DENR USE ONLY: ☐ Paper Report ☐ Electronic Data - Email CD (data loaded: Yes / No) Doc/Event #:

NC DENR
Division of Waste Management - Solid Waste

Environmental Monitoring Reporting Form

Notice: This form and any information attached to it are "Public Records" as defined in NC General Statute 132-1. As such, these documents are available for inspection and examination by any person upon request (NC General Statute 132-6).

Instructions:

- **Prepare one form for each individually monitored unit.**
- **Please type or print legibly.**
- Attach a notification table with values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards. The notification must include a preliminary analysis of the cause and significance of each value. (e.g. naturally occurring, off-site source, pre-existing condition, etc.).
- Attach a notification table of any groundwater or surface water values that equal or exceed the reporting limits.
- Attach a notification table of any methane gas values that attain or exceed explosive gas levels. This includes any structures on or nearby the facility (NCAC 13B .1629 (4)(a)(i).
- Send the original signed and sealed form, any tables, and Electronic Data Deliverable to: Compliance Unit, NCDENR-DWM, Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646.

Solid Waste Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):

Municipal Engineering Services Co., PA

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:

Name: Jonathan Pfohl Phone: (919)772-5393

E-mail: jpfohl@mesco.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Alexander County Active C&D and Closed Unlined MSWLF	2500 Paynes Dairy Road Taylorsville, NC 28681	02-01	.1600	December 3-5, 2014

Environmental Status: (Check all that apply)

☐ Initial/Background Monitoring ☒ Detection Monitoring ☒ Assessment Monitoring ☒ Corrective Action

Type of data submitted: (Check all that apply)

☒ Groundwater monitoring data from monitoring wells
☐ Groundwater monitoring data from private water supply wells
☐ Leachate monitoring data
☒ Surface water monitoring data
☐ Methane gas monitoring data
☒ Corrective action data (specify) MNA,Phytoremediation&LFG Extr.
☐ Other(specify)

Notification attached?

☐ No. No groundwater or surface water standards were exceeded.
☒ Yes, a notification of values exceeding a groundwater or surface water standard is attached. It includes a list of groundwater and surface water monitoring points, dates, analytical values, NC 2L groundwater standard, NC 2B surface water standard or NC Solid Waste GWPS and preliminary analysis of the cause and significance of any concentration.
☐ Yes, a notification of values exceeding an explosive methane gas limit is attached. It includes the methane monitoring points, dates, sample values and explosive methane gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Steven R. Gandy, Ph.D., P.E. Senior Project Manager (919) 772-5393

Facility Representative Name (Print) Title (Area Code) Telephone Number

Signature 5/8/2015 Date

Affix NC Licensed/ Professional Geologist Seal

NORTH CAROLINA PROFESSIONAL SEAL 31020 ENGINEER STEVEN R. GANDY

P.O. Box 97, Garner, NC 27529

Facility Representative Address

C-0281

NC PE Firm License Number (if applicable effective May 1, 2009)

Revised 6/2009

Semi-Annual Water Quality Monitoring Report with Corrective Action Update

Prepared for

Alexander County Active C&D and Closed MSWLF

Taylorsville, North Carolina

December 2014

Permit Number: 02-01

MESCO Project Number: G14003.0

Submitted: May 8, 2015

P.O. Box 97
Garner, NC 27529
P.E. License No. C-0281

Municipal Engineering Services Company, P.A.
Garner and Boone, North Carolina

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License No. C-0281

CIVIL/SANITARY/ENVIRONMENTAL ENGINEERS

SOLID WASTE MANAGEMENT

Municipal Services

Engineering Company, P.A.

SITE PLANNING/SUBDIVISIONS

SUBSURFACE UTILITY ENGINEERING (SUE)

May 8, 2015

Ms. Jaclynne Drummond
Solid Waste Section (SWS)
Division of Waste Management/ NCDENR
217 West Jones Street
Raleigh, NC 27603

Re: **Semi-Annual Water Quality Monitoring Report with Corrective Action Update**
Alexander County Active C&D and Closed MSWLF
Permit No. 02-01
MESCO Project No. G14003.0
Event Date(s): December 3-5, 2014

Introduction

On behalf of Alexander County, Municipal Engineering Services Company, P.A. (MESCO) is pleased to present this *Semi-Annual Water Quality Monitoring Report with Corrective Action Update* for the winter 2014 event performed at the Alexander County active construction and demolition (C&D) and closed municipal solid waste landfill (MSWLF). NCDENR Solid Waste Rules 15A NCAC 13B.1632 requires that Alexander County provide this report to the NC Solid Waste Section (SWS) on a semi-annual basis. This report documents the most recent quality of the ground and surface waters during this monitoring event performed December 3-5, 2014. Laboratory analytical results indicate one or more volatile organic compounds (VOCs) continue to persist at levels above the 2L Standard in samples collected from 14 wells that monitor the uppermost aquifer but concentrations continue to decrease over time and distance. Surface water samples did not contain contaminant concentrations in excess of the 2B Surface Water Standard. Corrective action to remediate VOCs in groundwater is ongoing within the four areas of concern (AOC) with updated information presented herein.

Background

The Alexander County active C&D and closed MSWLF, is located at 2500 Paynes Dairy Road near Taylorsville North Carolina. The total waste footprint encompasses approximately 24 acres situated on 283 contiguous acres. The site location topographic map is depicted in the attached **Figure 1**.

The closed MSWLF ceased operation prior to 1998 and the C&D landfill continues operation on the eastern unit of the closed MSWLF. Both landfill areas are treated as a single unit in this report. Water quality has been monitored at this facility on at least a semi-annual basis since 1990. MESCO submitted two *Assessment and Corrective Action* (ACM) reports dated August 27, 2002 and April 11, 2008. MESCO then developed a *Corrective Action Plan-Revision 1* (*CAP-Rev 1*) on February 6, 2009. In response to improved water quality and changing geochemical conditions the originally selected remediation approach was amended by MESCO in a *Corrective Action Plan-Addendum (CAP-Add)* dated December 20, 2010. Groundwater remediation efforts have been implemented at the four distinct areas of concern (AOCs) which are identified as MW-1B, MW-16, MW-24 and MW-26. Remediation technologies initiated to date with reference to their respective AOC include monitored natural attenuation (MNA) (MW-16, MW-24, MW-26), phytoremediation (MW-24), enhanced bioremediation via substrate injection (MW-26) and landfill gas (LFG) extraction (MW-1B). Following establishment of the two year MNA baseline MESCO completed a *Corrective Action Evaluation Report* (*CAER*) (DIN 13596) on March 22, 2011. Based on improved water quality conditions as demonstrated in the CAER the parameters and frequencies of future monitoring events were established by the SWS CAER review response (DIN 14150) dated June 16, 2011. A second *CAP-Add* was submitted by MESCO dated May 30, 2013 as requested by the SWS in a letter entitled *Compliance Boundary (Relevant Point of Compliance*) (DIN 18502) dated February 18, 2013. A *Request for Appendix II Groundwater Monitoring Modification* (DIN 20137) was submitted by MESCO dated November 8, 2013 which was subsequently approved by the SWS (DIN 20144) on November 13, 2013.

As specified within 15A NCAC 13B.1632(j), the SWS Environmental Monitoring Report Form and a recent SWS memorandum this report contains sampling procedures, field and laboratory results, corrective action update, ground/surface water characterization, and findings. Well construction summary table, field observations table, field parameter data table, sampling and analysis summary table, detections compared to Standards tables, a groundwater flow directions/rates table, potentiometric map, time-series graph, quality assurance/quality control data, and laboratory analytical data results are enclosed herein.

Sampling Procedures

MESCO personnel performed this sampling event following the parameters and frequency established by the SWS review response to the *(CAER)* (Doc ID 14150) dated June 16, 2011 and the SWS approved *Request for Appendix II Groundwater Monitoring Modification* (DIN 20137). The water quality monitoring program includes a combination of detection, assessment and corrective action monitoring with specifically defined analysis.

Water samples were collected from all monitoring locations outlined in the *CAP-Add* and *CAER* with the exception of MW-1A; which has been chronically dry. Monitoring locations are depicted on the potentiometric map (**Figure 2**).

Sampling was performed per the protocols outlined in the *Groundwater and Surface Water Sampling and Analysis Plan* included as Appendix B of the approved *CAP-Add.* A summary detailing the construction of the water monitoring wells is presented on **Table 1**. The function and integrity of all monitoring locations were visually evaluated and limited deficiencies identified as documented on **Table 2.** The depth to water in each well was electronically gaged prior to purging to quantify the static water level elevation. Low-flow pumping or bailing was utilized to purge the wells a minimum of three times the volume of standing water in the well or until dry. Surface water samples were collected from previously designated locations along discharge features. During well purging and surface water sample collection the required field parameters were recorded. The samples were then placed into laboratory-prepared, pre-preserved containers via a new disposable polyethylene bailer. Samples were collected, kept on ice, and transported to a NC-certified laboratory under proper chain of custody (C-O-C) protocols and within the specified hold times for each analysis.

Field Parameter Data

Field parameters were recorded including depth to water, pH, specific conductance, temperature, dissolved oxygen (DO), oxidation reduction potential (ORP), total dissolved solids (TDS), and turbidity. A summary of the field parameter data is presented in **Table 3** and the field sampling data sheet is enclosed in **Appendix B**.

Laboratory Results

Pace Analytical Services Inc. (PACE) of Huntersville/Asheville, NC and Pittsburgh, PA performed the bulk of the laboratory analyses. All water samples were tested for the constituents listed in 40CFR258 Appendix I and eight samples were tested for Appendix II heavy metal total mercury. Additionally; supplemental samples MW-1 and MW-1B were analyzed for dissolved methane to assess remediation progress. Corrective action monitoring (Appendix I plus MNA parameters) was also performed on 12 wells (MW-3, MW-5, MW-6, MW-11, MW-12, MW-12D, MW-16, MW-24, MW-25, MW-26, MW-27 and MW-31). Quality control measures implemented during this event included submittal and subsequent quantification of an equipment (EB), field (FB, and travel (TB) blanks. A sampling and analysis table summarizing the locations, laboratory, target analytes and methods is presented as **Table 4**. Laboratory results and C-O-Cs are presented in **Appendix A**.

Water samples were analyzed to the laboratory-established Method Detection Limits (MDL), which are at or below the current Solid Waste Section Limit (SWSL). **Table 5** summarizes App I constituents detected in groundwater and surface water samples that attain or were above the current SWSL, Groundwater Protection Standards (GWP), North Carolina Groundwater Standards (2L), the applicable North Carolina Surface Water Standards (2B) for a class C waterbody and Maximum Contaminant Levels (MCL) also known as "Federal Primary Drinking Water Standards". **Table 6** lists the few low level detection of Appendix II heavy metal mercury.

Quality Control Samples

Methylene chloride was detected in blanks (EB and FB). Since methylene chloride was not detected in any ground or surface water samples above regulatory Standards, any potential field/lab induced artifact contamination is non-consequential.

Groundwater Samples

Total metals were not detected at levels above their respective 2L Standards.

The VOCs detected in concentrations exceeding their respective 2L Standard during this event were aromatics benzene (MW-1, MW-2, MW-3, MW-4R, MW-5, MW-7, MW-11, MW-12, MW-15, MW-16 and MW-26) and para-dichlorobenzene (MW-3, MW-11, MW-12 and MW-26). Parent chlorinated aliphatic hydrocarbon tetrachloroethylene was detected above it's 2L Standard in samples (MW-1B, MW-16, MW-21 and MW-33).

Although not applicable for regulatory compliance evaluation all contaminants remain below federally established primary "Drinking Water Standards" except for benzene in MW-3.

A site map depicting the spatial distribution of VOC concentrations exceeding the 2L Standard during this sampling event is shown in **Figure 2.**

Surface Water Samples

None of the targeted constituents were detected in any surface water sample in levels above the 2B Standard.

Groundwater and Surface Water Characterization

At the landfill, groundwater flow direction generally mirrors topography, thus flow direction is from higher to lower elevations as shown on the potentiometric map included as **Figure 2**. Locally, groundwater flow is expected to be generally westerly toward the Lower Little River, and southerly toward the Catawba River (**Figure 1**). Groundwater linear velocity rates calculated using modified Darcy's equation varied greatly and were slower in the upper bedrock fracture system than the less prominent regolith (**Table 7**). Streams at designated monitoring points were visually observed to be of normal seasonal volume, flow rate and low turbidity. Hydrogeologic parameters appear generally consistent with historical observations.

Corrective Action Update

Groundwater remediation continues to be implemented at the four AOCs designated in the *CAP-Add.* Groundwater remediation per the *CAP-Add* is expected to continue until the SWS authorizes a change. General background information and activities performed since the *CAER* and last semi-annual event are briefly presented in the following sections.

MNA Analysis (AOCs MW-16, MW-24, MW-26)

Semi-annual MNA monitoring of 14 wells for the full suite of SWS recommended parameters was initiated on June 30, 2009 and performed for four consecutive semi-annual events to establish a baseline per the *CAP-Revision 1.* The number of wells requiring MNA analysis was reduced to 10 and the parameters and frequency were also amended per the SWS CAER review response (DIN 14150) dated June 16, 2011. Establishment of the MNA baseline concluded in December 2012 at MW-33 and MW-34. MNA data presented in **Table 8** continues to indicate that favorable geochemical conditions exist for continued natural attenuation.

MW-33, located within AOC MW-16 along the relevant compliance contained a VOC (PCE) above the 2L Standard for the first time. Following the acquisition of a 15.7 acre parcel from Crescent Resources on March 3, 2011, extension of the eastern relative point of compliance downgradient of AOC MW-16 has been approved with conditions by the SWS on February 18, 2013 (DIN:18502). Recordation of Survey Plat titled *Survey For Notice of Contaminated Site Alexander County Landfill* and *A Notice* and SWS approved *Declaration of Perpetual Land Use Restrictions* for this parcel has remained at the Alexander County Register of Deeds Office since November 13, 2012. The SWS approved *CAP-Add* dated May 30, 2013 clarifies that groundwater remediation of AOC MW-16 will remain as only MNA, rather than any other technologies described in the preceding *CAP-Add.*

Phytoremediation (AOC MW-24)

County personnel planted about 200 hybrid poplar trees over an approximate one acre area between MW-7 and MW-12 in May 2010 in an effort to phytoremediate groundwater in the MW-24 AOC. The County continued to maintain the fence-enclosed stand during this semi-annual period which included continuous supplemental watering and eradication of competing vegetation. MESCO personnel continued quarterly tree growth monitoring by recording measurements of ten designated sample trees on October 8, 2014 and December 5, 2014. The stand of trees were dormant during this semi-annual period. The average tree size remained about the same (42" or 25%) during the fall quarter (**Table 9**) and has increased considerably (183" or 482%) over the past 4 years (**Table 9 and Figure 3**).

MESCO personnel deployed dedicated pressure transducers in MW-7 and MW-12 on August 12, 2010 to record daily water levels. Groundwater level fluctuations were downloaded and transducers re-zeroed on October 8, 2014 and December 5, 2014. In addition, daily precipitation amounts are periodically obtained from the National Weather Services Cooperative Observer Program Station 318519 database.

A time series-graph depicting the correlation between tree growth, groundwater fluctuation and precipitation since the stand has been in place is presented on **Figure 3**. Data continues to suggest both MW-7 and MW-12 water level variations mirror each other and both respond quickly to precipitation events. Total cumulative VOC concentrations in AOC MW-24 during this event have have decreased 15% compared to its respective 2 year baseline established in 2010. The phytoremediation zone has not been established long enough to make a valid assessment of the effectiveness as a remediation measure. The phytoremediation area will continue to be maintained and monitored on a quarterly basis.

Enhanced Bioremediation via Substrate Injection (AOC MW-26)

In an attempt to remediate benzene as detected in MW-26, Bac-9 was injected 50 ft upgradient in IW-1 on February 17, 2011 following conditions in the Underground Injection Control (UIC) Permit WI0300160. The UIC permit was renewed on January 31, 2013 and as directed *by the UIC* post-injection water quality monitoring of MW-3, MW-11, MW-26, MW-27 and MW-31 is required on a semi-annual basis. Most recent levels of total VOCs compared to the baseline established during the four events prior to injection exhibited a greater reduction upgradient of the injection point than downgradient. Most recently, total cumulative VOCs from all samples in AOC MW-26 decreased 17% and benzene concentrations decreased 10% compared to the baseline averages established during the four event/ two years preceding the injection (**Figure 4**). Benzene, the single contaminate of concern, continues to be detected above the 2L Standard in sample MW-26. Further injections are not planned at this time.

Landfill Gas Extraction (AOC MW-1B)

Three LFG extraction wells (MEW-1, MEW-2, MEW-3) were installed screening the majority of the vadose zone at the northern border of the closed landfill in the vicinity of the scalehouse. MEW-1 was installed on August 17, 2010 with MEW-2 and MEW-3 installed on October 20, 2010. Well control heads were plumbed to a header pipe by the County which was connected to a soil vacuum extraction (SVE) unit on July 5, 2012. An active LFG blower system pilot study was performed by MESCO between June 14, 2012 and July 12, 2012 to evaluate the effectiveness a vacuum would have on reducing levels of LFG in the soil which may remediate the low level VOCs detected in groundwater hydraulically upgradient of the landfill. A comparison of LFG concentrations and pressures before and after vacuum start-up indicated the system is capable of eliminating LFG migration at all locations monitored within AOC MW-1B. The active LFG Collection Control System (LFGCCS) has been in continuous operation since November 1, 2012 and been verified and documented by MESCO personnel on at least a quarterly basis to be eliminating LFG migration through the vadose at all locations monitored beyond the extraction wells. Improvement in groundwater quality has also been observed in response to implementation of the LFG extraction system. Dissolved methane levels in groundwater have decreased considerably within MW-1 (-99%) and MW-1B (-86%) in the 2.5 years of operation **(Figure 7)**. During this event total cumulative VOC concentrations within AOC MW-1B have also exhibited a significant reduction (-78%) compared to the baseline established prior to initiation of remediation via LFG extraction **(Figure 6)**. Levels of benzene have decreased at MW-1B below 2L Standards for the fist time since it was installed in 2003. The LFGCCS is planned to continue operation and will continue to be monitored and assessed on a quarterly basis.

Findings

The semi-annual laboratory results indicate that low level (<24.3 µg/L) dissolved phase VOCs, consisting primarily of benzene and a few chlorinated solvents, continue to be detected in groundwater samples collected within 270 feet of the waste boundary. All constituents detected during this event remain within their own respective historically identified range except for premier detections of PCE in samples MW-1B and MW-33. Total VOC concentrations continue to not exhibit an increasing trend over time site-wide and in each of the AOCs (**Figure 5**). Statistical Sen's Slope trend analysis performed at a 95% confidence interval indicates a downward trend of total VOC concentrations at AOC MW-1B, AOC MW-26 and site-wide since corrective action was initiated. The same statistical analysis indicates no trend at AOC MW-16 or AOC MW-24. Total VOC concentrations during this event, compared to their own respective averages calculated during the two year baseline period, indicate a reduction site-wide (-28%), AOC MW-1B (-78%), AOC MW-16 (-3%), AOC MW-24 (-15%), AOC MW-26 (-23%) and aggregate of all other wells not located within designated remediation areas (-33%) (**Figure 6**).

Laboratory data continues to indicate all surface water samples remain unimpacted.

Evaluation of the most current water quality data continues to support assertions drawn in previous reports. VOCs persist in the upper portion of the aquifer but concentrations continue to decrease over time and distance away from the landfill. MNA data and previous screening models indicate that the plumes within each AOC are stabilizing and/or decreasing and there is evidence that natural attenuation is ongoing at the facility. Implementation of the corrective action measures coupled with natural attenuation is expected to decrease VOC concentrations in groundwater over time.

Closing

Water quality monitoring and corrective action will continue at the facility. Phytoremediation and LFG extraction evaluation is planned to continue on the established quarterly schedule. The next scheduled semi-annual water quality sampling event is scheduled for June 2015. Monitoring for the full Appendix II list of parameters at select locations is next planned to be performed in the winter 2016. If you have any questions or comments regarding this report, please contact us at (919) 772-5393 or by email at jpfohl@mesco.com or sgandy@mesco.com.

Sincerely,
MUNICIPAL ENGINEERING SERVICES CO., P.A.

Jonathan Pfohl
Environmental Specialist

Steven R. Gandy, Ph.D, P.E.
Senior Project Manager

Enclosures

cc: Josh Mitchell
Alexander County

Figures

Topographic Map with Site Location
Alexander County Active C&D and Closed MSWLF

2500 Paynes Dairy Road
Taylorsville, NC 28681
Lat:35-15-18.7246
Long:-81-08-51.51.32
Northing:767009.09
Easting:1363506.43

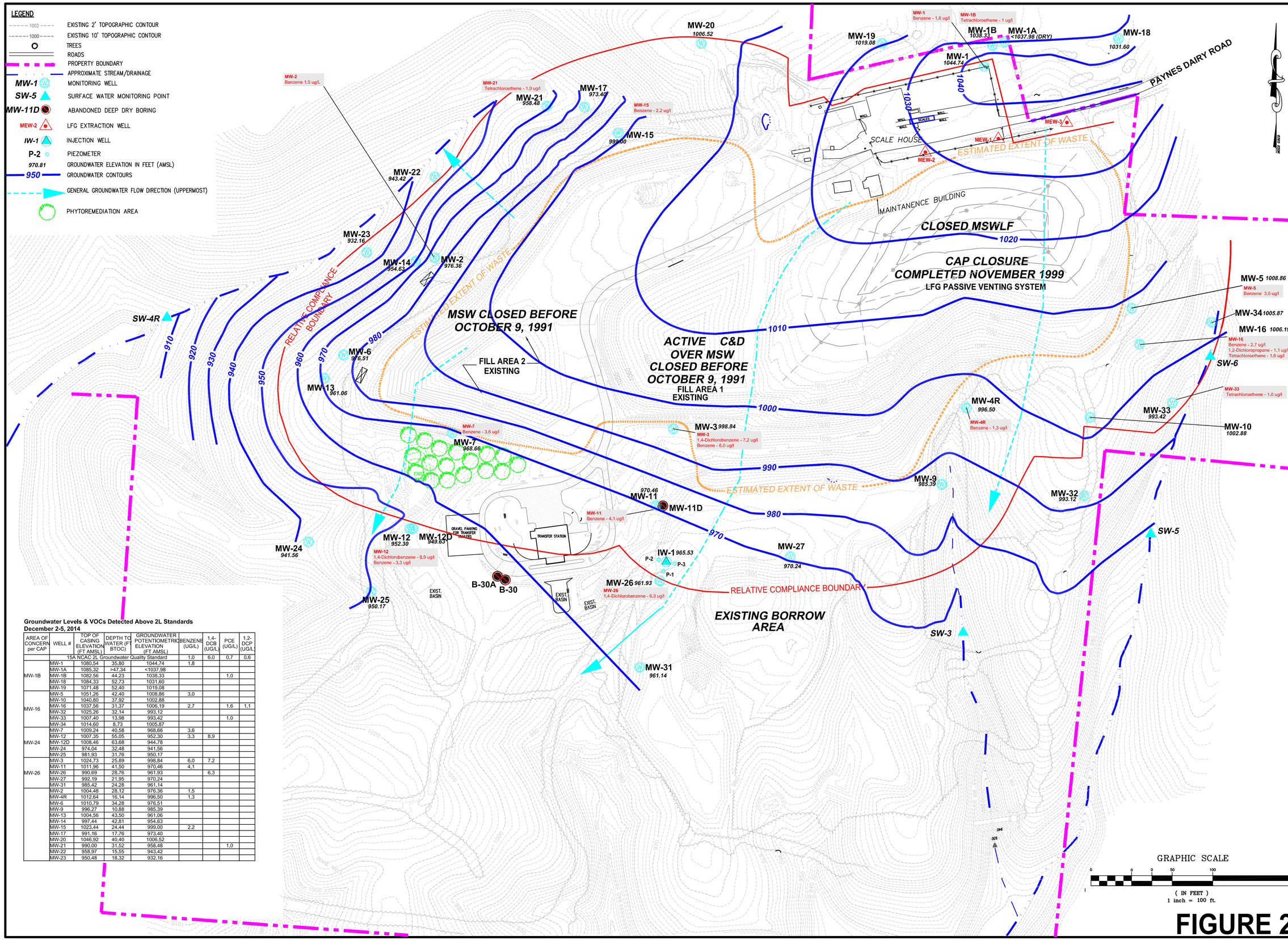
QUADRANGLE LEGEND

ROAD CLASSIFICATION

Primary highway, hard surface
Light-duty road, hard or improved surface
Secondary highway, hard surface
Unimproved road
Interstate Route
U. S. Route
State Route

0 1/2 1 MILE

FIGURE 1



Groundwater Levels & VOCs Detected Above 2L Standards
December 2-5, 2014

AREA OF CONCERN per CAP	WELL #	TOP OF CASING ELEVATION (FT AMSL)	DEPTH TO WATER (FT BTOC)	GROUNDWATER POTENTIOMETRIC ELEVATION (FT AMSL)	BENZENE (UG/L)	1,4-DCB (UG/L)	PCE (UG/L)	1,2-DCP (UG/L)
	15A NCAC 2L Groundwater Quality Standard				1.0	6.0	0.7	0.6
MW-1B	MW-1	1080.54	35.80	1044.74	1.8			
	MW-1A	1085.32	>47.34	<1037.98				
	MW-1B	1082.56	44.23	1038.33			1.0	
	MW-18	1084.33	52.73	1031.60				
	MW-19	1071.48	52.40	1019.08				
MW-16	MW-5	1051.26	42.40	1008.86	3.0			
	MW-10	1040.80	37.92	1002.88				
	MW-16	1037.56	31.37	1006.19	2.7		1.6	1.1
	MW-32	1025.26	32.14	993.12				
	MW-33	1007.40	13.98	993.42			1.0	
	MW-34	1014.60	8.73	1005.87				
MW-24	MW-7	1009.24	40.58	968.66	3.6			
	MW-12	1007.35	55.05	952.30	3.3	8.9		
	MW-12D	1008.46	63.68	944.78				
	MW-24	974.04	32.48	941.56				
	MW-25	981.93	31.76	950.17				
MW-26	MW-3	1024.73	25.89	998.84	6.0	7.2		
	MW-11	1011.96	41.50	970.46	4.1			
	MW-26	990.69	28.76	961.93		6.3		
	MW-27	992.19	21.95	970.24				
	MW-31	985.42	24.28	961.14				
	MW-2	1004.48	28.12	976.36	1.5			
	MW-4R	1012.64	16.14	996.50	1.3			
	MW-6	1010.79	34.28	976.51				
	MW-9	996.27	10.88	985.39				
	MW-13	1004.56	43.50	961.06				
	MW-14	997.44	42.81	954.63				
	MW-15	1023.44	24.44	999.00	2.2			
	MW-17	991.16	17.76	973.40				
	MW-20	1046.92	40.40	1006.52				
	MW-21	990.00	31.52	958.48			1.0	
	MW-22	958.97	15.55	943.42				
	MW-23	950.48	18.32	932.16				

Municipal Services Engineering Company, P.A.
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393 LICENSE NUMBER: C-0281
P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1767 LICENSE NUMBER: C-0281

ACTIVE CONSTRUCTION and DEMOLITION
CLOSED UNLINED MSW LANDFILL FACILITY
ALEXANDER COUNTY
NORTH CAROLINA

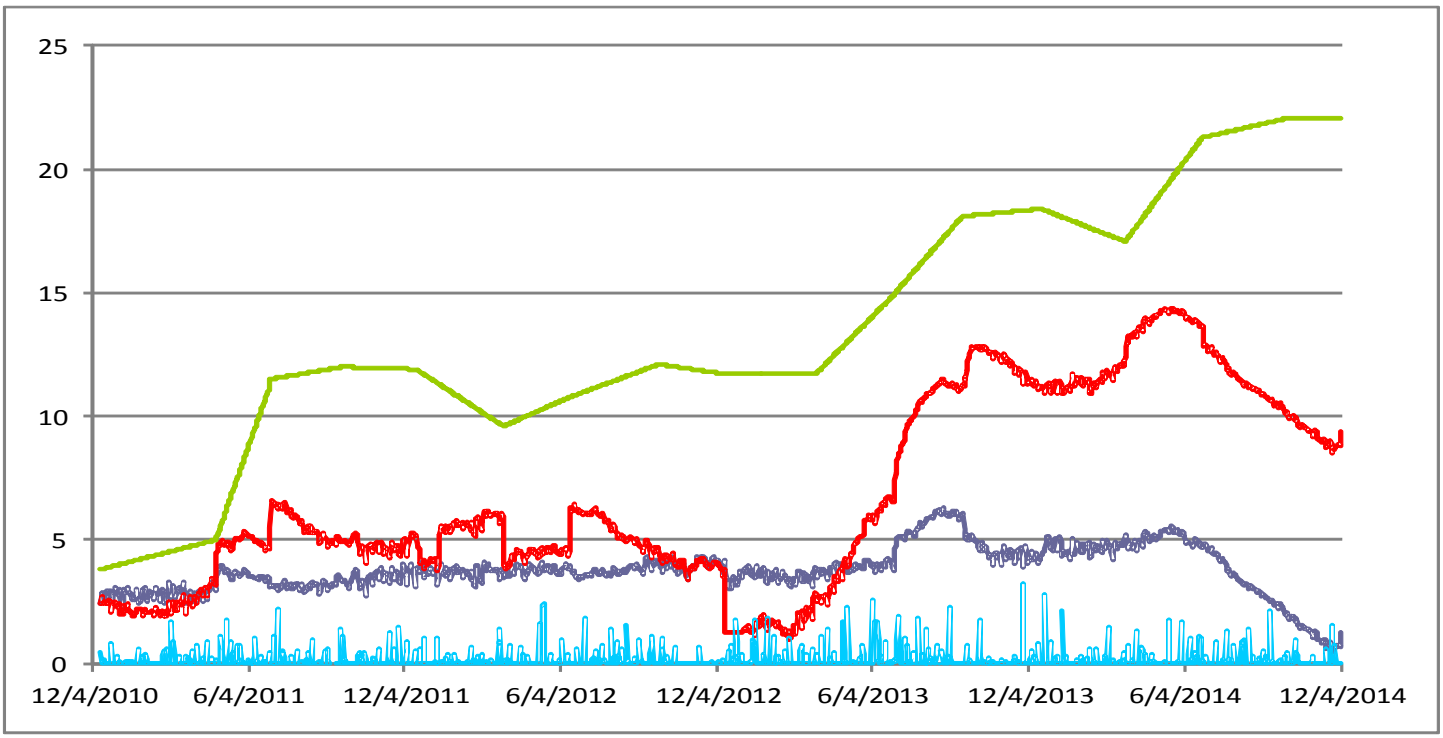
DATE	BY	REV.	DESCRIPTION

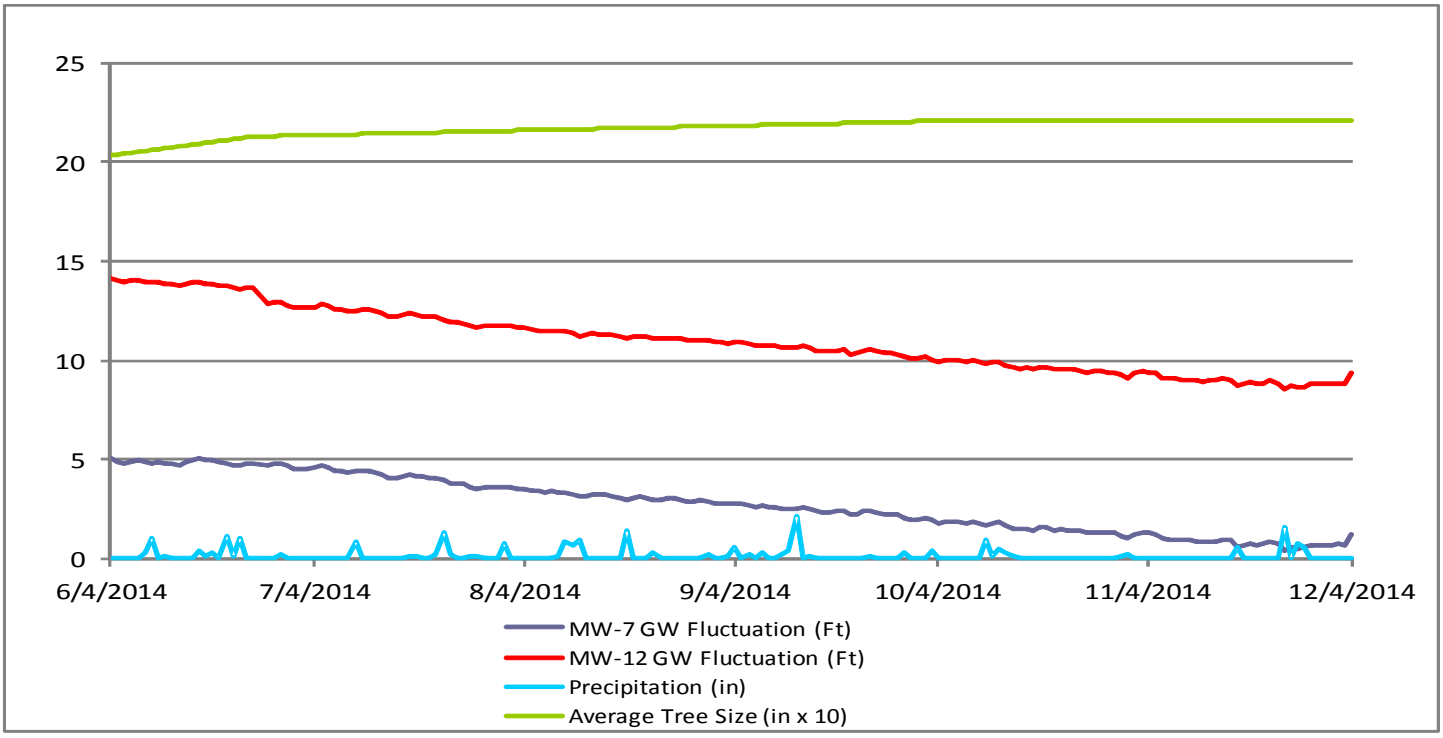
POTENTIOMETRIC MAP OF UPPERMOST AQUIFER
w/ VOCS DETECTIONS ABOVE 2L STANDARDS

SCALE: SEE SCALEBAR
DATE: 1/5/15
DRWN. BY: J. PFOHL
CHKD. BY: S. GANDY
PROJECT NUMBER G14003.0
DRAWING NO. FIGURE 2
SHEET NO. 1 OF 1

FIGURE 2

Figure 3
Time-Series Graphs of Groundwater, Precipitation & Tree Size
December 13, 2010 – December 4, 2014





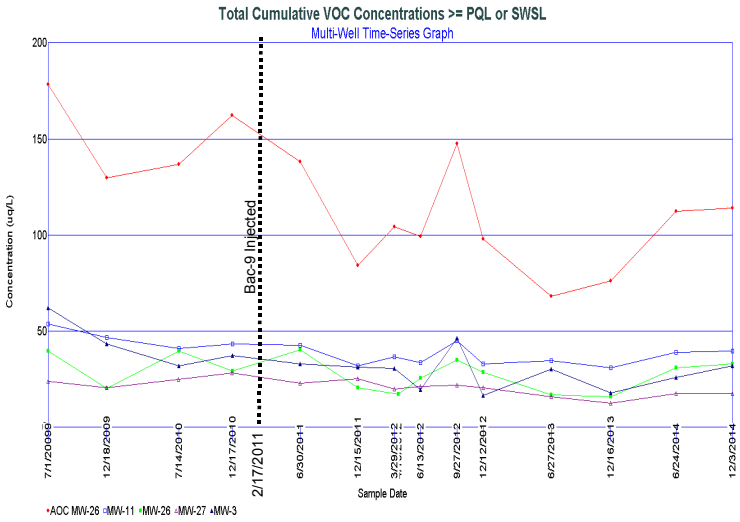
Data Sources:

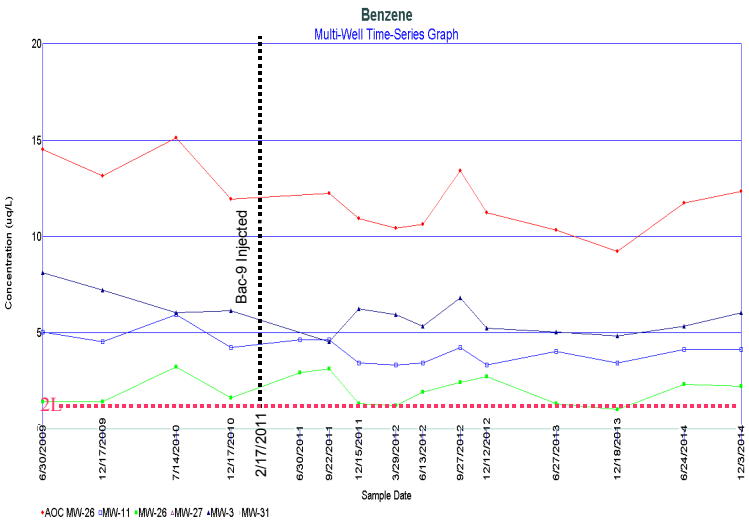
GW = Dedicated pressure transducers. Recorded daily.

