 11/22/2016 03:00
Associated Lab Samples: J1611176001, J1611176002, J1611176003, J1611176004, J1611176005, J1611176006

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QUALITY CONTROL DATA

Workorder: J1611176 J.E.D. Landfill

METHOD BLANK: 2203239

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
METALS				
Antimony	ug/L	0.046	0.046	U
Thallium	ug/L	0.057	0.057	U

QC Batch: MSVj/2838

Analysis Method: SW-846 8260B

QC Batch Method: SW-846 5030B

Prepared: 11/21/2016 10:56

Associated Lab Samples: J1611176001, J1611176002, J1611176003, J1611176004, J1611176005, J1611176006

METHOD BLANK: 2203857

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
VOLATILES				
Chloromethane	ug/L	0.21	0.21	U
Vinyl Chloride	ug/L	0.20	0.20	U
Bromomethane	ug/L	0.24	0.24	U
Chloroethane	ug/L	0.33	0.33	U
Trichlorofluoromethane	ug/L	0.32	0.32	U
Acetone	ug/L	2.1	2.1	U
1,1-Dichloroethylene	ug/L	0.18	0.18	U
Iodomethane (Methyl Iodide)	ug/L	0.16	0.16	U
Acrylonitrile	ug/L	1.1	1.1	U
Methylene Chloride	ug/L	2.5	2.5	U
Carbon Disulfide	ug/L	0.21	0.21	U
trans-1,2-Dichloroethylene	ug/L	0.20	0.20	U
1,1-Dichloroethane	ug/L	0.14	0.14	U
Vinyl Acetate	ug/L	0.19	0.19	U
2-Butanone (MEK)	ug/L	0.43	0.43	U
cis-1,2-Dichloroethylene	ug/L	0.24	0.24	U
Bromochloromethane	ug/L	0.17	0.17	U
Chloroform	ug/L	0.18	0.18	U
1,2-Dichloroethane	ug/L	0.23	0.23	U
1,1,1-Trichloroethane	ug/L	0.22	0.22	U
Carbon Tetrachloride	ug/L	0.36	0.36	U
Benzene	ug/L	0.16	0.16	U
Dibromomethane	ug/L	0.26	0.26	U
1,2-Dichloropropane	ug/L	0.20	0.20	U
Trichloroethene	ug/L	0.29	0.29	U
Bromodichloromethane	ug/L	0.25	0.25	U
cis-1,3-Dichloropropene	ug/L	0.16	0.16	U
4-Methyl-2-pentanone (MIBK)	ug/L	0.47	0.47	U
trans-1,3-Dichloropropylene	ug/L	0.18	0.18	U
1,1,2-Trichloroethane	ug/L	0.30	0.30	U

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QUALITY CONTROL DATA

Workorder: J1611176 J.E.D. Landfill

METHOD BLANK: 2203857

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Toluene	ug/L	0.23	0.23	U
2-Hexanone	ug/L	0.44	0.44	U
Dibromochloromethane	ug/L	0.33	0.33	U
Tetrachloroethylene (PCE)	ug/L	0.36	0.36	U
1,1,1,2-Tetrachloroethane	ug/L	0.26	0.26	U
Chlorobenzene	ug/L	0.21	0.21	U
Ethylbenzene	ug/L	0.24	0.24	U
Bromoform	ug/L	0.43	0.43	U
Styrene	ug/L	0.23	0.23	U
1,1,2,2-Tetrachloroethane	ug/L	0.20	0.20	U
1,2,3-Trichloropropane	ug/L	0.30	0.30	U
1,4-Dichlorobenzene	ug/L	0.22	0.22	U
1,2-Dichlorobenzene	ug/L	0.18	0.18	U
trans-1,4-Dichloro-2-butene	ug/L	1.8	1.8	U
Xylene (Total)	ug/L	0.53	0.53	U
1,2-Dichloroethane-d4 (S)	%	89	77-125	
Toluene-d8 (S)	%	101	80-121	
Bromofluorobenzene (S)	%	107	80-129	

QC Batch: MSVj/2840 Analysis Method: SW-846 8260B (SIM)
QC Batch Method: SW-846 5030B Prepared: 11/21/2016 10:56
Associated Lab Samples: J1611176001, J1611176002, J1611176003, J1611176004, J1611176005, J1611176006

METHOD BLANK: 2203861

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
VOLATILES				
Ethylene Dibromide (EDB)	ug/L	0.020	0.020	U
1,2-Dibromo-3-Chloropropane	ug/L	0.11	0.11	U
1,2-Dichloroethane-d4 (S)	%	89	77-125	
Toluene-d8 (S)	%	101	80-121	
Bromofluorobenzene (S)	%	107	80-129	

QC Batch: WCAj/2989 Analysis Method: SM 2540 C
QC Batch Method: SM 2540 C Prepared:
Associated Lab Samples: J1611176001, J1611176002, J1611176003, J1611176004, J1611176005, J1611176006

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QUALITY CONTROL DATA

Workorder: J1611176 J.E.D. Landfill

METHOD BLANK: 2204273

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Total Dissolved Solids	mg/L	10	10	U

QC Batch: WCAg/3605 Analysis Method: EPA 350.1

QC Batch Method: EPA 350.1 Prepared:

Associated Lab Samples: J1611176001, J1611176002, J1611176003, J1611176004, J1611176005, J1611176006

METHOD BLANK: 2204908

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Ammonia (N)	mg/L	0.01	0.01	U

QC Batch: DGMj/2215 Analysis Method: SW-846 7470A

QC Batch Method: SW-846 7470A Prepared: 11/23/2016 10:21

Associated Lab Samples: J1611176001, J1611176002, J1611176003, J1611176004, J1611176005, J1611176006

METHOD BLANK: 2205117

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
METALS				
Mercury	mg/L	0.000011	0.000011	U

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: J1611176 J.E.D. Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
J1611176001	16321-MW-24A	SW-846 3010A	DGMj/2195	SW-846 6010	ICPj/1624
J1611176002	16321-MW-24B	SW-846 3010A	DGMj/2195	SW-846 6010	ICPj/1624
J1611176003	16321-MW-22AR	SW-846 3010A	DGMj/2195	SW-846 6010	ICPj/1624
J1611176004	16321-MW-22BR	SW-846 3010A	DGMj/2195	SW-846 6010	ICPj/1624
J1611176005	16321-MW-23A	SW-846 3010A	DGMj/2195	SW-846 6010	ICPj/1624
J1611176006	16321-MW-23B	SW-846 3010A	DGMj/2195	SW-846 6010	ICPj/1624
J1611176001	16321-MW-24A			EPA 300.0	WCAj/2962
J1611176002	16321-MW-24B			EPA 300.0	WCAj/2962
J1611176003	16321-MW-22AR			EPA 300.0	WCAj/2962
J1611176004	16321-MW-22BR			EPA 300.0	WCAj/2962
J1611176005	16321-MW-23A			EPA 300.0	WCAj/2962
J1611176006	16321-MW-23B			EPA 300.0	WCAj/2962
J1611176001	16321-MW-24A	SW-846 3010A	DGMj/2206	SW-846 6020	ICMj/1341
J1611176002	16321-MW-24B	SW-846 3010A	DGMj/2206	SW-846 6020	ICMj/1341
J1611176003	16321-MW-22AR	SW-846 3010A	DGMj/2206	SW-846 6020	ICMj/1341
J1611176004	16321-MW-22BR	SW-846 3010A	DGMj/2206	SW-846 6020	ICMj/1341
J1611176005	16321-MW-23A	SW-846 3010A	DGMj/2206	SW-846 6020	ICMj/1341
J1611176006	16321-MW-23B	SW-846 3010A	DGMj/2206	SW-846 6020	ICMj/1341
J1611176001	16321-MW-24A	SW-846 5030B	MSVj/2838	SW-846 8260B	MSVj/2839
J1611176002	16321-MW-24B	SW-846 5030B	MSVj/2838	SW-846 8260B	MSVj/2839
J1611176003	16321-MW-22AR	SW-846 5030B	MSVj/2838	SW-846 8260B	MSVj/2839
J1611176004	16321-MW-22BR	SW-846 5030B	MSVj/2838	SW-846 8260B	MSVj/2839
J1611176005	16321-MW-23A	SW-846 5030B	MSVj/2838	SW-846 8260B	MSVj/2839
J1611176006	16321-MW-23B	SW-846 5030B	MSVj/2838	SW-846 8260B	MSVj/2839
J1611176001	16321-MW-24A	SW-846 5030B	MSVj/2840	SW-846 8260B (SIM)	MSVj/2841
J1611176002	16321-MW-24B	SW-846 5030B	MSVj/2840	SW-846 8260B (SIM)	MSVj/2841
J1611176003	16321-MW-22AR	SW-846 5030B	MSVj/2840	SW-846 8260B (SIM)	MSVj/2841
J1611176004	16321-MW-22BR	SW-846 5030B	MSVj/2840	SW-846 8260B (SIM)	MSVj/2841
J1611176005	16321-MW-23A	SW-846 5030B	MSVj/2840	SW-846 8260B (SIM)	MSVj/2841

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: J1611176 J.E.D. Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
J1611176006	16321-MW-23B	SW-846 5030B	MSVj/2840	SW-846 8260B (SIM)	MSVj/2841
J1611176001	16321-MW-24A			SM 2540 C	WCAj/2989
J1611176002	16321-MW-24B			SM 2540 C	WCAj/2989
J1611176003	16321-MW-22AR			SM 2540 C	WCAj/2989
J1611176004	16321-MW-22BR			SM 2540 C	WCAj/2989
J1611176005	16321-MW-23A			SM 2540 C	WCAj/2989
J1611176006	16321-MW-23B			SM 2540 C	WCAj/2989
J1611176001	16321-MW-24A			EPA 350.1	WCAg/3605
J1611176002	16321-MW-24B			EPA 350.1	WCAg/3605
J1611176003	16321-MW-22AR			EPA 350.1	WCAg/3605
J1611176004	16321-MW-22BR			EPA 350.1	WCAg/3605
J1611176005	16321-MW-23A			EPA 350.1	WCAg/3605
J1611176006	16321-MW-23B			EPA 350.1	WCAg/3605
J1611176001	16321-MW-24A	SW-846 7470A	DGMj/2215	SW-846 7470A	CVAj/1259
J1611176002	16321-MW-24B	SW-846 7470A	DGMj/2215	SW-846 7470A	CVAj/1259
J1611176003	16321-MW-22AR	SW-846 7470A	DGMj/2215	SW-846 7470A	CVAj/1259
J1611176004	16321-MW-22BR	SW-846 7470A	DGMj/2215	SW-846 7470A	CVAj/1259
J1611176005	16321-MW-23A	SW-846 7470A	DGMj/2215	SW-846 7470A	CVAj/1259
J1611176006	16321-MW-23B	SW-846 7470A	DGMj/2215	SW-846 7470A	CVAj/1259

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☒ Jacksonville: 6681 Southpoint Pkwy. • Jacksonville
☐ Miramar: 10200 USA Today Way, Miramar, FL 3302
☐ Tallahassee: 1288 Cedar Center Drive, Tallahassee
☐ Tampa: 9610 Princess Palm Ave. • Tampa, FL 33619 • 813.630.9610 • FAX 813.630.9622

J1611176

7,937,1597

Client Name: Waste Connections, Inc.		Project Name: J.E.D LANDFILL (FK/A OAK HAMMOCK DISPOSAL)		BOTTLE SIZE & TYPE	40 mL Vials	500 mL Plastic	500 mL Plastic	250 mL Plastic										LABORATORY I.D. NUMBER
Address: 5135 Madison Avenue		P.O. Number/Project Number:																
Tampa, Florida 33619		Project Location:																
Phone: 913-388-1026		FDEP Facility No: 89544																
FAX:		Project Name and Address: JED SWDE																
Contact: Kirk Wills		1501 Oxnard Way																
Sampled By: Joe Terry		S + Cloud, FL																
Turn Around Time: ☒ STANDARD ☐ RUSH		Special Instructions: Jax Profile: 31172																
Page 1 of 1		☒ ADAPT ☐ EQUIS																

SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING		MATRIX	NO. COUNT	PRESERVATION	HCL	HNO3	Ice	H2SO4							
			DATE	TIME														
16321-MW-24A		G	11/16/16	0600	GW	6		X	X	X	X							001
16321-MW-24B				0625														002
16321-MW-22AR				0815														003
16321-MW-22BR				0740														004
16321-MW-23A		↓	↓	1600	↓	↓		↓	↓	↓	↓							005
16321-MW-23B		G	11/16/16	0925	GW	6		X	X	X	X							006

Matrix Code: WW = wastewater SW = surface water GW = ground water DW = drinking water O = oil A = air SO = soil SL = sludge Preservation Code: I = ice H = (HCl) S = (H2SO4) N = (HNO3) T = (Sodium Thiosulfate)

Received on Ice ☐ Yes ☐ No ☐ Temp taken from sample ☐ Temp from blank

☐ Where required, pH checked Temperature when received **9** (in degrees celsius)

DCN: AD-051 Form last revised 08/18/2014

Device used for measuring Temp by unique identifier (circle IR temp gun used) **(J: 9A)** G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V

Relinquished by:	Date	Time	Received by:	Date	Time
1 <i>Joe Terry</i>	11-16-16	1600	<i>FedEx</i>	11-16-16	1600
2 <i>FedEx</i>	11-17-16	0830	<i>Bygones</i>	11-17-16	0830
3					
4					

FOR DRINKING WATER USE:

(When PWS Information not otherwise supplied) PWS ID: _____

Contact Person: _____ Phone: _____

Supplier of Water: _____

Site Address: _____

Client: Waste ConnectionsProject name: J.E.D. LandfillDate/Time Rcvd: 11-17-16 0830Log-In request number: JT1611176Received by: ByCompleted by: By**Cooler/Shipping Information:**Courier: ☐ AEL ☐ Client ☐ UPS ☐ Blue Streak ☒ FedEx ☐ AES ☐ ASAP ☐ Other (describe): _____Type: ☐ Cooler ☐ Box ☐ Other (describe): _____

Cooler temperature: Identify the cooler and document the temperature blank or ice water measurement

Cooler ID	4				
Temp (°C)	4				
Temp taken from	☐ Sample Bottle ☒ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler
Temp measured with	☒ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):

Other Information:

Any discrepancies should be explained in the "Comments" section below.

CHECKLIST	YES	NO	NA
1. Were custody seals on shipping container(s) intact?			☒
2. Were custody papers properly included with samples?	☒		
3. Were custody papers properly filled out (ink, signed, match labels)?	☒		
4. Did all bottles arrive in good condition (unbroken)?	☒		
5. Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?	☒		
6. Did the sample labels agree with the chain of custody?	☒		
7. Were correct bottles used for the tests indicated?	☒		
8. Were proper sample preservation techniques indicated on the label?	☒		
9. Were samples received within holding times?	☒		
10. Were all VOA vials free of the presence of air bubbles?	☒		
11. Have all Soil VOA Vials and Encores been placed in a freezer within 48 hours of collection?			☒
12. Were samples in direct contact with wet ice? If "No," check one: ☐ NO ICE ☐ BLUE ICE	☒		
13. Was the cooler temperature less than 6°C?	☒		
14. Where pH preservation is required, are sample pHs checked and any anomalies recorded by Sample control? Are all <2 or >10? Note: VOA samples are checked by laboratory analysts.	☒		
15. Was sufficient sample volume provided to perform all tests?	☒		
16. If for Bacteriological testing, were containers supplied by AEL? (See QA officer if answer is no)			☒
17. Were all sample containers provided by AEL? (Other than Bacteriological)	☒		
18. Were samples accepted into the laboratory?	☒		
19. When necessary to split samples into other bottles, is it noted in the comments?	☒		

Comments: (Note all sample(s) and container (s)" with a "No" checklist response in this comment section)



Advanced
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6681 Southpoint Parkway
Jacksonville, Florida 32216
Office (904) 363-9350
Fax (904) 363-9354

Project No.: J1611176
Client Name: Waste Connections
ProjectID: J.E.D. Landfill

I. Receipt

Due to an inadvertent sample receiving error, samples J1611176001 through J1611176006 were logged in and provided to the laboratory without sufficient time remaining to perform the analysis within the recommended hold time. The analysis was performed as soon as possible after receipt by the laboratory. Since the analysis was not performed significantly past the hold time, it is our opinion that the impact on the data is minimal. The data is qualified to indicate the holding time violation.

II. Holding Times

Preparation:

Analysis:

III. Method

Analysis: EPA 300.0

Preparation: None

IV. Preparation

V. Analysis

A. Calibration:

B. Blanks:

C. Duplicates:

D. Spikes: The matrix spike (MS) recoveries of Chloride for sample J1611176001 were outside control criteria. Recoveries in the Laboratory Control Sample (LCS) were acceptable, which indicates the analytical batch was in control. No further corrective action was required.

E. Serial Dilution:

F. Samples:

G. Other:

I certify that this data package is in compliance with the terms and conditions agreed to by Advanced Environmental Laboratories, Inc. and by the client, both technically and for completeness, except for the conditions detailed above. The Quality Assurance Officer, or designee, as verified by the following signature, has authorized release of the data contained in this data package:



Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL32216
Payments: P.O. Box 551580 Jacksonville, FL32255-1580

Phone: (904)363-9350
Fax: (904)363-9354

January 16, 2017

Kirk Wills
Waste Connections
5135 Madison Avenue
Tampa, FL 33619

RE: Workorder: J1611147 J.E.D. Landfill

Dear Kirk Wills:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, November 16, 2016. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. The analytical results for the samples contained in this report were submitted for analysis as outlined by the Chain of Custody and results pertain only to these samples.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Craig Myers', is positioned above the printed name.

Craig Myers
CMyers@AELLab.com

Enclosures

Report ID: 456642 - 7756923

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SAMPLE SUMMARY

Workorder: J1611147 J.E.D. Landfill

Lab ID	Sample ID	Matrix	Date Collected	Date Received
J1611147001	16320-MW-31A	Water	11/15/2016 07:45	11/16/2016 09:50
J1611147002	16320-MW-31B	Water	11/15/2016 08:35	11/16/2016 09:50
J1611147003	16320-MW-27A	Water	11/15/2016 10:05	11/16/2016 09:50
J1611147004	16320-MW-27B	Water	11/15/2016 11:00	11/16/2016 09:50
J1611147005	16320-MW-28A	Water	11/15/2016 12:30	11/16/2016 09:50
J1611147006	16320-MW-28B	Water	11/15/2016 12:55	11/16/2016 09:50
J1611147007	16320-MW-25A	Water	11/15/2016 14:12	11/16/2016 09:50
J1611147008	16320-MW-25B	Water	11/15/2016 14:45	11/16/2016 09:50
J1611147009	16320-EB	Water	11/15/2016 15:25	11/16/2016 09:50

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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147001**
Sample ID: **16320-MW-31A**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 07:45

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis, Water			Analytical Method: SW-846 6010					
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/18/2016 19:37	J
Barium	0.029		mg/L	1	0.0020	0.00028	11/18/2016 19:37	J
Beryllium	0.00048		mg/L	1	0.00030	0.00013	11/18/2016 19:37	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/18/2016 19:37	J
Chromium	0.0019		mg/L	1	0.0010	0.00050	11/18/2016 19:37	J
Cobalt	0.0015	I	mg/L	1	0.0040	0.00060	11/18/2016 19:37	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/18/2016 19:37	J
Iron	5.7		mg/L	1	0.20	0.030	11/18/2016 19:37	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/18/2016 19:37	J
Nickel	0.0017	I	mg/L	1	0.0065	0.0011	11/18/2016 19:37	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/18/2016 19:37	J
Silver	0.00058	I	mg/L	1	0.0040	0.00044	11/18/2016 19:37	J
Sodium	18		mg/L	1	0.20	0.16	11/18/2016 19:37	J
Vanadium	0.0031		mg/L	1	0.0015	0.00018	11/18/2016 19:37	J
Zinc	0.0020	U	mg/L	1	0.010	0.0020	11/18/2016 19:37	J
Analysis Desc: SW846 6020B			Preparation Method: SW-846 3010A					
Analysis, Total			Analytical Method: SW-846 6020					
Antimony	0.13	I	ug/L	1	0.70	0.046	11/23/2016 14:10	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 14:10	J
Analysis Desc: SW846 7470A			Preparation Method: SW-846 7470A					
Analysis, Water			Analytical Method: SW-846 7470A					
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/21/2016 15:06	J
VOLATILES								
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/17/2016 13:42	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/17/2016 13:42	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/17/2016 13:42	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/17/2016 13:42	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/17/2016 13:42	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 13:42	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/17/2016 13:42	J

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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147001**
Sample ID: **16320-MW-31A**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 07:45

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 13:42	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/17/2016 13:42	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/17/2016 13:42	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/17/2016 13:42	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/17/2016 13:42	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/17/2016 13:42	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/17/2016 13:42	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/17/2016 13:42	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/17/2016 13:42	J
Benzene	0.16	U	ug/L	1	1.0	0.16	11/17/2016 13:42	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/17/2016 13:42	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/17/2016 13:42	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/17/2016 13:42	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/17/2016 13:42	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/17/2016 13:42	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/17/2016 13:42	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/17/2016 13:42	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/17/2016 13:42	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/17/2016 13:42	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/17/2016 13:42	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/17/2016 13:42	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/17/2016 13:42	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/17/2016 13:42	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/17/2016 13:42	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/17/2016 13:42	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/17/2016 13:42	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/17/2016 13:42	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/17/2016 13:42	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/17/2016 13:42	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/17/2016 13:42	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/17/2016 13:42	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/17/2016 13:42	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/17/2016 13:42	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/17/2016 13:42	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/17/2016 13:42	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/17/2016 13:42	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 13:42	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/17/2016 13:42	J
1,2-Dichloroethane-d4 (S)	104		%	1	77-125		11/17/2016 13:42	
Toluene-d8 (S)	99		%	1	80-121		11/17/2016 13:42	

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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147001**
Sample ID: **16320-MW-31A**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 07:45

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Bromofluorobenzene (S)	104		%	1	80-129		11/17/2016 13:42	
Analysis Desc: 8260B SIM Analysis, Water		Preparation Method: SW-846 5030B Analytical Method: SW-846 8260B (SIM)						
1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/17/2016 13:42	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/17/2016 13:42	J
1,2-Dichloroethane-d4 (S)	94		%	1	77-125		11/17/2016 13:42	
Toluene-d8 (S)	100		%	1	80-121		11/17/2016 13:42	
Bromofluorobenzene (S)	100		%	1	80-129		11/17/2016 13:42	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water		Analytical Method: EPA 300.0						
Chloride	27		mg/L	1	5.0	0.50	11/17/2016 09:28	J
Nitrate	0.13	I,Q,J4	mg/L	1	0.50	0.050	11/17/2016 09:28	J
Analysis Desc: Ammonia,E350.1,Water		Analytical Method: EPA 350.1						
Ammonia (N)	1.1		mg/L	2	0.02	0.02	11/22/2016 10:40	G
Analysis Desc: Tot Dissolved Solids,SM2540C		Analytical Method: SM 2540 C						
Total Dissolved Solids	250		mg/L	1	10	10	11/20/2016 09:39	J

Lab ID: **J1611147002**
Sample ID: **16320-MW-31B**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 08:35

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: SW846 6010B Analysis,Water		Preparation Method: SW-846 3010A Analytical Method: SW-846 6010						
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/18/2016 20:17	J
Barium	0.56		mg/L	1	0.0020	0.00028	11/18/2016 20:17	J
Beryllium	0.0035		mg/L	1	0.00030	0.00013	11/18/2016 20:17	J
Cadmium	0.0018		mg/L	1	0.00060	0.00032	11/18/2016 20:17	J
Chromium	0.077		mg/L	1	0.0010	0.00050	11/18/2016 20:17	J

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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147002**
Sample ID: **16320-MW-31B**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 08:35

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Cobalt	0.0024	I	mg/L	1	0.0040	0.00060	11/18/2016 20:17	J
Copper	0.019		mg/L	1	0.0040	0.0025	11/18/2016 20:17	J
Iron	5.2		mg/L	1	0.20	0.030	11/18/2016 20:17	J
Lead	0.10		mg/L	1	0.0070	0.0013	11/18/2016 20:17	J
Nickel	0.013		mg/L	1	0.0065	0.0011	11/18/2016 20:17	J
Selenium	0.029		mg/L	1	0.020	0.0068	11/18/2016 20:17	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	11/18/2016 20:17	J
Sodium	15		mg/L	1	0.20	0.16	11/18/2016 20:17	J
Vanadium	0.13		mg/L	1	0.0015	0.00018	11/18/2016 20:17	J
Zinc	0.0083	I	mg/L	1	0.010	0.0020	11/18/2016 20:17	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6020

Antimony	0.43	I	ug/L	1	0.70	0.046	11/23/2016 14:29	J
Thallium	0.26		ug/L	1	0.20	0.057	11/23/2016 14:29	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A
Analytical Method: SW-846 7470A

Mercury	0.0011		mg/L	1	0.00010	0.000011	11/21/2016 15:28	J
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VOLATILES

Analysis Desc: 8260B Analysis, Water

Preparation Method: SW-846 5030B
Analytical Method: SW-846 8260B

1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/17/2016 14:09	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/17/2016 14:09	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/17/2016 14:09	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/17/2016 14:09	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/17/2016 14:09	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 14:09	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/17/2016 14:09	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 14:09	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/17/2016 14:09	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/17/2016 14:09	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/17/2016 14:09	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/17/2016 14:09	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/17/2016 14:09	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/17/2016 14:09	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/17/2016 14:09	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/17/2016 14:09	J

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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147002**
Sample ID: **16320-MW-31B**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 08:35

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Benzene	0.16	U	ug/L	1	1.0	0.16	11/17/2016 14:09	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/17/2016 14:09	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/17/2016 14:09	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/17/2016 14:09	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/17/2016 14:09	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/17/2016 14:09	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/17/2016 14:09	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/17/2016 14:09	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/17/2016 14:09	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/17/2016 14:09	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/17/2016 14:09	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/17/2016 14:09	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/17/2016 14:09	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/17/2016 14:09	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/17/2016 14:09	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/17/2016 14:09	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/17/2016 14:09	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/17/2016 14:09	J
Toluene	4.6		ug/L	1	1.0	0.23	11/17/2016 14:09	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/17/2016 14:09	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/17/2016 14:09	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/17/2016 14:09	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/17/2016 14:09	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/17/2016 14:09	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/17/2016 14:09	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/17/2016 14:09	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/17/2016 14:09	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 14:09	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/17/2016 14:09	J
1,2-Dichloroethane-d4 (S)	89		%	1	77-125		11/17/2016 14:09	
Toluene-d8 (S)	101		%	1	80-121		11/17/2016 14:09	
Bromofluorobenzene (S)	109		%	1	80-129		11/17/2016 14:09	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/17/2016 14:09	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/17/2016 14:09	J
1,2-Dichloroethane-d4 (S)	104		%	1	77-125		11/17/2016 14:09	
Toluene-d8 (S)	99		%	1	80-121		11/17/2016 14:09	
Bromofluorobenzene (S)	104		%	1	80-129		11/17/2016 14:09	

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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147002** Date Received: 11/16/16 09:50 Matrix: Water
Sample ID: **16320-MW-31B** Date Collected: 11/15/16 08:35

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: IC,E300.0,Water			Analytical Method: EPA 300.0					
Chloride	26	I	mg/L	50	250	25	11/17/2016 09:44	J
Nitrate	2.5	U,Q	mg/L	50	25	2.5	11/17/2016 09:44	J
Analysis Desc: Ammonia,E350.1,Water			Analytical Method: EPA 350.1					
Ammonia (N)	0.32		mg/L	1	0.01	0.01	11/22/2016 10:40	G
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540 C					
Total Dissolved Solids	1300		mg/L	1	10	10	11/20/2016 09:39	J

Lab ID: **J1611147003** Date Received: 11/16/16 09:50 Matrix: Water
Sample ID: **16320-MW-27A** Date Collected: 11/15/16 10:05

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis,Water			Analytical Method: SW-846 6010					
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/18/2016 20:22	J
Barium	0.010		mg/L	1	0.0020	0.00028	11/18/2016 20:22	J
Beryllium	0.00013	U	mg/L	1	0.00030	0.00013	11/18/2016 20:22	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/18/2016 20:22	J
Chromium	0.0021		mg/L	1	0.0010	0.00050	11/18/2016 20:22	J
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/18/2016 20:22	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/18/2016 20:22	J
Iron	0.43		mg/L	1	0.20	0.030	11/18/2016 20:22	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/18/2016 20:22	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/18/2016 20:22	J
Selenium	0.0082	I	mg/L	1	0.020	0.0068	11/18/2016 20:22	J
Silver	0.00054	I	mg/L	1	0.0040	0.00044	11/18/2016 20:22	J
Sodium	9.7		mg/L	1	0.20	0.16	11/18/2016 20:22	J
Vanadium	0.0048		mg/L	1	0.0015	0.00018	11/18/2016 20:22	J
Zinc	0.0064	I	mg/L	1	0.010	0.0020	11/18/2016 20:22	J

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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147003**
Sample ID: **16320-MW-27A**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 10:05

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: SW846 6020B		Preparation Method: SW-846 3010A						
Analysis, Total		Analytical Method: SW-846 6020						
Antimony	0.18	I	ug/L	1	0.70	0.046	11/23/2016 14:40	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 14:40	J
Analysis Desc: SW846 7470A		Preparation Method: SW-846 7470A						
Analysis, Water		Analytical Method: SW-846 7470A						
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/21/2016 15:31	J

VOLATILES

Analysis Desc: 8260B Analysis, Water		Preparation Method: SW-846 5030B						
		Analytical Method: SW-846 8260B						
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/17/2016 14:36	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/17/2016 14:36	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/17/2016 14:36	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/17/2016 14:36	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/17/2016 14:36	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 14:36	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/17/2016 14:36	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 14:36	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/17/2016 14:36	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/17/2016 14:36	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/17/2016 14:36	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/17/2016 14:36	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/17/2016 14:36	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/17/2016 14:36	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/17/2016 14:36	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/17/2016 14:36	J
Benzene	0.16	U	ug/L	1	1.0	0.16	11/17/2016 14:36	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/17/2016 14:36	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/17/2016 14:36	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/17/2016 14:36	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/17/2016 14:36	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/17/2016 14:36	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/17/2016 14:36	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/17/2016 14:36	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/17/2016 14:36	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/17/2016 14:36	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/17/2016 14:36	J