Precipitation = National Weather Services Cooperative Observer Program Station 318519. Recorded daily.

Tree Size = Field measurements (Height + width + trunk circumference) of ten designated sample trees includes dead ones. Recorded quarterly.

Figure 4
Total VOCs and Benzene Concentrations Pre/Post Injection Comparison in AOC MW-26
June 30, 2009 – December 3, 2014

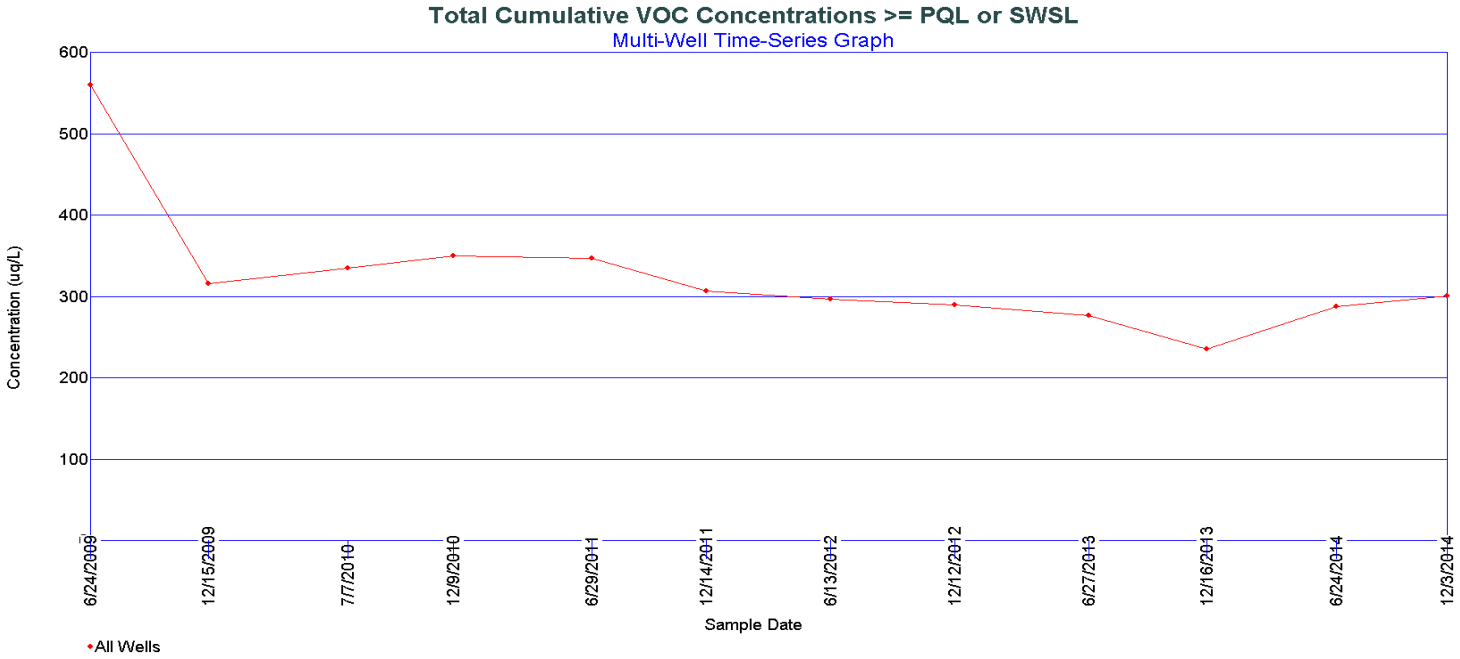


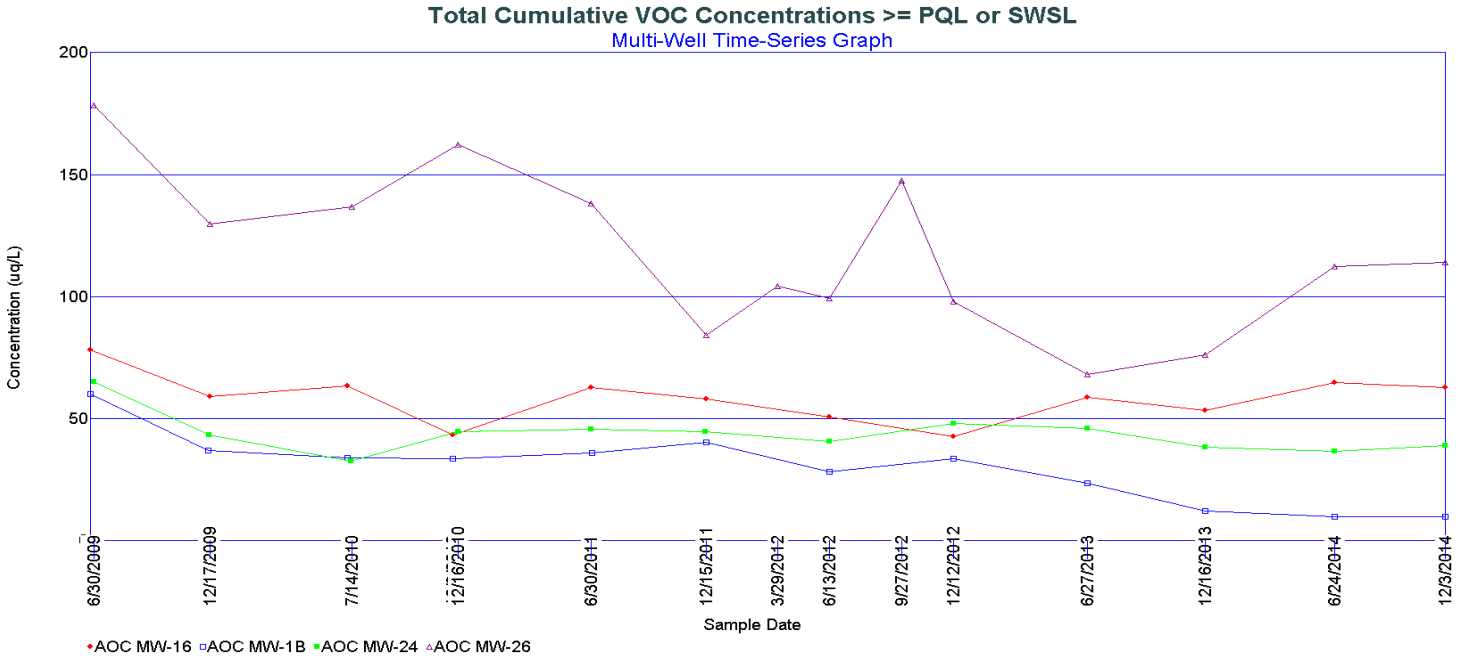


Total VOCs & Benzene Concentrations Pre/Post Injection Comparison in AOC MW-26

Hydraulic Gradient In Relation to Injection Well (IW-1)	Well ID	June 2009 (ug/L)		Dec 2009 (ug/L)		July 2010 (ug/L)		Dec. 2010 (ug/L)		Average of Four Events Preceding Injection (ug/L)		Dec 2014 (ug/L)		Difference (ug/L)		Difference (%)	
		All VOCs	Benzene	All VOCs	Benzene	All VOCs	Benzene	All VOCs	Benzene	All VOCs	Benzene	All VOCs	Benzene	All VOCs	Benzene	All VOCs	Benzene
Up	MW-3	61.66	8.10	43.03	7.20	31.50	6.00	37.04	6.10	43.31	6.85	31.50	6.00	-11.81	-0.85	-27	-12
Up	MW-11	53.28	5.00	46.25	4.50	40.81	5.90	43.20	4.20	45.89	4.90	39.50	4.10	-6.39	-0.80	-14	-16
Up	MW-27	23.70	0.00	20.20	0.00	24.60	0.00	28.00	0.00	24.13	0.00	17.20	0.00	-6.93	0.00	-29	0
Subtotal Upgradient		138.64	13.10	109.48	11.70	96.91	11.90	108.24	10.30	113.32	11.75	88.20	10.10	-25.12	-1.65	-22	-14
Down	MW-26	39.40	1.40	20.00	1.40	39.50	3.20	29.00	1.60	31.98	1.90	32.80	2.20	0.82	0.30	3	16
Down	MW-31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
Subtotal Downgradient		39.40	1.40	20.00	1.40	39.50	3.20	29.00	1.60	31.98	1.90	32.80	2.20	0.82	0.30	3	16
Up&Down Gradient Total		178.04	14.50	129.48	13.10	136.41	15.10	137.24	11.90	145.29	13.65	121.00	12.30	-24.29	-1.35	-17	-10

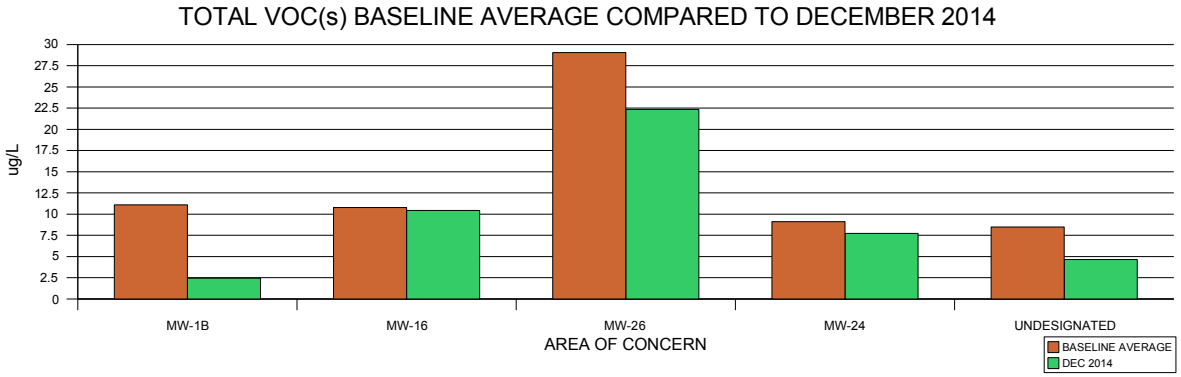
Figure 5
Time-Series Graphs of VOC Concentrations
June 24, 2009 to December 4, 2014





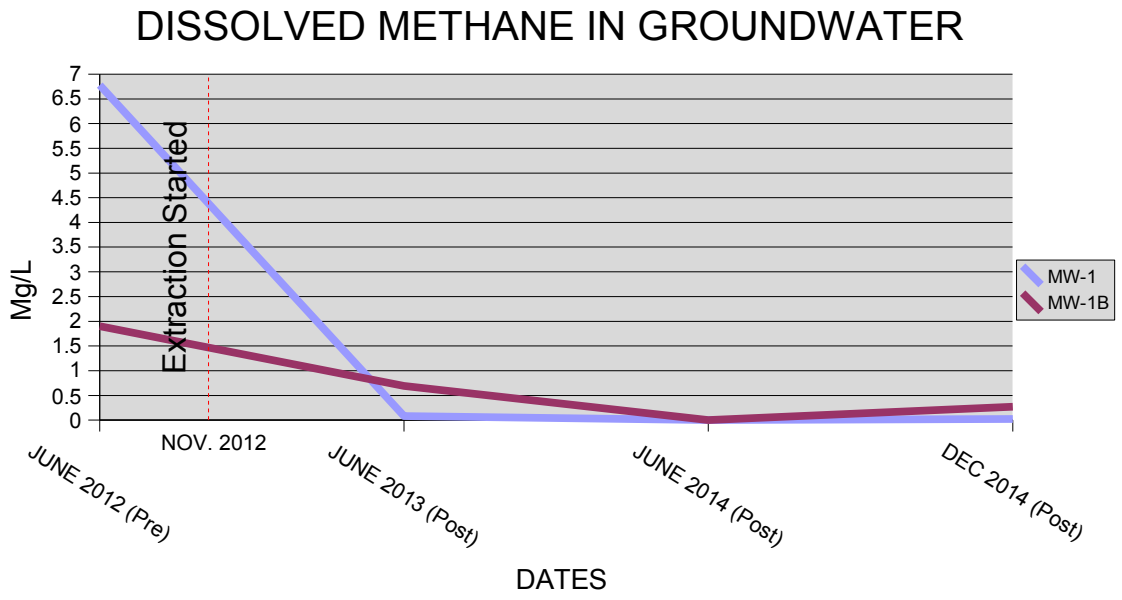
AOC MW-1B (MW-1,MW-1B,MW-18,MW-19)
AOC MW-16 (MW-5,MW-10,MW-16,MW-32,MW-33,MW-34)
AOC MW-24 (MW-7,MW-12,MW-12D,MW-24,MW-25)
AOC MW-26 (MW-3,MW-11,MW-26,MW-27,MW-31)

Figure 6
Histograms of Total VOC Concentrations
Baseline (June 24, 2009-December 9, 2010) Compared to December 2014



AOC ID	WELL ID	TOTAL VOC(s) BASELINE AVERAGE (June 2009-Dec. 2010) (ug/l)	TOTAL VOC(s) LATEST Dec 2014 (ug/l)	DIFFERENCE BETWEEN LATEST AND BASELINE (ug/L)	DIFFERENCE BETWEEN LATEST AND BASELINE (%)
MW-1B	MW-1	25.22	5.10	-20.12	-80
	MW-1A	NS	NS	NA	NA
	MW-1B	15.66	4.60	-11.06	-71
	MW-18	0.00	0.00	0.00	0
	MW-19	3.48	0.00	-3.48	-100
	AOC AVG	11.09	2.43	-8.67	-78
MW-16	MW-5	18.39	19.00	0.61	3
	MW-10	2.17	0.00	-2.17	-100
	MW-16	44.14	42.60	-1.54	-3
	MW-32	0.00	0.00	0.00	0
	MW-33	0.00	1.00	1.00	100
	MW-34	0.00	0.00	0.00	0
	AOC AVG	10.78	10.43	-0.35	-3
MW-24	MW-7	12.69	11.40	-1.29	-100
	MW-12	30.94	27.20	-3.74	-12
	MW-12D	0.00	0.00	0.00	0
	MW-24	1.56	0.00	-1.56	-100
	MW-25	0.30	0.00	-0.30	-100
	AOC AVG	9.10	7.72	-1.38	-15
MW-26	MW-3	43.31	31.50	-11.81	-27
	MW-11	45.89	30.30	-15.59	-34
	MW-26	31.98	32.80	0.82	3
	MW-27	24.13	17.20	-6.93	-29
	MW-31	0.00	0.00	0.00	0
	AOC AVG	29.06	22.36	-6.70	-23
Undesignated (No Remediation)	MW-2	27.19	13.70	-13.49	-50
	MW-4R	25.00	18.10	-6.90	-28
	MW-6	0.00	0.00	0.00	0
	MW-9	18.51	11.70	-6.81	-37
	MW-13	0.00	0.00	0.00	0
	MW-14	11.93	14.70	2.77	23
	MW-15	12.83	8.80	-4.03	-31
	MW-17	2.27	0.00	-2.27	-100
	MW-20	0.59	0.00	-0.59	-100
	MW-21	0.28	1.00	0.72	257
	MW-22	2.70	0.00	-2.70	-100
	MW-23	0.51	0.00	-0.51	-100
	AOC AVG	8.48	5.67	-2.82	-33
ALL WELLS	ALL WELLS AVG	12.55	9.08	-3.47	-28

Figure 7
Histograms of Dissolved Methane Concentrations
Pre-LFGCCS (June 15, 2012) Compared to Post-LFGGCCS (Dec. 4, 2014)



AOC ID	WELL ID	DISSOLVED METHANE Pre-Start Up June, 15, 2012 (mg/l)	DISSOLVED METHANE Post-Start Up June, 27, 2013 (mg/l)	DISSOLVED METHANE Post-Start Up June, 26, 2014 (mg/l)	DISSOLVED METHANE Post-Start Up Dec. 4, 2014 (mg/l)	REDUCTION SINCE START-UP (%)
MW-1B	MW-1	6.78	0.08	0.00153	0.0234	-99
	MW-1A	NS	NS	NS	NS	NA
	MW-1B	1.90	0.69	Not Detected	0.2660	-86
	MW-18	NS	NS	NS	NS	NA
	MW-19	NS	NS	NS	NS	NA
	AOC AVG	4.34	0.39	0.0009	0.1447	-97

NS = Not sampled since unimpacted
Dissolved methane not detected in MW-1B (<0.0004 mg/L) in June 2014

Tables

Table 1
Groundwater Monitoring Well Construction Table
December 3-5, 2014

Monitoring Well	Date Installed	Well Diameter	Total Well Depth	Top of Screen Depth	Screen Length	Geology of Screened Interval	Top of Casing Elevation	Ground Elevation	Groundwater Elevation	Depth to Water	Latitude	Longitude
		(inches)	(ft bgs)	(ft bgs)	(ft)		(ft amsl)	(ft amsl)	(ft amsl)	(ft btoc)		
MW-1	9/14/90	2	40.00	25.00	15	Soil & Rock	1080.54	1077.98	1044.74	35.80	35.8389	-81.1478
MW-1A	9/30/94	2	47.50	32.50	15	Soil & Rock	1085.32	1083.28	<1035.78	Dry (>49.54)	35.8389	-81.1478
MW-1B	5/21/03	2	61.00	46.00	15	Rock	1082.56	1079.56	1038.33	44.23	35.8391	-81.1478
MW-2	9/6/90	2	30.00	15.00	15	Soil	1004.48	1002.28	<974.03	28.12	35.8376	-81.1524
MW-3	9/19/90	2	33.00	13.00	20	Soil & Rock	1024.73	1024.23	998.84	25.89	35.8365	-81.1503
MW-4R	9/30/94	2	20.50	5.50	15	Soil & Rock	1012.64	1008.54	996.50	16.14	35.8366	-81.1479
MW-5	9/16/94	2	48.80	33.80	15	Soil & Rock	1051.26	1049.01	1008.86	42.40	35.8373	-81.1465
MW-6	9/29/94	2	41.00	26.00	15	Rock	1010.79	1008.29	976.51	34.28	35.8369	-81.1364
MW-7	9/29/94	2	53.00	38.00	15	Rock	1009.24	1005.84	968.66	40.58	35.8364	-81.1522
MW-9	10/24/00	2	31.50	16.50	15	Rock	996.27	993.76	985.39	10.88	35.8361	-81.1481
MW-10	10/25/00	2	91.00	76.00	15	Rock	1040.80	1037.83	1002.88	37.92	35.8366	-81.1469
MW-11	10/24/00	2	56.00	41.00	15	Rock	1011.96	1008.98	970.46	41.50	35.8359	-81.1505
MW-12	10/23/00	2	66.50	51.50	15	Soil	1007.35	1004.46	952.30	55.05	35.3577	-81.1525
MW-12D	6/9/00	2	100.00	90.00	10	Rock	1008.46	1006.03	944.78	63.68	35.3577	-81.1525
MW-13	10/25/00	2	60.50	45.50	15	Rock	1004.56	1001.63	961.06	43.50	35.8368	-81.1532
MW-14	10/26/00	2	40.50	25.50	15	Soil & Rock	997.44	994.06	954.63	42.81	35.8376	-81.1525
MW-15	10/25/00	2	35.00	20.00	15	Soil & Rock	1023.44	1020.81	999.00	24.44	35.8385	-81.1508
MW-16	12/20/07	2	40.25	25.25	15	Rock	1037.56	1034.94	1006.19	31.37	35.8371	-81.1465
MW-17	6/10/03	2	22.30	7.30	15	Rock	991.16	988.36	973.40	17.76	35.8386	-81.1511
MW-18	12/19/07	2	56.70	41.70	15	Rock	1084.33	1081.52	1031.60	52.73	35.8392	-81.1467
MW-19	12/20/07	2	63.92	48.92	15	Rock	1071.48	1068.67	1019.08	52.40	35.8391	-81.1487
MW-20	12/20/07	2	63.55	48.55	15	Rock	1046.92	1044.19	1006.52	40.40	35.8391	-81.1502
MW-21	12/19/07	2	41.05	26.05	15	Rock	990.00	987.08	958.48	31.52	35.8386	-81.1514
MW-22	12/19/07	2	18.12	8.12	10	Rock	958.97	956.21	943.42	15.55	35.8381	-81.1524
MW-23	12/19/07	2	21.54	6.54	15	Soil	950.48	947.83	932.16	18.32	35.8376	-81.1529
MW-24	12/20/07	2	35.35	20.35	15	Soil	974.04	971.29	941.56	32.48	35.8356	-81.1533
MW-25	12/19/07	2	44.48	29.48	15	Rock	981.93	979.93	950.17	31.76	35.8353	-81.1528
MW-26	12/20/07	2	49.80	34.80	15	Rock	990.69	988.08	961.93	28.76	35.8354	-81.1504
MW-27	12/20/07	2	49.82	34.82	15	Rock	992.19	989.19	970.24	21.95	35.8356	-81.1493
MW-31	8/16/10	2	32.56	17.56	15	Soil	985.42	982.42	961.14	24.28	35.8348	-81.1506
MW-32	8/16/10	2	42.70	27.7	15	Rock	1025.26	1022.26	993.12	32.14	35.8361	-81.1469
MW-33	4/27/13	2	21.38	6.38	15	PWR	1007.40	1004.40	993.42	13.98	35.8367	-81.1462
MW-34	4/27/13	2	21.19	6.19	15	PWR	1014.60	1011.60	1005.87	8.73	35.8373	-81.1459
IW-1	2/14/11	4	52.44	37.44	15	Rock	990.44	987.44	965.53	24.91	35.8356	-81.1504

NOTE:
bgs = below ground surface
amsl= above mean sea level
btoc = below top of casing (PVC well casing)

Table 2
Field Observations of Monitoring Locations
December 3-5, 2014

Sample Location	Viable Monitoring Location	Lack of Any Evidence of Tampering	Locked	Hinge/Hasp Operational	Tagged or Labeled	Concrete Surface Pad Effective	Comments
MW-1	Yes	Yes	Yes	Yes	Yes	Yes	
MW-1A	No	Yes	Yes	Yes	Yes	Yes	Dry which is typical
MW-1B	Yes	Yes	Yes	Yes	Yes	Yes	
MW-2	Yes	Yes	Yes	Yes	Yes	Yes	
MW-3	Yes	Yes	Yes	Yes	Yes	Yes	Slow recharge
MW-4R	Yes	Yes	Yes	Yes	Yes	Yes	Purge water has sulfur smell.
MW-5	Yes	Yes	Yes	Yes	Yes	?	Surface pad covered with soil
MW-6	Yes	Yes	Yes	Yes	Yes	Yes	
MW-7	Yes	Yes	Yes	Yes	Yes	Yes	Phytoremediation transducer data downloaded
MW-9	Yes	Yes	Yes	Yes	Yes	Yes	
MW-10	Yes	Yes	Yes	Yes	Yes	Yes	Purge water has sulfur smell. Very slow recharge
MW-11	Yes	Yes	Yes	Yes	Yes	Yes	
MW-12	Yes	Yes	Yes	Yes	Yes	Yes	Phytoremediation transducer data downloaded
MW-12D	Yes	Yes	Yes	Yes	Yes	Yes	
MW-13	Yes	Yes	Yes	Yes	Yes	Yes	
MW-14	Yes	Yes	Yes	Yes	Yes	?	Surface pad cracked
MW-15	Yes	Yes	Yes	Yes	Yes	Yes	
MW-16	Yes	Yes	Yes	Yes	Yes	?	Surface pad covered with soil
MW-17	Yes	Yes	Yes	Yes	Yes	Yes	
MW-18	Yes	Yes	Yes	Yes	Yes	Yes	
MW-19	Yes	Yes	Yes	Yes	Yes	Yes	
MW-20	Yes	Yes	Yes	Yes	Yes	Yes	
MW-21	Yes	Yes	Yes	Yes	Yes	Yes	
MW-22	Yes	Yes	Yes	Yes	Yes	Yes	
MW-23	Yes	Yes	Yes	Yes	Yes	Yes	
MW-24	Yes	Yes	Yes	Yes	Yes	Yes	
MW-25	Yes	Yes	Yes	Yes	Yes	Yes	
MW-26	Yes	Yes	Yes	Yes	Yes	Yes	
MW-27	Yes	Yes	Yes	Yes	Yes	Yes	
MW-31	Yes	Yes	Yes	Yes	Yes	Yes	
MW-32	Yes	Yes	Yes	Yes	Yes	Yes	
MW-33	Yes	Yes	Yes	Yes	Yes	Yes	
MW-34	Yes	Yes	Yes	Yes	Yes	Yes	Path to well recently improved by County
IW-1	Yes	Yes	Yes	Yes	Yes	Yes	Injection well. Not sampled this event.
SW-3	Yes	-	-	-	-	-	Low gage height and flow rate
SW-4R	Yes	-	-	-	-	-	Low gage height and flow rate
SW-5	Yes	-	-	-	-	-	Low gage height and flow rate
SW-6	Yes	-	-	-	-	-	Low gage height and flow rate

Any unusual field conditions, observations, or events:

LFG extraction system operating in AOC MW-1B which is typical.