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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147003**
Sample ID: **16320-MW-27A**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 10:05

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/17/2016 14:36	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/17/2016 14:36	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/17/2016 14:36	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/17/2016 14:36	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/17/2016 14:36	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/17/2016 14:36	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/17/2016 14:36	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/17/2016 14:36	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/17/2016 14:36	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/17/2016 14:36	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/17/2016 14:36	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/17/2016 14:36	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/17/2016 14:36	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/17/2016 14:36	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/17/2016 14:36	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/17/2016 14:36	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 14:36	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/17/2016 14:36	J
1,2-Dichloroethane-d4 (S)	101		%	1	77-125		11/17/2016 14:36	
Toluene-d8 (S)	97		%	1	80-121		11/17/2016 14:36	
Bromofluorobenzene (S)	105		%	1	80-129		11/17/2016 14:36	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/17/2016 14:36	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/17/2016 14:36	J
1,2-Dichloroethane-d4 (S)	101		%	1	77-125		11/17/2016 14:36	
Toluene-d8 (S)	97		%	1	80-121		11/17/2016 14:36	
Bromofluorobenzene (S)	105		%	1	80-129		11/17/2016 14:36	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	7.7		mg/L	1	5.0	0.50	11/17/2016 10:00	J
Nitrate	0.16	I	mg/L	1	0.50	0.050	11/17/2016 10:00	J

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	0.32		mg/L	1	0.01	0.01	11/22/2016 10:40	G
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Analysis Desc: Tot Dissolved
Solids,SM2540C

Analytical Method: SM 2540 C

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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147003**
Sample ID: **16320-MW-27A**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 10:05

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Total Dissolved Solids	80		mg/L	1	10	10	11/20/2016 09:39	J

Lab ID: **J1611147004**
Sample ID: **16320-MW-27B**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 11:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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METALS

Analysis Desc: SW846 6010B
Analysis, Water

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6010

Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/18/2016 20:26	J
Barium	0.055		mg/L	1	0.0020	0.00028	11/18/2016 20:26	J
Beryllium	0.00026	I	mg/L	1	0.00030	0.00013	11/18/2016 20:26	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/18/2016 20:26	J
Chromium	0.0062		mg/L	1	0.0010	0.00050	11/18/2016 20:26	J
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/18/2016 20:26	J
Copper	0.0028	I	mg/L	1	0.0040	0.0025	11/18/2016 20:26	J
Iron	1.1		mg/L	1	0.20	0.030	11/18/2016 20:26	J
Lead	0.0042	I	mg/L	1	0.0070	0.0013	11/18/2016 20:26	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/18/2016 20:26	J
Selenium	0.0087	I	mg/L	1	0.020	0.0068	11/18/2016 20:26	J
Silver	0.00053	I	mg/L	1	0.0040	0.00044	11/18/2016 20:26	J
Sodium	27		mg/L	1	0.20	0.16	11/18/2016 20:26	J
Vanadium	0.0090		mg/L	1	0.0015	0.00018	11/18/2016 20:26	J
Zinc	0.011		mg/L	1	0.010	0.0020	11/18/2016 20:26	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6020

Antimony	0.15	I	ug/L	1	0.70	0.046	11/23/2016 14:43	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 14:43	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A
Analytical Method: SW-846 7470A

Mercury	0.000016	I	mg/L	1	0.00010	0.000011	11/21/2016 15:34	J
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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147004**
Sample ID: **16320-MW-27B**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 11:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
VOLATILES								
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/17/2016 15:04	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/17/2016 15:04	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/17/2016 15:04	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/17/2016 15:04	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/17/2016 15:04	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 15:04	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/17/2016 15:04	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 15:04	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/17/2016 15:04	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/17/2016 15:04	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/17/2016 15:04	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/17/2016 15:04	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/17/2016 15:04	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/17/2016 15:04	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/17/2016 15:04	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/17/2016 15:04	J
Benzene	0.16	U	ug/L	1	1.0	0.16	11/17/2016 15:04	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/17/2016 15:04	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/17/2016 15:04	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/17/2016 15:04	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/17/2016 15:04	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/17/2016 15:04	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/17/2016 15:04	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/17/2016 15:04	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/17/2016 15:04	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/17/2016 15:04	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/17/2016 15:04	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/17/2016 15:04	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/17/2016 15:04	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/17/2016 15:04	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/17/2016 15:04	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/17/2016 15:04	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/17/2016 15:04	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/17/2016 15:04	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/17/2016 15:04	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/17/2016 15:04	J

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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147004**
Sample ID: **16320-MW-27B**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 11:00

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/17/2016 15:04	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/17/2016 15:04	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/17/2016 15:04	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/17/2016 15:04	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/17/2016 15:04	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/17/2016 15:04	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/17/2016 15:04	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 15:04	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/17/2016 15:04	J
1,2-Dichloroethane-d4 (S)	97		%	1	77-125		11/17/2016 15:04	
Toluene-d8 (S)	100		%	1	80-121		11/17/2016 15:04	
Bromofluorobenzene (S)	107		%	1	80-129		11/17/2016 15:04	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/17/2016 15:04	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/17/2016 15:04	J
1,2-Dichloroethane-d4 (S)	97		%	1	77-125		11/17/2016 15:04	
Toluene-d8 (S)	100		%	1	80-121		11/17/2016 15:04	
Bromofluorobenzene (S)	107		%	1	80-129		11/17/2016 15:04	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	37		mg/L	1	5.0	0.50	11/17/2016 10:16	J
Nitrate	0.14	I	mg/L	1	0.50	0.050	11/17/2016 10:16	J

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	0.04		mg/L	1	0.01	0.01	11/22/2016 10:40	G
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Analysis Desc: Tot Dissolved
Solids,SM2540C

Analytical Method: SM 2540 C

Total Dissolved Solids	140		mg/L	1	10	10	11/20/2016 09:39	J
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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147005**
Sample ID: **16320-MW-28A**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 12:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis, Water			Analytical Method: SW-846 6010					
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/18/2016 20:30	J
Barium	0.0051		mg/L	1	0.0020	0.0028	11/18/2016 20:30	J
Beryllium	0.00013	U	mg/L	1	0.00030	0.00013	11/18/2016 20:30	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/18/2016 20:30	J
Chromium	0.0030		mg/L	1	0.0010	0.00050	11/18/2016 20:30	J
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/18/2016 20:30	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/18/2016 20:30	J
Iron	0.98		mg/L	1	0.20	0.030	11/18/2016 20:30	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/18/2016 20:30	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/18/2016 20:30	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/18/2016 20:30	J
Silver	0.00060	I	mg/L	1	0.0040	0.00044	11/18/2016 20:30	J
Sodium	5.8		mg/L	1	0.20	0.16	11/18/2016 20:30	J
Vanadium	0.0017		mg/L	1	0.0015	0.00018	11/18/2016 20:30	J
Zinc	0.013		mg/L	1	0.010	0.0020	11/18/2016 20:30	J

Analysis Desc: SW846 6020B			Preparation Method: SW-846 3010A					
Analysis, Total			Analytical Method: SW-846 6020					
Antimony	0.050	I	ug/L	1	0.70	0.046	11/23/2016 14:47	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 14:47	J

Analysis Desc: SW846 7470A			Preparation Method: SW-846 7470A					
Analysis, Water			Analytical Method: SW-846 7470A					
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/21/2016 15:36	J

VOLATILES

Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/17/2016 15:31	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/17/2016 15:31	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/17/2016 15:31	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/17/2016 15:31	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/17/2016 15:31	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 15:31	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/17/2016 15:31	J

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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147005**
Sample ID: **16320-MW-28A**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 12:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 15:31	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/17/2016 15:31	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/17/2016 15:31	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/17/2016 15:31	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/17/2016 15:31	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/17/2016 15:31	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/17/2016 15:31	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/17/2016 15:31	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/17/2016 15:31	J
Benzene	0.16	U	ug/L	1	1.0	0.16	11/17/2016 15:31	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/17/2016 15:31	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/17/2016 15:31	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/17/2016 15:31	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/17/2016 15:31	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/17/2016 15:31	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/17/2016 15:31	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/17/2016 15:31	J
Chloroethane	1.8		ug/L	1	1.0	0.33	11/17/2016 15:31	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/17/2016 15:31	J
Chloromethane	0.69	I	ug/L	1	1.0	0.21	11/17/2016 15:31	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/17/2016 15:31	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/17/2016 15:31	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/17/2016 15:31	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/17/2016 15:31	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/17/2016 15:31	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/17/2016 15:31	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/17/2016 15:31	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/17/2016 15:31	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/17/2016 15:31	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/17/2016 15:31	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/17/2016 15:31	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/17/2016 15:31	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/17/2016 15:31	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/17/2016 15:31	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/17/2016 15:31	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/17/2016 15:31	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 15:31	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/17/2016 15:31	J
1,2-Dichloroethane-d4 (S)	103		%	1	77-125		11/17/2016 15:31	
Toluene-d8 (S)	98		%	1	80-121		11/17/2016 15:31	

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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147005**
Sample ID: **16320-MW-28A**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 12:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Bromofluorobenzene (S)	103		%	1	80-129		11/17/2016 15:31	
Analysis Desc: 8260B SIM Analysis, Water		Preparation Method: SW-846 5030B Analytical Method: SW-846 8260B (SIM)						
1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/17/2016 15:31	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/17/2016 15:31	J
1,2-Dichloroethane-d4 (S)	103		%	1	77-125		11/17/2016 15:31	
Toluene-d8 (S)	98		%	1	80-121		11/17/2016 15:31	
Bromofluorobenzene (S)	103		%	1	80-129		11/17/2016 15:31	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water		Analytical Method: EPA 300.0						
Chloride	6.0	I	mg/L	10	50	5.0	11/17/2016 10:32	J
Nitrate	0.50	U	mg/L	10	5.0	0.50	11/17/2016 10:32	J
Analysis Desc: Ammonia,E350.1,Water		Analytical Method: EPA 350.1						
Ammonia (N)	1.4		mg/L	2	0.02	0.02	11/22/2016 10:40	G
Analysis Desc: Tot Dissolved Solids,SM2540C		Analytical Method: SM 2540 C						
Total Dissolved Solids	80		mg/L	1	10	10	11/20/2016 09:39	J

Lab ID: **J1611147006**
Sample ID: **16320-MW-28B**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 12:55

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: SW846 6010B Analysis,Water		Preparation Method: SW-846 3010A Analytical Method: SW-846 6010						
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/18/2016 20:34	J
Barium	0.032		mg/L	1	0.0020	0.00028	11/18/2016 20:34	J
Beryllium	0.00013	U	mg/L	1	0.00030	0.00013	11/18/2016 20:34	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/18/2016 20:34	J
Chromium	0.0018		mg/L	1	0.0010	0.00050	11/18/2016 20:34	J

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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147006**
Sample ID: **16320-MW-28B**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 12:55

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/18/2016 20:34	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/18/2016 20:34	J
Iron	1.2		mg/L	1	0.20	0.030	11/18/2016 20:34	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/18/2016 20:34	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/18/2016 20:34	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/18/2016 20:34	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	11/18/2016 20:34	J
Sodium	15		mg/L	1	0.20	0.16	11/18/2016 20:34	J
Vanadium	0.0025		mg/L	1	0.0015	0.00018	11/18/2016 20:34	J
Zinc	0.0040	I	mg/L	1	0.010	0.0020	11/18/2016 20:34	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6020

Antimony	0.047	I	ug/L	1	0.70	0.046	11/23/2016 14:51	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 14:51	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A
Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/21/2016 15:45	J
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VOLATILES

Analysis Desc: 8260B Analysis, Water

Preparation Method: SW-846 5030B
Analytical Method: SW-846 8260B

1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/17/2016 15:58	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/17/2016 15:58	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/17/2016 15:58	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/17/2016 15:58	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/17/2016 15:58	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 15:58	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/17/2016 15:58	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 15:58	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/17/2016 15:58	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/17/2016 15:58	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/17/2016 15:58	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/17/2016 15:58	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/17/2016 15:58	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/17/2016 15:58	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/17/2016 15:58	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/17/2016 15:58	J

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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147006**
Sample ID: **16320-MW-28B**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 12:55

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Benzene	0.16	U	ug/L	1	1.0	0.16	11/17/2016 15:58	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/17/2016 15:58	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/17/2016 15:58	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/17/2016 15:58	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/17/2016 15:58	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/17/2016 15:58	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/17/2016 15:58	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/17/2016 15:58	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/17/2016 15:58	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/17/2016 15:58	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/17/2016 15:58	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/17/2016 15:58	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/17/2016 15:58	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/17/2016 15:58	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/17/2016 15:58	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/17/2016 15:58	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/17/2016 15:58	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/17/2016 15:58	J
Toluene	0.26	I	ug/L	1	1.0	0.23	11/17/2016 15:58	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/17/2016 15:58	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/17/2016 15:58	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/17/2016 15:58	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/17/2016 15:58	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/17/2016 15:58	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/17/2016 15:58	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/17/2016 15:58	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/17/2016 15:58	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 15:58	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/17/2016 15:58	J
1,2-Dichloroethane-d4 (S)	103		%	1	77-125		11/17/2016 15:58	
Toluene-d8 (S)	98		%	1	80-121		11/17/2016 15:58	
Bromofluorobenzene (S)	106		%	1	80-129		11/17/2016 15:58	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/17/2016 15:58	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/17/2016 15:58	J
1,2-Dichloroethane-d4 (S)	103		%	1	77-125		11/17/2016 15:58	
Toluene-d8 (S)	98		%	1	80-121		11/17/2016 15:58	
Bromofluorobenzene (S)	106		%	1	80-129		11/17/2016 15:58	

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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147006**
Sample ID: **16320-MW-28B**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 12:55

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: IC,E300.0,Water			Analytical Method: EPA 300.0					
Chloride	6.5	I	mg/L	10	50	5.0	11/17/2016 10:48	J
Nitrate	0.50	U	mg/L	10	5.0	0.50	11/17/2016 10:48	J
Analysis Desc: Ammonia,E350.1,Water			Analytical Method: EPA 350.1					
Ammonia (N)	0.09		mg/L	1	0.01	0.01	11/22/2016 10:40	G
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540 C					
Total Dissolved Solids	98		mg/L	1	10	10	11/20/2016 09:39	J

Lab ID: **J1611147007**
Sample ID: **16320-MW-25A**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 14:12

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Water			Preparation Method: SW-846 3010A Analytical Method: SW-846 6010					
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/18/2016 20:39	J
Barium	0.16		mg/L	1	0.0020	0.00028	11/18/2016 20:39	J
Beryllium	0.00095		mg/L	1	0.00030	0.00013	11/18/2016 20:39	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/18/2016 20:39	J
Chromium	0.0016		mg/L	1	0.0010	0.00050	11/18/2016 20:39	J
Cobalt	0.0022	I	mg/L	1	0.0040	0.00060	11/18/2016 20:39	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/18/2016 20:39	J
Iron	16		mg/L	1	0.20	0.030	11/18/2016 20:39	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/18/2016 20:39	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/18/2016 20:39	J
Selenium	0.0070	I	mg/L	1	0.020	0.0068	11/18/2016 20:39	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	11/18/2016 20:39	J
Sodium	53		mg/L	1	0.20	0.16	11/18/2016 20:39	J
Vanadium	0.0047		mg/L	1	0.0015	0.00018	11/18/2016 20:39	J
Zinc	0.0020	U	mg/L	1	0.010	0.0020	11/18/2016 20:39	J

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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147007**
Sample ID: **16320-MW-25A**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 14:12

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: SW846 6020B		Preparation Method: SW-846 3010A						
Analysis, Total		Analytical Method: SW-846 6020						
Antimony	0.046	U	ug/L	1	0.70	0.046	11/23/2016 14:54	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 14:54	J
Analysis Desc: SW846 7470A		Preparation Method: SW-846 7470A						
Analysis, Water		Analytical Method: SW-846 7470A						
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/21/2016 15:52	J

VOLATILES

Analysis Desc: 8260B Analysis, Water		Preparation Method: SW-846 5030B						
		Analytical Method: SW-846 8260B						
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/17/2016 16:26	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/17/2016 16:26	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/17/2016 16:26	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/17/2016 16:26	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/17/2016 16:26	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 16:26	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/17/2016 16:26	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 16:26	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/17/2016 16:26	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/17/2016 16:26	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/17/2016 16:26	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/17/2016 16:26	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/17/2016 16:26	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/17/2016 16:26	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/17/2016 16:26	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/17/2016 16:26	J
Benzene	0.16	U	ug/L	1	1.0	0.16	11/17/2016 16:26	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/17/2016 16:26	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/17/2016 16:26	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/17/2016 16:26	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/17/2016 16:26	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/17/2016 16:26	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/17/2016 16:26	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/17/2016 16:26	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/17/2016 16:26	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/17/2016 16:26	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/17/2016 16:26	J

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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147007**
Sample ID: **16320-MW-25A**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 14:12

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/17/2016 16:26	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/17/2016 16:26	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/17/2016 16:26	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/17/2016 16:26	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/17/2016 16:26	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/17/2016 16:26	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/17/2016 16:26	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/17/2016 16:26	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/17/2016 16:26	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/17/2016 16:26	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/17/2016 16:26	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/17/2016 16:26	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/17/2016 16:26	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/17/2016 16:26	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/17/2016 16:26	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/17/2016 16:26	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 16:26	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/17/2016 16:26	J
1,2-Dichloroethane-d4 (S)	95		%	1	77-125		11/17/2016 16:26	
Toluene-d8 (S)	97		%	1	80-121		11/17/2016 16:26	
Bromofluorobenzene (S)	109		%	1	80-129		11/17/2016 16:26	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/17/2016 16:26	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/17/2016 16:26	J
1,2-Dichloroethane-d4 (S)	95		%	1	77-125		11/17/2016 16:26	
Toluene-d8 (S)	97		%	1	80-121		11/17/2016 16:26	
Bromofluorobenzene (S)	109		%	1	80-129		11/17/2016 16:26	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	75		mg/L	1	5.0	0.50	11/17/2016 11:04	J
Nitrate	0.14	I	mg/L	1	0.50	0.050	11/17/2016 11:04	J

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	1.8		mg/L	5	0.05	0.04	11/22/2016 10:40	G
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Analysis Desc: Tot Dissolved
Solids,SM2540C

Analytical Method: SM 2540 C

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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147007**
Sample ID: **16320-MW-25A**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 14:12

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Total Dissolved Solids	440		mg/L	1	10	10	11/20/2016 09:39	J

Lab ID: **J1611147008**
Sample ID: **16320-MW-25B**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 14:45

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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METALS

Analysis Desc: SW846 6010B
Analysis, Water

Preparation Method: SW-846 3010A

Analytical Method: SW-846 6010

Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/18/2016 20:43	J
Barium	0.075		mg/L	1	0.0020	0.00028	11/18/2016 20:43	J
Beryllium	0.00032		mg/L	1	0.00030	0.00013	11/18/2016 20:43	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/18/2016 20:43	J
Chromium	0.0071		mg/L	1	0.0010	0.00050	11/18/2016 20:43	J
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/18/2016 20:43	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/18/2016 20:43	J
Iron	1.3		mg/L	1	0.20	0.030	11/18/2016 20:43	J
Lead	0.0019	I	mg/L	1	0.0070	0.0013	11/18/2016 20:43	J
Nickel	0.0019	I	mg/L	1	0.0065	0.0011	11/18/2016 20:43	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/18/2016 20:43	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	11/18/2016 20:43	J
Sodium	12		mg/L	1	0.20	0.16	11/18/2016 20:43	J
Vanadium	0.011		mg/L	1	0.0015	0.00018	11/18/2016 20:43	J
Zinc	0.0037	I	mg/L	1	0.010	0.0020	11/18/2016 20:43	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A

Analytical Method: SW-846 6020

Antimony	0.11	I	ug/L	1	0.70	0.046	11/23/2016 14:58	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 14:58	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A

Analytical Method: SW-846 7470A

Mercury	0.000014	I	mg/L	1	0.00010	0.000011	11/21/2016 15:55	J
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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147008**
Sample ID: **16320-MW-25B**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 14:45

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
VOLATILES								
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/17/2016 16:53	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/17/2016 16:53	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/17/2016 16:53	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/17/2016 16:53	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/17/2016 16:53	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 16:53	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/17/2016 16:53	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 16:53	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/17/2016 16:53	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/17/2016 16:53	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/17/2016 16:53	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/17/2016 16:53	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/17/2016 16:53	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/17/2016 16:53	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/17/2016 16:53	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/17/2016 16:53	J
Benzene	0.16	U	ug/L	1	1.0	0.16	11/17/2016 16:53	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/17/2016 16:53	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/17/2016 16:53	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/17/2016 16:53	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/17/2016 16:53	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	11/17/2016 16:53	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/17/2016 16:53	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/17/2016 16:53	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/17/2016 16:53	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/17/2016 16:53	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/17/2016 16:53	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/17/2016 16:53	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/17/2016 16:53	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/17/2016 16:53	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/17/2016 16:53	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/17/2016 16:53	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/17/2016 16:53	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/17/2016 16:53	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/17/2016 16:53	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/17/2016 16:53	J

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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147008**
Sample ID: **16320-MW-25B**

Date Received: 11/16/16 09:50 Matrix: Water
Date Collected: 11/15/16 14:45

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/17/2016 16:53	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/17/2016 16:53	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/17/2016 16:53	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/17/2016 16:53	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/17/2016 16:53	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/17/2016 16:53	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/17/2016 16:53	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 16:53	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/17/2016 16:53	J
1,2-Dichloroethane-d4 (S)	94		%	1	77-125		11/17/2016 16:53	
Toluene-d8 (S)	100		%	1	80-121		11/17/2016 16:53	
Bromofluorobenzene (S)	107		%	1	80-129		11/17/2016 16:53	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/17/2016 16:53	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/17/2016 16:53	J
1,2-Dichloroethane-d4 (S)	94		%	1	77-125		11/17/2016 16:53	
Toluene-d8 (S)	100		%	1	80-121		11/17/2016 16:53	
Bromofluorobenzene (S)	107		%	1	80-129		11/17/2016 16:53	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water

Analytical Method: EPA 300.0

Chloride	22	I	mg/L	10	50	5.0	11/17/2016 11:20	J
Nitrate	1.4	I	mg/L	10	5.0	0.50	11/17/2016 11:20	J

Analysis Desc: Ammonia,E350.1,Water

Analytical Method: EPA 350.1

Ammonia (N)	0.17		mg/L	1	0.01	0.01	11/22/2016 10:40	G
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Analysis Desc: Tot Dissolved
Solids,SM2540C

Analytical Method: SM 2540 C

Total Dissolved Solids	100		mg/L	1	10	10	11/20/2016 09:39	J
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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147009**

Date Received: 11/16/16 09:50 Matrix: Water

Sample ID: **16320-EB**

Date Collected: 11/15/16 15:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis, Water			Analytical Method: SW-846 6010					
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/18/2016 20:47	J
Barium	0.00028	U	mg/L	1	0.0020	0.00028	11/18/2016 20:47	J
Beryllium	0.00013	U	mg/L	1	0.00030	0.00013	11/18/2016 20:47	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/18/2016 20:47	J
Chromium	0.00056	I	mg/L	1	0.0010	0.00050	11/18/2016 20:47	J
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/18/2016 20:47	J
Copper	0.0025	U	mg/L	1	0.0040	0.0025	11/18/2016 20:47	J
Iron	0.030	U	mg/L	1	0.20	0.030	11/18/2016 20:47	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/18/2016 20:47	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/18/2016 20:47	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/18/2016 20:47	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	11/18/2016 20:47	J
Sodium	0.16	U	mg/L	1	0.20	0.16	11/18/2016 20:47	J
Vanadium	0.00018	U	mg/L	1	0.0015	0.00018	11/18/2016 20:47	J
Zinc	0.0097	I	mg/L	1	0.010	0.0020	11/18/2016 20:47	J
Analysis Desc: SW846 6020B			Preparation Method: SW-846 3010A					
Analysis, Total			Analytical Method: SW-846 6020					
Antimony	0.046	U	ug/L	1	0.70	0.046	11/23/2016 15:02	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/23/2016 15:02	J
Analysis Desc: SW846 7470A			Preparation Method: SW-846 7470A					
Analysis, Water			Analytical Method: SW-846 7470A					
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/21/2016 15:57	J
VOLATILES								
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/17/2016 17:21	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/17/2016 17:21	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/17/2016 17:21	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/17/2016 17:21	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/17/2016 17:21	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 17:21	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/17/2016 17:21	J

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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147009**

Date Received: 11/16/16 09:50 Matrix: Water

Sample ID: **16320-EB**

Date Collected: 11/15/16 15:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 17:21	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/17/2016 17:21	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/17/2016 17:21	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/17/2016 17:21	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/17/2016 17:21	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/17/2016 17:21	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/17/2016 17:21	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/17/2016 17:21	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/17/2016 17:21	J
Benzene	0.16	U	ug/L	1	1.0	0.16	11/17/2016 17:21	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/17/2016 17:21	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/17/2016 17:21	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/17/2016 17:21	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/17/2016 17:21	J
Carbon Disulfide	0.28	I	ug/L	1	1.0	0.21	11/17/2016 17:21	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/17/2016 17:21	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/17/2016 17:21	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/17/2016 17:21	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/17/2016 17:21	J
Chloromethane	0.74	I	ug/L	1	1.0	0.21	11/17/2016 17:21	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/17/2016 17:21	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/17/2016 17:21	J
Ethylbenzene	0.25	I	ug/L	1	1.0	0.24	11/17/2016 17:21	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/17/2016 17:21	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/17/2016 17:21	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/17/2016 17:21	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/17/2016 17:21	J
Toluene	2.9		ug/L	1	1.0	0.23	11/17/2016 17:21	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/17/2016 17:21	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/17/2016 17:21	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/17/2016 17:21	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/17/2016 17:21	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/17/2016 17:21	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/17/2016 17:21	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/17/2016 17:21	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/17/2016 17:21	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/17/2016 17:21	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/17/2016 17:21	J
1,2-Dichloroethane-d4 (S)	105		%	1	77-125		11/17/2016 17:21	
Toluene-d8 (S)	98		%	1	80-121		11/17/2016 17:21	

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ANALYTICAL RESULTS

Workorder: J1611147 J.E.D. Landfill

Lab ID: **J1611147009**

Date Received: 11/16/16 09:50 Matrix: Water

Sample ID: **16320-EB**

Date Collected: 11/15/16 15:25

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Bromofluorobenzene (S)	105		%	1	80-129		11/17/2016 17:21	
Analysis Desc: 8260B SIM Analysis, Water		Preparation Method: SW-846 5030B Analytical Method: SW-846 8260B (SIM)						
1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	0.20	0.11	11/17/2016 17:21	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	0.10	0.020	11/17/2016 17:21	J
1,2-Dichloroethane-d4 (S)	105		%	1	77-125		11/17/2016 17:21	
Toluene-d8 (S)	98		%	1	80-121		11/17/2016 17:21	
Bromofluorobenzene (S)	105		%	1	80-129		11/17/2016 17:21	

WET CHEMISTRY

Analysis Desc: IC,E300.0,Water		Analytical Method: EPA 300.0						
Chloride	0.50	U	mg/L	1	5.0	0.50	11/17/2016 11:36	J
Nitrate	0.050	U	mg/L	1	0.50	0.050	11/17/2016 11:36	J
Analysis Desc: Ammonia,E350.1,Water		Analytical Method: EPA 350.1						
Ammonia (N)	0.01	U	mg/L	1	0.01	0.01	11/22/2016 10:40	G
Analysis Desc: Tot Dissolved Solids,SM2540C		Analytical Method: SM 2540 C						
Total Dissolved Solids	10	U	mg/L	1	10	10	11/20/2016 09:39	J

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ANALYTICAL RESULTS QUALIFIERS

Workorder: J1611147 J.E.D. Landfill

PARAMETER QUALIFIERS

- U The compound was analyzed for but not detected.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- Q Missed Hold Time
- J4 Estimated Result

LAB QUALIFIERS

- G DOH Certification #E82001(AEL-G)(FL NELAC Certification)
- J DOH Certification #E82574(AEL-JAX)(FL NELAC Certification)

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QUALITY CONTROL DATA

Workorder: J1611147 J.E.D. Landfill

QC Batch: DGMJ/2193 Analysis Method: SW-846 6010
QC Batch Method: SW-846 3010A Prepared: 11/18/2016 08:45
Associated Lab Samples: J1611147001, J1611147002, J1611147003, J1611147004, J1611147005, J1611147006, J1611147007, J1611147008,

METHOD BLANK: 2201307

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
METALS				
Silver	mg/L	0.00044	0.00044	U
Arsenic	mg/L	0.0085	0.0085	U
Barium	mg/L	0.00028	0.00028	U
Beryllium	mg/L	0.00013	0.00013	U
Cadmium	mg/L	0.00032	0.00032	U
Cobalt	mg/L	0.00060	0.00060	U
Chromium	mg/L	0.00050	0.00050	U
Copper	mg/L	0.0025	0.0025	U
Iron	mg/L	0.030	0.030	U
Sodium	mg/L	0.16	0.16	U
Nickel	mg/L	0.0011	0.0011	U
Lead	mg/L	0.0013	0.0013	U
Selenium	mg/L	0.0068	0.0068	U
Vanadium	mg/L	0.00018	0.00018	U
Zinc	mg/L	0.0020	0.0020	U

QC Batch: MSVj/2805 Analysis Method: SW-846 8260B (SIM)
QC Batch Method: SW-846 5030B Prepared: 11/17/2016 09:33
Associated Lab Samples: J1611147001, J1611147002, J1611147003, J1611147004, J1611147005, J1611147006, J1611147007, J1611147008,