Table 3
Field Parameter Data Summary
December 2-5, 2015

Parameter	Water Depth	Water Elevation	TOC Elevation	Temp.	ORP	DO	pH	Specific Conductance	TDS	Methane Gas in Headspace	Turbidity of Metal Sample
Units	**ft (btoc)**	**ft (amsl)**	**ft (amsl)**	**C**	**mV**	**mg/L**	**SU**	**umhos/cm**	**mg/L**	**% Vol.**	**Visual or NTU**
MW-1	35.80	1044.74	1080.54	16.9	-86	0.2	6.58	460	130	0.0	Clear
MW-1B	44.23	1038.33	1082.56	16.8	NR	NR	4.91	90	40	0.0	Clear
MW-2	28.12	976.36	1004.48	17.3	NR	NR	5.88	420	200	0.0	Slight
MW-3	25.89	998.84	1024.73	17.1	-35	0.1	6.03	460	130	0.0	313
MW-4R	16.14	996.50	1012.64	15.9	NR	NR	5.89	80	40	NR	Clear
MW-5	42.40	1008.86	1051.26	16.8	-92	0.2	6.53	410	200	NR	40.1
MW-6	34.28	976.51	1010.79	15.9	182	0.6	6.91	410	200	NR	17.3
MW-7	40.58	968.66	1009.24	15.9	-99	0.1	7.09	510	250	Clear	Clear
MW-9	10.88	985.39	996.27	18.7	53	0.2	6.11	730	360	NR	Clear
MW-10	37.92	1002.88	1040.80	18.8	103	0.4	6.96	500	240	NR	Clear
MW-11	41.50	970.46	1011.96	12.3	121	0.8	6.12	410	200	NR	Clear
MW-12	55.05	952.30	1007.35	10.7	93	0.7	5.98	220	110	NR	16.5
MW-12D	63.68	944.78	1008.46	10.9	103	0.9	6.93	70	30	NR	10.3
MW-13	43.50	961.06	1004.56	10.4	93	1.1	6.87	190	80	NR	12.3
MW-14	42.81	954.63	997.44	14.5	11	0.7	6.73	80	30	NR	Clear
MW-15	24.44	999.00	1023.44	14.8	193	0.1	5.91	60	20	NR	Clear
MW-16	31.37	1006.19	1037.56	11.1	283	0.3	5.91	80	30	0.0	112
MW-17	17.76	973.40	991.16	13.6	213	0.9	5.57	60	20	0.0	Clear
MW-18	52.73	1031.60	1084.33	17.3	307	1.9	6.88	40	20	0.0	143
MW-19	52.40	1019.08	1071.48	17.4	231	2.3	6.91	80	30	0.0	Clear
MW-20	40.40	1006.52	1046.92	14.2	74	1.3	6.38	90	40	NR	Slight
MW-21	31.52	958.48	990.00	13.8	205	2.4	5.99	60	30	NR	Clear
MW-22	15.55	943.42	958.97	15.5	213	4.9	6.37	80	40	0.0	Slight
MW-23	18.32	932.16	950.48	15.4	203	5.8	6.97	110	50	NR	Slight
MW-24	32.48	941.56	974.04	11.3	297	0.4	5.93	190	90	0.0	128
MW-25	31.76	950.17	981.93	13.8	223	0.5	6.53	180	90	NR	203
MW-26	28.76	961.93	990.69	15.3	231	0.4	6.42	280	130	NR	27.2
MW-27	21.95	970.24	992.19	14.8	288	3.5	6.53	510	250	NR	41.6
MW-31	24.28	961.14	985.42	14.4	211	0.4	5.99	90	40	NR	Slight
MW-32	32.14	993.12	1025.26	14.3	228	1.3	6.99	280	130	0.0	Slight
MW-33	13.98	993.42	1007.40	15.1	135	4.4	6.21	110	50	0.0	Slight
MW-34	8.73	1005.87	1014.60	15.2	141	4.6	6.86	80	30	0.0	Slight
Minimum	8.73	932.16	950.48	10.4	-99	0.1	4.91	40	20	0.0	Clear
Average	32.54	982.11	1014.65	14.9	142	1.4	6.37	232	104	0.0	Slight
Maximum	63.68	1044.74	1084.33	18.8	307	5.8	7.09	730	360	0.0	Slight
SW-3	-	-	-	7.3	27	6.7	7.01	80	30	NR	Clear
SW-4R	-	-	-	7.2	19	NR	7.03	80	30	NR	Clear
SW-5	-	-	-	7.3	21	NR	7.07	80	30	NR	Clear
SW-6	-	-	-	7.5	35	NR	6.99	90	40	NR	Clear
Minimum	-	-	-	7.2	19	6.7	6.99	80	30	NR	Clear
Average	-	-	-	7.3	26	6.7	7.03	83	33	NR	Clear
Maximum	-	-	-	7.5	35	6.7	7.07	90	40	NR	Clear

NR = No Reading Attempted

Table 4
Sampling and Analysis Summary
December 3-5, 2014

		App. I		App. II	MNA													
Constituent	Reason Not Sampled	VOCs	Total Metals	Mercury (Total)	VFA	Hydrogen	Methane, Dissolved	Ethene/Ethane	Carbon Dioxide	Alkalinity	Sulfate	Sulfide	Chloride	TOC	COD	BOD	Iron, total	Nitrate
Laboratory		PACE	PACE	PACE	PACE	PACE	PACE	PACE	FIELD	PACE	PACE	PACE	PACE	PACE	PACE	PACE	PACE	PACE
Method		Lab EPA 8260B	Lab EPA 6000/7000	Lab EPA 7470	AM23G	AM20GAX	AM20GAX/RSK175	AM20GAX	Hach Kit	Lab SM 2320B	EPA 300.0	Lab SM18 4500-S D	Lab SM 4500-Cl-E	SM 5310B	SM 5220D	SM5210B	Lab EPA 6010	Lab 353.2
MW-1		x	x	x														
MW-1A	Dry																	
MW-1B		x	x	x			x											
MW-2		x	x	x														
MW-3		x	x			x	x	x	x	x	x		x	x	x	x		
MW-4R		x	x															
MW-5		x	x		x	x	x	x	x	x	x	x	x	x	x		x	x
MW-6		x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x
MW-7		x	x															
MW-9		x	x															
MW-10		x	x															
MW-11		x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x
MW-12		x	x		x	x	x	x	x	x	x	x	x	x	x		x	x
MW-12D		x	x		x	x	x	x	x	x	x	x	x	x	x		x	x
MW-13		x	x															
MW-14		x	x															
MW-15		x	x	x														
MW-16		x	x		x	x	x	x	x	x	x	x	x	x	x		x	x
MW-17		x	x	x														
MW-18		x	x	x							x							
MW-19		x	x															
MW-20		x	x															
MW-21		x	x	x														
MW-22		x	x															
MW-23		x	x															
MW-24		x	x		x	x	x	x	x	x	x	x	x	x	x		x	x
MW-25		x	x		x	x	x	x	x	x	x	x	x	x	x		x	x
MW-26		x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x
MW-27		x	x		x	x	x	x	x	x	x	x	x	x	x	x		
MW-31		x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x
MW-32		x	x															
MW-33		x	x															
MW-34		x	x															
SW-3		x	x															
SW-4R		x	x															
SW-5		x	x															
SW-6		x	x															
EB		x	x	x														
TB		x																
FB		x	x	x														

App I & II = Appendix I Listed in current 40 CFR 258

Table 5
Detections in Water Samples above SWSL, GWP, 2L or 2B (Appendix I)
December 3-5, 2014

Sample ID	Parameter Name [1]	Sample Date	Result	Unit	MDL [2]	SWSL [3]	2L [4]	2B [5]	GWP [6]	MCL [7]	Preliminary Cause [8]
MW-1	Benzene	12/4/14	1.8	ug/L	0.25	1	1			5	LFG
MW-1	Cobalt, total	12/4/14	22.3	ug/L	2.5	10			70	NE	
MW-1	Zinc, total	12/4/14	27.8	ug/L	5	10	1000			5000	
MW-1	1,4-Dichlorobenzene	12/4/14	3.3	ug/L	0.33	1	6			75	
MW-1B	Tetrachloroethene	12/4/14	1	ug/L	0.46	1	0.7			5	L &/or LFG
MW-1B	Zinc, total	12/4/14	12.5	ug/L	5	10	1000			5000	
MW-1B	Cobalt, total	12/4/14	73.2	ug/L	2.5	10			70	NE	
MW-1B	1,4-Dichlorobenzene	12/4/14	3.6	ug/L	0.33	1	6			75	
MW-2	Benzene	12/4/14	1.5	ug/L	0.25	1	1			5	L &/or LFG
MW-2	Barium, total	12/4/14	110	ug/L	2.5	100	700			1996	
MW-2	Cobalt, total	12/4/14	362	ug/L	2.5	10			70	NE	
MW-2	1,4-Dichlorobenzene	12/4/14	2.7	ug/L	0.33	1	6			75	
MW-2	Zinc, total	12/4/14	18.4	ug/L	5	10	1000			5000	
MW-2	cis-1,2-Dichloroethene	12/4/14	9.5	ug/L	0.19	5	70			70	
MW-3	1,4-Dichlorobenzene	12/3/14	7.2	ug/L	0.33	1	6			75	L &/or LFG
MW-3	Benzene	12/3/14	6	ug/L	0.25	1	1			5	L &/or LFG
MW-3	Cobalt, total	12/3/14	12.4	ug/L	2.5	10			70	NE	
MW-3	Toluene	12/3/14	1.3	ug/L	0.26	1	600			1000	
MW-3	Xylene (Total)	12/3/14	8.1	ug/L	0.66	5	530			10000	
MW-3	Ethylbenzene	12/3/14	1.7	ug/L	0.3	1	550			700	
MW-3	cis-1,2-Dichloroethene	12/3/14	7.2	ug/L	0.19	5	70			70	
MW-4R	Benzene	12/4/14	1.3	ug/L	0.25	1	1			5	L &/or LFG
MW-4R	Cobalt, total	12/4/14	127	ug/L	2.5	10			70	NE	
MW-4R	Barium, total	12/4/14	124	ug/L	2.5	100	700			1997	
MW-4R	cis-1,2-Dichloroethene	12/4/14	12.6	ug/L	0.19	5	70			70	
MW-4R	1,4-Dichlorobenzene	12/4/14	4.2	ug/L	0.33	1	6			75	
MW-5	Benzene	12/3/14	3	ug/L	0.25	1	1			5	L &/or LFG
MW-5	1,4-Dichlorobenzene	12/3/14	2.4	ug/L	0.33	1	6			75	
MW-5	Zinc, total	12/3/14	15.4	ug/L	5	10	1000			5000	
MW-5	cis-1,2-Dichloroethene	12/3/14	13.6	ug/L	0.19	5	70			70	
MW-6	Zinc, total	12/4/14	22.3	ug/L	5	10	1000			5000	
MW-6	Cobalt, total	12/4/14	53.1	ug/L	2.5	10			70	NE	
MW-7	Benzene	12/5/14	3.6	ug/L	0.25	1	1			5	L &/or LFG
MW-7	1,4-Dichlorobenzene	12/5/14	1.5	ug/L	0.33	1	6			75	
MW-7	cis-1,2-Dichloroethene	12/5/14	6.3	ug/L	0.19	5	70			70	

Sample ID	Parameter Name [1]	Sample Date	Result	Unit	MDL [2]	SWSL [3]	2L [4]	2B [5]	GWP [6]	MCL [7]	Preliminary Cause [8]
MW-9	Barium, total	12/2/14	162	ug/L	2.5	100	700			1998	
MW-9	Zinc, total	12/2/14	27.8	ug/L	5	10	1000			5000	
MW-9	Nickel, total	12/2/14	56.4	ug/L	2.5	50	100			NE	
MW-9	Cobalt, total	12/2/14	114	ug/L	2.5	10			**70**	NE	
MW-9	cis-1,2-Dichloroethene	12/2/14	11.7	ug/L	0.19	5	70			70	
MW-11	Benzene	12/3/14	4.1	ug/L	0.25	1	**1**			5	L &/or LFG
MW-11	1,4-Dichlorobenzene	12/3/14	9.2	ug/L	0.33	1	**6**			75	L &/or LFG
MW-11	Zinc, total	12/3/14	19.4	ug/L	5	10	1000			5000	
MW-11	Cobalt, total	12/3/14	110	ug/L	2.5	10			**70**	NE	
MW-11	Barium, total	12/3/14	146	ug/L	2.5	100	700			2000	
MW-11	cis-1,2-Dichloroethene	12/3/14	26.2	ug/L	0.19	5	70			70	
MW-12	Benzene	12/3/14	3.3	ug/L	0.25	1	**1**			5	L &/or LFG
MW-12	1,4-Dichlorobenzene	12/3/14	8.9	ug/L	0.33	1	**6**			75	L &/or LFG
MW-12	Cobalt, total	12/3/14	68.3	ug/L	2.5	10			70	NE	
MW-12	Zinc, total	12/3/14	36.4	ug/L	5	10	1000			5000	
MW-12	cis-1,2-Dichloroethene	12/3/14	12.9	ug/L	0.19	5	70			70	
MW-12	Barium, total	12/3/14	102	ug/L	2.5	100	700			1999	
MW-12	Trichloroethene	12/3/14	2.1	ug/L	0.47	1	3			5	
MW-13	Zinc, total	12/4/14	11.3	ug/L	5	10	1000			5000	
MW-13	Cadmium, total	12/4/14	1.8	ug/L	0.5	1	2			5	
MW-14	1,4-Dichlorobenzene	12/4/14	3.7	ug/L	0.33	1	6			75	
MW-14	Zinc, total	12/4/14	30	ug/L	5	10	1000			5000	
MW-14	Cobalt, total	12/4/14	232	ug/L	2.5	10			**70**	NE	
MW-14	Barium, total	12/4/14	107	ug/L	2.5	100	700			1995	
MW-14	cis-1,2-Dichloroethene	12/4/14	11	ug/L	0.19	5	70			70	
MW-15	Benzene	12/4/14	2.2	ug/L	0.25	1	**1**			5	L &/or LFG
MW-15	cis-1,2-Dichloroethene	12/4/14	6.6	ug/L	0.19	5	70			70	
MW-16	Benzene	12/3/14	2.7	ug/L	0.25	1	**1**			5	L &/or LFG
MW-16	1,2-Dichloropropane	12/3/14	1.1	ug/L	0.27	1	**0.6**			5	L &/or LFG
MW-16	Tetrachloroethene	12/3/14	1.6	ug/L	0.46	1	**0.7**			5	L &/or LFG
MW-16	cis-1,2-Dichloroethene	12/3/14	23	ug/L	0.19	5	70			70	
MW-16	1,4-Dichlorobenzene	12/3/14	2.6	ug/L	0.33	1	6			75	
MW-16	1,1-Dichloroethane	12/3/14	9.5	ug/L	0.32	5	70			7	
MW-16	Zinc, total	12/3/14	14.1	ug/L	5	10	1000			5000	
MW-16	Cobalt, total	12/3/14	45.7	ug/L	2.5	10			70	NE	
MW-16	Trichloroethene	12/3/14	2.1	ug/L	0.47	1	3			5	
MW-17	Cobalt, total	12/5/14	26	ug/L	2.5	10			70	NE	
MW-17	Zinc, total	12/5/14	17.1	ug/L	5	10	1000			5000	
MW-18	Vanadium, total	12/4/14	5.1,j	ug/L	2.5	25			**3.5**	NE	
MW-18	Zinc, total	12/4/14	22.5	ug/L	5	10	1000			5000	
MW-19	Vanadium, total	12/5/14	4.9, j	ug/L	2.5	25			**3.5**	NE	

Sample ID	Parameter Name [1]	Sample Date	Result	Unit	MDL [2]	SWSL [3]	2L [4]	2B [5]	GWP [6]	MCL [7]	Preliminary Cause [8]
MW-21	Tetrachloroethene	12/5/14	1	ug/L	0.46	1	**0.7**			5	L &/or LFG
MW-21	Zinc, total	12/5/14	13.8	ug/L	5	10	1000			5000	
MW-22	Zinc, total	12/5/14	15.1	ug/L	5	10	1000			5000	
MW-24	Zinc, total	12/3/14	12.9	ug/L	5	10	1000			5000	
MW-25	Cobalt, total	12/3/14	18.7	ug/L	2.5	10			70	NE	
MW-25	Zinc, total	12/3/14	13.7	ug/L	5	10	1000			5000	
MW-26	Benzene	12/3/14	2.2	ug/L	0.25	1	**1**			5	L &/or LFG
MW-26	cis-1,2-Dichloroethene	12/3/14	24.3	ug/L	0.19	5	70			70	
MW-26	Cobalt, total	12/3/14	92.3	ug/L	2.5	10			**70**	NE	
MW-26	1,4-Dichlorobenzene	12/3/14	6.3	ug/L	0.33	1	**6**			75	L &/or LFG
MW-26	Zinc, total	12/3/14	21.5	ug/L	5	10	1000			5000	
MW-27	Zinc, total	12/3/14	14	ug/L	5	10	1000			5000	
MW-27	Cadmium, total	12/3/14	1.1	ug/L	0.5	1	2			5	
MW-27	cis-1,2-Dichloroethene	12/3/14	17.2	ug/L	0.19	5	70			70	
MW-31	Zinc, total	12/3/14	16.1	ug/L	5	10	1000			5000	
MW-32	Zinc, total	12/4/14	10.9	ug/L	5	10	1000			5000	
MW-33	Tetrachloroethene	12/2/14	1	ug/L	0.46	1	**0.7**			5	L &/or LFG
MW-33	Zinc, total	12/2/14	15.4	ug/L	5	10	1000			5000	
MW-33	Vanadium, total	12/2/14	7.2, j	ug/L	2.5	25			**3.5**	NE	
MW-33	Copper, total	12/2/14	10.7	ug/L	2.5	10	1000			1300	
MW-34	Zinc, total	12/2/14	10.5	ug/L	5	10	1000			5000	
SW-5	Cobalt, total	12/4/14	16.3	ug/L	2.5	10		270		NE	
SW-6	Cobalt, total	12/2/14	15.3	ug/L	2.5	10		270		NE	
EB	Methylene Chloride	12/5/14	1.1	ug/L	0.97	1	4.6			5	
FB	Methylene Chloride	12/5/14	1.2	ug/L	0.97	1	4.6			5	

[1] Table contains constituents detected at or above SWSL, GWP, 2L, or 2B

[2] MDL = Method Detection Limit

[3] SWSL = Solid Waste Section Reporting Limit

[4] 2L = North Carolina 15A NCAC 2L Groundwater Quality Standard

[5] 2B = North Carolina 15 NCAC 2B Surface Water Quality Standard for this Specific Stream Classification

[6] GWP = Groundwater Protection Standard

[7] MCL = Primary Drinking Water Standard (not currently applicable for regulatory comparisons)

[8] Preliminary Cause = Refers to a preliminary analysis of the cause and/or source of a detection over the respective 2L/2B Standard. A definitive source of the detection was not determined as part of this report. Preliminary cause only listed pursuant to instructions

j =The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable

N = Natural originating from erosion of natural deposits. Source not anthropogenic.

L = Leachate

LFG = Landfill Gas

BOLD = Concentration > 2L, 2B or MCL Standard

Table 6
Detections in Water Samples above MDL (Appendix II Exclusive)
December 3-5, 2014

Sample ID	Parameter Name [1]	Sample Date	Result	Unit	MDL [2]	SWSL [3]	2L [4]	2B [5]	GWP [6]	MCL [7]	Preliminary Cause [8]
MW-1B	Mercury, total	12/4/14	0.42	ug/L	0.1	0.2	1			2	
MW-6	Mercury, total	12/4/14	0.13,j	ug/L	0.1	0.2	1			2	
MW-17	Mercury, total	12/5/14	0.19,j	ug/L	0.1	0.2	1			2	
MW-18	Mercury, total	12/4/14	0.51	ug/L	0.1	0.2	1			2	
MW-21	Mercury, total	12/5/14	0.11,j	ug/L	0.1	0.2	1			2	

[1] Table contains App II exclusive constituents detected over MDL

[2] MDL = Method Detection Limit

[3] SWSL = Solid Waste Section Reporting Limit

[4] 2L = North Carolina 15A NCAC 2L Groundwater Quality Standard

[5] 2B = North Carolina 15 NCAC 2B Surface Water Quality Standard for this Specific Stream Classification

[6] GWP = Groundwater Protection Standard

[7] MCL = Primary Drinking Water Standard (not currently applicable for regulatory comparisons)

[8] Preliminary Cause = Refers to a preliminary analysis of the cause and/or source of a detection over the respective 2L/2B Standard.
A definitive source of the detection was not determined as part of this report. Preliminary cause only listed pursuant to instructions

j =The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable

BOLD = Concentration >2L Standard

Table 7
Hydrologic Properties at Monitoring Well Locations
December 2-5, 2015

Monitoring Well	Hydraulic Conductivity (cm/sec)	Effective Porosity (%)	Hydraulic Gradient (ft/ft)	Average Linear Velocity Rate (ft/yr)	Flow Direction	Depth to Groundwater (ft btoc)	Groundwater Potentiometric Elevation (ft amsl)	Screened Interval Lithology
MW-2	3.70E-06	28	0.530	7	N57W	28.12	976.36	UC
MW-12	n/a	28	0.077	n/a	N42W	55.05	952.30	UC
MW-16	8.72E-04	17	0.075	401	S29E	31.37	1006.19	UC
MW-17	n/a	17	0.200	n/a	N57W	17.76	973.40	UC
MW-21	3.77E-03	28	0.304	4235	N49W	31.52	958.48	UC
MW-22	6.04E-04	28	0.227	506	N46W	15.55	943.42	UC
MW-23	9.83E-04	28	0.270	982	N31W	18.32	932.16	UC
MW-24	1.33E-02	28	0.052	2556	N81W	32.48	941.56	UC
MW-31	n/a	28	0.029	n/a	S45W	24.28	961.14	UC
MW-33	n/a	28	0.082	n/a	S40E	13.98	993.42	UC
MW-34	n/a	28	0.147	n/a	S27E	8.73	1005.87	UC
Minimum	3.70E-006	17	0.029	7	-	8.73	932.16	-
Average	3.26E-003	26	0.181	1448	-	25.20	967.66	-
Maximum	1.33E-002	28	0.530	4235	-	55.05	1006.19	-
MW-1	5.60E-05	10	0.135	78	N19W	35.80	1044.74	UC/UBR
MW-3	3.90E-06	10	0.019	1	S06W	25.89	998.84	UC/UBR
MW-4R	4.90E-04	10	0.043	219	S01E	16.14	996.50	UC/UBR
MW-5	6.40E-05	28	0.046	11	S24E	42.40	1008.86	UC/UBR
MW-14	n/a	10	2.685	n/a	N48W	42.81	954.63	UC/UBR
MW-15	n/a	10	0.063	n/a	N41W	24.44	999.00	UC/UBR
Minimum	3.90E-06	10	0.019	1	-	16.14	954.63	-
Average	1.53E-04	13	0.499	77	-	31.25	1000.43	-
Maximum	4.90E-04	28	2.685	219	-	42.81	1044.74	-
MW-1B	n/a	10	1.041	n/a	N00W	44.23	1038.33	UBR
MW-6	2.40E-05	10	0.120	30	N68W	26.27	976.51	UBR
MW-7	1.60E-06	10	0.089	1	S06W	40.58	968.66	UBR
MW-9	n/a	10	0.081	n/a	S30E	10.88	985.39	UBR
MW-11	n/a	10	0.058	n/a	S18W	41.50	970.46	UBR
MW-13	n/a	10	1.118	n/a	S78W	43.50	961.06	UBR
MW-19	1.92E-06	10	0.184	4	N17W	52.40	1019.08	UBR
MW-20	5.49E-05	10	0.036	20	N82W	40.40	1006.52	UBR
MW-25	5.41E-05	10	0.042	24	N75W	31.76	950.17	UBR
MW-26	1.16E-04	10	0.051	61	S22W	28.76	961.93	UBR
MW-27	2.83E-05	10	0.027	8	S10W	21.95	970.24	UBR
MW-32	n/a	10	0.120	n/a	S09E	32.14	993.12	UBR
Minimum	1.60E-06	10	0.027	1	-	10.88	950.17	-
Average	4.01E-05	10	0.247	21	-	34.53	983.46	-
Maximum	1.16E-04	10	1.118	61	-	52.40	1038.33	-
MW-10	n/a	10	0.072	n/a	n/a	37.92	1002.88	LBR
MW-12D	n/a	10	0.113	n/a	n/a	63.68	944.78	LBR
MW-18	1.19E-04	10	0.094	n/a	n/a	52.73	1031.60	LBR
Minimum	1.19E-04	10	0.072	-	-	37.92	944.78	-
Average	1.19E-04	10	0.093	-	-	51.44	993.09	-
Maximum	1.19E-04	10	0.113	-	-	63.68	1031.60	-

NOTE: Values for hydraulic conductivity obtained from GAI Consultants Sampling Report (April, 1995) & MESCO ACM Report (2008).

Average Linear Groundwater Velocities calculated only for UC & UBR wells with hydraulic conductivity values.

UC = Unconfined/saprolite; UBR = Upper Bedrock fracture system; LBR = Lower Bedrock fracture system.

Wells screened in LBR not utilized for flow directions/gradients.

Hydrologic Gradient taken from water elevations recorded between December 2-5, 2014.

Flow rate (Q) calculated via modified Darcy's equation:

$$Q = -\frac{K}{n_e} \cdot \frac{dh}{dl}$$

K= hydraulic conductivity
n_e = effective porosity
dh= head difference
dl= horizontal distance

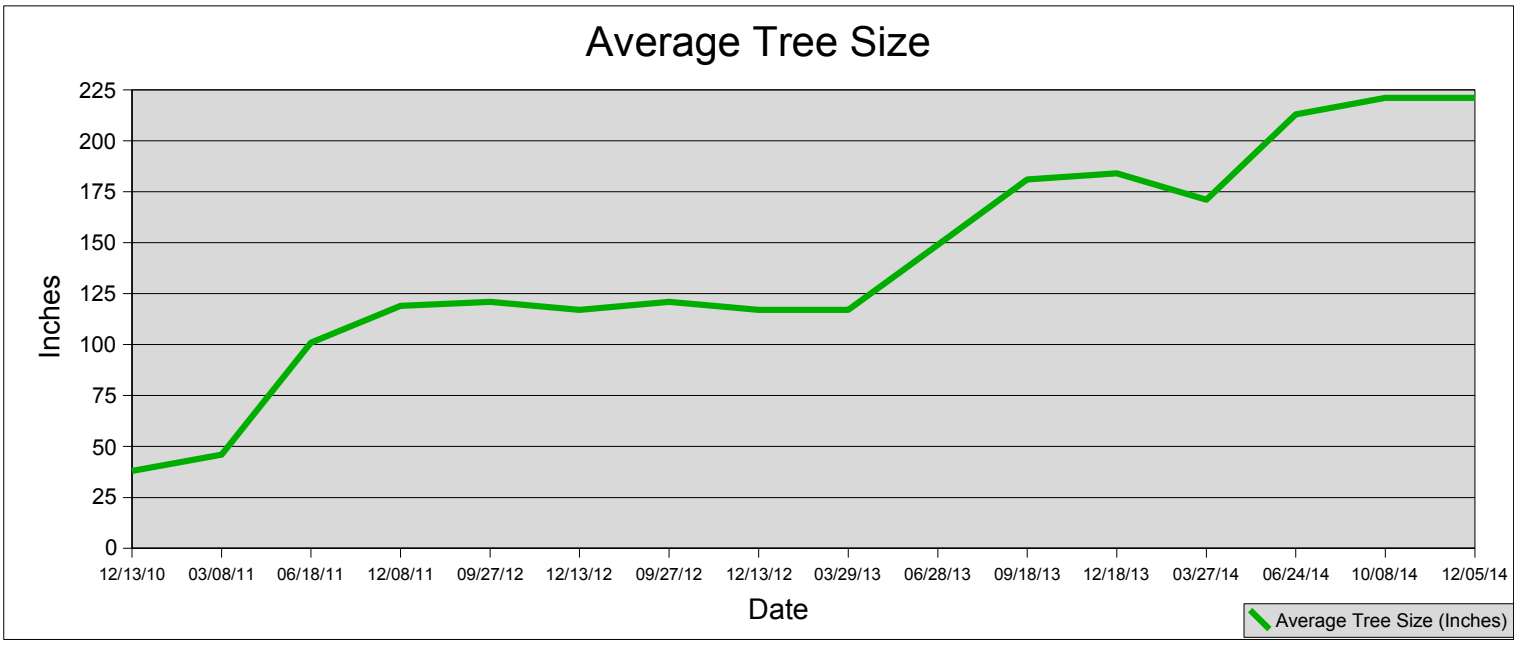
Table 8
MNA Parameter Data Summary
December 3-5, 2014

Parameters	Method	MDL*	Units	MW-18	MW-3	MW-5	MW-6	MW-7	MW-11	MW-12	MW-12D	MW-16	MW-24	MW-25	MW-26	MW-27	MW-31	MW-33	MW-34
				12/04/14	12/03/14	12/03/14	12/04/14	12/05/14	12/03/14	12/03/14	12/03/14	12/03/14	12/03/14	12/03/14	12/03/14	12/03/14	12/03/14	12/02/14	12/02/14
VFA – Acetic Acid	AM23G	8	ug/L	NS	NS	120	25	NS	50	54	120	67	72	51	76	160	21	NS	NS
VFA – Butyric Acid	AM23G	7	ug/L	NS	NS	<7	51	NS	<7	<7	<7	<7	<7	<7	<7	<7	51	NS	NS
VFA – Lactic Acid	AM23G	12	ug/L	NS	NS	260	300	NS	140	110	440	110	160	120	150	<12	99	NS	NS
VFA – Propionic Acid	AM23G	11	ug/L	NS	NS	44	27	NS	<11	38	<11	40	40	<11	42	43	27	NS	NS
VFA – Pyruvic Acid	AM23G	9	ug/L	NS	NS	<9	79	NS	<9	<9	<9	<9	<9	<9	<9	<9	73	NS	NS
Hydrogen	AM20GAX	0.13	nM	NS	NS	0.98	0.75	NS	0.71	1.4	0.72	1.1	0.73	0.81	1.5	0.74	0.71	NS	NS
Methane	AM20GAX	0.01	ug/L	NS	NS	4100	45	NS	5000	1700	0.36	4100	0.41	0.34	850	0.11	0.11	NS	NS
Ethene	AM20GAX	0.01	ug/L	NS	NS	<0.008	0.02	NS	<0.028	0.01	<0.008	<0.008	<0.008	<0.008	<0.024	<0.008	<0.008	NS	NS
Ethane	AM20GAX	0.001	ug/L	NS	NS	0.02	0.01	NS	0.04	0.63	1.1	0.03	1.7	1	0.03	0.001	<0.001	NS	NS
CO2-Dissolved	Field HACH Kit	0	mg/L	40	>100	>100	>100	>100	>100	>100	70	>100	fill in	fill in	>100	>100	60	NS	NS
Alkalinity	SM 2320B	1000	ug/L	NS	103000	<1000	31000	NS	216000	120000	367000	40700	69500	44600	163000	46600	39700	NS	NS
Sulfate	EPA 300.0	1000	ug/L	NS	1370	6550	17100	NS	2760	4120	1470	7300	3270	6090	4320	5620	2310	NS	NS
Sulfide	SM 4500-S2D	100	ug/L	NS	NS	<100	<100	NS	<100	<100	<100	<100	<100	103	<100	<100	<100	NS	NS
Chloride	SM 4500-Cl-E	500	ug/L	NS	22000	3640	7780	NS	48500	11100	58000	4820	3610	20200	28500	19500	13000	NS	NS
TOC	SM 5310B	500	ug/L	NS	6620	1720	2830	NS	6260	3010	5070	1870	2140	2360	3520	1960	2050	NS	NS
COD	SM 5220D	12500	ug/L	NS	33000	NS	22000	NS	83000	38000	61000	14000	<12500	<12500	25000	<12500	14000	NS	NS
BOD	SM5210B	2000	ug/L	NS	8400	2700	NS	NS	2700	NS	NS	NS	NS	NS	<2000	<2000	<2000	NS	NS
Iron (total)	EPA 6010	25	ug/L	NS	NS	47000	2840	NS	55200	29800	2720	62	297	1060	27700	NS	325	NS	NS
Nitrate	EPA 353.2	10	ug/L	NS	NS	<10	213	NS	<10	<10	137	59.7	89.4	307	<10	NS	1020	NS	NS
Temperature	Field Instrument	0	C	17.3	17.1	16.8	15.9	15.9	12.3	10.7	10.9	11.1	11.3	13.8	15.3	14.8	14.4	15.1	15.2
ORP	Field Instrument	-900	mV	307	-35	-92	182	-99	121	93	103	283	297	223	231	288	211	135	141
DO	Field Instrument	0	mg/L	1.9	0.1	0.2	0.6	0.1	0.8	0.7	0.9	0.3	0.4	0.5	0.4	3.5	0.4	4.4	4.6
pH	Field Instrument	0	SU	6.88	6.03	6.53	6.19	7.09	6.12	5.98	6.93	5.91	5.93	6.53	6.42	6.53	5.99	6.21	6.83
Sp. Conductance	Field Instrument	0	us/cm	40	460	410	410	510	410	220	70	80	190	180	280	510	90	110	80
Turbidity	Field Instrument	0	NTU	143	313	40.1	17.3	Clear	Clear	16.5	10.3	112	128	203	27.2	41.6	Slight	Slight	Slight

Notes:
VFA = Volatile Fatty Acids
MDL* = Lab Method Detection Limit or lowest field measurement possible
< = Not Detected above MDL value
>100 = CO2 Concentration exceeds maximum capability of method used
MNA monitoring not required for MW-31 by SWS but recorded per NC Underground Injection Control (UIC) Permit requirement
NS = Not Sampled since not required during this specific event or at this particular location

Table 9
Phytoremediation Tree Measurement Summary
December 5, 2014

		October 8, 2014						December 5, 2015					Oct 8, 2014 compared to Dec 5, 2014			
Tree ID	Date Planted	Height (in)	Width Middle (in)	Trunk Circ. (in)	Total (Ht + Width + Circ.) (in)	Notes	Date Planted	Height (in)	Width Middle (in)	Trunk Circ. (in)	Total (Ht + Width + Circ.) (in)	Notes	Height (in)	Width Middle (in)	Trunk Circ. (in)	Total (Ht + Width + Circ.) (in)
1	5/25/10	224	185	14.4	423		5/25/10	225	186	14.4	425		1	1	0.0	2
2	5/22/13	70	51	2.6	124		5/22/13	70	52	2.6	125		0	1	0.0	1
3	5/25/10	192	145	7.9	345		5/25/10	192	146	7.9	346		0	1	0.0	1
4	5/25/10	168	75	5.2	248		5/25/10	168	75	5.2	248		0	0	0.0	0
5	5/25/10	74	42	3.1	119		5/25/10	75	42	3.1	120		1	0	0.0	1
6	5/25/10	73	60	2.3	135		5/25/10	73	60	2.3	135		0	0	0.0	0
7	5/25/10	105	73	2.4	180		5/25/10	105	74	2.4	181		0	1	0.0	1
8	5/25/10	181	72	6.1	259		5/25/10	181	73	6.1	260		0	1	0.0	1
9	5/25/10	159	62	4.1	225		5/25/10	159	62	4.1	225		0	0	0.0	0
10	5/22/13	88	56	2.5	147		5/22/13	89	57	2.5	149		1	1	0.0	2
Min.	-	70.0	42	2	119	-	-	70	42	2.3	120	-	0	0	0.0	0
Avg.	-	133	82	5.1	221	-	-	134	83	5.1	221	-	0	1	0.0	1
Max.	-	224	185	14.4	423	-	-	225	186	14.4	425	-	1	1	0.0	2



Appendix A
Laboratory Analysis Reports
Chains of Custody

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

December 22, 2014

Mr. Jonathan Pfohl
Municipal Engineering Services
PO Box 97
Garner, NC 27529

RE: Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

Dear Mr. Pfohl:
Enclosed are the analytical results for sample(s) received by the laboratory between December 04, 2014 and December 05, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
West Virginia Certification #: 356
Virginia/VELAP Certification #: 460222

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SAMPLE SUMMARY

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92228156001	**MW-3**	Water	12/03/14 09:50	12/04/14 12:30
92228156002	**MW-11**	Water	12/03/14 17:35	12/04/14 12:30
92228156003	**MW-26**	Water	12/03/14 15:10	12/04/14 12:30
92228156004	**MW-27**	Water	12/03/14 14:30	12/04/14 12:30
92228156005	**MW-31**	Water	12/03/14 14:00	12/04/14 12:30
92228156006	**MW-18**	Water	12/04/14 13:55	12/05/14 14:20
92228156008	**MW-31**	Water	12/04/14 14:10	12/05/14 14:20