METHOD BLANK: 2201312

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
VOLATILES				
Ethylene Dibromide (EDB)	ug/L	0.020	0.020	U
1,2-Dibromo-3-Chloropropane	ug/L	0.11	0.11	U
1,2-Dichloroethane-d4 (S)	%	96	77-125	
Toluene-d8 (S)	%	100	80-121	
Bromofluorobenzene (S)	%	107	80-129	

QC Batch: MSVj/2807 Analysis Method: SW-846 8260B
QC Batch Method: SW-846 5030B Prepared: 11/17/2016 09:33
Associated Lab Samples: J1611147001, J1611147002, J1611147003, J1611147004, J1611147005, J1611147006, J1611147007, J1611147008,

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QUALITY CONTROL DATA

Workorder: J1611147 J.E.D. Landfill

METHOD BLANK: 2201317

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
VOLATILES				
Chloromethane	ug/L	0.21	0.21	U
Vinyl Chloride	ug/L	0.20	0.20	U
Bromomethane	ug/L	0.24	0.24	U
Chloroethane	ug/L	0.33	0.33	U
Trichlorofluoromethane	ug/L	0.32	0.32	U
Acetone	ug/L	2.1	2.1	U
1,1-Dichloroethylene	ug/L	0.18	0.18	U
Iodomethane (Methyl Iodide)	ug/L	0.16	0.16	U
Acrylonitrile	ug/L	1.1	1.1	U
Methylene Chloride	ug/L	2.5	2.5	U
Carbon Disulfide	ug/L	0.21	0.21	U
trans-1,2-Dichloroethylene	ug/L	0.20	0.20	U
1,1-Dichloroethane	ug/L	0.14	0.14	U
Vinyl Acetate	ug/L	0.19	0.19	U
2-Butanone (MEK)	ug/L	0.43	0.43	U
cis-1,2-Dichloroethylene	ug/L	0.24	0.24	U
Bromochloromethane	ug/L	0.17	0.17	U
Chloroform	ug/L	0.18	0.18	U
1,2-Dichloroethane	ug/L	0.23	0.23	U
1,1,1-Trichloroethane	ug/L	0.22	0.22	U
Carbon Tetrachloride	ug/L	0.36	0.36	U
Benzene	ug/L	0.16	0.16	U
Dibromomethane	ug/L	0.26	0.26	U
1,2-Dichloropropane	ug/L	0.20	0.20	U
Trichloroethene	ug/L	0.29	0.29	U
Bromodichloromethane	ug/L	0.25	0.25	U
cis-1,3-Dichloropropene	ug/L	0.16	0.16	U
4-Methyl-2-pentanone (MIBK)	ug/L	0.47	0.47	U
trans-1,3-Dichloropropylene	ug/L	0.18	0.18	U
1,1,2-Trichloroethane	ug/L	0.30	0.30	U
Toluene	ug/L	0.23	0.23	U
2-Hexanone	ug/L	0.44	0.44	U
Dibromochloromethane	ug/L	0.33	0.33	U
Tetrachloroethylene (PCE)	ug/L	0.36	0.36	U
1,1,1,2-Tetrachloroethane	ug/L	0.26	0.26	U
Chlorobenzene	ug/L	0.21	0.21	U
Ethylbenzene	ug/L	0.24	0.24	U
Bromoform	ug/L	0.43	0.43	U
Styrene	ug/L	0.23	0.23	U
1,1,2,2-Tetrachloroethane	ug/L	0.20	0.20	U
1,2,3-Trichloropropane	ug/L	0.30	0.30	U
1,4-Dichlorobenzene	ug/L	0.22	0.22	U
1,2-Dichlorobenzene	ug/L	0.18	0.18	U
trans-1,4-Dichloro-2-butene	ug/L	1.8	1.8	U

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QUALITY CONTROL DATA

Workorder: J1611147 J.E.D. Landfill

METHOD BLANK: 2201317

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Xylene (Total)	ug/L	0.53	0.53	U
1,2-Dichloroethane-d4 (S)	%	96	77-125	
Toluene-d8 (S)	%	100	80-121	
Bromofluorobenzene (S)	%	107	80-129	

QC Batch: WCAj/2958

Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0

Prepared:

Associated Lab Samples: J1611147001, J1611147002, J1611147003, J1611147004, J1611147005, J1611147006, J1611147007, J1611147008,

METHOD BLANK: 2201432

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Chloride	mg/L	0.50	0.50	U
Nitrate	mg/L	0.050	0.050	U

QC Batch: DGMj/2198

Analysis Method: SW-846 6020

QC Batch Method: SW-846 3010A

Prepared: 11/21/2016 07:30

Associated Lab Samples: J1611147001, J1611147002, J1611147003, J1611147004, J1611147005, J1611147006, J1611147007, J1611147008,

METHOD BLANK: 2201781

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
METALS				
Antimony	ug/L	0.046	0.046	U
Thallium	ug/L	0.057	0.057	U

QC Batch: WCAj/2967

Analysis Method: SM 2540 C

QC Batch Method: SM 2540 C

Prepared:

Associated Lab Samples: J1611147001, J1611147002, J1611147003, J1611147004, J1611147005, J1611147006, J1611147007, J1611147008,

METHOD BLANK: 2202622

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Total Dissolved Solids	mg/L	10	10	U

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QUALITY CONTROL DATA

Workorder: J1611147 J.E.D. Landfill

METHOD BLANK: 2202622

QC Batch: DGMJ/2204 Analysis Method: SW-846 7470A
QC Batch Method: SW-846 7470A Prepared: 11/21/2016 11:35
Associated Lab Samples: J1611147001, J1611147002, J1611147003, J1611147004, J1611147005, J1611147006, J1611147007, J1611147008,

METHOD BLANK: 2202879

Parameter	Units	Blank Result	Reporting Limit Qualifiers
METALS			
Mercury	mg/L	0.000011	0.000011 U

QC Batch: WCAg/3605 Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 Prepared:
Associated Lab Samples: J1611147001, J1611147002, J1611147003, J1611147004, J1611147005, J1611147006, J1611147007, J1611147008,

METHOD BLANK: 2204908

Parameter	Units	Blank Result	Reporting Limit Qualifiers
WET CHEMISTRY			
Ammonia (N)	mg/L	0.01	0.01 U

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: J1611147 J.E.D. Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
J1611147001	16320-MW-31A	SW-846 3010A	DGMj/2193	SW-846 6010	ICPj/1622
J1611147002	16320-MW-31B	SW-846 3010A	DGMj/2193	SW-846 6010	ICPj/1622
J1611147003	16320-MW-27A	SW-846 3010A	DGMj/2193	SW-846 6010	ICPj/1622
J1611147004	16320-MW-27B	SW-846 3010A	DGMj/2193	SW-846 6010	ICPj/1622
J1611147005	16320-MW-28A	SW-846 3010A	DGMj/2193	SW-846 6010	ICPj/1622
J1611147006	16320-MW-28B	SW-846 3010A	DGMj/2193	SW-846 6010	ICPj/1622
J1611147007	16320-MW-25A	SW-846 3010A	DGMj/2193	SW-846 6010	ICPj/1622
J1611147008	16320-MW-25B	SW-846 3010A	DGMj/2193	SW-846 6010	ICPj/1622
J1611147009	16320-EB	SW-846 3010A	DGMj/2193	SW-846 6010	ICPj/1622
J1611147001	16320-MW-31A	SW-846 5030B	MSVj/2805	SW-846 8260B (SIM)	MSVj/2806
J1611147002	16320-MW-31B	SW-846 5030B	MSVj/2805	SW-846 8260B (SIM)	MSVj/2806
J1611147003	16320-MW-27A	SW-846 5030B	MSVj/2805	SW-846 8260B (SIM)	MSVj/2806
J1611147004	16320-MW-27B	SW-846 5030B	MSVj/2805	SW-846 8260B (SIM)	MSVj/2806
J1611147005	16320-MW-28A	SW-846 5030B	MSVj/2805	SW-846 8260B (SIM)	MSVj/2806
J1611147006	16320-MW-28B	SW-846 5030B	MSVj/2805	SW-846 8260B (SIM)	MSVj/2806
J1611147007	16320-MW-25A	SW-846 5030B	MSVj/2805	SW-846 8260B (SIM)	MSVj/2806
J1611147008	16320-MW-25B	SW-846 5030B	MSVj/2805	SW-846 8260B (SIM)	MSVj/2806
J1611147009	16320-EB	SW-846 5030B	MSVj/2805	SW-846 8260B (SIM)	MSVj/2806
J1611147001	16320-MW-31A	SW-846 5030B	MSVj/2807	SW-846 8260B	MSVj/2808
J1611147002	16320-MW-31B	SW-846 5030B	MSVj/2807	SW-846 8260B	MSVj/2808
J1611147003	16320-MW-27A	SW-846 5030B	MSVj/2807	SW-846 8260B	MSVj/2808
J1611147004	16320-MW-27B	SW-846 5030B	MSVj/2807	SW-846 8260B	MSVj/2808
J1611147005	16320-MW-28A	SW-846 5030B	MSVj/2807	SW-846 8260B	MSVj/2808
J1611147006	16320-MW-28B	SW-846 5030B	MSVj/2807	SW-846 8260B	MSVj/2808
J1611147007	16320-MW-25A	SW-846 5030B	MSVj/2807	SW-846 8260B	MSVj/2808
J1611147008	16320-MW-25B	SW-846 5030B	MSVj/2807	SW-846 8260B	MSVj/2808
J1611147009	16320-EB	SW-846 5030B	MSVj/2807	SW-846 8260B	MSVj/2808
J1611147001	16320-MW-31A			EPA 300.0	WCAj/2958
J1611147002	16320-MW-31B			EPA 300.0	WCAj/2958
J1611147003	16320-MW-27A			EPA 300.0	WCAj/2958
J1611147004	16320-MW-27B			EPA 300.0	WCAj/2958

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: J1611147 J.E.D. Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
J1611147005	16320-MW-28A			EPA 300.0	WCAj/2958
J1611147006	16320-MW-28B			EPA 300.0	WCAj/2958
J1611147007	16320-MW-25A			EPA 300.0	WCAj/2958
J1611147008	16320-MW-25B			EPA 300.0	WCAj/2958
J1611147009	16320-EB			EPA 300.0	WCAj/2958
J1611147001	16320-MW-31A	SW-846 3010A	DGMj/2198	SW-846 6020	ICMj/1339
J1611147002	16320-MW-31B	SW-846 3010A	DGMj/2198	SW-846 6020	ICMj/1339
J1611147003	16320-MW-27A	SW-846 3010A	DGMj/2198	SW-846 6020	ICMj/1339
J1611147004	16320-MW-27B	SW-846 3010A	DGMj/2198	SW-846 6020	ICMj/1339
J1611147005	16320-MW-28A	SW-846 3010A	DGMj/2198	SW-846 6020	ICMj/1339
J1611147006	16320-MW-28B	SW-846 3010A	DGMj/2198	SW-846 6020	ICMj/1339
J1611147007	16320-MW-25A	SW-846 3010A	DGMj/2198	SW-846 6020	ICMj/1339
J1611147008	16320-MW-25B	SW-846 3010A	DGMj/2198	SW-846 6020	ICMj/1339
J1611147009	16320-EB	SW-846 3010A	DGMj/2198	SW-846 6020	ICMj/1339
J1611147001	16320-MW-31A			SM 2540 C	WCAj/2967
J1611147002	16320-MW-31B			SM 2540 C	WCAj/2967
J1611147003	16320-MW-27A			SM 2540 C	WCAj/2967
J1611147004	16320-MW-27B			SM 2540 C	WCAj/2967
J1611147005	16320-MW-28A			SM 2540 C	WCAj/2967
J1611147006	16320-MW-28B			SM 2540 C	WCAj/2967
J1611147007	16320-MW-25A			SM 2540 C	WCAj/2967
J1611147008	16320-MW-25B			SM 2540 C	WCAj/2967
J1611147009	16320-EB			SM 2540 C	WCAj/2967
J1611147001	16320-MW-31A	SW-846 7470A	DGMj/2204	SW-846 7470A	CVAj/1256
J1611147002	16320-MW-31B	SW-846 7470A	DGMj/2204	SW-846 7470A	CVAj/1256
J1611147003	16320-MW-27A	SW-846 7470A	DGMj/2204	SW-846 7470A	CVAj/1256
J1611147004	16320-MW-27B	SW-846 7470A	DGMj/2204	SW-846 7470A	CVAj/1256
J1611147005	16320-MW-28A	SW-846 7470A	DGMj/2204	SW-846 7470A	CVAj/1256
J1611147006	16320-MW-28B	SW-846 7470A	DGMj/2204	SW-846 7470A	CVAj/1256
J1611147007	16320-MW-25A	SW-846 7470A	DGMj/2204	SW-846 7470A	CVAj/1256
J1611147008	16320-MW-25B	SW-846 7470A	DGMj/2204	SW-846 7470A	CVAj/1256

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: J1611147 J.E.D. Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
J1611147009	16320-EB	SW-846 7470A	DGMj/2204	SW-846 7470A	CVAj/1256
J1611147001	16320-MW-31A			EPA 350.1	WCAg/3605
J1611147002	16320-MW-31B			EPA 350.1	WCAg/3605
J1611147003	16320-MW-27A			EPA 350.1	WCAg/3605
J1611147004	16320-MW-27B			EPA 350.1	WCAg/3605
J1611147005	16320-MW-28A			EPA 350.1	WCAg/3605
J1611147006	16320-MW-28B			EPA 350.1	WCAg/3605
J1611147007	16320-MW-25A			EPA 350.1	WCAg/3605
J1611147008	16320-MW-25B			EPA 350.1	WCAg/3605
J1611147009	16320-EB			EPA 350.1	WCAg/3605

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- ☐ **Gainesville:** 4965 SW 41st Blvd. • Gainesville, FL 32608 • 352/336-1111
- ☒ **Jacksonville:** 6681 Southpoint Pkwy. • Jacksonville, FL 32216 • 904/731-1111
- ☐ **Miramar:** 10200 USA Today Way, Miramar, FL 33025 • 954/889-1111
- ☐ **Tallahassee:** 1288 Cedar Canyon Drive, Tallahassee, FL 32303 • 904/633-1111
- ☐ **Tampa:** 9610 Princess Palm Ave. • Tampa, FL 33619 • 813/630.9610

J1611147

Client Name:		Waste Connections, Inc.		Project Name: J.E.D LANDFILL (F/K/A OAK HAMMOCK DISPOSAL)		BOTTLE SIZE & TYPE		40 mL Vials		500 mL Plastic		500 mL Plastic		250 mL Plastic														LABORATORY I.D. NUMBER	
Address:		5135 Madison Avenue		P.O. Number/Project Number:																									
Tampa, Florida 33619				Project Location:		St. Cloud, FL																							
Phone:		813-388-1026		FDEP Facility No:		89544																							
FAX:				Project Name and Address:		JED SWDF																							
Contact:		Kirk Wills																											
Sampled By:																													
Turn Around Time:		☒ STANDARD ☐ RUSH		Special Instructions:		Jax Profile: 31172																							
Page		1 of 1		☒ ADaPT ☐ EQUIS																									
SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING		MATRIX	NO. COUNT	PRESER-VATION	HCL	HNO3	Ice	H2SO4																		
16320-MW-31A	MW-31A	G	11-15-16	0745	GW	6		X	X	X	X																	001	
16320-MW-31B	MW-31B			0835																								002	
16320-MW-27A	MW-27A			1005																								003	
16320-MW-27B	MW-27B			1100																								004	
16320-MW-28A	MW-28A			1230																								005	
16320-MW-28B	MW-28B			1255																								006	
16320-MW-25A	MW-25A			1412	↓																							007	
16320-MW-25B	MW-25B	↓	↓	1445	GW	↓		↓	↓	↓	↓																	008	
16320-EB	Equipment Blank	G	11-15-16	1525	DE H2O	6		X	X	X	X																	009	

Matrix Code: WW = waste water SW = surface water GW = ground water DW = drinking water O = oil A = air SO = soil SL = sludge
 Preservation Code: I = Ice H = (HCl) S = (H2SO4) N = (HNO3) T = (Sodium Thiosulfate)

Received on Ice ☒ Yes ☐ No ☒ Temp taken from sample ☐ Temp from blank

☐ Where required, pH checked Temperature when received 9 (in degrees celcius)

DCN: AD-051 Form last revised 08/18/2014

Device used for measuring Temp by unique identifier (circle IR temp gun used) Q: 9A G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V

	Relinquished by:	Date	Time	Received by:	Date	Time
1	Joe Terry	11-15-16	1615	UPS	11-15-16	11015
2	UPS	11-16-16	9:50	Bob Aron	11-16-16	9:50
3						
4						

FOR DRINKING WATER USE:

(When PWS information not otherwise supplied) PWS ID: _____

Contact Person: _____ Phone : _____

Supplier of Water: _____

Site-Address: _____

Client: Waste ConnectionsProject name: J.E.D. LandfillDate/Time Rcvd: 11-16-16Log-In request number: JI611147Received by: BACompleted by: Bj**Cooler/Shipping Information:**Courier: ☒ AEL ☐ Client ☒ UPS ☐ Blue Streak ☐ FedEx ☐ AES ☐ ASAP ☐ Other (describe): _____Type: ☒ Cooler ☐ Box ☐ Other (describe) _____

Cooler temperature: Identify the cooler and document the temperature blank or ice water measurement

Cooler ID					
Temp (°C)	4				
Temp taken from	☒ Sample Bottle ☒ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler
Temp measured with	☒ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):

Other Information:

Any discrepancies should be explained in the "Comments" section below.

CHECKLIST	YES	NO	NA
1. Were custody seals on shipping container(s) intact?			☒
2. Were custody papers properly included with samples?	☒		
3. Were custody papers properly filled out (ink, signed, match labels)?	☒		
4. Did all bottles arrive in good condition (unbroken)?	☒		
5. Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?	☒		
6. Did the sample labels agree with the chain of custody?	☒		
7. Were correct bottles used for the tests indicated?	☒		
8. Were proper sample preservation techniques indicated on the label?	☒		
9. Were samples received within holding times?	☒		
10. Were all VOA vials free of the presence of air bubbles?	☒		
11. Have all Soil VOA Vials and Encores been placed in a freezer within 48 hours of collection?			☒
12. Were samples in direct contact with wet ice? If "No," check one: ☐ NO ICE ☐ BLUE ICE	☒		
13. Was the cooler temperature less than 6°C?	☒		
14. Where pH preservation is required, are sample pHs checked and any anomalies recorded by Sample control? Are all <2 or >10? Note: VOA samples are checked by laboratory analysts.	☒		
15. Was sufficient sample volume provided to perform all tests?	☒		
16. If for Bacteriological testing, were containers supplied by AEL? (See QA officer if answer is no)			☒
17. Were all sample containers provided by AEL? (Other than Bacteriological)	☒		
18. Were samples accepted into the laboratory?	☒		
19. When necessary to split samples into other bottles, is it noted in the comments?	☒		

Comments: (Note all sample(s) and container (s)" with a "No" checklist response in this comment section)



**Advanced
Environmental Laboratories, Inc.**

6601 Southpoint Parkway
Jacksonville, Florida 32216
(904) 363-9350
FAX (904) 363-9354

QCBatch: WCAJ:2958

Method: 300.0

PrepMethod: 300.0

I. RECEIPT

Due to an inadvertent sample receiving error, samples J16111470001 and J1611147002 were logged in and provided to the laboratory without sufficient time remaining to perform the analysis within the recommended hold time. The analysis was performed as soon as possible after receipt by the laboratory. Since the analysis was not performed significantly past the hold time, it is our opinion that the impact on the data is minimal. The data is qualified to indicate the holding time violation.

II. HOLDING TIMES

Preparation: All holding times were met.

Analysis: All holding times were met.

III. PREPARATION

Sample preparation proceeded normally.

VI. ANALYSIS

A. Calibration: All acceptance criteria were met.

B. Blanks: All acceptance criteria were met.

C. Duplicates: All acceptance criteria were met.

D. Spikes: All acceptance criteria were met.

E. Serial Dilution: All acceptance criteria were met.

F. Samples: Samples J1611147002, 005 and 008 were analyzed at the lowest possible dilution due to the dark color in the samples that could affect the instrument.

G. Other:

I certify that this data package is in compliance with the terms and conditions agreed to by Advanced Environmental Laboratories, Inc. and by the client, both technically and for completeness, except for the conditions detailed above. The Technical Director or his designee, as verified by the following signature, has authorized release of the data contained in this hard copy data package and in the computer-readable data submitted on diskette:

December 5, 2016

Kirk Wills
Waste Connections
5135 Madison Avenue
Tampa, FL 33619

RE: Workorder: A1608292 J.E.D. Landfill

Dear Kirk Wills:

Enclosed are the analytical results for sample(s) received by the laboratory on Friday, November 18, 2016. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. The analytical results for the samples contained in this report were submitted for analysis as outlined by the Chain of Custody and results pertain only to these samples.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Craig Myers
CMyers@AELLab.com

Enclosures

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SAMPLE SUMMARY

Workorder: A1608292 J.E.D. Landfill

Lab ID	Sample ID	Matrix	Date Collected	Date Received
A1608292001	16323-SW-3	Water	11/18/2016 07:30	11/18/2016 11:05
A1608292002	16323-SW-4	Water	11/18/2016 08:20	11/18/2016 11:05

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ANALYTICAL RESULTS

Workorder: A1608292 J.E.D. Landfill

Lab ID: **A1608292001**

Date Received: 11/18/16 11:05 Matrix: Water

Sample ID: **16323-SW-3**

Date Collected: 11/18/16 07:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis, Water			Analytical Method: SM 2340B					
Total Hardness (as CaCO ₃)	45		mg/L	1	0.16	0.10	11/23/2016 18:42	J
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/23/2016 18:42	J
Barium	0.022		mg/L	1	0.0020	0.00028	11/23/2016 18:42	J
Beryllium	0.00015	I	mg/L	1	0.00030	0.00013	11/23/2016 18:42	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	11/23/2016 18:42	J
Calcium	11		mg/L	1	0.20	0.16	11/23/2016 18:42	J
Chromium	0.00050	U	mg/L	1	0.0010	0.00050	11/23/2016 18:42	J
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/23/2016 18:42	J
Copper	0.0031	I	mg/L	1	0.0040	0.0025	11/23/2016 18:42	J
Iron	0.68		mg/L	1	0.20	0.030	11/23/2016 18:42	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/23/2016 18:42	J
Magnesium	4.1		mg/L	1	0.20	0.021	11/23/2016 18:42	J
Nickel	0.0011	U	mg/L	1	0.0065	0.0011	11/23/2016 18:42	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/23/2016 18:42	J
Silver	0.0020	I	mg/L	1	0.0040	0.00044	11/23/2016 18:42	J
Vanadium	0.0020	V	mg/L	1	0.0015	0.00018	11/23/2016 18:42	J
Zinc	0.012		mg/L	1	0.010	0.0020	11/23/2016 18:42	J
Analysis Desc: SW846 6020B			Preparation Method: SW-846 3010A					
Analysis, Total			Analytical Method: SW-846 6020					
Antimony	0.065	I	ug/L	1	0.70	0.046	11/29/2016 17:59	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/29/2016 17:59	J
Analysis Desc: SW846 7470A			Preparation Method: SW-846 7470A					
Analysis, Water			Analytical Method: SW-846 7470A					
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	11/23/2016 13:40	J
Microbiology								
Analysis Desc: Fecal Coliform			Analytical Method: SM 9222D					
MF, SM9222D, Water								
Coliform Fecal	164		#/100 mL	1	1	1	11/18/2016 14:39	A
VOLATILES								
Analysis Desc: 8260B Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260B					

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ANALYTICAL RESULTS

Workorder: A1608292 J.E.D. Landfill

Lab ID: **A1608292001**

Date Received: 11/18/16 11:05 Matrix: Water

Sample ID: **16323-SW-3**

Date Collected: 11/18/16 07:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 12:14	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/23/2016 12:14	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 12:14	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 12:14	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/23/2016 12:14	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 12:14	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 12:14	J
1,2-Dichlorobenzene	1.6		ug/L	1	1.0	0.18	11/23/2016 12:14	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/23/2016 12:14	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 12:14	J
1,4-Dichlorobenzene	1.3		ug/L	1	1.0	0.22	11/23/2016 12:14	J
2-Butanone (MEK)	2.6	I	ug/L	1	5.0	0.43	11/23/2016 12:14	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/23/2016 12:14	J
4-Methyl-2-pentanone (MIBK)	1.6		ug/L	1	1.0	0.47	11/23/2016 12:14	J
Acetone	6.3		ug/L	1	5.0	2.1	11/23/2016 12:14	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/23/2016 12:14	J
Benzene	0.16	U	ug/L	1	1.0	0.16	11/23/2016 12:14	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/23/2016 12:14	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/23/2016 12:14	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/23/2016 12:14	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/23/2016 12:14	J
Carbon Disulfide	0.59	I	ug/L	1	1.0	0.21	11/23/2016 12:14	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/23/2016 12:14	J
Chlorobenzene	0.63	I	ug/L	1	1.0	0.21	11/23/2016 12:14	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 12:14	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/23/2016 12:14	J
Chloromethane	0.40	I	ug/L	1	1.0	0.21	11/23/2016 12:14	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 12:14	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 12:14	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 12:14	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/23/2016 12:14	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/23/2016 12:14	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 12:14	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/23/2016 12:14	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 12:14	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/23/2016 12:14	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/23/2016 12:14	J
Vinyl Acetate	0.76	I	ug/L	1	1.0	0.19	11/23/2016 12:14	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/23/2016 12:14	J
Xylene (Total)	0.92	I	ug/L	1	2.0	0.53	11/23/2016 12:14	J

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ANALYTICAL RESULTS

Workorder: A1608292 J.E.D. Landfill

Lab ID: **A1608292001**

Date Received: 11/18/16 11:05 Matrix: Water

Sample ID: **16323-SW-3**

Date Collected: 11/18/16 07:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 12:14	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/23/2016 12:14	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/23/2016 12:14	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 12:14	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/23/2016 12:14	J
1,2-Dichloroethane-d4 (S)	82		%	1	77-125		11/23/2016 12:14	
Toluene-d8 (S)	102		%	1	80-121		11/23/2016 12:14	
Bromofluorobenzene (S)	108		%	1	80-129		11/23/2016 12:14	

Analysis Desc: 8260B SIM Analysis,
Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260B (SIM)

1,2-Dibromo-3-Chloropropane	3.3		ug/L	1	0.20	0.11	11/23/2016 12:14	J
Ethylene Dibromide (EDB)	0.79		ug/L	1	0.10	0.020	11/23/2016 12:14	J
1,2-Dichloroethane-d4 (S)	82		%	1	77-125		11/23/2016 12:14	
Toluene-d8 (S)	102		%	1	80-121		11/23/2016 12:14	
Bromofluorobenzene (S)	108		%	1	80-129		11/23/2016 12:14	

WET CHEMISTRY

Analysis Desc: Total
Nitrogen, Calculated, Water

Analytical Method: Calculation

Total Nitrogen	0.82		mg/L	1	0.10	0.10	12/5/2016 12:04	G
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Analysis Desc: Unionized
Ammonia, DEP SOP, Water

Analytical Method: DEP SOP 10/03/83

Unionized Ammonia	0	U	mg/L	1			12/5/2016 12:04	G
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Analysis Desc: IC, E300.0, Water

Analytical Method: EPA 300.0

Nitrate	0.051	U	mg/L	1	0.50	0.051	11/19/2016 00:15	A
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Analysis Desc: Ammonia, E350.1, Water

Analytical Method: EPA 350.1

Ammonia (N)	0.04		mg/L	1	0.01	0.01	11/22/2016 10:40	G
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Analysis Desc: TKN, E351.2, Water

Preparation Method: Copper Sulfate Digestion

Analytical Method: EPA 351.2

Total Kjeldahl Nitrogen	0.79		mg/L	1	0.10	0.050	11/23/2016 12:48	G
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Analysis Desc: Total
Phosphorus, E365.4, Analysis

Preparation Method: Copper Sulfate Digestion

Analytical Method: EPA 365.4

Total Phosphorus (as P)	0.050	U	mg/L	1	0.10	0.050	11/23/2016 12:48	G
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ANALYTICAL RESULTS

Workorder: A1608292 J.E.D. Landfill

Lab ID: **A1608292001**

Date Received: 11/18/16 11:05 Matrix: Water

Sample ID: **16323-SW-3**

Date Collected: 11/18/16 07:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: COD,E410.4,Water		Analytical Method: EPA 410.4						
Chemical Oxygen Demand	54	1,J4	mg/L	1	20	7.2	11/23/2016 11:25	G
Analysis Desc: Chlorophyll A,SM10200H,Water		Analytical Method: SM 10200 H						
Chlorophyll A	1.6		mg/m3	1	1.0	1.0	11/28/2016 15:22	G
Analysis Desc: Tot Dissolved Solids,SM2540C		Analytical Method: SM 2540 C						
Total Dissolved Solids	180		mg/L	1	10	10	11/23/2016 12:48	J
Analysis Desc: TSS,SM2540D,Water		Analytical Method: SM 2540D						
Total Suspended Solids	2.8		mg/L	1	2.0	1.0	11/23/2016 06:56	J
Analysis Desc: Nitrate+Nitrite,SM4500NO3-F		Analytical Method: SM 4500NO3-F						
Nitrate + Nitrite	0.026		mg/L	1	0.01	0.004	11/28/2016 13:40	G
Analysis Desc: BOD,SM5210B,Water		Analytical Method: SM 5210B						
Biochemical Oxygen Demand	2.0	U	mg/L	1	2.0	2.0	11/18/2016 15:40	A
Analysis Desc: TOC,SM5310B,Water		Analytical Method: SM 5310B						
Total Organic Carbon	18		mg/L	1	1.0	0.25	11/23/2016 14:33	G