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SAMPLE ANALYTE COUNT

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92228156001	**MW-3**	EPA 6010	JMW	15	PASI-A
		EPA 8260	GAW	51	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 5210B	SER	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	JTJ	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92228156002	**MW-11**	EPA 6010	JMW	16	PASI-A
		EPA 8260	GAW	51	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 4500-S2D	JTJ	1	PASI-A
		SM 5210B	SER	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	JTJ	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92228156003	**MW-26**	EPA 6010	JMW	16	PASI-A
		EPA 8260	GAW	51	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 4500-S2D	JTJ	1	PASI-A
		SM 5210B	SER	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	JTJ	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92228156004	**MW-27**	EPA 6010	JMW	15	PASI-A
		EPA 8260	GAW	51	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 4500-S2D	JTJ	1	PASI-A
		SM 5210B	SER	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	JTJ	1	PASI-A
		SM 5310B	AES2	1	PASI-A

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SAMPLE ANALYTE COUNT

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92228156005	**MW-31**	EPA 6010	JMW	16	PASI-A
		EPA 8260	GAW	51	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 4500-S2D	JTJ	1	PASI-A
		SM 5210B	SER	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	JTJ	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92228156006	**MW-18**	EPA 6010	JMW	15	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8260	GAW	51	PASI-C

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ANALYTICAL RESULTS

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

Sample: MW-3 **Lab ID: 92228156001** Collected: 12/03/14 09:50 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/05/14 16:10	12/11/14 18:20	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:20	7440-38-2	
Barium	**44.1J**	ug/L	100	2.5	1	12/05/14 16:10	12/11/14 18:20	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 18:20	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 18:20	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:20	7440-47-3	
Cobalt	**12.4**	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:20	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:20	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:20	7439-92-1	
Nickel	**10.6J**	ug/L	50.0	2.5	1	12/05/14 16:10	12/11/14 18:20	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 18:20	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:20	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/05/14 16:10	12/11/14 18:20	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/05/14 16:10	12/11/14 18:20	7440-62-2	
Zinc	**9.1J**	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 18:20	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/05/14 17:37	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/05/14 17:37	107-13-1	
Benzene	**6.0**	ug/L	1.0	0.25	1		12/05/14 17:37	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/05/14 17:37	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/05/14 17:37	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/05/14 17:37	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/05/14 17:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/05/14 17:37	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/05/14 17:37	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/05/14 17:37	56-23-5	
Chlorobenzene	**0.98J**	ug/L	3.0	0.23	1		12/05/14 17:37	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/05/14 17:37	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/05/14 17:37	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/05/14 17:37	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/05/14 17:37	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/05/14 17:37	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/05/14 17:37	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/05/14 17:37	74-95-3	
1,2-Dichlorobenzene	**0.48J**	ug/L	5.0	0.30	1		12/05/14 17:37	95-50-1	
1,4-Dichlorobenzene	**7.2**	ug/L	1.0	0.33	1		12/05/14 17:37	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/05/14 17:37	110-57-6	
1,1-Dichloroethane	**0.68J**	ug/L	5.0	0.32	1		12/05/14 17:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/05/14 17:37	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/05/14 17:37	75-35-4	
cis-1,2-Dichloroethene	**7.2**	ug/L	5.0	0.19	1		12/05/14 17:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/05/14 17:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/05/14 17:37	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/05/14 17:37	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/05/14 17:37	10061-01-5	

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ANALYTICAL RESULTS

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

Sample: MW-3 **Lab ID: 92228156001** Collected: 12/03/14 09:50 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/05/14 17:37	10061-02-6	
Ethylbenzene	**1.7**	ug/L	1.0	0.30	1		12/05/14 17:37	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/05/14 17:37	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/05/14 17:37	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/05/14 17:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/05/14 17:37	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/05/14 17:37	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/05/14 17:37	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/05/14 17:37	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/05/14 17:37	127-18-4	
Toluene	**1.3**	ug/L	1.0	0.26	1		12/05/14 17:37	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/05/14 17:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/05/14 17:37	79-00-5	
Trichloroethene	**0.98J**	ug/L	1.0	0.47	1		12/05/14 17:37	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/05/14 17:37	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/05/14 17:37	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/05/14 17:37	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/05/14 17:37	75-01-4	
Xylene (Total)	**8.1**	ug/L	5.0	0.66	1		12/05/14 17:37	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	86	%	70-130		1		12/05/14 17:37	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		12/05/14 17:37	17060-07-0	
Toluene-d8 (S)	106	%	70-130		1		12/05/14 17:37	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**103000**	ug/L	5000	1000	1		12/11/14 22:11		M1
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**8400**	ug/L	2000	2000	1	12/05/14 07:34	12/10/14 04:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**1370J**	ug/L	250000	1000	1		12/17/14 15:35	14808-79-8	
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**22000**	ug/L	1000	500	1		12/09/14 03:31	16887-00-6	M1
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**33000**	ug/L	25000	12500	1		12/16/14 10:30		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**6620**	ug/L	1000	500	1		12/06/14 17:02	7440-44-0	

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ANALYTICAL RESULTS

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

Sample: MW-11 **Lab ID: 92228156002** Collected: 12/03/14 17:35 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/05/14 16:10	12/11/14 18:23	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:23	7440-38-2	
Barium	**146**	ug/L	100	2.5	1	12/05/14 16:10	12/11/14 18:23	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 18:23	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 18:23	7440-43-9	
Chromium	**7.3J**	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:23	7440-47-3	
Cobalt	**110**	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:23	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:23	7440-50-8	
Iron	**55200**	ug/L	300	25.0	1	12/05/14 16:10	12/11/14 18:23	7439-89-6	
Lead	**5.2J**	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:23	7439-92-1	
Nickel	**16.2J**	ug/L	50.0	2.5	1	12/05/14 16:10	12/11/14 18:23	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 18:23	7782-49-2	
Silver	**2.7J**	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:23	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/05/14 16:10	12/11/14 18:23	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/05/14 16:10	12/11/14 18:23	7440-62-2	
Zinc	**19.4**	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 18:23	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/05/14 18:10	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/05/14 18:10	107-13-1	
Benzene	**4.1**	ug/L	1.0	0.25	1		12/05/14 18:10	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/05/14 18:10	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/05/14 18:10	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/05/14 18:10	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/05/14 18:10	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/05/14 18:10	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/05/14 18:10	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/05/14 18:10	56-23-5	
Chlorobenzene	**2.3J**	ug/L	3.0	0.23	1		12/05/14 18:10	108-90-7	
Chloroethane	**0.88J**	ug/L	10.0	0.54	1		12/05/14 18:10	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/05/14 18:10	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/05/14 18:10	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/05/14 18:10	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/05/14 18:10	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/05/14 18:10	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/05/14 18:10	74-95-3	
1,2-Dichlorobenzene	**0.45J**	ug/L	5.0	0.30	1		12/05/14 18:10	95-50-1	
1,4-Dichlorobenzene	**9.2**	ug/L	1.0	0.33	1		12/05/14 18:10	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/05/14 18:10	110-57-6	
1,1-Dichloroethane	**0.45J**	ug/L	5.0	0.32	1		12/05/14 18:10	75-34-3	
1,2-Dichloroethane	**0.14J**	ug/L	1.0	0.12	1		12/05/14 18:10	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/05/14 18:10	75-35-4	
cis-1,2-Dichloroethene	**26.2**	ug/L	5.0	0.19	1		12/05/14 18:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/05/14 18:10	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/05/14 18:10	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/05/14 18:10	142-28-9	

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ANALYTICAL RESULTS

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

Sample: MW-11 **Lab ID: 92228156002** Collected: 12/03/14 17:35 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/05/14 18:10	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/05/14 18:10	10061-02-6	
Ethylbenzene	**0.34J**	ug/L	1.0	0.30	1		12/05/14 18:10	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/05/14 18:10	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/05/14 18:10	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/05/14 18:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/05/14 18:10	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/05/14 18:10	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/05/14 18:10	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/05/14 18:10	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/05/14 18:10	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/05/14 18:10	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/05/14 18:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/05/14 18:10	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/05/14 18:10	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/05/14 18:10	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/05/14 18:10	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/05/14 18:10	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/05/14 18:10	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/05/14 18:10	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	87	%	70-130		1		12/05/14 18:10	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-130		1		12/05/14 18:10	17060-07-0	
Toluene-d8 (S)	107	%	70-130		1		12/05/14 18:10	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**216000**	ug/L	5000	1000	1		12/11/14 22:48		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D								
Sulfide	ND	ug/L	1000	100	1		12/06/14 15:00	18496-25-8	
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**2700**	ug/L	2000	2000	1	12/05/14 07:34	12/10/14 04:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**2760J**	ug/L	250000	1000	1		12/17/14 15:48	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	ug/L	10000	10.0	1		12/05/14 02:14		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**48500**	ug/L	5000	2500	5		12/09/14 03:56	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**83000**	ug/L	25000	12500	1		12/16/14 10:30		

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ANALYTICAL RESULTS

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

Sample: MW-11 **Lab ID: 92228156002** Collected: 12/03/14 17:35 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**6260**	ug/L	1000	500	1		12/06/14 06:20	7440-44-0	

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ANALYTICAL RESULTS

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

Sample: MW-26 **Lab ID: 92228156003** Collected: 12/03/14 15:10 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/05/14 16:10	12/11/14 18:27	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:27	7440-38-2	
Barium	**87.3J**	ug/L	100	2.5	1	12/05/14 16:10	12/11/14 18:27	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 18:27	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 18:27	7440-43-9	
Chromium	**4.4J**	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:27	7440-47-3	
Cobalt	**92.3**	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:27	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:27	7440-50-8	
Iron	**27700**	ug/L	300	25.0	1	12/05/14 16:10	12/11/14 18:27	7439-89-6	
Lead	**2.6J**	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:27	7439-92-1	
Nickel	**12.2J**	ug/L	50.0	2.5	1	12/05/14 16:10	12/11/14 18:27	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 18:27	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:27	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/05/14 16:10	12/11/14 18:27	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/05/14 16:10	12/11/14 18:27	7440-62-2	
Zinc	**21.5**	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 18:27	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/05/14 18:27	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/05/14 18:27	107-13-1	
Benzene	**2.2**	ug/L	1.0	0.25	1		12/05/14 18:27	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/05/14 18:27	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/05/14 18:27	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/05/14 18:27	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/05/14 18:27	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/05/14 18:27	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/05/14 18:27	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/05/14 18:27	56-23-5	
Chlorobenzene	**1.6J**	ug/L	3.0	0.23	1		12/05/14 18:27	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/05/14 18:27	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/05/14 18:27	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/05/14 18:27	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/05/14 18:27	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/05/14 18:27	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/05/14 18:27	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/05/14 18:27	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/05/14 18:27	95-50-1	
1,4-Dichlorobenzene	**6.3**	ug/L	1.0	0.33	1		12/05/14 18:27	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/05/14 18:27	110-57-6	
1,1-Dichloroethane	**0.39J**	ug/L	5.0	0.32	1		12/05/14 18:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/05/14 18:27	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/05/14 18:27	75-35-4	
cis-1,2-Dichloroethene	**24.3**	ug/L	5.0	0.19	1		12/05/14 18:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/05/14 18:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/05/14 18:27	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/05/14 18:27	142-28-9	

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ANALYTICAL RESULTS

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

Sample: MW-26 **Lab ID: 92228156003** Collected: 12/03/14 15:10 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/05/14 18:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/05/14 18:27	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/05/14 18:27	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/05/14 18:27	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/05/14 18:27	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/05/14 18:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/05/14 18:27	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/05/14 18:27	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/05/14 18:27	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/05/14 18:27	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/05/14 18:27	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/05/14 18:27	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/05/14 18:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/05/14 18:27	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/05/14 18:27	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/05/14 18:27	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/05/14 18:27	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/05/14 18:27	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/05/14 18:27	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/05/14 18:27	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	86	%	70-130		1		12/05/14 18:27	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		12/05/14 18:27	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		12/05/14 18:27	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**163000**	ug/L	5000	1000	1		12/11/14 23:03		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D								
Sulfide	ND	ug/L	1000	100	1		12/06/14 15:00	18496-25-8	
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	ug/L	2000	2000	1	12/05/14 07:34	12/10/14 04:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**4320J**	ug/L	250000	1000	1		12/18/14 13:33	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	ug/L	10000	10.0	1		12/05/14 02:10		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**28500**	ug/L	1000	500	1		12/09/14 03:35	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**25000**	ug/L	25000	12500	1		12/16/14 10:30		

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ANALYTICAL RESULTS

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

Sample: MW-26 **Lab ID: 92228156003** Collected: 12/03/14 15:10 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**3520**	ug/L	1000	500	1		12/06/14 06:31	7440-44-0	

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ANALYTICAL RESULTS

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

Sample: MW-27 **Lab ID: 92228156004** Collected: 12/03/14 14:30 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/05/14 16:10	12/11/14 18:30	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:30	7440-38-2	
Barium	**40.3J**	ug/L	100	2.5	1	12/05/14 16:10	12/11/14 18:30	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 18:30	7440-41-7	
Cadmium	**1.1**	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 18:30	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:30	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:30	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:30	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:30	7439-92-1	
Nickel	**4.9J**	ug/L	50.0	2.5	1	12/05/14 16:10	12/11/14 18:30	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 18:30	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:30	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/05/14 16:10	12/11/14 18:30	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/05/14 16:10	12/11/14 18:30	7440-62-2	
Zinc	**14.0**	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 18:30	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/05/14 18:44	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/05/14 18:44	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		12/05/14 18:44	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/05/14 18:44	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/05/14 18:44	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/05/14 18:44	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/05/14 18:44	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/05/14 18:44	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/05/14 18:44	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/05/14 18:44	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/05/14 18:44	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/05/14 18:44	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/05/14 18:44	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/05/14 18:44	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/05/14 18:44	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/05/14 18:44	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/05/14 18:44	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/05/14 18:44	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/05/14 18:44	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/05/14 18:44	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/05/14 18:44	110-57-6	
1,1-Dichloroethane	**0.40J**	ug/L	5.0	0.32	1		12/05/14 18:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/05/14 18:44	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/05/14 18:44	75-35-4	
cis-1,2-Dichloroethene	**17.2**	ug/L	5.0	0.19	1		12/05/14 18:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/05/14 18:44	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/05/14 18:44	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/05/14 18:44	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/05/14 18:44	10061-01-5	

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ANALYTICAL RESULTS

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

Sample: MW-27 **Lab ID: 92228156004** Collected: 12/03/14 14:30 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/05/14 18:44	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/05/14 18:44	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/05/14 18:44	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/05/14 18:44	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/05/14 18:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/05/14 18:44	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/05/14 18:44	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/05/14 18:44	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/05/14 18:44	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/05/14 18:44	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/05/14 18:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/05/14 18:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/05/14 18:44	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/05/14 18:44	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/05/14 18:44	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/05/14 18:44	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/05/14 18:44	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/05/14 18:44	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/05/14 18:44	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	88	%	70-130		1		12/05/14 18:44	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	70-130		1		12/05/14 18:44	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		12/05/14 18:44	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**46600**	ug/L	5000	1000	1		12/11/14 23:16		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D								
Sulfide	ND	ug/L	1000	100	1		12/06/14 15:00	18496-25-8	
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	ug/L	2000	2000	1	12/05/14 07:34	12/10/14 04:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**5620J**	ug/L	250000	1000	1		12/18/14 14:13	14808-79-8	
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**19500**	ug/L	1000	500	1		12/09/14 03:36	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	ug/L	25000	12500	1		12/16/14 10:30		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**1960**	ug/L	1000	500	1		12/06/14 06:41	7440-44-0	

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ANALYTICAL RESULTS

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

Sample: MW-31 **Lab ID: 92228156005** Collected: 12/03/14 14:00 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/05/14 16:10	12/11/14 18:33	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:33	7440-38-2	
Barium	**87.2J**	ug/L	100	2.5	1	12/05/14 16:10	12/11/14 18:33	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 18:33	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 18:33	7440-43-9	
Chromium	**2.7J**	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:33	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:33	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:33	7440-50-8	
Iron	**325**	ug/L	300	25.0	1	12/05/14 16:10	12/11/14 18:33	7439-89-6	B
Lead	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:33	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	12/05/14 16:10	12/11/14 18:33	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 18:33	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:33	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/05/14 16:10	12/11/14 18:33	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/05/14 16:10	12/11/14 18:33	7440-62-2	
Zinc	**16.1**	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 18:33	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/05/14 19:01	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/05/14 19:01	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		12/05/14 19:01	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/05/14 19:01	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/05/14 19:01	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/05/14 19:01	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/05/14 19:01	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/05/14 19:01	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/05/14 19:01	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/05/14 19:01	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/05/14 19:01	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/05/14 19:01	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/05/14 19:01	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/05/14 19:01	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/05/14 19:01	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/05/14 19:01	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/05/14 19:01	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/05/14 19:01	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/05/14 19:01	95-50-1	
1,4-Dichlorobenzene	**0.66J**	ug/L	1.0	0.33	1		12/05/14 19:01	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/05/14 19:01	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		12/05/14 19:01	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/05/14 19:01	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/05/14 19:01	75-35-4	
cis-1,2-Dichloroethene	**1.5J**	ug/L	5.0	0.19	1		12/05/14 19:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/05/14 19:01	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/05/14 19:01	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/05/14 19:01	142-28-9	

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ANALYTICAL RESULTS

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

Sample: MW-31 **Lab ID: 92228156005** Collected: 12/03/14 14:00 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/05/14 19:01	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/05/14 19:01	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/05/14 19:01	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/05/14 19:01	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/05/14 19:01	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/05/14 19:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/05/14 19:01	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/05/14 19:01	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/05/14 19:01	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/05/14 19:01	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/05/14 19:01	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/05/14 19:01	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/05/14 19:01	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/05/14 19:01	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/05/14 19:01	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/05/14 19:01	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/05/14 19:01	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/05/14 19:01	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/05/14 19:01	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/05/14 19:01	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	89	%	70-130		1		12/05/14 19:01	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	70-130		1		12/05/14 19:01	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		12/05/14 19:01	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**39700**	ug/L	5000	1000	1		12/11/14 23:27		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D								
Sulfide	ND	ug/L	1000	100	1		12/06/14 15:00	18496-25-8	
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	ND	ug/L	2000	2000	1	12/05/14 07:34	12/10/14 04:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**2310J**	ug/L	250000	1000	1		12/18/14 14:27	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**1020J**	ug/L	10000	10.0	1		12/05/14 01:48		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**13000**	ug/L	1000	500	1		12/09/14 03:36	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**14000J**	ug/L	25000	12500	1		12/16/14 10:30		

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ANALYTICAL RESULTS

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

Sample: MW-31 **Lab ID: 92228156005** Collected: 12/03/14 14:00 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**2050**	ug/L	1000	500	1		12/06/14 06:52	7440-44-0	

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ANALYTICAL RESULTS

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

Sample: MW-18 **Lab ID: 92228156006** Collected: 12/04/14 13:55 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/08/14 15:25	12/11/14 21:06	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 21:06	7440-38-2	
Barium	**20.6J**	ug/L	100	2.5	1	12/08/14 15:25	12/11/14 21:06	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 21:06	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 21:06	7440-43-9	
Chromium	**3.6J**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 21:06	7440-47-3	
Cobalt	**2.9J**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 21:06	7440-48-4	
Copper	**9.5J**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 21:06	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 21:06	7439-92-1	
Nickel	**4.9J**	ug/L	50.0	2.5	1	12/08/14 15:25	12/11/14 21:06	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 21:06	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 21:06	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/08/14 15:25	12/11/14 21:06	7440-28-0	
Vanadium	**5.1J**	ug/L	25.0	2.5	1	12/08/14 15:25	12/11/14 21:06	7440-62-2	
Zinc	**22.5**	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 21:06	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**0.51**	ug/L	0.20	0.10	1	12/06/14 12:10	12/11/14 14:21	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/11/14 09:31	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/11/14 09:31	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		12/11/14 09:31	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/11/14 09:31	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/11/14 09:31	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/11/14 09:31	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/11/14 09:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/11/14 09:31	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/11/14 09:31	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/11/14 09:31	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/11/14 09:31	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/11/14 09:31	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/11/14 09:31	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/11/14 09:31	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/11/14 09:31	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/11/14 09:31	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/11/14 09:31	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/11/14 09:31	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/11/14 09:31	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/11/14 09:31	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/11/14 09:31	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		12/11/14 09:31	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/11/14 09:31	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/11/14 09:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		12/11/14 09:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/11/14 09:31	156-60-5	

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ANALYTICAL RESULTS

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

Sample: MW-18 **Lab ID: 92228156006** Collected: 12/04/14 13:55 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/11/14 09:31	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/11/14 09:31	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/11/14 09:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/11/14 09:31	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/11/14 09:31	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/11/14 09:31	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/11/14 09:31	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/11/14 09:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/11/14 09:31	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/11/14 09:31	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/11/14 09:31	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/11/14 09:31	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/11/14 09:31	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/11/14 09:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/11/14 09:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/11/14 09:31	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/11/14 09:31	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/11/14 09:31	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/11/14 09:31	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/11/14 09:31	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/11/14 09:31	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/11/14 09:31	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	105	%	70-130		1		12/11/14 09:31	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	70-130		1		12/11/14 09:31	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		12/11/14 09:31	2037-26-5	

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QUALITY CONTROL DATA

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

QC Batch: MERP/7378
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Associated Lab Samples: 92228156006

METHOD BLANK: 1345664
Matrix: Water
Associated Lab Samples: 92228156006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	12/11/14 13:10	

LABORATORY CONTROL SAMPLE: 1345665

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.5	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1345666 1345667

Parameter	Units	92228242001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.4	2.4	97	97	75-125	0	25	

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QUALITY CONTROL DATA

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

QC Batch: MPRP/17481 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92228156001, 92228156002, 92228156003, 92228156004, 92228156005

METHOD BLANK: 1345047 Matrix: Water
Associated Lab Samples: 92228156001, 92228156002, 92228156003, 92228156004, 92228156005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	6.0	12/11/14 18:05	
Arsenic	ug/L	ND	10.0	12/11/14 18:05	
Barium	ug/L	ND	100	12/11/14 18:05	
Beryllium	ug/L	ND	1.0	12/11/14 18:05	
Cadmium	ug/L	ND	1.0	12/11/14 18:05	
Chromium	ug/L	ND	10.0	12/11/14 18:05	
Cobalt	ug/L	ND	10.0	12/11/14 18:05	
Copper	ug/L	ND	10.0	12/11/14 18:05	
Iron	ug/L	47.1J	300	12/11/14 18:05	
Lead	ug/L	ND	10.0	12/11/14 18:05	
Nickel	ug/L	ND	50.0	12/11/14 18:05	
Selenium	ug/L	ND	10.0	12/11/14 18:05	
Silver	ug/L	ND	10.0	12/11/14 18:05	
Thallium	ug/L	ND	5.5	12/11/14 18:05	
Vanadium	ug/L	ND	25.0	12/11/14 18:05	
Zinc	ug/L	6.9J	10.0	12/11/14 18:05	

LABORATORY CONTROL SAMPLE: 1345048

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	491	98	80-120	
Arsenic	ug/L	500	484	97	80-120	
Barium	ug/L	500	486	97	80-120	
Beryllium	ug/L	500	499	100	80-120	
Cadmium	ug/L	500	492	98	80-120	
Chromium	ug/L	500	484	97	80-120	
Cobalt	ug/L	500	486	97	80-120	
Copper	ug/L	500	498	100	80-120	
Iron	ug/L	5000	4960	99	80-120	
Lead	ug/L	500	487	97	80-120	
Nickel	ug/L	500	494	99	80-120	
Selenium	ug/L	500	485	97	80-120	
Silver	ug/L	250	244	98	80-120	
Thallium	ug/L	500	485	97	80-120	
Vanadium	ug/L	500	492	98	80-120	
Zinc	ug/L	500	485	97	80-120	

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QUALITY CONTROL DATA

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1345049 1345050

Parameter	Units	92228073022 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	500	500	482	483	96	96	75-125	0	25	
Arsenic	ug/L	ND	500	500	475	480	95	96	75-125	1	25	
Barium	ug/L	5.0	500	500	485	486	96	96	75-125	0	25	
Beryllium	ug/L	ND	500	500	498	497	99	99	75-125	0	25	
Cadmium	ug/L	ND	500	500	483	484	97	97	75-125	0	25	
Chromium	ug/L	ND	500	500	481	482	96	96	75-125	0	25	
Cobalt	ug/L	ND	500	500	474	475	95	95	75-125	0	25	
Copper	ug/L	3.8J	500	500	492	493	98	98	75-125	0	25	
Iron	ug/L	176	5000	5000	5170	5150	100	99	75-125	0	25	
Lead	ug/L	ND	500	500	473	473	95	95	75-125	0	25	
Nickel	ug/L	ND	500	500	484	483	97	97	75-125	0	25	
Selenium	ug/L	ND	500	500	476	481	95	96	75-125	1	25	
Silver	ug/L	ND	250	250	240	240	96	96	75-125	0	25	
Thallium	ug/L	ND	500	500	473	473	95	95	75-125	0	25	
Vanadium	ug/L	ND	500	500	490	489	98	98	75-125	0	25	
Zinc	ug/L	6.9J	500	500	480	481	95	95	75-125	0	25	

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QUALITY CONTROL DATA

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

QC Batch: MPRP/17494
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92228156006

METHOD BLANK: 1346098
Matrix: Water
Associated Lab Samples: 92228156006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	6.0	12/11/14 19:51	
Arsenic	ug/L	ND	10.0	12/11/14 19:51	
Barium	ug/L	ND	100	12/11/14 19:51	
Beryllium	ug/L	ND	1.0	12/11/14 19:51	
Cadmium	ug/L	ND	1.0	12/11/14 19:51	
Chromium	ug/L	ND	10.0	12/11/14 19:51	
Cobalt	ug/L	ND	10.0	12/11/14 19:51	
Copper	ug/L	ND	10.0	12/11/14 19:51	
Lead	ug/L	ND	10.0	12/11/14 19:51	
Nickel	ug/L	ND	50.0	12/11/14 19:51	
Selenium	ug/L	ND	10.0	12/11/14 19:51	
Silver	ug/L	ND	10.0	12/11/14 19:51	
Thallium	ug/L	ND	5.5	12/11/14 19:51	
Vanadium	ug/L	ND	25.0	12/11/14 19:51	
Zinc	ug/L	ND	10.0	12/11/14 19:51	

LABORATORY CONTROL SAMPLE: 1346099

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	496	99	80-120	
Arsenic	ug/L	500	493	99	80-120	
Barium	ug/L	500	491	98	80-120	
Beryllium	ug/L	500	509	102	80-120	
Cadmium	ug/L	500	500	100	80-120	
Chromium	ug/L	500	491	98	80-120	
Cobalt	ug/L	500	492	98	80-120	
Copper	ug/L	500	500	100	80-120	
Lead	ug/L	500	495	99	80-120	
Nickel	ug/L	500	502	100	80-120	
Selenium	ug/L	500	498	100	80-120	
Silver	ug/L	250	247	99	80-120	
Thallium	ug/L	500	491	98	80-120	
Vanadium	ug/L	500	500	100	80-120	
Zinc	ug/L	500	492	98	80-120	

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QUALITY CONTROL DATA

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1346100 1346101

Parameter	Units	92228163012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	500	500	488	489	98	98	75-125	0	25	
Arsenic	ug/L	ND	500	500	496	489	99	97	75-125	1	25	
Barium	ug/L	41.8J	500	500	530	528	98	97	75-125	0	25	
Beryllium	ug/L	ND	500	500	509	508	102	102	75-125	0	25	
Cadmium	ug/L	0.51J	500	500	499	495	100	99	75-125	1	25	
Chromium	ug/L	ND	500	500	487	485	97	97	75-125	0	25	
Cobalt	ug/L	22.3	500	500	502	500	96	96	75-125	0	25	
Copper	ug/L	ND	500	500	506	503	101	100	75-125	1	25	
Lead	ug/L	3.0J	500	500	481	477	96	95	75-125	1	25	
Nickel	ug/L	10.2J	500	500	500	497	98	97	75-125	1	25	
Selenium	ug/L	ND	500	500	484	487	97	97	75-125	1	25	
Silver	ug/L	ND	250	250	248	247	99	99	75-125	0	25	
Thallium	ug/L	ND	500	500	478	476	95	95	75-125	0	25	
Vanadium	ug/L	ND	500	500	502	499	100	100	75-125	1	25	
Zinc	ug/L	27.8	500	500	514	508	97	96	75-125	1	25	

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QUALITY CONTROL DATA

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

QC Batch: MSV/29504 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92228156001, 92228156002, 92228156003, 92228156004, 92228156005

METHOD BLANK: 1345070 Matrix: Water
Associated Lab Samples: 92228156001, 92228156002, 92228156003, 92228156004, 92228156005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	12/05/14 12:08	
1,1,1-Trichloroethane	ug/L	ND	1.0	12/05/14 12:08	
1,1,2,2-Tetrachloroethane	ug/L	ND	3.0	12/05/14 12:08	
1,1,2-Trichloroethane	ug/L	ND	1.0	12/05/14 12:08	
1,1-Dichloroethane	ug/L	ND	5.0	12/05/14 12:08	
1,1-Dichloroethene	ug/L	ND	5.0	12/05/14 12:08	
1,2,3-Trichloropropane	ug/L	ND	1.0	12/05/14 12:08	
1,2-Dibromo-3-chloropropane	ug/L	ND	13.0	12/05/14 12:08	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	12/05/14 12:08	
1,2-Dichlorobenzene	ug/L	ND	5.0	12/05/14 12:08	
1,2-Dichloroethane	ug/L	ND	1.0	12/05/14 12:08	
1,2-Dichloropropane	ug/L	ND	1.0	12/05/14 12:08	
1,3-Dichloropropane	ug/L	ND	1.0	12/05/14 12:08	
1,4-Dichlorobenzene	ug/L	ND	1.0	12/05/14 12:08	
2-Butanone (MEK)	ug/L	ND	100	12/05/14 12:08	
2-Hexanone	ug/L	ND	50.0	12/05/14 12:08	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	12/05/14 12:08	
Acetone	ug/L	ND	100	12/05/14 12:08	
Acrylonitrile	ug/L	ND	200	12/05/14 12:08	
Benzene	ug/L	ND	1.0	12/05/14 12:08	
Bromochloromethane	ug/L	ND	3.0	12/05/14 12:08	
Bromodichloromethane	ug/L	ND	1.0	12/05/14 12:08	
Bromoform	ug/L	ND	3.0	12/05/14 12:08	
Bromomethane	ug/L	4.4J	10.0	12/05/14 12:08	
Carbon disulfide	ug/L	ND	100	12/05/14 12:08	
Carbon tetrachloride	ug/L	ND	1.0	12/05/14 12:08	
Chlorobenzene	ug/L	ND	3.0	12/05/14 12:08	
Chloroethane	ug/L	ND	10.0	12/05/14 12:08	
Chloroform	ug/L	ND	5.0	12/05/14 12:08	
Chloromethane	ug/L	ND	1.0	12/05/14 12:08	
cis-1,2-Dichloroethene	ug/L	ND	5.0	12/05/14 12:08	
cis-1,3-Dichloropropene	ug/L	ND	1.0	12/05/14 12:08	
Dibromochloromethane	ug/L	ND	3.0	12/05/14 12:08	
Dibromomethane	ug/L	ND	10.0	12/05/14 12:08	
Ethylbenzene	ug/L	ND	1.0	12/05/14 12:08	
Iodomethane	ug/L	ND	10.0	12/05/14 12:08	
Methylene Chloride	ug/L	ND	1.0	12/05/14 12:08	
Styrene	ug/L	ND	1.0	12/05/14 12:08	
Tetrachloroethene	ug/L	ND	1.0	12/05/14 12:08	
Toluene	ug/L	ND	1.0	12/05/14 12:08	
trans-1,2-Dichloroethene	ug/L	ND	5.0	12/05/14 12:08	

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QUALITY CONTROL DATA

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

METHOD BLANK: 1345070 Matrix: Water
Associated Lab Samples: 92228156001, 92228156002, 92228156003, 92228156004, 92228156005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,3-Dichloropropene	ug/L	ND	1.0	12/05/14 12:08	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	12/05/14 12:08	
Trichloroethene	ug/L	ND	1.0	12/05/14 12:08	
Trichlorofluoromethane	ug/L	ND	1.0	12/05/14 12:08	
Vinyl acetate	ug/L	ND	50.0	12/05/14 12:08	
Vinyl chloride	ug/L	ND	1.0	12/05/14 12:08	
Xylene (Total)	ug/L	ND	5.0	12/05/14 12:08	
1,2-Dichloroethane-d4 (S)	%	108	70-130	12/05/14 12:08	
4-Bromofluorobenzene (S)	%	87	70-130	12/05/14 12:08	
Toluene-d8 (S)	%	104	70-130	12/05/14 12:08	

LABORATORY CONTROL SAMPLE: 1345071

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	47.3	95	80-125	
1,1,1-Trichloroethane	ug/L	50	43.5	87	71-129	
1,1,2,2-Tetrachloroethane	ug/L	50	47.2	94	79-124	
1,1,2-Trichloroethane	ug/L	50	50.9	102	85-125	
1,1-Dichloroethane	ug/L	50	44.8	90	73-126	
1,1-Dichloroethene	ug/L	50	42.9	86	66-135	
1,2,3-Trichloropropane	ug/L	50	41.9	84	75-130	
1,2-Dibromo-3-chloropropane	ug/L	50	48.7	97	71-133	
1,2-Dibromoethane (EDB)	ug/L	50	53.9	108	83-124	
1,2-Dichlorobenzene	ug/L	50	48.8	98	80-133	
1,2-Dichloroethane	ug/L	50	41.8	84	67-128	
1,2-Dichloropropane	ug/L	50	50.2	100	75-132	
1,3-Dichloropropane	ug/L	50	53.3	107	76-131	
1,4-Dichlorobenzene	ug/L	50	47.6	95	78-130	
2-Butanone (MEK)	ug/L	100	97.5J	98	61-144	
2-Hexanone	ug/L	100	106	106	68-143	
4-Methyl-2-pentanone (MIBK)	ug/L	100	113	113	72-135	
Acetone	ug/L	100	97.3J	97	48-146	
Acrylonitrile	ug/L	250	138J	55	40-160	
Benzene	ug/L	50	52.8	106	80-125	
Bromochloromethane	ug/L	50	51.4	103	71-125	
Bromodichloromethane	ug/L	50	44.0	88	78-124	
Bromoform	ug/L	50	38.5	77	71-128	
Bromomethane	ug/L	50	47.8	96	40-160	
Carbon disulfide	ug/L	50	52.0J	104	50-160	
Carbon tetrachloride	ug/L	50	44.3	89	69-131	
Chlorobenzene	ug/L	50	47.3	95	81-122	
Chloroethane	ug/L	50	47.0	94	39-148	
Chloroform	ug/L	50	39.7	79	73-127	
Chloromethane	ug/L	50	54.7	109	44-146	

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QUALITY CONTROL DATA

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

LABORATORY CONTROL SAMPLE: 1345071

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	50	47.7	95	74-124	
cis-1,3-Dichloropropene	ug/L	50	52.1	104	72-132	
Dibromochloromethane	ug/L	50	41.9	84	78-125	
Dibromomethane	ug/L	50	47.1	94	82-120	
Ethylbenzene	ug/L	50	47.1	94	79-121	
Iodomethane	ug/L	100	90.1	90	39-154	
Methylene Chloride	ug/L	50	48.5	97	64-133	
Styrene	ug/L	50	51.0	102	84-126	
Tetrachloroethene	ug/L	50	45.0	90	78-122	
Toluene	ug/L	50	51.6	103	80-121	
trans-1,2-Dichloroethene	ug/L	50	46.9	94	71-127	
trans-1,3-Dichloropropene	ug/L	50	50.7	101	69-141	
trans-1,4-Dichloro-2-butene	ug/L	50	49.0J	98	40-160	
Trichloroethene	ug/L	50	46.5	93	78-122	
Trichlorofluoromethane	ug/L	50	49.8	100	53-137	
Vinyl acetate	ug/L	100	104	104	40-160	
Vinyl chloride	ug/L	50	64.3	129	58-137	
Xylene (Total)	ug/L	150	139	93	81-126	
1,2-Dichloroethane-d4 (S)	%			102	70-130	
4-Bromofluorobenzene (S)	%			93	70-130	
Toluene-d8 (S)	%			108	70-130	

MATRIX SPIKE SAMPLE: 1345073

Parameter	Units	92228187001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	18.8	94	70-130	
1,1,1-Trichloroethane	ug/L	ND	20	19.8	99	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20.9	105	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	22.3	112	70-130	
1,1-Dichloroethane	ug/L	1.5	20	24.6	115	70-130	
1,1-Dichloroethene	ug/L	ND	20	22.1	111	70-166	
1,2,3-Trichloropropane	ug/L	ND	20	16.8	84	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	18.0	90	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	19.9	99	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	20.9	104	70-130	
1,2-Dichloroethane	ug/L	ND	20	20.0	100	70-130	
1,2-Dichloropropane	ug/L	ND	20	24.6	123	70-130	
1,3-Dichloropropane	ug/L	ND	20	21.2	106	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	22.0	107	70-130	
2-Butanone (MEK)	ug/L	ND	40	43.3J	108	70-130	
2-Hexanone	ug/L	ND	40	48.1J	120	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	49.1J	123	70-130	
Acetone	ug/L	ND	40	42.9J	107	70-130	
Acrylonitrile	ug/L	ND	100	61.4J	61	70-130	M0
Benzene	ug/L	1.2	20	25.6	122	70-148	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

MATRIX SPIKE SAMPLE: 1345073

Parameter	Units	92228187001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromochloromethane	ug/L	ND	20	23.5	118	70-130	
Bromodichloromethane	ug/L	ND	20	18.8	94	70-130	
Bromoform	ug/L	ND	20	14.5	73	70-130	
Bromomethane	ug/L	ND	20	18.7	93	70-130	
Carbon disulfide	ug/L	ND	20	23.3J	116	70-130	
Carbon tetrachloride	ug/L	ND	20	20.3	101	70-130	
Chlorobenzene	ug/L	ND	20	21.0	105	70-146	
Chloroethane	ug/L	ND	20	26.4	128	70-130	
Chloroform	ug/L	ND	20	19.2	96	70-130	
Chloromethane	ug/L	ND	20	26.0	130	70-130	
cis-1,2-Dichloroethene	ug/L	1.3	20	24.2	114	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	22.1	111	70-130	
Dibromochloromethane	ug/L	ND	20	16.2	81	70-130	
Dibromomethane	ug/L	ND	20	19.3	96	70-130	
Ethylbenzene	ug/L	ND	20	21.3	106	70-130	
Iodomethane	ug/L	ND	40	26.4	66	70-130	M0
Methylene Chloride	ug/L	ND	20	27.8	139	70-130	M0
Styrene	ug/L	ND	20	20.5	102	70-130	
Tetrachloroethene	ug/L	ND	20	18.3	89	70-130	
Toluene	ug/L	ND	20	22.7	113	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	23.0	115	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	21.5	107	70-130	
trans-1,4-Dichloro-2-butene	ug/L	ND	20	16.4J	82	70-130	
Trichloroethene	ug/L	ND	20	20.8	102	69-151	
Trichlorofluoromethane	ug/L	ND	20	25.7	128	70-130	
Vinyl acetate	ug/L	ND	40	44.7J	112	70-130	
Vinyl chloride	ug/L	ND	20	29.7	149	70-130	M0
1,2-Dichloroethane-d4 (S)	%				107	70-130	
4-Bromofluorobenzene (S)	%				86	70-130	
Toluene-d8 (S)	%				107	70-130	

SAMPLE DUPLICATE: 1345072

Parameter	Units	92228156001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND			
1,1,1-Trichloroethane	ug/L	ND	ND			
1,1,2,2-Tetrachloroethane	ug/L	ND	ND			
1,1,2-Trichloroethane	ug/L	ND	ND			
1,1-Dichloroethane	ug/L	0.68J	0.65J			
1,1-Dichloroethene	ug/L	ND	ND			
1,2,3-Trichloropropane	ug/L	ND	ND			
1,2-Dibromo-3-chloropropane	ug/L	ND	ND			
1,2-Dibromoethane (EDB)	ug/L	ND	ND			
1,2-Dichlorobenzene	ug/L	0.48J	0.46J			
1,2-Dichloroethane	ug/L	ND	ND			

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QUALITY CONTROL DATA

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

SAMPLE DUPLICATE: 1345072

Parameter	Units	92228156001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloropropane	ug/L	ND	ND			
1,3-Dichloropropane	ug/L	ND	ND			
1,4-Dichlorobenzene	ug/L	7.2	6.9	4		
2-Butanone (MEK)	ug/L	ND	ND			
2-Hexanone	ug/L	ND	ND			
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND			
Acetone	ug/L	ND	ND			
Acrylonitrile	ug/L	ND	ND			
Benzene	ug/L	6.0	5.5	8		
Bromochloromethane	ug/L	ND	ND			
Bromodichloromethane	ug/L	ND	ND			
Bromoform	ug/L	ND	ND			
Bromomethane	ug/L	ND	ND			
Carbon disulfide	ug/L	ND	ND			
Carbon tetrachloride	ug/L	ND	ND			
Chlorobenzene	ug/L	0.98J	0.94J			
Chloroethane	ug/L	ND	0.81J			
Chloroform	ug/L	ND	ND			
Chloromethane	ug/L	ND	ND			
cis-1,2-Dichloroethene	ug/L	7.2	7.2	0		
cis-1,3-Dichloropropene	ug/L	ND	ND			
Dibromochloromethane	ug/L	ND	ND			
Dibromomethane	ug/L	ND	ND			
Ethylbenzene	ug/L	1.7	1.7	2		
Iodomethane	ug/L	ND	ND			
Methylene Chloride	ug/L	ND	ND			
Styrene	ug/L	ND	ND			
Tetrachloroethene	ug/L	ND	ND			
Toluene	ug/L	1.3	1.2	7		
trans-1,2-Dichloroethene	ug/L	ND	ND			
trans-1,3-Dichloropropene	ug/L	ND	ND			
trans-1,4-Dichloro-2-butene	ug/L	ND	ND			
Trichloroethene	ug/L	0.98J	1.1			
Trichlorofluoromethane	ug/L	ND	ND			
Vinyl acetate	ug/L	ND	ND			
Vinyl chloride	ug/L	ND	ND			
Xylene (Total)	ug/L	8.1	8.4	4		
1,2-Dichloroethane-d4 (S)	%	107	113	5		
4-Bromofluorobenzene (S)	%	86	89	4		
Toluene-d8 (S)	%	106	104	2		

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QUALITY CONTROL DATA

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

QC Batch: MSV/29579
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92228156006

METHOD BLANK: 1348741
Matrix: Water
Associated Lab Samples: 92228156006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	12/11/14 08:58	
1,1,1-Trichloroethane	ug/L	ND	1.0	12/11/14 08:58	
1,1,2,2-Tetrachloroethane	ug/L	ND	3.0	12/11/14 08:58	
1,1,2-Trichloroethane	ug/L	ND	1.0	12/11/14 08:58	
1,1-Dichloroethane	ug/L	ND	5.0	12/11/14 08:58	
1,1-Dichloroethene	ug/L	ND	5.0	12/11/14 08:58	
1,2,3-Trichloropropane	ug/L	ND	1.0	12/11/14 08:58	
1,2-Dibromo-3-chloropropane	ug/L	ND	13.0	12/11/14 08:58	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	12/11/14 08:58	
1,2-Dichlorobenzene	ug/L	ND	5.0	12/11/14 08:58	
1,2-Dichloroethane	ug/L	ND	1.0	12/11/14 08:58	
1,2-Dichloropropane	ug/L	ND	1.0	12/11/14 08:58	
1,3-Dichloropropane	ug/L	ND	1.0	12/11/14 08:58	
1,4-Dichlorobenzene	ug/L	ND	1.0	12/11/14 08:58	
2-Butanone (MEK)	ug/L	ND	100	12/11/14 08:58	
2-Hexanone	ug/L	ND	50.0	12/11/14 08:58	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	12/11/14 08:58	
Acetone	ug/L	ND	100	12/11/14 08:58	
Acrylonitrile	ug/L	ND	200	12/11/14 08:58	
Benzene	ug/L	ND	1.0	12/11/14 08:58	
Bromochloromethane	ug/L	ND	3.0	12/11/14 08:58	
Bromodichloromethane	ug/L	ND	1.0	12/11/14 08:58	
Bromoform	ug/L	ND	3.0	12/11/14 08:58	
Bromomethane	ug/L	ND	10.0	12/11/14 08:58	
Carbon disulfide	ug/L	ND	100	12/11/14 08:58	
Carbon tetrachloride	ug/L	ND	1.0	12/11/14 08:58	
Chlorobenzene	ug/L	ND	3.0	12/11/14 08:58	
Chloroethane	ug/L	ND	10.0	12/11/14 08:58	
Chloroform	ug/L	ND	5.0	12/11/14 08:58	
Chloromethane	ug/L	ND	1.0	12/11/14 08:58	
cis-1,2-Dichloroethene	ug/L	ND	5.0	12/11/14 08:58	
cis-1,3-Dichloropropene	ug/L	ND	1.0	12/11/14 08:58	
Dibromochloromethane	ug/L	ND	3.0	12/11/14 08:58	
Dibromomethane	ug/L	ND	10.0	12/11/14 08:58	
Ethylbenzene	ug/L	ND	1.0	12/11/14 08:58	
Iodomethane	ug/L	ND	10.0	12/11/14 08:58	
Methylene Chloride	ug/L	ND	1.0	12/11/14 08:58	
Styrene	ug/L	ND	1.0	12/11/14 08:58	
Tetrachloroethene	ug/L	ND	1.0	12/11/14 08:58	
Toluene	ug/L	ND	1.0	12/11/14 08:58	
trans-1,2-Dichloroethene	ug/L	ND	5.0	12/11/14 08:58	

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QUALITY CONTROL DATA

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

METHOD BLANK: 1348741 Matrix: Water
Associated Lab Samples: 92228156006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,3-Dichloropropene	ug/L	ND	1.0	12/11/14 08:58	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	12/11/14 08:58	
Trichloroethene	ug/L	ND	1.0	12/11/14 08:58	
Trichlorofluoromethane	ug/L	ND	1.0	12/11/14 08:58	
Vinyl acetate	ug/L	ND	50.0	12/11/14 08:58	
Vinyl chloride	ug/L	ND	1.0	12/11/14 08:58	
Xylene (Total)	ug/L	ND	5.0	12/11/14 08:58	
1,2-Dichloroethane-d4 (S)	%	94	70-130	12/11/14 08:58	
4-Bromofluorobenzene (S)	%	103	70-130	12/11/14 08:58	
Toluene-d8 (S)	%	97	70-130	12/11/14 08:58	

LABORATORY CONTROL SAMPLE: 1348742

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	57.5	115	80-125	
1,1,1-Trichloroethane	ug/L	50	58.9	118	71-129	
1,1,2,2-Tetrachloroethane	ug/L	50	51.0	102	79-124	
1,1,2-Trichloroethane	ug/L	50	49.2	98	85-125	
1,1-Dichloroethane	ug/L	50	50.1	100	73-126	
1,1-Dichloroethene	ug/L	50	53.7	107	66-135	
1,2,3-Trichloropropane	ug/L	50	55.3	111	75-130	
1,2-Dibromo-3-chloropropane	ug/L	50	51.9	104	71-133	
1,2-Dibromoethane (EDB)	ug/L	50	53.2	106	83-124	
1,2-Dichlorobenzene	ug/L	50	49.2	98	80-133	
1,2-Dichloroethane	ug/L	50	57.0	114	67-128	
1,2-Dichloropropane	ug/L	50	45.9	92	75-132	
1,3-Dichloropropane	ug/L	50	46.6	93	76-131	
1,4-Dichlorobenzene	ug/L	50	48.9	98	78-130	
2-Butanone (MEK)	ug/L	100	105	105	61-144	
2-Hexanone	ug/L	100	123	123	68-143	
4-Methyl-2-pentanone (MIBK)	ug/L	100	123	123	72-135	
Acetone	ug/L	100	116	116	48-146	
Acrylonitrile	ug/L	250	255	102	40-160	
Benzene	ug/L	50	48.0	96	80-125	
Bromochloromethane	ug/L	50	44.6	89	71-125	
Bromodichloromethane	ug/L	50	55.9	112	78-124	
Bromoform	ug/L	50	46.2	92	71-128	
Bromomethane	ug/L	50	47.5	95	40-160	
Carbon disulfide	ug/L	50	41.9J	84	50-160	
Carbon tetrachloride	ug/L	50	66.6	133	69-131	L3
Chlorobenzene	ug/L	50	49.6	99	81-122	
Chloroethane	ug/L	50	41.0	82	39-148	
Chloroform	ug/L	50	51.6	103	73-127	
Chloromethane	ug/L	50	48.3	97	44-146	

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QUALITY CONTROL DATA

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

LABORATORY CONTROL SAMPLE: 1348742

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	50	51.6	103	74-124	
cis-1,3-Dichloropropene	ug/L	50	51.1	102	72-132	
Dibromochloromethane	ug/L	50	47.9	96	78-125	
Dibromomethane	ug/L	50	50.0	100	82-120	
Ethylbenzene	ug/L	50	50.4	101	79-121	
Iodomethane	ug/L	100	79.7	80	39-154	
Methylene Chloride	ug/L	50	50.7	101	64-133	
Styrene	ug/L	50	50.0	100	84-126	
Tetrachloroethene	ug/L	50	46.5	93	78-122	
Toluene	ug/L	50	48.4	97	80-121	
trans-1,2-Dichloroethene	ug/L	50	51.0	102	71-127	
trans-1,3-Dichloropropene	ug/L	50	54.6	109	69-141	
trans-1,4-Dichloro-2-butene	ug/L	50	59.3J	119	40-160	
Trichloroethene	ug/L	50	51.2	102	78-122	
Trichlorofluoromethane	ug/L	50	53.3	107	53-137	
Vinyl acetate	ug/L	100	105	105	40-160	
Vinyl chloride	ug/L	50	45.8	92	58-137	
Xylene (Total)	ug/L	150	154	103	81-126	
1,2-Dichloroethane-d4 (S)	%			93	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Toluene-d8 (S)	%			102	70-130	

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QUALITY CONTROL DATA

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

QC Batch: WET/34725 — Analysis Method: SM 2320B
QC Batch Method: SM 2320B — Analysis Description: 2320B Alkalinity
Associated Lab Samples: 92228156001, 92228156002, 92228156003, 92228156004, 92228156005

METHOD BLANK: 1349705 — Matrix: Water
Associated Lab Samples: 92228156001, 92228156002, 92228156003, 92228156004, 92228156005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	ug/L	ND	5000	12/11/14 21:51	

LABORATORY CONTROL SAMPLE: 1349706

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	ug/L	50000	49000	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1349707 — 1349708

Parameter	Units	92228156001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	ug/L	103000	50000	50000	144000	147000	83	88	90-110	2	4	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

QC Batch: WET/34630 — Analysis Method: SM 4500-S2D
QC Batch Method: SM 4500-S2D — Analysis Description: 4500S2D Sulfide Water
Associated Lab Samples: 92228156002, 92228156003, 92228156004, 92228156005

METHOD BLANK: 1345730 — Matrix: Water
Associated Lab Samples: 92228156002, 92228156003, 92228156004, 92228156005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide	ug/L	ND	1000	12/06/14 15:00	

LABORATORY CONTROL SAMPLE: 1345731

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	ug/L	500	531J	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1345732 — 1345733

Parameter	Units	92227838002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	ug/L	ND	500	500	576J	574J	113	113	90-110	0	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1345734 — 1345735

Parameter	Units	92227909002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	ug/L	ND	500	500	509J	509J	99	99	90-110	0	10	

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QUALITY CONTROL DATA

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

QC Batch: WET/34602 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 92228156001, 92228156002, 92228156003, 92228156004, 92228156005

METHOD BLANK: 1344257 Matrix: Water
Associated Lab Samples: 92228156001, 92228156002, 92228156003, 92228156004, 92228156005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	ug/L	ND	2000	12/10/14 04:00	

LABORATORY CONTROL SAMPLE: 1344258

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	ug/L	198000	217000	110	84.5-115.4	

SAMPLE DUPLICATE: 1344259

Parameter	Units	92228029001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	ug/L	188 mg/L	167000	12	10	D6

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QUALITY CONTROL DATA

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

QC Batch: WETA/21306 | Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 | Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92228156001, 92228156002

METHOD BLANK: 1353205 | Matrix: Water
Associated Lab Samples: 92228156001, 92228156002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	ug/L	ND	250000	12/16/14 17:25	

LABORATORY CONTROL SAMPLE: 1353206

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	ug/L	20000	18800J	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1353207 1353208

Parameter	Units	92229106004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	ug/L	9.2 mg/L	20000	20000	29800J	29400J	103	101	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1353209 1353210

Parameter	Units	92229106033 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	ug/L	20.5 mg/L	20000	20000	41100J	41600J	103	106	90-110	1	10	

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QUALITY CONTROL DATA

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

QC Batch: WETA/21328 — Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 — Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92228156003, 92228156004, 92228156005

METHOD BLANK: 1354588 — Matrix: Water
Associated Lab Samples: 92228156003, 92228156004, 92228156005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	ug/L	ND	250000	12/18/14 13:05	

LABORATORY CONTROL SAMPLE: 1354590

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	ug/L	20000	19500J	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1354591 — 1354592

Parameter	Units	92228156003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	ug/L	4320J	20000	20000	23800J	23500J	97	96	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1354593 — 1354594

Parameter	Units	92228073039 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	ug/L	ND	20000	20000	19900J	20100J	99	100	90-110	1	10	

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QUALITY CONTROL DATA

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

QC Batch: WETA/21144
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92228156005

METHOD BLANK: 1344247
Matrix: Water
Associated Lab Samples: 92228156005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	ug/L	ND	20.0	12/05/14 01:10	

LABORATORY CONTROL SAMPLE: 1344248

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	ug/L	2500	2520	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1344249 1344250

Parameter	Units	92228095001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	ug/L	ND	2500	2500	2440	2430	98	97	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1344251 1344252

Parameter	Units	92228095002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	ug/L	ND	2500	2500	2440	2430	97	97	90-110	0	10	

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QUALITY CONTROL DATA

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

QC Batch: WETA/21145 — Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 — Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92228156002, 92228156003

METHOD BLANK: 1344253 — Matrix: Water
Associated Lab Samples: 92228156002, 92228156003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	ug/L	ND	20.0	12/05/14 01:54	

LABORATORY CONTROL SAMPLE: 1344254

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	ug/L	2500	2510	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1344255 1344256

Parameter	Units	92228073040 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	ug/L	0.18 mg/L	2500	2500	2680	2680	100	100	90-110	0	10	

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QUALITY CONTROL DATA

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

QC Batch: WETA/21190 — Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E — Analysis Description: 4500 Chloride
Associated Lab Samples: 92228156001, 92228156002, 92228156003, 92228156004, 92228156005

METHOD BLANK: 1346459 — Matrix: Water
Associated Lab Samples: 92228156001, 92228156002, 92228156003, 92228156004, 92228156005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	ug/L	ND	1000	12/09/14 03:29	

LABORATORY CONTROL SAMPLE: 1346460

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	ug/L	20000	20500	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1346461 — 1346462

Parameter	Units	92228156001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	ug/L	22000	20000	20000	35900	35800	70	69	90-110	0	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1346463 — 1346464

Parameter	Units	92228163006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	ug/L	20200	20000	20000	32900	32900	64	64	90-110	0	10	M1

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QUALITY CONTROL DATA

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

QC Batch: WETA/21289 — Analysis Method: SM 5220D
QC Batch Method: SM 5220D — Analysis Description: 5220D COD
Associated Lab Samples: 92228156001, 92228156002, 92228156003, 92228156004, 92228156005

METHOD BLANK: 1352166 — Matrix: Water
Associated Lab Samples: 92228156001, 92228156002, 92228156003, 92228156004, 92228156005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	ug/L	ND	25000	12/16/14 10:30	

LABORATORY CONTROL SAMPLE: 1352167

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	ug/L	750000	746000	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1352168 — 1352169

Parameter	Units	92228966001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	ug/L	47.0 mg/L	750000	750000	790000	793000	99	99	90-110	0	3	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1352170 — 1352171

Parameter	Units	92228156001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	ug/L	33000	750000	750000	785000	785000	100	100	90-110	0	3	

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QUALITY CONTROL DATA

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

QC Batch: WETA/21150 — Analysis Method: SM 5310B
QC Batch Method: SM 5310B — Analysis Description: 5310B TOC
Associated Lab Samples: 92228156001, 92228156002, 92228156003, 92228156004, 92228156005

METHOD BLANK: 1344752 — Matrix: Water
Associated Lab Samples: 92228156001, 92228156002, 92228156003, 92228156004, 92228156005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	ug/L	ND	1000	12/06/14 01:23	

LABORATORY CONTROL SAMPLE: 1344753

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	ug/L	25000	24700	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1344754 1344755

Parameter	Units	92227454005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	ug/L	10.1 mg/L	25000	25000	33900	32400	95	89	90-110	5	5	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1344756 1344757

Parameter	Units	92227984005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	ug/L	7.0 mg/L	25000	25000	31700	31300	99	97	90-110	1	5	

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QUALIFIERS

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

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TNI - The NELAC Institute.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville
PASI-C	Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
D6	The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
L3	Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92228156001	**MW-3**	EPA 3010	MPRP/17481	EPA 6010	ICP/15755
92228156002	**MW-11**	EPA 3010	MPRP/17481	EPA 6010	ICP/15755
92228156003	**MW-26**	EPA 3010	MPRP/17481	EPA 6010	ICP/15755
92228156004	**MW-27**	EPA 3010	MPRP/17481	EPA 6010	ICP/15755
92228156005	**MW-31**	EPA 3010	MPRP/17481	EPA 6010	ICP/15755
92228156006	**MW-18**	EPA 3010	MPRP/17494	EPA 6010	ICP/15761
92228156006	**MW-18**	EPA 7470	MERP/7378	EPA 7470	MERC/7087
92228156001	**MW-3**	EPA 8260	MSV/29504		
92228156002	**MW-11**	EPA 8260	MSV/29504		
92228156003	**MW-26**	EPA 8260	MSV/29504		
92228156004	**MW-27**	EPA 8260	MSV/29504		
92228156005	**MW-31**	EPA 8260	MSV/29504		
92228156006	**MW-18**	EPA 8260	MSV/29579		
92228156001	**MW-3**	SM 2320B	WET/34725		
92228156002	**MW-11**	SM 2320B	WET/34725		
92228156003	**MW-26**	SM 2320B	WET/34725		
92228156004	**MW-27**	SM 2320B	WET/34725		
92228156005	**MW-31**	SM 2320B	WET/34725		
92228156002	**MW-11**	SM 4500-S2D	WET/34630		
92228156003	**MW-26**	SM 4500-S2D	WET/34630		
92228156004	**MW-27**	SM 4500-S2D	WET/34630		
92228156005	**MW-31**	SM 4500-S2D	WET/34630		
92228156001	**MW-3**	SM 5210B	WET/34602	SM 5210B	WET/34605
92228156002	**MW-11**	SM 5210B	WET/34602	SM 5210B	WET/34605
92228156003	**MW-26**	SM 5210B	WET/34602	SM 5210B	WET/34605
92228156004	**MW-27**	SM 5210B	WET/34602	SM 5210B	WET/34605
92228156005	**MW-31**	SM 5210B	WET/34602	SM 5210B	WET/34605
92228156001	**MW-3**	EPA 300.0	WETA/21306		
92228156002	**MW-11**	EPA 300.0	WETA/21306		
92228156003	**MW-26**	EPA 300.0	WETA/21328		
92228156004	**MW-27**	EPA 300.0	WETA/21328		
92228156005	**MW-31**	EPA 300.0	WETA/21328		
92228156002	**MW-11**	EPA 353.2	WETA/21145		
92228156003	**MW-26**	EPA 353.2	WETA/21145		
92228156005	**MW-31**	EPA 353.2	WETA/21144		
92228156001	**MW-3**	SM 4500-Cl-E	WETA/21190		
92228156002	**MW-11**	SM 4500-Cl-E	WETA/21190		
92228156003	**MW-26**	SM 4500-Cl-E	WETA/21190		
92228156004	**MW-27**	SM 4500-Cl-E	WETA/21190		
92228156005	**MW-31**	SM 4500-Cl-E	WETA/21190		
92228156001	**MW-3**	SM 5220D	WETA/21289		
92228156002	**MW-11**	SM 5220D	WETA/21289		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Alexander LF (SWS & UIC)
Pace Project No.: 92228156

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92228156003	**MW-26**	SM 5220D	WETA/21289		
92228156004	**MW-27**	SM 5220D	WETA/21289		
92228156005	**MW-31**	SM 5220D	WETA/21289		
92228156001	**MW-3**	SM 5310B	WETA/21150		
92228156002	**MW-11**	SM 5310B	WETA/21150		
92228156003	**MW-26**	SM 5310B	WETA/21150		
92228156004	**MW-27**	SM 5310B	WETA/21150		
92228156005	**MW-31**	SM 5310B	WETA/21150		

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Pace Analytical	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: September 22, 2014 Page 1 of 2
	Document Number: **F-CHR-CS-003-rev.15**	Issuing Authority: Pace Huntersville Quality Office

Client Name: Municipal Eng.

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ (Pace) Other_____

Custody Seal on Cooler/Box Present: ☐ yes (☐ no) Seals intact: ☐ yes ☐ no

Optional
Proj. Due Date:
Proj. Name:

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other_____

Thermometer Used: IR Gun (T1401) **Type of Ice:** (Wet) Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor **T1401** No Correction

Corrected Cooler Temp.: 4.6 °C **Biological Tissue is Frozen:** Yes No (N/A)

Temp should be above freezing to 6°C

Date and Initials of person examining contents: DS 12/4/14

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☑Yes ☐No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☐Yes ☑No ☐N/A	12. no times + dates on labels
-Includes date/time/ID/Analysis Matrix:_____		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13. #1 BPSN pH>2
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☑No ☐N/A	#2 2 BPSN pH>2
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No	
Samples checked for dechlorination:	☑Yes ☐No ☐N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):_____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: JG Date: 12/4/14

SRF Review: NB Date: 12/8/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

WO#: 92228156

92228156

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Municipal Engineering Services	Report To:	Jonathan Pfohl	Attention:	Municipal Engineering Services
Address:	P.O. Box 97	Copy To:		Company Name:	
Garner, NC 27529				Address:	
Email To:	jpfohl@mesco.com	Purchase Order No.		Pace Quote Reference:	
Phone: 919-772-5393	Fax:	Client Project ID:	Alexander LF (SWS & UIC)	Pace Project Manager:	Kevin Godwin
Requested Due Date/TAT:	10 Day (Default)	Container Order Number:		Pace Profile #:	

Regulatory Agency	
State / Location	
North Carolina	

MATRIX CODE (see valid codes to left): Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Other OT, Tissue TS

SAMPLE TYPE (G=GRAB C=COMP)

Requested Analysis Filtered (Y/N)

ITEM#	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE	SAMPLE TYPE	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	VOCs Appendix I	Total Metals Appendix I	Mercury	Alkalinity	Chloride	Sulfate	Sulfide	TOC	COD	BOD	Iron	Nitrate	VFA (AM236)		92228156
																			N	N		N	N	N	N	N	N	N	N	N	N		
1	MW-3	WT	G			12/3/14	9:50					1	3						X	X		X	X	X		X	x	X					001
2	MW-11	WT	G			12/3/14	5:35					1	3						X	X		X	X	X	X	X	X	X	X	X	X		002
3	MW-26	WT	G			12/3/14	3:10					1	3						X	X		X	X	X	X	X	X	X	X	X	X		003
4	MW-27	WT	G			12/3/14	2:30					1	3						X	X		X	X	X	X	X	x	X			X		004
5	MW-31	WT	G			12/3/14	2:00					1	3						X	X		X	X	X	X	X	X	X	X	X	[illegible]		005 — Later
6	MW-18	WT	G									1	3						X	X	X				X								
7																																	
8																																	
9																																	
10																																	
11																																	
12																																	

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	[signature] MESCO	12/4/14	7:55	[signature] Pace	12/4/14	755				
	[signature] / Pace	12/4/14	1230	Patrick Lim / PACE	12/4/14	1230	E.C	Y	N	Y

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	Jonathan Pfohl		
SIGNATURE of SAMPLER: [signature]		DATE Signed:	12/4/14

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Pace Analytical®	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: September 2014 Page 1 of 2
	Document Number: **F-CHR-CS-003-rev.15**	Issuing Authority: Pace Huntersville Quality Office

Client Name: Municipal

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other_____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other_____

Thermometer Used: IR Gun T1401 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor **T1401** No Correction

Corrected Cooler Temp.: 5.2 °C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Optional
Proj. Due Date:
Proj. Name:

Date and Initials of person examining contents: AP 12-5-14

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☐Yes ☑No ☐N/A	12. No date or time
-Includes date/time/ID/Analysis Matrix:_____		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No	
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):_____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: MW-31 VFA sample received 12/5/14 KG. collected 12/4/14 @ 14:10

SCURF Review: JG Date: 12/5/14

SRF Review: [illegible] Date: 12/5/14

Place label here

9222 8156 OR

Handwrite project number (if no label available)

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Municipal Engineering Services	Report To:	Jonathan Pfohl	Attention:	Municipal Engineering Services
Address:	P.O. Box 97	Copy To:		Company Name:	
Garner, NC 27529				Address:	
Email To:	jpfohl@mesco.com	Purchase Order No.		Pace Quote Reference:	
Phone:	919-772-5393 Fax:	Client Project ID:	Alexander LF (SWS & UIC)	Pace Project Manager:	Kevin Godwin
Requested Due Date/TAT:	10 Day (Default)	Container Order Number:		Pace Profile #:	

Regulatory Agency	
State / Location	
North Carolina	

Requested Analysis Filtered (Y/N)

ITEM#	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	VOCs Appendix I	Total Metals Appendix I		Alkalinity	Chloride	Sulfate	Sulfide	TOC	COD	BOD	Iron	Nitrate	Mercury		92228156
	MATRIX CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Other OT, Tissue TS											Preservatives							N	N		N	N	N	N	N	N	N	N	N	N	
1	~~MW-3~~ P	WT	G									1	3						X	X		X	X	X		X	x	X				
2	~~MW-11~~ P	WT	G									1	3						X	X		X	X	X	X	X	X	X	X	X		
3	~~MW-26~~ P	WT	G									1	3						X	X		X	X	X	X	X	X	X	X	X		
4	~~MW-27~~ P	WT	G									1	3						X	X		X	X	X	X	X	x	X				
5	~~MW-31~~ P	WT	G									1	3						X	X		X	X	X	X	X	X	X	X	X		
6	MW-18	WT	G		12/4/14		1:55					1	3						X	X										X		006
7																																008
8																																
9																																
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
P = Previously submitted	/ MESCO	12/5/14	~~1210~~ 1220		12-5-14	1810				
		12-5-14	1420	/ Pace	12-5-14	1420	5.2	Y	N	Y

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER: Jonathan Pfohl					
SIGNATURE of SAMPLER:	DATE Signed: 12/5/14				

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

December 16, 2014

Kevin Godwin
Pace Analytical Services, Inc.
9800 Kincey Avenue
Suite 100
Huntersville, NC 28078

RE: **ALEXANDER LF / 92228156**

Microseeps Workorder: 14242

Dear Kevin Godwin:

Enclosed are the analytical results for sample(s) received by the laboratory on Tuesday, December 09, 2014. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Robbin Robl 12/16/2014 RW 12-16-14
rrobl@microseeps.com

Customer Service Representative

Enclosures

As a valued client we would appreciate your comments on our service.
Please email info@microseeps.com.

Total Number of Pages 10

CERTIFICATE OF ANALYSIS

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220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

LABORATORY ACCREDITATIONS & CERTIFICATIONS

Accreditor:	Pennsylvania Department of Environmental Protection, Bureau of Laboratories
Accreditation ID:	02-00538
Scope:	NELAP Non-Potable Water and Solid & Hazardous Waste
Accreditor:	South Carolina Department of Health and Environmental Control, Office of Environmental Laboratory Certification
Accreditation ID:	89009003
Scope:	Clean Water Act (CWA); Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: New Jersey, Department of Environmental Protection
Accreditation ID:	PA026
Scope:	Non-Potable Water; Solid and Chemical Materials
Accreditor:	NELAP: New York, Department of Health Wadsworth Center
Accreditation ID:	11815
Scope:	Non-Potable Water; Solid and Hazardous Waste
Accreditor:	State of Connecticut, Department of Public Health, Division of Environmental Health
Accreditation ID:	PH-0263
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: Texas, Commission on Environmental Quality
Accreditation ID:	T104704453-09-TX
Scope:	Non-Potable Water
Accreditor:	State of New Hampshire
Accreditation ID:	299409
Scope:	Non-potable water
Accreditor:	State of Georgia
Accreditation ID:	Chapter 391-3-26
Scope:	As per the Georgia EPD Rules and Regulations for Commercial Laboratories, Microseeps is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC).

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Fax: (412) 826-3433

SAMPLE SUMMARY

Workorder: 14242 ALEXANDER LF / 92228156

Lab ID	Sample ID	Matrix	Date Collected	Date Received
142420001	MW-31	Water	12/4/2014 14:10	12/9/2014 11:30

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Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 14242 ALEXANDER LF / 92228156

Lab ID: **142420001** Date Received: 12/9/2014 11:30 Matrix: Water

Sample ID: **MW-31** Date Collected: 12/4/2014 14:10

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
EDonors - MICR										
Analysis Desc: AM23G			Analytical Method: AM23G							
Lactic Acid	**0.099J**	mg/l	0.10	0.0020	1			12/13/2014 14:01	KB	
Acetic Acid	**0.021J**	mg/l	0.070	0.0020	1			12/13/2014 14:01	KB	
Propionic Acid	**0.027J**	mg/l	0.050	0.0010	1			12/13/2014 14:01	KB	
Butyric Acid	**0.051**	mg/l	0.050	0.0010	1			12/13/2014 14:01	KB	
Pyruvic Acid	**0.073J**	mg/l	0.15	0.0020	1			12/13/2014 14:01	KB	

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ANALYTICAL RESULTS QUALIFIERS

Workorder: 14242 ALEXANDER LF / 92228156

DEFINITIONS/QUALIFIERS

Disclaimer : The Pennsylvania Department of Environmental Protection (PADEP) has decided to no longer recognize analyses that do not produce data for primary compliance, for NELAP accreditation. The methods affected by this decision are AM20GAx, AM21G, SW846 7199 and AM4.02. The laboratory shall continue to administer the NELAP/TNI standard requirements in the performance of these methods.

MDL	Method Detection Limit. Can be used synonymously with LOD; Limit Of Detection.
PQL	Practical Quanitation Limit. Can be used synonymously with LOQ; Limit Of Quantitation.
ND	Not detected at or above reporting limit.
DF	Dilution Factor.
S	Surrogate.
RPD	Relative Percent Difference.
% Rec	Percent Recovery.
U	Indicates the compound was analyzed for, but not detected at or above the noted concentration.
J	Estimated concentration greater than the set method detection limit (MDL) and less than the set reporting limit (PQL).

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Phone: (412) 826-5245
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QUALITY CONTROL DATA

Workorder: 14242 ALEXANDER LF / 92228156

QC Batch: EDON/2354 Analysis Method: AM23G

QC Batch Method: AM23G

Associated Lab Samples: 142420001

METHOD BLANK: 32251

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
EDonors				
Lactic Acid	mg/l	0.10 U	0.10	
Acetic Acid	mg/l	0.0087J	0.070	
Propionic Acid	mg/l	0.050 U	0.050	
Butyric Acid	mg/l	0.050 U	0.050	
Pyruvic Acid	mg/l	0.15 U	0.15	

LABORATORY CONTROL SAMPLE: 32252

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
EDonors						
Lactic Acid	mg/l	2	1.9	96	70-130	
Acetic Acid	mg/l	2	2.1	107	70-130	
Propionic Acid	mg/l	2	2.1	105	70-130	
Butyric Acid	mg/l	2	2.0	102	70-130	
Pyruvic Acid	mg/l	2	1.9	97	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 32253 32254 Original: 142410001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
EDonors											
Lactic Acid	mg/l	0.3	2	2.2	2.2	95	93	70-130	2.1	30	
Acetic Acid	mg/l	0.025	2	2.1	2.1	104	104	70-130	0	30	
Propionic Acid	mg/l	0.027	2	2.1	2.1	103	103	70-130	0	30	
Butyric Acid	mg/l	0.051	2	2.0	2.0	99	100	70-130	1	30	
Pyruvic Acid	mg/l	0.079	2	1.9	1.9	93	93	70-130	0	30	

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Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 14242 ALEXANDER LF / 92228156

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
142420001	MW-31			AM23G	EDON/2354

CERTIFICATE OF ANALYSIS
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Chain of Custody

14242

Pace Analytical®
www.pacelabs.com

Workorder: 92228156 **Workorder Name:** Alexander LF (SWS & UIC) **Results Requested** 12/18/2014

Report / Invoice To	Subcontract To
Kevin Godwin Pace Analytical Charlotte 9800 Kincey Ave. Suite 100 Huntersville, NC 28078 Phone (704)875-9092 Email: kevin.godwin@pacelabs.com	P.O. KRG 14119 Microseeps.

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	Requested Analysis: VFACAM23G	LAB USE ONLY
1	~~MW-11~~	~~12/8/2014 17:05~~	~~92228156002~~	~~Water~~			
2	~~MW-28~~	~~12/3/2014 15:10~~	~~92228156003~~	~~Water~~			
3	~~MW-27~~	~~12/3/2014 14:30~~	~~92228156004~~	~~Water~~			
4	MW-31	12/4/2014 14:10	92228156008	Water	2	X	
5							

KG 12/8/14

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	12/8/14 12:10	[signature] PAES	12.9.14 1130
2				
3				

Comments

Cooler Temperature on Receipt	Custody Seal	Received on Ice	Samples Intact
4 °C	Y or (N)	(Y) or N	(Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.

*VFA report only! Acetic Acid
propionic Acid
Butyric Acid
Pyruvic Acid
Lactic Acid

units = ug/L

NON-CONFORMANCE FORM

Microseeps Project Number: 14242

Date: 12. 9.14 Time of Receipt: 11 30 Receiver: LY

Client: Pace - H

REASON FOR NON-CONFORMANCE:

COC marked vials were unpreserved. Actual vials were MS BAK vials → (proper preservative for LLVFA requested).

ACTION TAKEN:

Client name: Date: Time:

OK to proceed.

Customer Service Initials: RR Date: 12/10/14

Cooler Receipt Form

Client Name: Pace - H Project: 92228156 Lab Work Order: 14242

A. Shipping/Container Information (circle appropriate response)

Courier: (FedEx) UPS USPS Client Other:_____ Air bill Present: (Yes) No

Tracking Number: 6196 8499 8410

Custody Seal on Cooler/Box Present: Yes (No) Seals Intact: Yes No

Cooler/Box Packing Material: (Bubble Wrap) Absorbent Foam Other:_____

Type of Ice: (Wet) Blue None Ice Intact: (Yes) Melted

Cooler Temperature: 4°C Radiation Screened: Yes (No) Chain of Custody Present: (Yes) No

Comments:_____

B. Laboratory Assignment/Log-in (check appropriate response)

	YES	NO	N/A	Comment Reference non-Conformanc
Chain of Custody properly filled out	✓			
Chain of Custody relinquished	✓			
Sampler Name & Signature on COC		✓		
Containers intact	✓			
Were samples in separate bags	✓			
Sample container labels match COC Sample name/date and time collected	✓			
Sufficient volume provided	✓			
Microseeps containers used	✓			
Are containers properly preserved for the requested testing? (as labeled)	✓			
If an unknown preservation state, were containers checked? Exception: VOA's coliform			✓	If yes, see pH form.
Was volume for dissolved testing field filtered, as noted on the COC? Was volume received in a preserved container?			✓	

Comments:_____

Cooler contents examined/received by: LJ Date: 12.9.14

Project Manager Review: BR Date: 12/10/14

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

December 15, 2014

Kevin Godwin
Pace Analytical Services, Inc.
9800 Kincey Avenue
Suite 100
Huntersville, NC 28078

RE: **ALEXANDER LF / 92228156**
Microseeps Workorder: 14209

Dear Kevin Godwin:

Enclosed are the analytical results for sample(s) received by the laboratory on Friday, December 05, 2014. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Robbin Robl 12/15/2014
rrobl@microseeps.com

Customer Service Representative

Enclosures

As a valued client we would appreciate your comments on our service.
Please email info@microseeps.com.

Total Number of Pages 12

CERTIFICATE OF ANALYSIS

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Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

LABORATORY ACCREDITATIONS & CERTIFICATIONS

Accreditor:	Pennsylvania Department of Environmental Protection, Bureau of Laboratories
Accreditation ID:	02-00538
Scope:	NELAP Non-Potable Water and Solid & Hazardous Waste
Accreditor:	South Carolina Department of Health and Environmental Control, Office of Environmental Laboratory Certification
Accreditation ID:	89009003
Scope:	Clean Water Act (CWA); Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: New Jersey, Department of Environmental Protection
Accreditation ID:	PA026
Scope:	Non-Potable Water; Solid and Chemical Materials
Accreditor:	NELAP: New York, Department of Health Wadsworth Center
Accreditation ID:	11815
Scope:	Non-Potable Water; Solid and Hazardous Waste
Accreditor:	State of Connecticut, Department of Public Health, Division of Environmental Health
Accreditation ID:	PH-0263
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: Texas, Commission on Environmental Quality
Accreditation ID:	T104704453-09-TX
Scope:	Non-Potable Water
Accreditor:	State of New Hampshire
Accreditation ID:	299409
Scope:	Non-potable water
Accreditor:	State of Georgia
Accreditation ID:	Chapter 391-3-26
Scope:	As per the Georgia EPD Rules and Regulations for Commercial Laboratories, Microseeps is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC).

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Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

SAMPLE SUMMARY

Workorder: 14209 ALEXANDER LF / 92228156

Lab ID	Sample ID	Matrix	Date Collected	Date Received
142090001	MW-11	Water	12/3/2014 17:35	12/5/2014 12:00
142090002	MW-26	Water	12/3/2014 15:10	12/5/2014 12:00
142090003	MW-27	Water	12/3/2014 14:30	12/5/2014 12:00

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ANALYTICAL RESULTS

Workorder: 14209 ALEXANDER LF / 92228156

Lab ID: **142090001** Date Received: 12/5/2014 12:00 Matrix: Water

Sample ID: **MW-11** Date Collected: 12/3/2014 17:35

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
EDonors - MICR										
Analysis Desc: AM23G			Analytical Method: AM23G							
Lactic Acid	**0.14**	mg/l	0.10	0.012	1			12/11/2014 05:00	KB	
Acetic Acid	**0.050J**	mg/l	0.070	0.0080	1			12/11/2014 05:00	KB	
Propionic Acid	**0.011U**	mg/l	0.050	0.011	1			12/11/2014 05:00	KB	
Butyric Acid	**0.0070U**	mg/l	0.050	0.0070	1			12/11/2014 05:00	KB	
Pyruvic Acid	**0.0090U**	mg/l	0.15	0.0090	1			12/11/2014 05:00	KB	

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ANALYTICAL RESULTS

Workorder: 14209 ALEXANDER LF / 92228156

Lab ID: **142090002** Date Received: 12/5/2014 12:00 Matrix: Water

Sample ID: **MW-26** Date Collected: 12/3/2014 15:10

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
EDonors - MICR										
Analysis Desc: AM23G			Analytical Method: AM23G							
Lactic Acid	**0.15**	mg/l	0.10	0.012	1			12/11/2014 07:30	KB	
Acetic Acid	**0.076**	mg/l	0.070	0.0080	1			12/11/2014 07:30	KB	
Propionic Acid	**0.042J**	mg/l	0.050	0.011	1			12/11/2014 07:30	KB	
Butyric Acid	**0.0070U**	mg/l	0.050	0.0070	1			12/11/2014 07:30	KB	
Pyruvic Acid	**0.0090U**	mg/l	0.15	0.0090	1			12/11/2014 07:30	KB	

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ANALYTICAL RESULTS

Workorder: 14209 ALEXANDER LF / 92228156

Lab ID: **142090003** Date Received: 12/5/2014 12:00 Matrix: Water

Sample ID: **MW-27** Date Collected: 12/3/2014 14:30

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
EDonors - MICR										
Analysis Desc: AM23G			Analytical Method: AM23G							
Lactic Acid	**0.012U**	mg/l	0.10	0.012	1			12/11/2014 08:19	KB	
Acetic Acid	**0.16**	mg/l	0.070	0.0080	1			12/11/2014 08:19	KB	
Propionic Acid	**0.043J**	mg/l	0.050	0.011	1			12/11/2014 08:19	KB	
Butyric Acid	**0.0070U**	mg/l	0.050	0.0070	1			12/11/2014 08:19	KB	
Pyruvic Acid	**0.0090U**	mg/l	0.15	0.0090	1			12/11/2014 08:19	KB	

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ANALYTICAL RESULTS QUALIFIERS

Workorder: 14209 ALEXANDER LF / 92228156

DEFINITIONS/QUALIFIERS

Disclaimer : The Pennsylvania Department of Environmental Protection (PADEP) has decided to no longer recognize analyses that do not produce data for primary compliance, for NELAP accreditation. The methods affected by this decision are AM20GAx, AM21G, SW846 7199 and AM4.02. The laboratory shall continue to administer the NELAP/TNI standard requirements in the performance of these methods.

MDL	Method Detection Limit. Can be used synonymously with LOD; Limit Of Detection.
PQL	Practical Quanitation Limit. Can be used synonymously with LOQ; Limit Of Quantitation.
ND	Not detected at or above reporting limit.
DF	Dilution Factor.
S	Surrogate.
RPD	Relative Percent Difference.
% Rec	Percent Recovery.
U	Indicates the compound was analyzed for, but not detected at or above the noted concentration.
J	Estimated concentration greater than the set method detection limit (MDL) and less than the set reporting limit (PQL).

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QUALITY CONTROL DATA

Workorder: 14209 ALEXANDER LF / 92228156

QC Batch: EDON/2347 Analysis Method: AM23G

QC Batch Method: AM23G

Associated Lab Samples: 142090001, 142090002, 142090003

METHOD BLANK: 32169

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
EDonors				
Lactic Acid	mg/l	0.012U	0.012	
Acetic Acid	mg/l	0.063J	0.0080	
Propionic Acid	mg/l	0.045J	0.011	
Butyric Acid	mg/l	0.0070U	0.0070	
Pyruvic Acid	mg/l	0.0090U	0.0090	

LABORATORY CONTROL SAMPLE: 32170

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
EDonors						
Lactic Acid	mg/l	2	1.9	94	70-130	
Acetic Acid	mg/l	2	2.0	100	70-130	
Propionic Acid	mg/l	2	2.0	103	70-130	
Butyric Acid	mg/l	2	2.1	107	70-130	
Pyruvic Acid	mg/l	2	2.1	106	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 32171 32172 Original: 142090001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
EDonors											
Lactic Acid	mg/l	0.14	2	2.0	2.0	93	91	70-130	2.2	30	
Acetic Acid	mg/l	0.05	2	2.1	2.1	103	105	70-130	1.9	30	
Propionic Acid	mg/l	0	2	2.2	2.2	108	109	70-130	0.92	30	
Butyric Acid	mg/l	0	2	2.1	2.1	104	106	70-130	1.9	30	
Pyruvic Acid	mg/l	0	2	2.2	2.1	108	104	70-130	3.8	30	

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 14209 ALEXANDER LF / 92228156

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
142090001	MW-11			AM23G	EDON/2347
142090002	MW-26			AM23G	EDON/2347
142090003	MW-27			AM23G	EDON/2347

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14209

Chain of Custody

Pace Analytical®
www.pacelabs.com

Workorder: 92228156 **Workorder Name:** Alexander LF (SWS & UIC) **Results Requested** 12/18/2014

Report / Invoice To

Kevin Godwin
Pace Analytical Charlotte
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
Phone (704)875-9092
Email: kevin.godwin@pacelabs.com

Subcontract To

Microseeps

P.O. KRG14116

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved BRL						Requested Analysis: VFA AM23G												LAB USE ONLY
1	MW-11	12/3/2014 17:35	92228156002	Water	1						X												
2	MW-26	12/3/2014 15:10	92228156003	Water	1						X												
3	MW-27	12/3/2014 14:30	92228156004	Water	1						X												
4																							
5																							

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	12/4/14 17:20	[signature] PACES	12.5.14 1200
2				
3				

Comments

Cooler Temperature on Receipt 2 °C **Custody Seal** Y or N **Received on Ice** Y or N **Samples Intact** Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.*
This chain of custody is considered complete as is since this information is available in the owner laboratory.

VFA *report only! Acetic Acid
propionic Acid
butyric Acid
Pyruvic Acid
Lactic Acid

units = ug/L

Please send results to project manager listed above and:
Tracy.Moore@pacelabs.com
704-875-9092 ext. 334

NON-CONFORMANCE FORM

Microseeps Project Number: 14209

Date: 12.5.14 Time of Receipt: 1200 Receiver: LY

Client: Pace-H

REASON FOR NON-CONFORMANCE:

Only 1 vial per sample. No backup if needed.

ACTION TAKEN:

Client name: _____ Date: _____ Time: _____

OK to proceed

Customer Service Initials: KK Date: 12/5/14

Cooler Receipt Form

Client Name: Pace - H Project: 92228156 Lab Work Order: 14209

A. Shipping/Container Information (circle appropriate response)

Courier: FedEx UPS USPS Client Other:_____ Air bill Present: Yes No

Tracking Number: 6196 8499 7321

Custody Seal on Cooler/Box Present: Yes No Seals Intact: Yes No

Cooler/Box Packing Material: Bubble Wrap Absorbent Foam Other:_____

Type of Ice: Wet Blue None Ice Intact: Yes Melted

Cooler Temperature: 2°C Radiation Screened: Yes No Chain of Custody Present: Yes No

Comments:_____

B. Laboratory Assignment/Log-in (check appropriate response)

	YES	NO	N/A	Comment Reference non-Conforman
Chain of Custody properly filled out	✓			
Chain of Custody relinquished	✓			
Sampler Name & Signature on COC		✓		
Containers intact	✓			
Were samples in separate bags		✓		
Sample container labels match COC Sample name/date and time collected	✓			
Sufficient volume provided		✓		No back up.
Microseeps containers used	✓			
Are containers properly preserved for the requested testing? (as labeled)	✓			
If an unknown preservation state, were containers checked? Exception: VOA's coliform			✓	If yes, see pH form.
Was volume for dissolved testing field filtered, as noted on the COC? Was volume received in a preserved container?			✓	

Comments:_____

Cooler contents examined/received by: LY Date: 12.5.14

Project Manager Review: AR Date: 12/5/14

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

December 23, 2014

Mr. Jonathan Pfohl
Municipal Engineering Services
PO Box 97
Garner, NC 27529

RE: Project: Alexander LF-SWS
Pace Project No.: 92228163

Dear Mr. Pfohl:
Enclosed are the analytical results for sample(s) received by the laboratory between December 04, 2014 and December 09, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
West Virginia Certification #: 356
Virginia/VELAP Certification #: 460222

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SAMPLE SUMMARY

Project: Alexander LF-SWS
Pace Project No.: 92228163

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92228163001	**MW-5**	Water	12/03/14 12:00	12/04/14 12:30
92228163002	**MW-12**	Water	12/03/14 10:30	12/04/14 12:30
92228163003	**MW-12D**	Water	12/03/14 11:45	12/04/14 12:30
92228163004	**MW-16**	Water	12/03/14 13:15	12/04/14 12:30
92228163005	**MW-24**	Water	12/03/14 16:50	12/04/14 12:30
92228163006	**MW-25**	Water	12/03/14 15:45	12/04/14 12:30
92228163007	**MW-26**	Water	12/03/14 15:10	12/04/14 12:30
92228163008	**MW-11**	Water	12/03/14 17:35	12/04/14 12:30
92228163009	**MW-27**	Water	12/03/14 14:30	12/04/14 12:30
92228163010	**MW-31**	Water	12/03/14 14:00	12/04/14 12:30
92228163011	**MW-9**	Water	12/02/14 12:00	12/04/14 12:30
92228163012	**MW-1**	Water	12/04/14 17:40	12/05/14 14:20
92228163013	**MW-1B**	Water	12/04/14 17:10	12/05/14 14:20
92228163014	**MW-2**	Water	12/04/14 11:15	12/05/14 14:20
92228163015	**MW-4R**	Water	12/04/14 15:10	12/05/14 14:20
92228163016	**MW-10**	Water	12/04/14 14:40	12/05/14 14:20
92228163017	**MW-13**	Water	12/04/14 16:55	12/05/14 14:20
92228163018	**MW-14**	Water	12/04/14 10:30	12/05/14 14:20
92228163019	**MW-15**	Water	12/04/14 12:00	12/05/14 14:20
92228163020	**MW-32**	Water	12/04/14 09:30	12/05/14 14:20
92228163021	**MW-33**	Water	12/02/14 13:10	12/05/14 14:20
92228163022	**MW-34**	Water	12/02/14 14:00	12/05/14 14:20
92228163023	**SW-5**	Water	12/04/14 09:55	12/05/14 14:20
92228163024	**SW-6**	Water	12/02/14 14:20	12/05/14 14:20
92228163025	**MW-6**	Water	12/04/14 16:00	12/05/14 14:20
92228163026	**MW-7**	Water	12/05/14 12:00	12/09/14 15:10
92228163027	**MW-17**	Water	12/05/14 11:00	12/09/14 15:10
92228163028	**MW-19**	Water	12/05/14 10:15	12/09/14 15:10
92228163029	**MW-20**	Water	12/05/14 13:15	12/09/14 15:10
92228163030	**MW-21**	Water	12/05/14 15:00	12/09/14 15:10
92228163031	**MW-22**	Water	12/05/14 15:40	12/09/14 15:10
92228163032	**MW-23**	Water	12/05/14 14:30	12/09/14 15:10
92228163033	**SW-3**	Water	12/05/14 09:30	12/09/14 15:10
92228163034	**SW-4R**	Water	12/05/14 14:20	12/09/14 15:10
92228163035	**EB**	Water	12/05/14 08:10	12/09/14 15:10
92228163036	**FB**	Water	12/05/14 08:20	12/09/14 15:10
92228163037	**TB**	Water	12/05/14 00:00	12/09/14 15:10

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SAMPLE ANALYTE COUNT

Project: Alexander LF-SWS
Pace Project No.: 92228163

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92228163001	**MW-5**	EPA 6010	JMW	16	PASI-A
		EPA 8260	GAW	51	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 4500-S2D	JTJ	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	JTJ	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92228163002	**MW-12**	EPA 6010	JMW	16	PASI-A
		EPA 8260	GAW	51	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 4500-S2D	JTJ	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	JTJ	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92228163003	**MW-12D**	EPA 6010	JMW	16	PASI-A
		EPA 8260	GAW	51	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 4500-S2D	JTJ	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	JTJ	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92228163004	**MW-16**	EPA 6010	JMW	16	PASI-A
		EPA 8260	GAW	51	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 4500-S2D	JTJ	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	JTJ	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92228163005	**MW-24**	EPA 6010	JMW	16	PASI-A

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SAMPLE ANALYTE COUNT

Project: Alexander LF-SWS
Pace Project No.: 92228163

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260	GAW	51	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 4500-S2D	JTJ	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	JTJ	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92228163006	**MW-25**	EPA 6010	JMW	16	PASI-A
		EPA 8260	GAW	51	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 4500-S2D	JTJ	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	JTJ	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92228163011	**MW-9**	EPA 6010	JMW	15	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163012	**MW-1**	EPA 6010	JMW	15	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163013	**MW-1B**	EPA 6010	JMW	15	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163014	**MW-2**	EPA 6010	JMW	15	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163015	**MW-4R**	EPA 6010	JMW	15	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163016	**MW-10**	EPA 6010	JMW	15	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163017	**MW-13**	EPA 6010	JMW	15	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163018	**MW-14**	EPA 6010	JMW	15	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163019	**MW-15**	EPA 6010	JMW	15	PASI-A

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(704)875-9092

SAMPLE ANALYTE COUNT

Project: Alexander LF-SWS
Pace Project No.: 92228163

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7470	HVK	1	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163020	**MW-32**	EPA 6010	JMW	15	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163021	**MW-33**	EPA 6010	JMW	15	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163022	**MW-34**	EPA 6010	JMW	15	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163023	**SW-5**	EPA 6010	JMW	15	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163024	**SW-6**	EPA 6010	JMW	15	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163025	**MW-6**	EPA 6010	JMW	16	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8260	GAW	51	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 4500-S2D	JTJ	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	JTJ	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92228163026	**MW-7**	EPA 6010	SH1	15	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163027	**MW-17**	EPA 6010	SH1	15	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163028	**MW-19**	EPA 6010	SH1	15	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163029	**MW-20**	EPA 6010	SH1	15	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163030	**MW-21**	EPA 6010	SH1	15	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163031	**MW-22**	EPA 6010	SH1	15	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163032	**MW-23**	EPA 6010	SH1	15	PASI-A

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SAMPLE ANALYTE COUNT

Project: Alexander LF-SWS
Pace Project No.: 92228163

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260	GAW	51	PASI-C
92228163033	**SW-3**	EPA 6010	SH1	15	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163034	**SW-4R**	EPA 6010	SH1	15	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163035	**EB**	EPA 6010	SH1	15	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163036	**FB**	EPA 6010	SH1	15	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8260	GAW	51	PASI-C
92228163037	**TB**	EPA 8260	GAW	51	PASI-C

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-5 **Lab ID: 92228163001** Collected: 12/03/14 12:00 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/05/14 16:10	12/11/14 18:36	7440-36-0	
Arsenic	**3.0J**	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:36	7440-38-2	
Barium	**50.7J**	ug/L	100	2.5	1	12/05/14 16:10	12/11/14 18:36	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 18:36	7440-41-7	
Cadmium	**0.60J**	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 18:36	7440-43-9	
Chromium	**3.4J**	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:36	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:36	7440-48-4	
Copper	**2.6J**	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:36	7440-50-8	
Iron	**47000**	ug/L	300	25.0	1	12/05/14 16:10	12/11/14 18:36	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:36	7439-92-1	
Nickel	**3.1J**	ug/L	50.0	2.5	1	12/05/14 16:10	12/11/14 18:36	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 18:36	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:36	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/05/14 16:10	12/11/14 18:36	7440-28-0	
Vanadium	**2.5J**	ug/L	25.0	2.5	1	12/05/14 16:10	12/11/14 18:36	7440-62-2	
Zinc	**15.4**	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 18:36	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	**18.8J**	ug/L	100	10.0	1		12/05/14 19:17	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/05/14 19:17	107-13-1	
Benzene	**3.0**	ug/L	1.0	0.25	1		12/05/14 19:17	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/05/14 19:17	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/05/14 19:17	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/05/14 19:17	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/05/14 19:17	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/05/14 19:17	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/05/14 19:17	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/05/14 19:17	56-23-5	
Chlorobenzene	**0.74J**	ug/L	3.0	0.23	1		12/05/14 19:17	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/05/14 19:17	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/05/14 19:17	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/05/14 19:17	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/05/14 19:17	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/05/14 19:17	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/05/14 19:17	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/05/14 19:17	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/05/14 19:17	95-50-1	
1,4-Dichlorobenzene	**2.4**	ug/L	1.0	0.33	1		12/05/14 19:17	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/05/14 19:17	110-57-6	
1,1-Dichloroethane	**4.1J**	ug/L	5.0	0.32	1		12/05/14 19:17	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/05/14 19:17	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/05/14 19:17	75-35-4	
cis-1,2-Dichloroethene	**13.6**	ug/L	5.0	0.19	1		12/05/14 19:17	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/05/14 19:17	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/05/14 19:17	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/05/14 19:17	142-28-9	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-5 **Lab ID: 92228163001** Collected: 12/03/14 12:00 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/05/14 19:17	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/05/14 19:17	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/05/14 19:17	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/05/14 19:17	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/05/14 19:17	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/05/14 19:17	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/05/14 19:17	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/05/14 19:17	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/05/14 19:17	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/05/14 19:17	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/05/14 19:17	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/05/14 19:17	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/05/14 19:17	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/05/14 19:17	79-00-5	
Trichloroethene	**0.61J**	ug/L	1.0	0.47	1		12/05/14 19:17	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/05/14 19:17	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/05/14 19:17	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/05/14 19:17	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/05/14 19:17	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/05/14 19:17	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	88	%	70-130		1		12/05/14 19:17	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-130		1		12/05/14 19:17	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		12/05/14 19:17	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	ND	ug/L	5000	1000	1		12/15/14 16:33		M1
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D								
Sulfide	ND	ug/L	1000	100	1		12/06/14 15:00	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**6550J**	ug/L	250000	1000	1		12/18/14 14:40	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	ug/L	10000	10.0	1		12/05/14 01:43		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**3640**	ug/L	1000	500	1		12/09/14 03:37	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**30000**	ug/L	25000	12500	1		12/16/14 10:30		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**1720**	ug/L	1000	500	1		12/06/14 07:10	7440-44-0	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-12 **Lab ID: 92228163002** Collected: 12/03/14 10:30 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/05/14 16:10	12/11/14 18:39	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:39	7440-38-2	
Barium	**102**	ug/L	100	2.5	1	12/05/14 16:10	12/11/14 18:39	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 18:39	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 18:39	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:39	7440-47-3	
Cobalt	**68.3**	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:39	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:39	7440-50-8	
Iron	**29800**	ug/L	300	25.0	1	12/05/14 16:10	12/11/14 18:39	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:39	7439-92-1	
Nickel	**7.5J**	ug/L	50.0	2.5	1	12/05/14 16:10	12/11/14 18:39	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 18:39	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:39	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/05/14 16:10	12/11/14 18:39	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/05/14 16:10	12/11/14 18:39	7440-62-2	
Zinc	**36.4**	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 18:39	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/05/14 19:34	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/05/14 19:34	107-13-1	
Benzene	**3.3**	ug/L	1.0	0.25	1		12/05/14 19:34	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/05/14 19:34	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/05/14 19:34	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/05/14 19:34	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/05/14 19:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/05/14 19:34	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/05/14 19:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/05/14 19:34	56-23-5	
Chlorobenzene	**2.8J**	ug/L	3.0	0.23	1		12/05/14 19:34	108-90-7	
Chloroethane	**1.3J**	ug/L	10.0	0.54	1		12/05/14 19:34	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/05/14 19:34	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/05/14 19:34	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/05/14 19:34	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/05/14 19:34	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/05/14 19:34	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/05/14 19:34	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/05/14 19:34	95-50-1	
1,4-Dichlorobenzene	**8.9**	ug/L	1.0	0.33	1		12/05/14 19:34	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/05/14 19:34	110-57-6	
1,1-Dichloroethane	**1.7J**	ug/L	5.0	0.32	1		12/05/14 19:34	75-34-3	
1,2-Dichloroethane	**0.35J**	ug/L	1.0	0.12	1		12/05/14 19:34	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/05/14 19:34	75-35-4	
cis-1,2-Dichloroethene	**12.9**	ug/L	5.0	0.19	1		12/05/14 19:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/05/14 19:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/05/14 19:34	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/05/14 19:34	142-28-9	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-12 **Lab ID: 92228163002** Collected: 12/03/14 10:30 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/05/14 19:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/05/14 19:34	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/05/14 19:34	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/05/14 19:34	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/05/14 19:34	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/05/14 19:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/05/14 19:34	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/05/14 19:34	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/05/14 19:34	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/05/14 19:34	79-34-5	
Tetrachloroethene	**0.65J**	ug/L	1.0	0.46	1		12/05/14 19:34	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/05/14 19:34	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/05/14 19:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/05/14 19:34	79-00-5	
Trichloroethene	**2.1**	ug/L	1.0	0.47	1		12/05/14 19:34	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/05/14 19:34	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/05/14 19:34	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/05/14 19:34	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/05/14 19:34	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/05/14 19:34	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	86	%	70-130		1		12/05/14 19:34	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-130		1		12/05/14 19:34	17060-07-0	
Toluene-d8 (S)	106	%	70-130		1		12/05/14 19:34	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**120000**	ug/L	5000	1000	1		12/15/14 17:06		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D								
Sulfide	ND	ug/L	1000	100	1		12/06/14 15:00	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**4120J**	ug/L	250000	1000	1		12/18/14 14:54	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	ug/L	10000	10.0	1		12/05/14 01:40		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**11100**	ug/L	1000	500	1		12/09/14 03:38	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**38000**	ug/L	25000	12500	1		12/16/14 10:30		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**3010**	ug/L	1000	500	1		12/06/14 07:21	7440-44-0	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-12D **Lab ID: 92228163003** Collected: 12/03/14 11:45 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/05/14 16:10	12/11/14 18:42	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:42	7440-38-2	
Barium	**7.6J**	ug/L	100	2.5	1	12/05/14 16:10	12/11/14 18:42	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 18:42	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 18:42	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:42	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:42	7440-48-4	
Copper	**2.8J**	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:42	7440-50-8	
Iron	**2720**	ug/L	300	25.0	1	12/05/14 16:10	12/11/14 18:42	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:42	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	12/05/14 16:10	12/11/14 18:42	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 18:42	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:42	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/05/14 16:10	12/11/14 18:42	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/05/14 16:10	12/11/14 18:42	7440-62-2	
Zinc	**8.2J**	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 18:42	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/05/14 19:51	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/05/14 19:51	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		12/05/14 19:51	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/05/14 19:51	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/05/14 19:51	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/05/14 19:51	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/05/14 19:51	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/05/14 19:51	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/05/14 19:51	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/05/14 19:51	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/05/14 19:51	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/05/14 19:51	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/05/14 19:51	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/05/14 19:51	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/05/14 19:51	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/05/14 19:51	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/05/14 19:51	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/05/14 19:51	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/05/14 19:51	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/05/14 19:51	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/05/14 19:51	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		12/05/14 19:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/05/14 19:51	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/05/14 19:51	75-35-4	
cis-1,2-Dichloroethene	**0.47J**	ug/L	5.0	0.19	1		12/05/14 19:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/05/14 19:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/05/14 19:51	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/05/14 19:51	142-28-9	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-12D **Lab ID: 92228163003** Collected: 12/03/14 11:45 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/05/14 19:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/05/14 19:51	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/05/14 19:51	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/05/14 19:51	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/05/14 19:51	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/05/14 19:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/05/14 19:51	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/05/14 19:51	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/05/14 19:51	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/05/14 19:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/05/14 19:51	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/05/14 19:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/05/14 19:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/05/14 19:51	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/05/14 19:51	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/05/14 19:51	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/05/14 19:51	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/05/14 19:51	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/05/14 19:51	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/05/14 19:51	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	86	%	70-130		1		12/05/14 19:51	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		12/05/14 19:51	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		12/05/14 19:51	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**367000**	ug/L	5000	1000	1		12/15/14 17:20		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D								
Sulfide	ND	ug/L	1000	100	1		12/06/14 15:00	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**1470J**	ug/L	250000	1000	1		12/18/14 15:08	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**137J**	ug/L	10000	10.0	1		12/05/14 01:42		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**58000**	ug/L	5000	2500	5		12/09/14 03:58	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**61000**	ug/L	25000	12500	1		12/16/14 10:30		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**5070**	ug/L	1000	500	1		12/06/14 08:09	7440-44-0	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-16 **Lab ID: 92228163004** Collected: 12/03/14 13:15 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/05/14 16:10	12/11/14 18:45	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:45	7440-38-2	
Barium	**52.5J**	ug/L	100	2.5	1	12/05/14 16:10	12/11/14 18:45	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 18:45	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 18:45	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:45	7440-47-3	
Cobalt	**45.7**	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:45	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:45	7440-50-8	
Iron	**62.0J**	ug/L	300	25.0	1	12/05/14 16:10	12/11/14 18:45	7439-89-6	B
Lead	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:45	7439-92-1	
Nickel	**5.9J**	ug/L	50.0	2.5	1	12/05/14 16:10	12/11/14 18:45	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 18:45	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:45	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/05/14 16:10	12/11/14 18:45	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/05/14 16:10	12/11/14 18:45	7440-62-2	
Zinc	**14.1**	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 18:45	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/05/14 20:08	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/05/14 20:08	107-13-1	
Benzene	**2.7**	ug/L	1.0	0.25	1		12/05/14 20:08	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/05/14 20:08	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/05/14 20:08	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/05/14 20:08	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/05/14 20:08	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/05/14 20:08	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/05/14 20:08	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/05/14 20:08	56-23-5	
Chlorobenzene	**0.71J**	ug/L	3.0	0.23	1		12/05/14 20:08	108-90-7	
Chloroethane	**0.64J**	ug/L	10.0	0.54	1		12/05/14 20:08	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/05/14 20:08	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/05/14 20:08	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/05/14 20:08	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/05/14 20:08	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/05/14 20:08	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/05/14 20:08	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/05/14 20:08	95-50-1	
1,4-Dichlorobenzene	**2.6**	ug/L	1.0	0.33	1		12/05/14 20:08	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/05/14 20:08	110-57-6	
1,1-Dichloroethane	**9.5**	ug/L	5.0	0.32	1		12/05/14 20:08	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/05/14 20:08	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/05/14 20:08	75-35-4	
cis-1,2-Dichloroethene	**23.0**	ug/L	5.0	0.19	1		12/05/14 20:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/05/14 20:08	156-60-5	
1,2-Dichloropropane	**1.1**	ug/L	1.0	0.27	1		12/05/14 20:08	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/05/14 20:08	142-28-9	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-16 **Lab ID: 92228163004** Collected: 12/03/14 13:15 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/05/14 20:08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/05/14 20:08	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/05/14 20:08	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/05/14 20:08	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/05/14 20:08	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/05/14 20:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/05/14 20:08	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/05/14 20:08	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/05/14 20:08	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/05/14 20:08	79-34-5	
Tetrachloroethene	**1.6**	ug/L	1.0	0.46	1		12/05/14 20:08	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/05/14 20:08	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/05/14 20:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/05/14 20:08	79-00-5	
Trichloroethene	**2.1**	ug/L	1.0	0.47	1		12/05/14 20:08	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/05/14 20:08	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/05/14 20:08	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/05/14 20:08	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/05/14 20:08	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/05/14 20:08	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	86	%	70-130		1		12/05/14 20:08	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-130		1		12/05/14 20:08	17060-07-0	
Toluene-d8 (S)	107	%	70-130		1		12/05/14 20:08	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**40700**	ug/L	5000	1000	1		12/15/14 17:36		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D								
Sulfide	ND	ug/L	1000	100	1		12/06/14 15:00	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**7300J**	ug/L	250000	1000	1		12/18/14 15:48	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**59.7J**	ug/L	10000	10.0	1		12/05/14 01:45		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**4820**	ug/L	1000	500	1		12/09/14 03:39	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**14000J**	ug/L	25000	12500	1		12/16/14 10:30		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**1870**	ug/L	1000	500	1		12/06/14 08:19	7440-44-0	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-24 **Lab ID: 92228163005** Collected: 12/03/14 16:50 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/05/14 16:10	12/11/14 18:58	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:58	7440-38-2	
Barium	**25.8J**	ug/L	100	2.5	1	12/05/14 16:10	12/11/14 18:58	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 18:58	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 18:58	7440-43-9	
Chromium	**2.5J**	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:58	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:58	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:58	7440-50-8	
Iron	**297J**	ug/L	300	25.0	1	12/05/14 16:10	12/11/14 18:58	7439-89-6	B
Lead	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:58	7439-92-1	
Nickel	**3.0J**	ug/L	50.0	2.5	1	12/05/14 16:10	12/11/14 18:58	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 18:58	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 18:58	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/05/14 16:10	12/11/14 18:58	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/05/14 16:10	12/11/14 18:58	7440-62-2	
Zinc	**12.9**	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 18:58	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/05/14 20:24	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/05/14 20:24	107-13-1	
Benzene	**0.52J**	ug/L	1.0	0.25	1		12/05/14 20:24	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/05/14 20:24	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/05/14 20:24	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/05/14 20:24	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/05/14 20:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/05/14 20:24	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/05/14 20:24	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/05/14 20:24	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/05/14 20:24	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/05/14 20:24	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/05/14 20:24	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/05/14 20:24	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/05/14 20:24	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/05/14 20:24	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/05/14 20:24	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/05/14 20:24	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/05/14 20:24	95-50-1	
1,4-Dichlorobenzene	**0.94J**	ug/L	1.0	0.33	1		12/05/14 20:24	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/05/14 20:24	110-57-6	
1,1-Dichloroethane	**0.63J**	ug/L	5.0	0.32	1		12/05/14 20:24	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/05/14 20:24	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/05/14 20:24	75-35-4	
cis-1,2-Dichloroethene	**1.0J**	ug/L	5.0	0.19	1		12/05/14 20:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/05/14 20:24	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/05/14 20:24	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/05/14 20:24	142-28-9	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-24 **Lab ID: 92228163005** Collected: 12/03/14 16:50 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/05/14 20:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/05/14 20:24	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/05/14 20:24	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/05/14 20:24	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/05/14 20:24	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/05/14 20:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/05/14 20:24	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/05/14 20:24	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/05/14 20:24	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/05/14 20:24	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/05/14 20:24	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/05/14 20:24	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/05/14 20:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/05/14 20:24	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/05/14 20:24	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/05/14 20:24	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/05/14 20:24	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/05/14 20:24	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/05/14 20:24	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/05/14 20:24	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	86	%	70-130		1		12/05/14 20:24	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		12/05/14 20:24	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		12/05/14 20:24	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**69500**	ug/L	5000	1000	1		12/15/14 17:47		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D								
Sulfide	ND	ug/L	1000	100	1		12/06/14 15:00	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**3270J**	ug/L	250000	1000	1		12/18/14 16:02	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**89.4J**	ug/L	10000	10.0	1		12/05/14 02:13		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**3610**	ug/L	1000	500	1		12/09/14 03:40	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	ug/L	25000	12500	1		12/16/14 10:30		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**2140**	ug/L	1000	500	1		12/10/14 22:07	7440-44-0	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-25 **Lab ID: 92228163006** Collected: 12/03/14 15:45 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/05/14 16:10	12/11/14 19:01	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 19:01	7440-38-2	
Barium	**80.0J**	ug/L	100	2.5	1	12/05/14 16:10	12/11/14 19:01	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 19:01	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 19:01	7440-43-9	
Chromium	**4.0J**	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 19:01	7440-47-3	
Cobalt	**18.7**	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 19:01	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 19:01	7440-50-8	
Iron	**1060**	ug/L	300	25.0	1	12/05/14 16:10	12/11/14 19:01	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 19:01	7439-92-1	
Nickel	**4.1J**	ug/L	50.0	2.5	1	12/05/14 16:10	12/11/14 19:01	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 19:01	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 19:01	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/05/14 16:10	12/11/14 19:01	7440-28-0	
Vanadium	**2.9J**	ug/L	25.0	2.5	1	12/05/14 16:10	12/11/14 19:01	7440-62-2	
Zinc	**13.7**	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 19:01	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/05/14 20:41	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/05/14 20:41	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		12/05/14 20:41	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/05/14 20:41	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/05/14 20:41	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/05/14 20:41	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/05/14 20:41	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/05/14 20:41	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/05/14 20:41	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/05/14 20:41	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/05/14 20:41	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/05/14 20:41	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/05/14 20:41	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/05/14 20:41	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/05/14 20:41	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/05/14 20:41	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/05/14 20:41	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/05/14 20:41	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/05/14 20:41	95-50-1	
1,4-Dichlorobenzene	**0.74J**	ug/L	1.0	0.33	1		12/05/14 20:41	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/05/14 20:41	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		12/05/14 20:41	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/05/14 20:41	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/05/14 20:41	75-35-4	
cis-1,2-Dichloroethene	**1.5J**	ug/L	5.0	0.19	1		12/05/14 20:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/05/14 20:41	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/05/14 20:41	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/05/14 20:41	142-28-9	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-25 **Lab ID: 92228163006** Collected: 12/03/14 15:45 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/05/14 20:41	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/05/14 20:41	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/05/14 20:41	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/05/14 20:41	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/05/14 20:41	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/05/14 20:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/05/14 20:41	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/05/14 20:41	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/05/14 20:41	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/05/14 20:41	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/05/14 20:41	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/05/14 20:41	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/05/14 20:41	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/05/14 20:41	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/05/14 20:41	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/05/14 20:41	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/05/14 20:41	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/05/14 20:41	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/05/14 20:41	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/05/14 20:41	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	88	%	70-130		1		12/05/14 20:41	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-130		1		12/05/14 20:41	17060-07-0	
Toluene-d8 (S)	106	%	70-130		1		12/05/14 20:41	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**44600**	ug/L	5000	1000	1		12/15/14 17:57		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D								
Sulfide	**103J**	ug/L	1000	100	1		12/06/14 15:00	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**6090J**	ug/L	250000	1000	1		12/18/14 16:16	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**307J**	ug/L	10000	10.0	1		12/05/14 02:12		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**20200**	ug/L	1000	500	1		12/09/14 03:42	16887-00-6	M1
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	ND	ug/L	25000	12500	1		12/16/14 11:30		
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**2360**	ug/L	1000	500	1		12/10/14 22:17	7440-44-0	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-9 **Lab ID: 92228163011** Collected: 12/02/14 12:00 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/05/14 16:10	12/11/14 19:04	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 19:04	7440-38-2	
Barium	**162**	ug/L	100	2.5	1	12/05/14 16:10	12/11/14 19:04	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 19:04	7440-41-7	
Cadmium	**0.87J**	ug/L	1.0	0.50	1	12/05/14 16:10	12/11/14 19:04	7440-43-9	
Chromium	**5.5J**	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 19:04	7440-47-3	
Cobalt	**114**	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 19:04	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 19:04	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 19:04	7439-92-1	
Nickel	**56.4**	ug/L	50.0	2.5	1	12/05/14 16:10	12/11/14 19:04	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 19:04	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/05/14 16:10	12/11/14 19:04	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/05/14 16:10	12/11/14 19:04	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/05/14 16:10	12/11/14 19:04	7440-62-2	
Zinc	**27.8**	ug/L	10.0	5.0	1	12/05/14 16:10	12/11/14 19:04	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/05/14 20:58	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/05/14 20:58	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		12/05/14 20:58	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/05/14 20:58	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/05/14 20:58	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/05/14 20:58	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/05/14 20:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/05/14 20:58	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/05/14 20:58	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/05/14 20:58	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/05/14 20:58	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/05/14 20:58	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/05/14 20:58	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/05/14 20:58	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/05/14 20:58	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/05/14 20:58	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/05/14 20:58	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/05/14 20:58	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/05/14 20:58	95-50-1	
1,4-Dichlorobenzene	**0.90J**	ug/L	1.0	0.33	1		12/05/14 20:58	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/05/14 20:58	110-57-6	
1,1-Dichloroethane	**0.70J**	ug/L	5.0	0.32	1		12/05/14 20:58	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/05/14 20:58	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/05/14 20:58	75-35-4	
cis-1,2-Dichloroethene	**11.7**	ug/L	5.0	0.19	1		12/05/14 20:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/05/14 20:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/05/14 20:58	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/05/14 20:58	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/05/14 20:58	10061-01-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-9 **Lab ID: 92228163011** Collected: 12/02/14 12:00 Received: 12/04/14 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/05/14 20:58	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/05/14 20:58	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/05/14 20:58	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/05/14 20:58	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/05/14 20:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/05/14 20:58	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/05/14 20:58	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/05/14 20:58	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/05/14 20:58	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/05/14 20:58	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/05/14 20:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/05/14 20:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/05/14 20:58	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/05/14 20:58	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/05/14 20:58	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/05/14 20:58	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/05/14 20:58	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/05/14 20:58	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/05/14 20:58	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	87	%	70-130		1		12/05/14 20:58	460-00-4	
1,2-Dichloroethane-d4 (S)	112	%	70-130		1		12/05/14 20:58	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		12/05/14 20:58	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-1 **Lab ID: 92228163012** Collected: 12/04/14 17:40 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/08/14 15:25	12/11/14 19:57	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 19:57	7440-38-2	
Barium	**41.8J**	ug/L	100	2.5	1	12/08/14 15:25	12/11/14 19:57	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 19:57	7440-41-7	
Cadmium	**0.51J**	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 19:57	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 19:57	7440-47-3	
Cobalt	**22.3**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 19:57	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 19:57	7440-50-8	
Lead	**3.0J**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 19:57	7439-92-1	
Nickel	**10.2J**	ug/L	50.0	2.5	1	12/08/14 15:25	12/11/14 19:57	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 19:57	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 19:57	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/08/14 15:25	12/11/14 19:57	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/08/14 15:25	12/11/14 19:57	7440-62-2	
Zinc	**27.8**	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 19:57	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	12/06/14 12:10	12/11/14 14:03	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/11/14 09:48	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/11/14 09:48	107-13-1	
Benzene	**1.8**	ug/L	1.0	0.25	1		12/11/14 09:48	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/11/14 09:48	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/11/14 09:48	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/11/14 09:48	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/11/14 09:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/11/14 09:48	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/11/14 09:48	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/11/14 09:48	56-23-5	
Chlorobenzene	**0.42J**	ug/L	3.0	0.23	1		12/11/14 09:48	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/11/14 09:48	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/11/14 09:48	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/11/14 09:48	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/11/14 09:48	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/11/14 09:48	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/11/14 09:48	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/11/14 09:48	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/11/14 09:48	95-50-1	
1,4-Dichlorobenzene	**3.3**	ug/L	1.0	0.33	1		12/11/14 09:48	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/11/14 09:48	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		12/11/14 09:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/11/14 09:48	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/11/14 09:48	75-35-4	
cis-1,2-Dichloroethene	**2.8J**	ug/L	5.0	0.19	1		12/11/14 09:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/11/14 09:48	156-60-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-1 **Lab ID: 92228163012** Collected: 12/04/14 17:40 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/11/14 09:48	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/11/14 09:48	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/11/14 09:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/11/14 09:48	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/11/14 09:48	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/11/14 09:48	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/11/14 09:48	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/11/14 09:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/11/14 09:48	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/11/14 09:48	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/11/14 09:48	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/11/14 09:48	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/11/14 09:48	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/11/14 09:48	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/11/14 09:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/11/14 09:48	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/11/14 09:48	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/11/14 09:48	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/11/14 09:48	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/11/14 09:48	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/11/14 09:48	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/11/14 09:48	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		12/11/14 09:48	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	70-130		1		12/11/14 09:48	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		12/11/14 09:48	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-1B **Lab ID: 92228163013** Collected: 12/04/14 17:10 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/08/14 15:25	12/11/14 20:06	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:06	7440-38-2	
Barium	**31.9J**	ug/L	100	2.5	1	12/08/14 15:25	12/11/14 20:06	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 20:06	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 20:06	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:06	7440-47-3	
Cobalt	**73.2**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:06	7440-48-4	
Copper	**2.7J**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:06	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:06	7439-92-1	
Nickel	**8.0J**	ug/L	50.0	2.5	1	12/08/14 15:25	12/11/14 20:06	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 20:06	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:06	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/08/14 15:25	12/11/14 20:06	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/08/14 15:25	12/11/14 20:06	7440-62-2	
Zinc	**12.5**	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 20:06	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**0.42**	ug/L	0.20	0.10	1	12/06/14 12:10	12/11/14 14:06	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/11/14 10:20	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/11/14 10:20	107-13-1	
Benzene	**0.73J**	ug/L	1.0	0.25	1		12/11/14 10:20	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/11/14 10:20	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/11/14 10:20	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/11/14 10:20	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/11/14 10:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/11/14 10:20	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/11/14 10:20	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/11/14 10:20	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/11/14 10:20	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/11/14 10:20	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/11/14 10:20	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/11/14 10:20	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/11/14 10:20	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/11/14 10:20	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/11/14 10:20	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/11/14 10:20	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/11/14 10:20	95-50-1	
1,4-Dichlorobenzene	**3.6**	ug/L	1.0	0.33	1		12/11/14 10:20	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/11/14 10:20	110-57-6	
1,1-Dichloroethane	**0.50J**	ug/L	5.0	0.32	1		12/11/14 10:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/11/14 10:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/11/14 10:20	75-35-4	
cis-1,2-Dichloroethene	**2.2J**	ug/L	5.0	0.19	1		12/11/14 10:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/11/14 10:20	156-60-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-1B **Lab ID: 92228163013** Collected: 12/04/14 17:10 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/11/14 10:20	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/11/14 10:20	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/11/14 10:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/11/14 10:20	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/11/14 10:20	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/11/14 10:20	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/11/14 10:20	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/11/14 10:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/11/14 10:20	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/11/14 10:20	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/11/14 10:20	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/11/14 10:20	79-34-5	
Tetrachloroethene	**1.0**	ug/L	1.0	0.46	1		12/11/14 10:20	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/11/14 10:20	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/11/14 10:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/11/14 10:20	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/11/14 10:20	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/11/14 10:20	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/11/14 10:20	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/11/14 10:20	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/11/14 10:20	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/11/14 10:20	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		12/11/14 10:20	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130		1		12/11/14 10:20	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		12/11/14 10:20	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-2 **Lab ID: 92228163014** Collected: 12/04/14 11:15 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/08/14 15:25	12/11/14 20:19	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:19	7440-38-2	
Barium	**110**	ug/L	100	2.5	1	12/08/14 15:25	12/11/14 20:19	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 20:19	7440-41-7	
Cadmium	**0.64J**	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 20:19	7440-43-9	
Chromium	**4.4J**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:19	7440-47-3	
Cobalt	**362**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:19	7440-48-4	
Copper	**2.7J**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:19	7440-50-8	
Lead	**3.8J**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:19	7439-92-1	
Nickel	**5.2J**	ug/L	50.0	2.5	1	12/08/14 15:25	12/11/14 20:19	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 20:19	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:19	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/08/14 15:25	12/11/14 20:19	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/08/14 15:25	12/11/14 20:19	7440-62-2	
Zinc	**18.4**	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 20:19	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	12/06/14 12:10	12/11/14 14:14	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/11/14 10:37	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/11/14 10:37	107-13-1	
Benzene	**1.5**	ug/L	1.0	0.25	1		12/11/14 10:37	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/11/14 10:37	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/11/14 10:37	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/11/14 10:37	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/11/14 10:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/11/14 10:37	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/11/14 10:37	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/11/14 10:37	56-23-5	
Chlorobenzene	**1.0J**	ug/L	3.0	0.23	1		12/11/14 10:37	108-90-7	
Chloroethane	**1.2J**	ug/L	10.0	0.54	1		12/11/14 10:37	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/11/14 10:37	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/11/14 10:37	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/11/14 10:37	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/11/14 10:37	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/11/14 10:37	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/11/14 10:37	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/11/14 10:37	95-50-1	
1,4-Dichlorobenzene	**2.7**	ug/L	1.0	0.33	1		12/11/14 10:37	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/11/14 10:37	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		12/11/14 10:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/11/14 10:37	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/11/14 10:37	75-35-4	
cis-1,2-Dichloroethene	**9.5**	ug/L	5.0	0.19	1		12/11/14 10:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/11/14 10:37	156-60-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-2 **Lab ID: 92228163014** Collected: 12/04/14 11:15 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/11/14 10:37	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/11/14 10:37	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/11/14 10:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/11/14 10:37	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/11/14 10:37	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/11/14 10:37	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/11/14 10:37	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/11/14 10:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/11/14 10:37	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/11/14 10:37	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/11/14 10:37	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/11/14 10:37	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/11/14 10:37	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/11/14 10:37	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/11/14 10:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/11/14 10:37	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/11/14 10:37	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/11/14 10:37	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/11/14 10:37	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/11/14 10:37	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/11/14 10:37	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/11/14 10:37	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		12/11/14 10:37	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130		1		12/11/14 10:37	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		12/11/14 10:37	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-4R **Lab ID: 92228163015** Collected: 12/04/14 15:10 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/08/14 15:25	12/11/14 20:22	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:22	7440-38-2	
Barium	**124**	ug/L	100	2.5	1	12/08/14 15:25	12/11/14 20:22	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 20:22	7440-41-7	
Cadmium	**0.62J**	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 20:22	7440-43-9	
Chromium	**3.6J**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:22	7440-47-3	
Cobalt	**127**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:22	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:22	7440-50-8	
Lead	**5.1J**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:22	7439-92-1	
Nickel	**8.6J**	ug/L	50.0	2.5	1	12/08/14 15:25	12/11/14 20:22	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 20:22	7782-49-2	
Silver	**2.6J**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:22	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/08/14 15:25	12/11/14 20:22	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/08/14 15:25	12/11/14 20:22	7440-62-2	
Zinc	ND	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 20:22	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/11/14 10:53	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/11/14 10:53	107-13-1	
Benzene	**1.3**	ug/L	1.0	0.25	1		12/11/14 10:53	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/11/14 10:53	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/11/14 10:53	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/11/14 10:53	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/11/14 10:53	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/11/14 10:53	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/11/14 10:53	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/11/14 10:53	56-23-5	
Chlorobenzene	**1.4J**	ug/L	3.0	0.23	1		12/11/14 10:53	108-90-7	
Chloroethane	**1.2J**	ug/L	10.0	0.54	1		12/11/14 10:53	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/11/14 10:53	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/11/14 10:53	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/11/14 10:53	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/11/14 10:53	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/11/14 10:53	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/11/14 10:53	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/11/14 10:53	95-50-1	
1,4-Dichlorobenzene	**4.2**	ug/L	1.0	0.33	1		12/11/14 10:53	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/11/14 10:53	110-57-6	
1,1-Dichloroethane	**2.5J**	ug/L	5.0	0.32	1		12/11/14 10:53	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/11/14 10:53	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/11/14 10:53	75-35-4	
cis-1,2-Dichloroethene	**12.6**	ug/L	5.0	0.19	1		12/11/14 10:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/11/14 10:53	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/11/14 10:53	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/11/14 10:53	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/11/14 10:53	10061-01-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-4R **Lab ID: 92228163015** Collected: 12/04/14 15:10 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/11/14 10:53	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/11/14 10:53	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/11/14 10:53	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/11/14 10:53	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/11/14 10:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/11/14 10:53	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/11/14 10:53	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/11/14 10:53	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/11/14 10:53	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/11/14 10:53	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/11/14 10:53	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/11/14 10:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/11/14 10:53	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/11/14 10:53	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/11/14 10:53	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/11/14 10:53	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/11/14 10:53	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/11/14 10:53	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/11/14 10:53	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		12/11/14 10:53	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	70-130		1		12/11/14 10:53	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		12/11/14 10:53	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-10 **Lab ID: 92228163016** Collected: 12/04/14 14:40 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/08/14 15:25	12/11/14 20:25	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:25	7440-38-2	
Barium	**27.2J**	ug/L	100	2.5	1	12/08/14 15:25	12/11/14 20:25	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 20:25	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 20:25	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:25	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:25	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:25	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:25	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	12/08/14 15:25	12/11/14 20:25	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 20:25	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:25	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/08/14 15:25	12/11/14 20:25	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/08/14 15:25	12/11/14 20:25	7440-62-2	
Zinc	**6.7J**	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 20:25	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/11/14 11:10	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/11/14 11:10	107-13-1	
Benzene	**0.36J**	ug/L	1.0	0.25	1		12/11/14 11:10	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/11/14 11:10	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/11/14 11:10	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/11/14 11:10	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/11/14 11:10	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/11/14 11:10	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/11/14 11:10	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/11/14 11:10	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/11/14 11:10	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/11/14 11:10	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/11/14 11:10	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/11/14 11:10	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/11/14 11:10	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/11/14 11:10	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/11/14 11:10	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/11/14 11:10	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/11/14 11:10	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/11/14 11:10	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/11/14 11:10	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		12/11/14 11:10	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/11/14 11:10	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/11/14 11:10	75-35-4	
cis-1,2-Dichloroethene	**1.9J**	ug/L	5.0	0.19	1		12/11/14 11:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/11/14 11:10	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/11/14 11:10	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/11/14 11:10	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/11/14 11:10	10061-01-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-10 **Lab ID: 92228163016** Collected: 12/04/14 14:40 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/11/14 11:10	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/11/14 11:10	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/11/14 11:10	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/11/14 11:10	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/11/14 11:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/11/14 11:10	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/11/14 11:10	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/11/14 11:10	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/11/14 11:10	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/11/14 11:10	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/11/14 11:10	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/11/14 11:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/11/14 11:10	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/11/14 11:10	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/11/14 11:10	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/11/14 11:10	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/11/14 11:10	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/11/14 11:10	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/11/14 11:10	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		12/11/14 11:10	460-00-4	
1,2-Dichloroethane-d4 (S)	90	%	70-130		1		12/11/14 11:10	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		12/11/14 11:10	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-13 **Lab ID: 92228163017** Collected: 12/04/14 16:55 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/08/14 15:25	12/11/14 20:29	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:29	7440-38-2	
Barium	**15.7J**	ug/L	100	2.5	1	12/08/14 15:25	12/11/14 20:29	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 20:29	7440-41-7	
Cadmium	**1.8**	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 20:29	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:29	7440-47-3	
Cobalt	**2.5J**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:29	7440-48-4	
Copper	**3.6J**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:29	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:29	7439-92-1	
Nickel	**5.8J**	ug/L	50.0	2.5	1	12/08/14 15:25	12/11/14 20:29	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 20:29	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:29	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/08/14 15:25	12/11/14 20:29	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/08/14 15:25	12/11/14 20:29	7440-62-2	
Zinc	**11.3**	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 20:29	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/11/14 11:26	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/11/14 11:26	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		12/11/14 11:26	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/11/14 11:26	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/11/14 11:26	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/11/14 11:26	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/11/14 11:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/11/14 11:26	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/11/14 11:26	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/11/14 11:26	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/11/14 11:26	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/11/14 11:26	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/11/14 11:26	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/11/14 11:26	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/11/14 11:26	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/11/14 11:26	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/11/14 11:26	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/11/14 11:26	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/11/14 11:26	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/11/14 11:26	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/11/14 11:26	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		12/11/14 11:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/11/14 11:26	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/11/14 11:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		12/11/14 11:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/11/14 11:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/11/14 11:26	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/11/14 11:26	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/11/14 11:26	10061-01-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-13 **Lab ID: 92228163017** Collected: 12/04/14 16:55 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/11/14 11:26	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/11/14 11:26	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/11/14 11:26	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/11/14 11:26	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/11/14 11:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/11/14 11:26	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/11/14 11:26	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/11/14 11:26	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/11/14 11:26	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/11/14 11:26	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/11/14 11:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/11/14 11:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/11/14 11:26	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/11/14 11:26	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/11/14 11:26	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/11/14 11:26	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/11/14 11:26	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/11/14 11:26	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/11/14 11:26	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		12/11/14 11:26	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	70-130		1		12/11/14 11:26	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		12/11/14 11:26	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-14 **Lab ID: 92228163018** Collected: 12/04/14 10:30 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/08/14 15:25	12/11/14 20:32	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:32	7440-38-2	
Barium	**107**	ug/L	100	2.5	1	12/08/14 15:25	12/11/14 20:32	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 20:32	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 20:32	7440-43-9	
Chromium	**3.2J**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:32	7440-47-3	
Cobalt	**232**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:32	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:32	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:32	7439-92-1	
Nickel	**13.4J**	ug/L	50.0	2.5	1	12/08/14 15:25	12/11/14 20:32	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 20:32	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:32	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/08/14 15:25	12/11/14 20:32	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/08/14 15:25	12/11/14 20:32	7440-62-2	
Zinc	**30.0**	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 20:32	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/11/14 11:42	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/11/14 11:42	107-13-1	
Benzene	**0.66J**	ug/L	1.0	0.25	1		12/11/14 11:42	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/11/14 11:42	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/11/14 11:42	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/11/14 11:42	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/11/14 11:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/11/14 11:42	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/11/14 11:42	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/11/14 11:42	56-23-5	
Chlorobenzene	**1.6J**	ug/L	3.0	0.23	1		12/11/14 11:42	108-90-7	
Chloroethane	**1.4J**	ug/L	10.0	0.54	1		12/11/14 11:42	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/11/14 11:42	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/11/14 11:42	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/11/14 11:42	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/11/14 11:42	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/11/14 11:42	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/11/14 11:42	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/11/14 11:42	95-50-1	
1,4-Dichlorobenzene	**3.7**	ug/L	1.0	0.33	1		12/11/14 11:42	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/11/14 11:42	110-57-6	
1,1-Dichloroethane	**0.55J**	ug/L	5.0	0.32	1		12/11/14 11:42	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/11/14 11:42	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/11/14 11:42	75-35-4	
cis-1,2-Dichloroethene	**11.0**	ug/L	5.0	0.19	1		12/11/14 11:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/11/14 11:42	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/11/14 11:42	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/11/14 11:42	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/11/14 11:42	10061-01-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-14 **Lab ID: 92228163018** Collected: 12/04/14 10:30 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/11/14 11:42	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/11/14 11:42	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/11/14 11:42	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/11/14 11:42	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/11/14 11:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/11/14 11:42	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/11/14 11:42	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/11/14 11:42	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/11/14 11:42	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/11/14 11:42	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/11/14 11:42	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/11/14 11:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/11/14 11:42	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/11/14 11:42	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/11/14 11:42	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/11/14 11:42	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/11/14 11:42	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/11/14 11:42	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/11/14 11:42	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		12/11/14 11:42	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130		1		12/11/14 11:42	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		12/11/14 11:42	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-15 **Lab ID: 92228163019** Collected: 12/04/14 12:00 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/08/14 15:25	12/11/14 20:35	7440-36-0	
Arsenic	**3.4J**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:35	7440-38-2	
Barium	**13.4J**	ug/L	100	2.5	1	12/08/14 15:25	12/11/14 20:35	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 20:35	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 20:35	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:35	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:35	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:35	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:35	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	12/08/14 15:25	12/11/14 20:35	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 20:35	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:35	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/08/14 15:25	12/11/14 20:35	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/08/14 15:25	12/11/14 20:35	7440-62-2	
Zinc	**8.5J**	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 20:35	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	12/06/14 12:10	12/11/14 14:16	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	**22.2J**	ug/L	100	10.0	1		12/11/14 11:59	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/11/14 11:59	107-13-1	
Benzene	**2.2**	ug/L	1.0	0.25	1		12/11/14 11:59	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/11/14 11:59	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/11/14 11:59	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/11/14 11:59	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/11/14 11:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/11/14 11:59	78-93-3	
Carbon disulfide	**3.3J**	ug/L	100	1.2	1		12/11/14 11:59	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/11/14 11:59	56-23-5	
Chlorobenzene	**0.67J**	ug/L	3.0	0.23	1		12/11/14 11:59	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/11/14 11:59	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/11/14 11:59	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/11/14 11:59	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/11/14 11:59	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/11/14 11:59	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/11/14 11:59	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/11/14 11:59	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/11/14 11:59	95-50-1	
1,4-Dichlorobenzene	**0.91J**	ug/L	1.0	0.33	1		12/11/14 11:59	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/11/14 11:59	110-57-6	
1,1-Dichloroethane	**0.96J**	ug/L	5.0	0.32	1		12/11/14 11:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/11/14 11:59	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/11/14 11:59	75-35-4	
cis-1,2-Dichloroethene	**6.6**	ug/L	5.0	0.19	1		12/11/14 11:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/11/14 11:59	156-60-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-15 **Lab ID: 92228163019** Collected: 12/04/14 12:00 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/11/14 11:59	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/11/14 11:59	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/11/14 11:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/11/14 11:59	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/11/14 11:59	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/11/14 11:59	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/11/14 11:59	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/11/14 11:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/11/14 11:59	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/11/14 11:59	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/11/14 11:59	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/11/14 11:59	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/11/14 11:59	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/11/14 11:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/11/14 11:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/11/14 11:59	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/11/14 11:59	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/11/14 11:59	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/11/14 11:59	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/11/14 11:59	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/11/14 11:59	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/11/14 11:59	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		12/11/14 11:59	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	70-130		1		12/11/14 11:59	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		12/11/14 11:59	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-32 **Lab ID: 92228163020** Collected: 12/04/14 09:30 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/08/14 15:25	12/11/14 20:38	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:38	7440-38-2	
Barium	**11.1J**	ug/L	100	2.5	1	12/08/14 15:25	12/11/14 20:38	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 20:38	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 20:38	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:38	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:38	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:38	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:38	7439-92-1	
Nickel	**12.8J**	ug/L	50.0	2.5	1	12/08/14 15:25	12/11/14 20:38	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 20:38	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:38	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/08/14 15:25	12/11/14 20:38	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/08/14 15:25	12/11/14 20:38	7440-62-2	
Zinc	**10.9**	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 20:38	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/11/14 12:15	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/11/14 12:15	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		12/11/14 12:15	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/11/14 12:15	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/11/14 12:15	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/11/14 12:15	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/11/14 12:15	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/11/14 12:15	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/11/14 12:15	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/11/14 12:15	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/11/14 12:15	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/11/14 12:15	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/11/14 12:15	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/11/14 12:15	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/11/14 12:15	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/11/14 12:15	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/11/14 12:15	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/11/14 12:15	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/11/14 12:15	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/11/14 12:15	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/11/14 12:15	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		12/11/14 12:15	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/11/14 12:15	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/11/14 12:15	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		12/11/14 12:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/11/14 12:15	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/11/14 12:15	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/11/14 12:15	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/11/14 12:15	10061-01-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-32 **Lab ID: 92228163020** Collected: 12/04/14 09:30 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/11/14 12:15	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/11/14 12:15	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/11/14 12:15	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/11/14 12:15	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/11/14 12:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/11/14 12:15	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/11/14 12:15	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/11/14 12:15	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/11/14 12:15	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/11/14 12:15	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/11/14 12:15	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/11/14 12:15	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/11/14 12:15	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/11/14 12:15	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/11/14 12:15	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/11/14 12:15	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/11/14 12:15	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/11/14 12:15	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/11/14 12:15	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		12/11/14 12:15	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130		1		12/11/14 12:15	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		12/11/14 12:15	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-33 **Lab ID: 92228163021** Collected: 12/02/14 13:10 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/08/14 15:25	12/11/14 20:41	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:41	7440-38-2	
Barium	**33.9J**	ug/L	100	2.5	1	12/08/14 15:25	12/11/14 20:41	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 20:41	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 20:41	7440-43-9	
Chromium	**5.9J**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:41	7440-47-3	
Cobalt	**9.0J**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:41	7440-48-4	
Copper	**10.7**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:41	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:41	7439-92-1	
Nickel	**6.9J**	ug/L	50.0	2.5	1	12/08/14 15:25	12/11/14 20:41	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 20:41	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:41	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/08/14 15:25	12/11/14 20:41	7440-28-0	
Vanadium	**7.2J**	ug/L	25.0	2.5	1	12/08/14 15:25	12/11/14 20:41	7440-62-2	
Zinc	**15.4**	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 20:41	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/12/14 01:55	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/12/14 01:55	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		12/12/14 01:55	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/12/14 01:55	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/12/14 01:55	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/12/14 01:55	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/12/14 01:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/12/14 01:55	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/12/14 01:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/12/14 01:55	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/12/14 01:55	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/12/14 01:55	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/12/14 01:55	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/12/14 01:55	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/12/14 01:55	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/12/14 01:55	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/12/14 01:55	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/12/14 01:55	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/12/14 01:55	95-50-1	
1,4-Dichlorobenzene	**0.47J**	ug/L	1.0	0.33	1		12/12/14 01:55	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/12/14 01:55	110-57-6	
1,1-Dichloroethane	**0.84J**	ug/L	5.0	0.32	1		12/12/14 01:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/12/14 01:55	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/12/14 01:55	75-35-4	
cis-1,2-Dichloroethene	**1.6J**	ug/L	5.0	0.19	1		12/12/14 01:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/12/14 01:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/12/14 01:55	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/12/14 01:55	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/12/14 01:55	10061-01-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-33 **Lab ID: 92228163021** Collected: 12/02/14 13:10 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/12/14 01:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/12/14 01:55	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/12/14 01:55	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/12/14 01:55	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/12/14 01:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/12/14 01:55	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/12/14 01:55	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/12/14 01:55	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/12/14 01:55	79-34-5	
Tetrachloroethene	**1.0**	ug/L	1.0	0.46	1		12/12/14 01:55	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/12/14 01:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/12/14 01:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/12/14 01:55	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/12/14 01:55	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/12/14 01:55	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/12/14 01:55	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/12/14 01:55	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/12/14 01:55	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/12/14 01:55	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		12/12/14 01:55	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130		1		12/12/14 01:55	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		12/12/14 01:55	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-34 **Lab ID: 92228163022** Collected: 12/02/14 14:00 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/08/14 15:25	12/11/14 20:44	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:44	7440-38-2	
Barium	**18.3J**	ug/L	100	2.5	1	12/08/14 15:25	12/11/14 20:44	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 20:44	7440-41-7	
Cadmium	**0.66J**	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 20:44	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:44	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:44	7440-48-4	
Copper	**4.9J**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:44	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:44	7439-92-1	
Nickel	**2.5J**	ug/L	50.0	2.5	1	12/08/14 15:25	12/11/14 20:44	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 20:44	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:44	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/08/14 15:25	12/11/14 20:44	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/08/14 15:25	12/11/14 20:44	7440-62-2	
Zinc	**10.5**	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 20:44	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/12/14 02:12	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/12/14 02:12	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		12/12/14 02:12	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/12/14 02:12	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/12/14 02:12	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/12/14 02:12	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/12/14 02:12	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/12/14 02:12	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/12/14 02:12	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/12/14 02:12	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/12/14 02:12	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/12/14 02:12	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/12/14 02:12	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/12/14 02:12	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/12/14 02:12	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/12/14 02:12	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/12/14 02:12	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/12/14 02:12	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/12/14 02:12	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/12/14 02:12	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/12/14 02:12	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		12/12/14 02:12	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/12/14 02:12	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/12/14 02:12	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		12/12/14 02:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/12/14 02:12	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/12/14 02:12	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/12/14 02:12	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/12/14 02:12	10061-01-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-34 **Lab ID: 92228163022** Collected: 12/02/14 14:00 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/12/14 02:12	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/12/14 02:12	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/12/14 02:12	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/12/14 02:12	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/12/14 02:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/12/14 02:12	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/12/14 02:12	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/12/14 02:12	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/12/14 02:12	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/12/14 02:12	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/12/14 02:12	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/12/14 02:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/12/14 02:12	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/12/14 02:12	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/12/14 02:12	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/12/14 02:12	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/12/14 02:12	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/12/14 02:12	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/12/14 02:12	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		12/12/14 02:12	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	70-130		1		12/12/14 02:12	17060-07-0	
Toluene-d8 (S)	96	%	70-130		1		12/12/14 02:12	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: SW-5 **Lab ID: 92228163023** Collected: 12/04/14 09:55 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/08/14 15:25	12/11/14 20:47	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:47	7440-38-2	
Barium	**20.1J**	ug/L	100	2.5	1	12/08/14 15:25	12/11/14 20:47	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 20:47	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 20:47	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:47	7440-47-3	
Cobalt	**16.3**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:47	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:47	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:47	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	12/08/14 15:25	12/11/14 20:47	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 20:47	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 20:47	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/08/14 15:25	12/11/14 20:47	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/08/14 15:25	12/11/14 20:47	7440-62-2	
Zinc	**9.4J**	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 20:47	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/12/14 02:28	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/12/14 02:28	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		12/12/14 02:28	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/12/14 02:28	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/12/14 02:28	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/12/14 02:28	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/12/14 02:28	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/12/14 02:28	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/12/14 02:28	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/12/14 02:28	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/12/14 02:28	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/12/14 02:28	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/12/14 02:28	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/12/14 02:28	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/12/14 02:28	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/12/14 02:28	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/12/14 02:28	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/12/14 02:28	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/12/14 02:28	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/12/14 02:28	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/12/14 02:28	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		12/12/14 02:28	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/12/14 02:28	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/12/14 02:28	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		12/12/14 02:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/12/14 02:28	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/12/14 02:28	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/12/14 02:28	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/12/14 02:28	10061-01-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: SW-5 **Lab ID: 92228163023** Collected: 12/04/14 09:55 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/12/14 02:28	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/12/14 02:28	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/12/14 02:28	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/12/14 02:28	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/12/14 02:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/12/14 02:28	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/12/14 02:28	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/12/14 02:28	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/12/14 02:28	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/12/14 02:28	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/12/14 02:28	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/12/14 02:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/12/14 02:28	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/12/14 02:28	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/12/14 02:28	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/12/14 02:28	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/12/14 02:28	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/12/14 02:28	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/12/14 02:28	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		12/12/14 02:28	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		1		12/12/14 02:28	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		12/12/14 02:28	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: SW-6 **Lab ID: 92228163024** Collected: 12/02/14 14:20 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/08/14 15:25	12/11/14 21:00	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 21:00	7440-38-2	
Barium	**17.6J**	ug/L	100	2.5	1	12/08/14 15:25	12/11/14 21:00	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 21:00	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 21:00	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 21:00	7440-47-3	
Cobalt	**15.3**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 21:00	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 21:00	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 21:00	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	12/08/14 15:25	12/11/14 21:00	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 21:00	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 21:00	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/08/14 15:25	12/11/14 21:00	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/08/14 15:25	12/11/14 21:00	7440-62-2	
Zinc	**6.4J**	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 21:00	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/12/14 03:02	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/12/14 03:02	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		12/12/14 03:02	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/12/14 03:02	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/12/14 03:02	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/12/14 03:02	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/12/14 03:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/12/14 03:02	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/12/14 03:02	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/12/14 03:02	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/12/14 03:02	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/12/14 03:02	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/12/14 03:02	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/12/14 03:02	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/12/14 03:02	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/12/14 03:02	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/12/14 03:02	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/12/14 03:02	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/12/14 03:02	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/12/14 03:02	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/12/14 03:02	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		12/12/14 03:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/12/14 03:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/12/14 03:02	75-35-4	
cis-1,2-Dichloroethene	**0.19J**	ug/L	5.0	0.19	1		12/12/14 03:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/12/14 03:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/12/14 03:02	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/12/14 03:02	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/12/14 03:02	10061-01-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: SW-6 **Lab ID: 92228163024** Collected: 12/02/14 14:20 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/12/14 03:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/12/14 03:02	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/12/14 03:02	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/12/14 03:02	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/12/14 03:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/12/14 03:02	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/12/14 03:02	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/12/14 03:02	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/12/14 03:02	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/12/14 03:02	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/12/14 03:02	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/12/14 03:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/12/14 03:02	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/12/14 03:02	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/12/14 03:02	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/12/14 03:02	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/12/14 03:02	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/12/14 03:02	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/12/14 03:02	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		12/12/14 03:02	460-00-4	
1,2-Dichloroethane-d4 (S)	89	%	70-130		1		12/12/14 03:02	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		12/12/14 03:02	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-6 **Lab ID: 92228163025** Collected: 12/04/14 16:00 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/08/14 15:25	12/11/14 21:03	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 21:03	7440-38-2	
Barium	**76.3J**	ug/L	100	2.5	1	12/08/14 15:25	12/11/14 21:03	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 21:03	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/08/14 15:25	12/11/14 21:03	7440-43-9	
Chromium	**3.7J**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 21:03	7440-47-3	
Cobalt	**53.1**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 21:03	7440-48-4	
Copper	**3.2J**	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 21:03	7440-50-8	
Iron	**2840**	ug/L	300	25.0	1	12/08/14 15:25	12/11/14 21:03	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 21:03	7439-92-1	
Nickel	**15.6J**	ug/L	50.0	2.5	1	12/08/14 15:25	12/11/14 21:03	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 21:03	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/08/14 15:25	12/11/14 21:03	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/08/14 15:25	12/11/14 21:03	7440-28-0	
Vanadium	**2.7J**	ug/L	25.0	2.5	1	12/08/14 15:25	12/11/14 21:03	7440-62-2	
Zinc	**22.3**	ug/L	10.0	5.0	1	12/08/14 15:25	12/11/14 21:03	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**0.13J**	ug/L	0.20	0.10	1	12/06/14 12:10	12/11/14 14:19	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/12/14 03:18	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/12/14 03:18	107-13-1	
Benzene	**0.47J**	ug/L	1.0	0.25	1		12/12/14 03:18	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/12/14 03:18	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/12/14 03:18	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/12/14 03:18	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/12/14 03:18	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/12/14 03:18	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/12/14 03:18	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/12/14 03:18	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/12/14 03:18	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/12/14 03:18	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/12/14 03:18	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/12/14 03:18	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/12/14 03:18	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/12/14 03:18	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/12/14 03:18	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/12/14 03:18	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/12/14 03:18	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/12/14 03:18	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/12/14 03:18	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		12/12/14 03:18	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/12/14 03:18	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/12/14 03:18	75-35-4	
cis-1,2-Dichloroethene	**0.74J**	ug/L	5.0	0.19	1		12/12/14 03:18	156-59-2	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-6 **Lab ID: 92228163025** Collected: 12/04/14 16:00 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/12/14 03:18	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/12/14 03:18	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/12/14 03:18	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/12/14 03:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/12/14 03:18	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/12/14 03:18	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/12/14 03:18	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/12/14 03:18	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/12/14 03:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/12/14 03:18	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/12/14 03:18	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/12/14 03:18	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/12/14 03:18	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/12/14 03:18	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/12/14 03:18	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/12/14 03:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/12/14 03:18	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/12/14 03:18	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/12/14 03:18	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/12/14 03:18	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/12/14 03:18	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/12/14 03:18	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/12/14 03:18	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		12/12/14 03:18	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	70-130		1		12/12/14 03:18	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		12/12/14 03:18	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**31000**	ug/L	5000	1000	1		12/11/14 23:48		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D								
Sulfide	ND	ug/L	1000	100	1		12/10/14 15:00	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**17100J**	ug/L	250000	1000	1		12/19/14 01:48	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**213J**	ug/L	10000	10.0	1		12/05/14 23:38		
4500 Chloride	Analytical Method: SM 4500-Cl-E								
Chloride	**7780**	ug/L	1000	500	1		12/09/14 03:44	16887-00-6	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**22000J**	ug/L	25000	12500	1		12/16/14 11:30		

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-6 **Lab ID: 92228163025** Collected: 12/04/14 16:00 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**2830**	ug/L	1000	500	1		12/10/14 22:40	7440-44-0	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-7 **Lab ID: 92228163026** Collected: 12/05/14 12:00 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/10/14 15:10	12/12/14 17:01	7440-36-0	
Arsenic	**3.5J**	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:01	7440-38-2	
Barium	**6.5J**	ug/L	100	2.5	1	12/10/14 15:10	12/12/14 17:01	7440-39-3	
Beryllium	**0.81J**	ug/L	1.0	0.50	1	12/10/14 15:10	12/12/14 17:01	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/10/14 15:10	12/12/14 17:01	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:01	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:01	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:01	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:01	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	12/10/14 15:10	12/12/14 17:01	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/10/14 15:10	12/12/14 17:01	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:01	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/10/14 15:10	12/12/14 17:01	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/10/14 15:10	12/12/14 17:01	7440-62-2	
Zinc	**5.2J**	ug/L	10.0	5.0	1	12/10/14 15:10	12/12/14 17:01	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/12/14 03:35	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/12/14 03:35	107-13-1	
Benzene	**3.6**	ug/L	1.0	0.25	1		12/12/14 03:35	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/12/14 03:35	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/12/14 03:35	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/12/14 03:35	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/12/14 03:35	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/12/14 03:35	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/12/14 03:35	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/12/14 03:35	56-23-5	
Chlorobenzene	**0.94J**	ug/L	3.0	0.23	1		12/12/14 03:35	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/12/14 03:35	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/12/14 03:35	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/12/14 03:35	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/12/14 03:35	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/12/14 03:35	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/12/14 03:35	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/12/14 03:35	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/12/14 03:35	95-50-1	
1,4-Dichlorobenzene	**1.5**	ug/L	1.0	0.33	1		12/12/14 03:35	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/12/14 03:35	110-57-6	
1,1-Dichloroethane	**1.8J**	ug/L	5.0	0.32	1		12/12/14 03:35	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/12/14 03:35	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/12/14 03:35	75-35-4	
cis-1,2-Dichloroethene	**6.3**	ug/L	5.0	0.19	1		12/12/14 03:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/12/14 03:35	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/12/14 03:35	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/12/14 03:35	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/12/14 03:35	10061-01-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-7 **Lab ID: 92228163026** Collected: 12/05/14 12:00 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/12/14 03:35	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/12/14 03:35	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/12/14 03:35	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/12/14 03:35	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/12/14 03:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/12/14 03:35	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/12/14 03:35	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/12/14 03:35	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/12/14 03:35	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/12/14 03:35	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/12/14 03:35	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/12/14 03:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/12/14 03:35	79-00-5	
Trichloroethene	**0.50J**	ug/L	1.0	0.47	1		12/12/14 03:35	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/12/14 03:35	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/12/14 03:35	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/12/14 03:35	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/12/14 03:35	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/12/14 03:35	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		12/12/14 03:35	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	70-130		1		12/12/14 03:35	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		12/12/14 03:35	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-17 **Lab ID: 92228163027** Collected: 12/05/14 11:00 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/10/14 15:10	12/12/14 17:04	7440-36-0	
Arsenic	**3.4J**	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:04	7440-38-2	
Barium	**64.0J**	ug/L	100	2.5	1	12/10/14 15:10	12/12/14 17:04	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/10/14 15:10	12/12/14 17:04	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/10/14 15:10	12/12/14 17:04	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:04	7440-47-3	
Cobalt	**26.0**	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:04	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:04	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:04	7439-92-1	
Nickel	**5.0J**	ug/L	50.0	2.5	1	12/10/14 15:10	12/12/14 17:04	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/10/14 15:10	12/12/14 17:04	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:04	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/10/14 15:10	12/12/14 17:04	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/10/14 15:10	12/12/14 17:04	7440-62-2	
Zinc	**17.1**	ug/L	10.0	5.0	1	12/10/14 15:10	12/12/14 17:04	7440-66-6	B
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**0.19J**	ug/L	0.20	0.10	1	12/11/14 12:20	12/11/14 15:39	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/12/14 03:52	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/12/14 03:52	107-13-1	
Benzene	**0.67J**	ug/L	1.0	0.25	1		12/12/14 03:52	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/12/14 03:52	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/12/14 03:52	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/12/14 03:52	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/12/14 03:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/12/14 03:52	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/12/14 03:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/12/14 03:52	56-23-5	
Chlorobenzene	**0.28J**	ug/L	3.0	0.23	1		12/12/14 03:52	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/12/14 03:52	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/12/14 03:52	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/12/14 03:52	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/12/14 03:52	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/12/14 03:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/12/14 03:52	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/12/14 03:52	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/12/14 03:52	95-50-1	
1,4-Dichlorobenzene	**0.40J**	ug/L	1.0	0.33	1		12/12/14 03:52	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/12/14 03:52	110-57-6	
1,1-Dichloroethane	**0.82J**	ug/L	5.0	0.32	1		12/12/14 03:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/12/14 03:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/12/14 03:52	75-35-4	
cis-1,2-Dichloroethene	**1.7J**	ug/L	5.0	0.19	1		12/12/14 03:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/12/14 03:52	156-60-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-17 **Lab ID: 92228163027** Collected: 12/05/14 11:00 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/12/14 03:52	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/12/14 03:52	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/12/14 03:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/12/14 03:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/12/14 03:52	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/12/14 03:52	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/12/14 03:52	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/12/14 03:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/12/14 03:52	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/12/14 03:52	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/12/14 03:52	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/12/14 03:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/12/14 03:52	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/12/14 03:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/12/14 03:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/12/14 03:52	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/12/14 03:52	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/12/14 03:52	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/12/14 03:52	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/12/14 03:52	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/12/14 03:52	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/12/14 03:52	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		12/12/14 03:52	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	70-130		1		12/12/14 03:52	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		12/12/14 03:52	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-19 **Lab ID: 92228163028** Collected: 12/05/14 10:15 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/10/14 15:10	12/12/14 17:07	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:07	7440-38-2	
Barium	**37.1J**	ug/L	100	2.5	1	12/10/14 15:10	12/12/14 17:07	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/10/14 15:10	12/12/14 17:07	7440-41-7	
Cadmium	**0.80J**	ug/L	1.0	0.50	1	12/10/14 15:10	12/12/14 17:07	7440-43-9	
Chromium	**4.4J**	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:07	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:07	7440-48-4	
Copper	**6.4J**	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:07	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:07	7439-92-1	
Nickel	**2.9J**	ug/L	50.0	2.5	1	12/10/14 15:10	12/12/14 17:07	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/10/14 15:10	12/12/14 17:07	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:07	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/10/14 15:10	12/12/14 17:07	7440-28-0	
Vanadium	**4.9J**	ug/L	25.0	2.5	1	12/10/14 15:10	12/12/14 17:07	7440-62-2	
Zinc	**8.9J**	ug/L	10.0	5.0	1	12/10/14 15:10	12/12/14 17:07	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/12/14 04:08	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/12/14 04:08	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		12/12/14 04:08	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/12/14 04:08	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/12/14 04:08	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/12/14 04:08	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/12/14 04:08	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/12/14 04:08	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/12/14 04:08	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/12/14 04:08	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/12/14 04:08	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/12/14 04:08	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/12/14 04:08	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/12/14 04:08	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/12/14 04:08	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/12/14 04:08	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/12/14 04:08	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/12/14 04:08	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/12/14 04:08	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/12/14 04:08	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/12/14 04:08	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		12/12/14 04:08	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/12/14 04:08	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/12/14 04:08	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		12/12/14 04:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/12/14 04:08	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/12/14 04:08	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/12/14 04:08	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/12/14 04:08	10061-01-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-19 **Lab ID: 92228163028** Collected: 12/05/14 10:15 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/12/14 04:08	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/12/14 04:08	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/12/14 04:08	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/12/14 04:08	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/12/14 04:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/12/14 04:08	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/12/14 04:08	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/12/14 04:08	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/12/14 04:08	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/12/14 04:08	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/12/14 04:08	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/12/14 04:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/12/14 04:08	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/12/14 04:08	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/12/14 04:08	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/12/14 04:08	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/12/14 04:08	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/12/14 04:08	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/12/14 04:08	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		12/12/14 04:08	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	70-130		1		12/12/14 04:08	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		12/12/14 04:08	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-20 **Lab ID: 92228163029** Collected: 12/05/14 13:15 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/10/14 15:10	12/12/14 17:11	7440-36-0	
Arsenic	**3.1J**	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:11	7440-38-2	
Barium	**44.3J**	ug/L	100	2.5	1	12/10/14 15:10	12/12/14 17:11	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/10/14 15:10	12/12/14 17:11	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/10/14 15:10	12/12/14 17:11	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:11	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:11	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:11	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:11	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	12/10/14 15:10	12/12/14 17:11	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/10/14 15:10	12/12/14 17:11	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:11	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/10/14 15:10	12/12/14 17:11	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/10/14 15:10	12/12/14 17:11	7440-62-2	
Zinc	**7.6J**	ug/L	10.0	5.0	1	12/10/14 15:10	12/12/14 17:11	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/12/14 04:25	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/12/14 04:25	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		12/12/14 04:25	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/12/14 04:25	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/12/14 04:25	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/12/14 04:25	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/12/14 04:25	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/12/14 04:25	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/12/14 04:25	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/12/14 04:25	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/12/14 04:25	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/12/14 04:25	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/12/14 04:25	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/12/14 04:25	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/12/14 04:25	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/12/14 04:25	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/12/14 04:25	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/12/14 04:25	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/12/14 04:25	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/12/14 04:25	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/12/14 04:25	110-57-6	
1,1-Dichloroethane	**0.44J**	ug/L	5.0	0.32	1		12/12/14 04:25	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/12/14 04:25	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/12/14 04:25	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		12/12/14 04:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/12/14 04:25	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/12/14 04:25	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/12/14 04:25	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/12/14 04:25	10061-01-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-20 **Lab ID: 92228163029** Collected: 12/05/14 13:15 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/12/14 04:25	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/12/14 04:25	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/12/14 04:25	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/12/14 04:25	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/12/14 04:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/12/14 04:25	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/12/14 04:25	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/12/14 04:25	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/12/14 04:25	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/12/14 04:25	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/12/14 04:25	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/12/14 04:25	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/12/14 04:25	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/12/14 04:25	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/12/14 04:25	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/12/14 04:25	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/12/14 04:25	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/12/14 04:25	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/12/14 04:25	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		12/12/14 04:25	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	70-130		1		12/12/14 04:25	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		12/12/14 04:25	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-21 **Lab ID: 92228163030** Collected: 12/05/14 15:00 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/10/14 15:10	12/12/14 17:14	7440-36-0	
Arsenic	**4.1J**	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:14	7440-38-2	
Barium	**44.2J**	ug/L	100	2.5	1	12/10/14 15:10	12/12/14 17:14	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/10/14 15:10	12/12/14 17:14	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/10/14 15:10	12/12/14 17:14	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:14	7440-47-3	
Cobalt	**5.6J**	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:14	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:14	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:14	7439-92-1	
Nickel	**4.1J**	ug/L	50.0	2.5	1	12/10/14 15:10	12/12/14 17:14	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/10/14 15:10	12/12/14 17:14	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:14	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/10/14 15:10	12/12/14 17:14	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/10/14 15:10	12/12/14 17:14	7440-62-2	
Zinc	**13.8**	ug/L	10.0	5.0	1	12/10/14 15:10	12/12/14 17:14	7440-66-6	B
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**0.11J**	ug/L	0.20	0.10	1	12/11/14 12:20	12/11/14 15:41	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/12/14 04:42	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/12/14 04:42	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		12/12/14 04:42	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/12/14 04:42	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/12/14 04:42	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/12/14 04:42	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/12/14 04:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/12/14 04:42	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/12/14 04:42	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/12/14 04:42	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/12/14 04:42	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/12/14 04:42	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/12/14 04:42	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/12/14 04:42	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/12/14 04:42	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/12/14 04:42	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/12/14 04:42	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/12/14 04:42	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/12/14 04:42	95-50-1	
1,4-Dichlorobenzene	**0.38J**	ug/L	1.0	0.33	1		12/12/14 04:42	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/12/14 04:42	110-57-6	
1,1-Dichloroethane	**0.72J**	ug/L	5.0	0.32	1		12/12/14 04:42	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/12/14 04:42	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/12/14 04:42	75-35-4	
cis-1,2-Dichloroethene	**1.9J**	ug/L	5.0	0.19	1		12/12/14 04:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/12/14 04:42	156-60-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-21 **Lab ID: 92228163030** Collected: 12/05/14 15:00 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/12/14 04:42	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/12/14 04:42	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/12/14 04:42	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/12/14 04:42	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/12/14 04:42	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/12/14 04:42	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/12/14 04:42	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/12/14 04:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/12/14 04:42	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/12/14 04:42	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/12/14 04:42	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/12/14 04:42	79-34-5	
Tetrachloroethene	**1.0**	ug/L	1.0	0.46	1		12/12/14 04:42	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/12/14 04:42	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/12/14 04:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/12/14 04:42	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/12/14 04:42	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/12/14 04:42	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/12/14 04:42	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/12/14 04:42	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/12/14 04:42	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/12/14 04:42	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		12/12/14 04:42	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	70-130		1		12/12/14 04:42	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		12/12/14 04:42	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-22 **Lab ID: 92228163031** Collected: 12/05/14 15:40 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/10/14 15:10	12/12/14 17:17	7440-36-0	
Arsenic	**3.8J**	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:17	7440-38-2	
Barium	**73.3J**	ug/L	100	2.5	1	12/10/14 15:10	12/12/14 17:17	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/10/14 15:10	12/12/14 17:17	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/10/14 15:10	12/12/14 17:17	7440-43-9	
Chromium	**3.4J**	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:17	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:17	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:17	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:17	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	12/10/14 15:10	12/12/14 17:17	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/10/14 15:10	12/12/14 17:17	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:17	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/10/14 15:10	12/12/14 17:17	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/10/14 15:10	12/12/14 17:17	7440-62-2	
Zinc	**15.1**	ug/L	10.0	5.0	1	12/10/14 15:10	12/12/14 17:17	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/12/14 04:58	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/12/14 04:58	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		12/12/14 04:58	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/12/14 04:58	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/12/14 04:58	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/12/14 04:58	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/12/14 04:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/12/14 04:58	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/12/14 04:58	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/12/14 04:58	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/12/14 04:58	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/12/14 04:58	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/12/14 04:58	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/12/14 04:58	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/12/14 04:58	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/12/14 04:58	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/12/14 04:58	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/12/14 04:58	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/12/14 04:58	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/12/14 04:58	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/12/14 04:58	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		12/12/14 04:58	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/12/14 04:58	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/12/14 04:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		12/12/14 04:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/12/14 04:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/12/14 04:58	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/12/14 04:58	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/12/14 04:58	10061-01-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-22 **Lab ID: 92228163031** Collected: 12/05/14 15:40 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/12/14 04:58	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/12/14 04:58	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/12/14 04:58	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/12/14 04:58	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/12/14 04:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/12/14 04:58	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/12/14 04:58	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/12/14 04:58	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/12/14 04:