Lab ID: **A1608292002**

Date Received: 11/18/16 11:05 Matrix: Water

Sample ID: **16323-SW-4**

Date Collected: 11/18/16 08:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Water		Preparation Method: SW-846 3010A						
		Analytical Method: SM 2340B						
Total Hardness (as CaCO3)	100		mg/L	1	0.16	0.10	11/23/2016 19:04	J
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	11/23/2016 19:04	J
Barium	0.035		mg/L	1	0.0020	0.00028	11/23/2016 19:04	J
Beryllium	0.00014	I	mg/L	1	0.00030	0.00013	11/23/2016 19:04	J

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ANALYTICAL RESULTS

Workorder: A1608292 J.E.D. Landfill

Lab ID: **A1608292002**
Sample ID: **16323-SW-4**

Date Received: 11/18/16 11:05 Matrix: Water
Date Collected: 11/18/16 08:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Cadmium	0.00035	I	mg/L	1	0.00060	0.00032	11/23/2016 19:04	J
Calcium	32		mg/L	1	0.20	0.16	11/23/2016 19:04	J
Chromium	0.00061	I	mg/L	1	0.0010	0.00050	11/23/2016 19:04	J
Cobalt	0.00060	U	mg/L	1	0.0040	0.00060	11/23/2016 19:04	J
Copper	0.0026	I	mg/L	1	0.0040	0.0025	11/23/2016 19:04	J
Iron	1.4		mg/L	1	0.20	0.030	11/23/2016 19:04	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	11/23/2016 19:04	J
Magnesium	5.2		mg/L	1	0.20	0.021	11/23/2016 19:04	J
Nickel	0.0014	I	mg/L	1	0.0065	0.0011	11/23/2016 19:04	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	11/23/2016 19:04	J
Silver	0.0020	I	mg/L	1	0.0040	0.00044	11/23/2016 19:04	J
Vanadium	0.0020	V	mg/L	1	0.0015	0.00018	11/23/2016 19:04	J
Zinc	0.018		mg/L	1	0.010	0.0020	11/23/2016 19:04	J

Analysis Desc: SW846 6020B
Analysis, Total

Preparation Method: SW-846 3010A
Analytical Method: SW-846 6020

Antimony	0.064	I	ug/L	1	0.70	0.046	11/29/2016 18:05	J
Thallium	0.057	U	ug/L	1	0.20	0.057	11/29/2016 18:05	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A
Analytical Method: SW-846 7470A

Mercury	0.000057	I	mg/L	1	0.00010	0.000011	11/23/2016 13:54	J
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Microbiology

Analysis Desc: Fecal Coliform
MF, SM9222D, Water

Analytical Method: SM 9222D

Coliform Fecal	100		#/100 mL	1	1	1	11/18/2016 14:41	A
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VOLATILES

Analysis Desc: 8260B Analysis, Water

Preparation Method: SW-846 5030B
Analytical Method: SW-846 8260B

1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 12:42	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	11/23/2016 12:42	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 12:42	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 12:42	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	11/23/2016 12:42	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 12:42	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	11/23/2016 12:42	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 12:42	J

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ANALYTICAL RESULTS

Workorder: A1608292 J.E.D. Landfill

Lab ID: **A1608292002**
Sample ID: **16323-SW-4**

Date Received: 11/18/16 11:05 Matrix: Water
Date Collected: 11/18/16 08:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	11/23/2016 12:42	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	11/23/2016 12:42	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	11/23/2016 12:42	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	11/23/2016 12:42	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	11/23/2016 12:42	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	1.0	0.47	11/23/2016 12:42	J
Acetone	2.1	U	ug/L	1	5.0	2.1	11/23/2016 12:42	J
Acrylonitrile	1.1	U	ug/L	1	10	1.1	11/23/2016 12:42	J
Benzene	0.16	U	ug/L	1	1.0	0.16	11/23/2016 12:42	J
Bromochloromethane	0.17	U	ug/L	1	1.0	0.17	11/23/2016 12:42	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	11/23/2016 12:42	J
Bromoform	0.43	U	ug/L	1	1.0	0.43	11/23/2016 12:42	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	11/23/2016 12:42	J
Carbon Disulfide	0.31	I	ug/L	1	1.0	0.21	11/23/2016 12:42	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	11/23/2016 12:42	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	11/23/2016 12:42	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 12:42	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	11/23/2016 12:42	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	11/23/2016 12:42	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	11/23/2016 12:42	J
Dibromomethane	0.26	U	ug/L	1	1.0	0.26	11/23/2016 12:42	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 12:42	J
Iodomethane (Methyl Iodide)	0.16	U	ug/L	1	1.0	0.16	11/23/2016 12:42	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	11/23/2016 12:42	J
Styrene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 12:42	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	11/23/2016 12:42	J
Toluene	0.23	U	ug/L	1	1.0	0.23	11/23/2016 12:42	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	11/23/2016 12:42	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	11/23/2016 12:42	J
Vinyl Acetate	0.19	U	ug/L	1	1.0	0.19	11/23/2016 12:42	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	11/23/2016 12:42	J
Xylene (Total)	0.53	U	ug/L	1	2.0	0.53	11/23/2016 12:42	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	11/23/2016 12:42	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	11/23/2016 12:42	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	11/23/2016 12:42	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	1.0	0.18	11/23/2016 12:42	J
trans-1,4-Dichloro-2-butene	1.8	U	ug/L	1	10	1.8	11/23/2016 12:42	J
1,2-Dichloroethane-d4 (S)	83		%	1	77-125		11/23/2016 12:42	
Toluene-d8 (S)	103		%	1	80-121		11/23/2016 12:42	
Bromofluorobenzene (S)	109		%	1	80-129		11/23/2016 12:42	

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ANALYTICAL RESULTS

Workorder: A1608292 J.E.D. Landfill

Lab ID: **A1608292002**

Date Received: 11/18/16 11:05 Matrix: Water

Sample ID: **16323-SW-4**

Date Collected: 11/18/16 08:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: 8260B SIM Analysis, Water		Preparation Method: SW-846 5030B						
		Analytical Method: SW-846 8260B (SIM)						
1,2-Dibromo-3-Chloropropane	0.11	U,J4	ug/L	1	0.20	0.11	11/23/2016 12:42	J
Ethylene Dibromide (EDB)	0.020	I,J4	ug/L	1	0.10	0.020	11/23/2016 12:42	J
1,2-Dichloroethane-d4 (S)	83		%	1	77-125		11/23/2016 12:42	
Toluene-d8 (S)	103		%	1	80-121		11/23/2016 12:42	
Bromofluorobenzene (S)	109		%	1	80-129		11/23/2016 12:42	

WET CHEMISTRY

Analysis Desc: Total Nitrogen, Calculated, Water		Analytical Method: Calculation						
Total Nitrogen	1.5		mg/L	1	0.10	0.10	12/5/2016 12:05	G
Analysis Desc: Unionized Ammonia, DEP SOP, Water		Analytical Method: DEP SOP 10/03/83						
Unionized Ammonia	0	U	mg/L	1			12/5/2016 12:06	G
Analysis Desc: IC, E300.0, Water		Analytical Method: EPA 300.0						
Nitrate	0.051	U,J3	mg/L	1	0.50	0.051	11/19/2016 00:45	A
Analysis Desc: Ammonia, E350.1, Water		Analytical Method: EPA 350.1						
Ammonia (N)	0.30		mg/L	1	0.01	0.01	11/22/2016 10:40	G
Analysis Desc: TKN, E351.2, Water		Preparation Method: Copper Sulfate Digestion						
		Analytical Method: EPA 351.2						
Total Kjeldahl Nitrogen	1.5		mg/L	1	0.10	0.050	11/23/2016 12:48	G
Analysis Desc: Total Phosphorus, E365.4, Analysis		Preparation Method: Copper Sulfate Digestion						
		Analytical Method: EPA 365.4						
Total Phosphorus (as P)	0.092	I	mg/L	1	0.10	0.050	11/23/2016 12:48	G
Analysis Desc: COD, E410.4, Water		Analytical Method: EPA 410.4						
Chemical Oxygen Demand	74		mg/L	1	20	7.2	11/23/2016 11:25	G
Analysis Desc: Chlorophyll A, SM10200H, Water		Analytical Method: SM 10200 H						
Chlorophyll A	1.6		mg/m3	1	1.0	1.0	11/28/2016 15:22	G
Analysis Desc: Tot Dissolved Solids, SM2540C		Analytical Method: SM 2540 C						

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ANALYTICAL RESULTS

Workorder: A1608292 J.E.D. Landfill

Lab ID: **A1608292002**

Date Received: 11/18/16 11:05 Matrix: Water

Sample ID: **16323-SW-4**

Date Collected: 11/18/16 08:20

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Total Dissolved Solids	220		mg/L	1	10	10	11/23/2016 12:48	J
Analysis Desc: TSS,SM2540D,Water		Analytical Method: SM 2540D						
Total Suspended Solids	2.0		mg/L	1	2.0	1.0	11/23/2016 06:56	J
Analysis Desc: Nitrate+Nitrite,SM4500NO3F,W		Analytical Method: SM 4500NO3-F						
Nitrate + Nitrite	0.020		mg/L	1	0.01	0.004	11/28/2016 13:40	G
Analysis Desc: BOD,SM5210B,Water		Analytical Method: SM 5210B						
Biochemical Oxygen Demand	2.0	U	mg/L	1	2.0	2.0	11/18/2016 15:51	A
Analysis Desc: TOC,SM5310B,Water		Analytical Method: SM 5310B						
Total Organic Carbon	22		mg/L	1	1.0	0.25	11/23/2016 14:33	G

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ANALYTICAL RESULTS QUALIFIERS

Workorder: A1608292 J.E.D. Landfill

PARAMETER QUALIFIERS

- U The compound was analyzed for but not detected.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- [1] MS-92% MSD- 89%
- V Method Blank Contamination
- J3 Lab QC Failure
- J4 Estimated Result

LAB QUALIFIERS

- A DOH Certification #E53076(AEL-A)(FL NELAC Certification)
- G DOH Certification #E82001(AEL-G)(FL NELAC Certification)
- J DOH Certification #E82574(AEL-JAX)(FL NELAC Certification)

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QUALITY CONTROL DATA

Workorder: A1608292 J.E.D. Landfill

QC Batch: MICa/1285 Analysis Method: SM 9222D
QC Batch Method: SM 9222D Prepared:
Associated Lab Samples: A1608292001, A1608292002

METHOD BLANK: 2204040

Parameter	Units	Blank Result	Reporting Limit Qualifiers
Microbiology			
Coliform Fecal	#/100 mL	1	1 U

METHOD BLANK: 2204041

Parameter	Units	Blank Result	Reporting Limit Qualifiers
Microbiology			
Coliform Fecal	#/100 mL	1	1 U

QC Batch: DGMj/2212 Analysis Method: SW-846 6010
QC Batch Method: SW-846 3010A Prepared: 11/23/2016 07:35
Associated Lab Samples: A1608292001, A1608292002

METHOD BLANK: 2204391

Parameter	Units	Blank Result	Reporting Limit Qualifiers
METALS			
Silver	mg/L	0.00044	0.00044 U
Arsenic	mg/L	0.0085	0.0085 U
Barium	mg/L	0.00028	0.00028 U
Beryllium	mg/L	0.00013	0.00013 U
Calcium	mg/L	0.16	0.16 U
Cadmium	mg/L	0.00032	0.00032 U
Cobalt	mg/L	0.00060	0.00060 U
Chromium	mg/L	0.00050	0.00050 U
Copper	mg/L	0.0025	0.0025 U
Iron	mg/L	0.030	0.030 U
Magnesium	mg/L	0.021	0.021 U
Nickel	mg/L	0.0011	0.0011 U
Lead	mg/L	0.0013	0.0013 U
Selenium	mg/L	0.0068	0.0068 U
Vanadium	mg/L	0.00024	0.00018 I
Zinc	mg/L	0.0020	0.0020 U

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QUALITY CONTROL DATA

Workorder: A1608292 J.E.D. Landfill

QC Batch:	DGMJ/2214	Analysis Method:	SW-846 6020
QC Batch Method:	SW-846 3010A	Prepared:	11/23/2016 07:35
Associated Lab Samples: A1608292001, A1608292002			

METHOD BLANK: 2204695

Parameter	Units	Blank Result	Reporting Limit Qualifiers
METALS			
Antimony	ug/L	0.046	0.046 U
Thallium	ug/L	0.057	0.057 U

QC Batch:	WCAj/2992	Analysis Method:	SM 2540D
QC Batch Method:	SM 2540D	Prepared:	
Associated Lab Samples: A1608292001, A1608292002			

METHOD BLANK: 2204784

Parameter	Units	Blank Result	Reporting Limit Qualifiers
WET CHEMISTRY			
Total Suspended Solids	mg/L	1.0	1.0 U

QC Batch:	WCAg/3605	Analysis Method:	EPA 350.1
QC Batch Method:	EPA 350.1	Prepared:	
Associated Lab Samples: A1608292001, A1608292002			

METHOD BLANK: 2204908

Parameter	Units	Blank Result	Reporting Limit Qualifiers
WET CHEMISTRY			
Ammonia (N)	mg/L	0.01	0.01 U

QC Batch:	WCAa/1921	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Prepared:	
Associated Lab Samples: A1608292001, A1608292002			

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QUALITY CONTROL DATA

Workorder: A1608292 J.E.D. Landfill

METHOD BLANK: 2204921

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY Nitrate	mg/L	0.051	0.051	U

QC Batch: DGMJ/2216 Analysis Method: SW-846 7470A
QC Batch Method: SW-846 7470A Prepared: 11/23/2016 10:21
Associated Lab Samples: A1608292001, A1608292002

METHOD BLANK: 2205122

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
METALS Mercury	mg/L	0.000011	0.000011	U

QC Batch: WCAj/2999 Analysis Method: SM 2540 C
QC Batch Method: SM 2540 C Prepared:
Associated Lab Samples: A1608292001, A1608292002

METHOD BLANK: 2205714

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY Total Dissolved Solids	mg/L	10	10	U

QC Batch: WCAg/3623 Analysis Method: EPA 351.2
QC Batch Method: Copper Sulfate Digestion Prepared: 11/22/2016 17:30
Associated Lab Samples: A1608292001, A1608292002

METHOD BLANK: 2206163

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY Total Kjeldahl Nitrogen	mg/L	0.050	0.050	U

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QUALITY CONTROL DATA

Workorder: A1608292 J.E.D. Landfill

METHOD BLANK: 2206164

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
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WET CHEMISTRY

Total Phosphorus (as P)	mg/L	0.050	0.050	U
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QC Batch: WCAg/3623

Analysis Method: EPA 365.4

QC Batch Method: Copper Sulfate Digestion

Prepared: 11/22/2016 17:30

Associated Lab Samples: A1608292001, A1608292002

METHOD BLANK: 2206163

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
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WET CHEMISTRY

Total Kjeldahl Nitrogen	mg/L	0.050	0.050	U
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METHOD BLANK: 2206164

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
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WET CHEMISTRY

Total Phosphorus (as P)	mg/L	0.050	0.050	U
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QC Batch: WCAg/3626

Analysis Method: EPA 410.4

QC Batch Method: EPA 410.4

Prepared:

Associated Lab Samples: A1608292001, A1608292002

METHOD BLANK: 2206278

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
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WET CHEMISTRY

Chemical Oxygen Demand	mg/L	7.2	7.2	U
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METHOD BLANK: 2206284

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
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WET CHEMISTRY

Chemical Oxygen Demand	mg/L	7.2	7.2	U
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QUALITY CONTROL DATA

Workorder: A1608292 J.E.D. Landfill

QC Batch: WCAg/3629 Analysis Method: SM 10200 H
QC Batch Method: SM 10200 H Prepared:
Associated Lab Samples: A1608292001, A1608292002

METHOD BLANK: 2207525

Parameter	Units	Blank Result	Reporting Limit Qualifiers
WET CHEMISTRY			
Chlorophyll A	mg/m3	1.0	1.0 U

QC Batch: MSVj/2862 Analysis Method: SW-846 8260B
QC Batch Method: SW-846 5030B Prepared: 11/23/2016 09:32
Associated Lab Samples: A1608292001, A1608292002

METHOD BLANK: 2207680

Parameter	Units	Blank Result	Reporting Limit Qualifiers
VOLATILES			
Chloromethane	ug/L	0.21	0.21 U
Vinyl Chloride	ug/L	0.20	0.20 U
Bromomethane	ug/L	0.24	0.24 U
Chloroethane	ug/L	0.33	0.33 U
Trichlorofluoromethane	ug/L	0.32	0.32 U
Acetone	ug/L	2.1	2.1 U
1,1-Dichloroethylene	ug/L	0.18	0.18 U
Iodomethane (Methyl Iodide)	ug/L	0.16	0.16 U
Acrylonitrile	ug/L	1.1	1.1 U
Methylene Chloride	ug/L	2.5	2.5 U
Carbon Disulfide	ug/L	0.21	0.21 U
trans-1,2-Dichloroethylene	ug/L	0.20	0.20 U
1,1-Dichloroethane	ug/L	0.14	0.14 U
Vinyl Acetate	ug/L	0.19	0.19 U
2-Butanone (MEK)	ug/L	0.43	0.43 U
cis-1,2-Dichloroethylene	ug/L	0.24	0.24 U
Bromochloromethane	ug/L	0.17	0.17 U
Chloroform	ug/L	0.18	0.18 U
1,2-Dichloroethane	ug/L	0.23	0.23 U
1,1,1-Trichloroethane	ug/L	0.22	0.22 U
Carbon Tetrachloride	ug/L	0.36	0.36 U
Benzene	ug/L	0.16	0.16 U
Dibromomethane	ug/L	0.26	0.26 U
1,2-Dichloropropane	ug/L	0.20	0.20 U
Trichloroethene	ug/L	0.29	0.29 U
Bromodichloromethane	ug/L	0.25	0.25 U

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QUALITY CONTROL DATA

Workorder: A1608292 J.E.D. Landfill

METHOD BLANK: 2207680

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
cis-1,3-Dichloropropene	ug/L	0.16	0.16	U
4-Methyl-2-pentanone (MIBK)	ug/L	0.47	0.47	U
trans-1,3-Dichloropropylene	ug/L	0.18	0.18	U
1,1,2-Trichloroethane	ug/L	0.30	0.30	U
Toluene	ug/L	0.23	0.23	U
2-Hexanone	ug/L	0.44	0.44	U
Dibromochloromethane	ug/L	0.33	0.33	U
Tetrachloroethylene (PCE)	ug/L	0.36	0.36	U
1,1,1,2-Tetrachloroethane	ug/L	0.26	0.26	U
Chlorobenzene	ug/L	0.21	0.21	U
Ethylbenzene	ug/L	0.24	0.24	U
Bromoform	ug/L	0.43	0.43	U
Styrene	ug/L	0.23	0.23	U
1,1,2,2-Tetrachloroethane	ug/L	0.20	0.20	U
1,2,3-Trichloropropane	ug/L	0.30	0.30	U
1,4-Dichlorobenzene	ug/L	0.22	0.22	U
1,2-Dichlorobenzene	ug/L	0.18	0.18	U
trans-1,4-Dichloro-2-butene	ug/L	1.8	1.8	U
Xylene (Total)	ug/L	0.53	0.53	U
1,2-Dichloroethane-d4 (S)	%	86	77-125	
Toluene-d8 (S)	%	104	80-121	
Bromofluorobenzene (S)	%	111	80-129	

QC Batch: MSVj/2864

Analysis Method: SW-846 8260B (SIM)

QC Batch Method: SW-846 5030B

Prepared: 11/23/2016 09:32

Associated Lab Samples: A1608292001, A1608292002

METHOD BLANK: 2207686

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
VOLATILES				
Ethylene Dibromide (EDB)	ug/L	0.020	0.020	U
1,2-Dibromo-3-Chloropropane	ug/L	0.11	0.11	U
1,2-Dichloroethane-d4 (S)	%	86	77-125	
Toluene-d8 (S)	%	104	80-121	
Bromofluorobenzene (S)	%	111	80-129	

QC Batch: WCAg/3634

Analysis Method: SM 4500NO3-F

QC Batch Method: SM 4500NO3-F

Prepared:

Associated Lab Samples: A1608292001, A1608292002

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QUALITY CONTROL DATA

Workorder: A1608292 J.E.D. Landfill

METHOD BLANK: 2208159

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY Nitrate + Nitrite	mg/L	0.004	0.004	U

QC Batch: WCAg/3635 Analysis Method: SM 5310B
QC Batch Method: SM 5310B Prepared:
Associated Lab Samples: A1608292001, A1608292002

METHOD BLANK: 2208193

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY Total Organic Carbon	mg/L	0.25	0.25	U

METHOD BLANK: 2208197

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY Total Organic Carbon	mg/L	0.25	0.25	U

QC Batch: WCAa/1940 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Prepared:
Associated Lab Samples: A1608292001, A1608292002

METHOD BLANK: 2209786

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY Biochemical Oxygen Demand	mg/L	2.0	2.0	U

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QUALITY CONTROL DATA QUALIFIERS

Workorder: A1608292 J.E.D. Landfill

QUALITY CONTROL PARAMETER QUALIFIERS

- U The compound was analyzed for but not detected.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J1 Surrogate Failure
- J3 Lab QC Failure
- V Method Blank Contamination

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: A1608292 J.E.D. Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
A1608292001	16323-SW-3			SM 9222D	MICa/1285
A1608292002	16323-SW-4			SM 9222D	MICa/1285
A1608292001	16323-SW-3	SW-846 3010A	DGMj/2212	SW-846 6010	ICPj/1632
A1608292002	16323-SW-4	SW-846 3010A	DGMj/2212	SW-846 6010	ICPj/1632
A1608292001	16323-SW-3	SW-846 3010A	DGMj/2214	SW-846 6020	ICMj/1343
A1608292002	16323-SW-4	SW-846 3010A	DGMj/2214	SW-846 6020	ICMj/1343
A1608292001	16323-SW-3			SM 2540D	WCAj/2992
A1608292002	16323-SW-4			SM 2540D	WCAj/2992
A1608292001	16323-SW-3			EPA 350.1	WCAg/3605
A1608292002	16323-SW-4			EPA 350.1	WCAg/3605
A1608292001	16323-SW-3			EPA 300.0	WCAa/1921
A1608292002	16323-SW-4			EPA 300.0	WCAa/1921
A1608292001	16323-SW-3	SW-846 7470A	DGMj/2216	SW-846 7470A	CVAj/1258
A1608292002	16323-SW-4	SW-846 7470A	DGMj/2216	SW-846 7470A	CVAj/1258
A1608292001	16323-SW-3			SM 2540 C	WCAj/2999
A1608292002	16323-SW-4			SM 2540 C	WCAj/2999
A1608292001	16323-SW-3	Copper Sulfate Digestion	WCAG/3623	EPA 365.4	WCAg/3624
A1608292002	16323-SW-4	Copper Sulfate Digestion	WCAG/3623	EPA 365.4	WCAg/3624
A1608292001	16323-SW-3	Copper Sulfate Digestion	WCAG/3623	EPA 351.2	WCAg/3625
A1608292002	16323-SW-4	Copper Sulfate Digestion	WCAG/3623	EPA 351.2	WCAg/3625
A1608292001	16323-SW-3			EPA 410.4	WCAg/3626
A1608292002	16323-SW-4			EPA 410.4	WCAg/3626

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: A1608292 J.E.D. Landfill

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
A1608292001	16323-SW-3			SM 10200 H	WCAg/3629
A1608292002	16323-SW-4			SM 10200 H	WCAg/3629
A1608292001	16323-SW-3	SW-846 5030B	MSVj/2862	SW-846 8260B	MSVj/2863
A1608292002	16323-SW-4	SW-846 5030B	MSVj/2862	SW-846 8260B	MSVj/2863
A1608292001	16323-SW-3	SW-846 5030B	MSVj/2864	SW-846 8260B (SIM)	MSVj/2865
A1608292002	16323-SW-4	SW-846 5030B	MSVj/2864	SW-846 8260B (SIM)	MSVj/2865
A1608292001	16323-SW-3			SM 4500NO3-F	WCAg/3634
A1608292002	16323-SW-4			SM 4500NO3-F	WCAg/3634
A1608292001	16323-SW-3			SM 5310B	WCAg/3635
A1608292002	16323-SW-4			SM 5310B	WCAg/3635
A1608292001	16323-SW-3			SM 5210B	WCAa/1940
A1608292002	16323-SW-4			SM 5210B	WCAa/1940
A1608292001	16323-SW-3	Calculation	CLCg/	Calculation	CLCg/
A1608292001	16323-SW-3	DEP SOP 10/03/83	WCAg/	DEP SOP 10/03/83	WCAg/
A1608292002	16323-SW-4	Calculation	CLCg/	Calculation	CLCg/
A1608292002	16323-SW-4	DEP SOP 10/03/83	WCAg/	DEP SOP 10/03/83	WCAg/

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☐ **Tallahassee:** 1288 Cedar Center Drive, Tallahassee, FL 32301 • 850.219.6274 • Fax 850.219.6275
☐ **Tampa:** 9610 Princess Palm Ave. • Tampa, FL 33619 • 813.630.9616 • Fax 813.630.4327

A1608292

Preservation Code: I = ice H = (HCl) S = (H₂SO₄) N = (HNO₃) T = (Sodium Thiosulfate)

☐ Where required, pH checked Temperature when received 4 (in degrees celcius)

Device used for measuring Temp by unique identifier (circle IR temp gun used) J: 9A G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V

FOR DRINKING WATER USE:

(When PWS information not otherwise supplied) PWS ID: _____

Contact Person: _____ Phone: _____

Supplier of Water: _____

Site-Address: _____



Advanced
Environmental Laboratories, Inc.

6681 Southpoint Parkway
Jacksonville, Florida 32216
Office (904) 363-9350
Fax (904) 363-9354

Project No.: A1608292
Client Name: Waste Connections
ProjectID: J.E.D. Landfill

I. Receipt

II. Holding Times

Preparation:

Analysis:

III. Method

Analysis: SW-846 6010

Preparation: SW-846 3010A

IV. Preparation

V. Analysis

A. Calibration:

B. Blanks: The Method Blank (MB) contained low levels of Vanadium above the Method Detection Limit (MDL). In accordance with AEL QA, all sample results found in the Method Blank are flagged with a V qualifier to indicate the data is an estimate.

C. Duplicates:

D. Spikes:

E. Serial Dilution:

F. Samples:

G. Other:

I certify that this data package is in compliance with the terms and conditions agreed to by Advanced Environmental Laboratories, Inc. and by the client, both technically and for completeness, except for the conditions detailed above. The Quality Assurance Officer, or designee, as verified by the following signature, has authorized release of the data contained in this data package:



Advanced
Environmental Laboratories, Inc.

6681 Southpoint Parkway
Jacksonville, Florida 32216
Office (904) 363-9350
Fax (904) 363-9354

Project No.: A1608292
Client Name: Waste Connections
ProjectID: J.E.D. Landfill

I. Receipt

No Exceptions were encountered.

II. Holding Times

Preparation: All holding times were met.
Analysis: All holding times were met.

III. Method

Analysis: SW-846 8260B
Preparation: SW-846 5030B

IV. Preparation

Sample preparation proceeded normally.

V. Analysis

A. Calibration: All acceptance criteria were met.
B. Blanks: All acceptance criteria were met.
C. Surrogates:
D. Spikes: The spike recovery of PCE for the Laboratory Control Sample (LCS) was outside the upper control criterion. The analyte in question was not detected in the associated client samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was required.
E. Internal Standard:
F. Samples: Sample analyses proceeded normally.
G. Other:

I certify that this data package is in compliance with the terms and conditions agreed to by Advanced Environmental Laboratories, Inc. and by the client, both technically and for completeness, except for the conditions detailed above. The Quality Assurance Officer, or designee, as verified by the following signature, has authorized release of the data contained in this data package:



Project No.: A1608292
Client Name: Waste Connections
ProjectID: J.E.D. Landfill

I. Receipt

No Exceptions were encountered.

II. Holding Times

Preparation: All holding times were met.
Analysis: All holding times were met.

III. Method

Analysis: SW-846 8260B (SIM)
Preparation: SW-846 5030B

IV. Preparation

Sample preparation proceeded normally.

V. Analysis

A. Calibration: All acceptance criteria were met.
B. Blanks: All acceptance criteria were met.
C. Surrogates: The control criteria were exceeded for surrogate 1,2-dichloroethane-d4 in the LCSD. The associated QC analysis recoveries of target compounds were in control, indicating the analysis was in control. The surrogate outliers were flagged accordingly. No further corrective action was required.

The control criterion was exceeded for the following surrogate in the matrix spike (MS) pertaining to A1608292001 due to matrix interferences: 1,2-dichloroethane-d4. The affected surrogate is qualified accordingly.

The control criterion was exceeded for the following surrogates in several samples due to matrix interference: 1,2-dichloroethane-d4, toluene-d8, bromofluorobenzene. The error associated with an elevated recovery equates to a high bias. The quality of the sample data is not significantly affected, as internal recoveries were within acceptance criteria of the ICAL and are consistent with quality control samples. No further corrective action was required.

D. Spikes: The matrix spike (MS) recoveries of EDB, DBCP for A1608292001 were outside control criteria. Recoveries in the Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) were acceptable, which indicates the analytical batch was in control. The matrix spike outlier suggests a potential low bias in this matrix. The affected sample is qualified to indicate matrix interference.

I certify that this data package is in compliance with the terms and conditions agreed to by Advanced Environmental Laboratories, Inc. and by the client, both technically and for completeness, except for the conditions detailed above. The Quality Assurance Officer, or designee, as verified by the following signature, has authorized release of the data contained in this data package:



Advanced
Environmental Laboratories, Inc.

6681 Southpoint Parkway
Jacksonville, Florida 32216
Office (904) 363-9350
Fax (904) 363-9354

E. Internal Standard: All acceptance criteria were met.

F. Samples: Sample analyses proceeded normally.

G. Other:

I certify that this data package is in compliance with the terms and conditions agreed to by Advanced Environmental Laboratories, Inc. and by the client, both technically and for completeness, except for the conditions detailed above. The Quality Assurance Officer, or designee, as verified by the following signature, has authorized release of the data contained in this data package:
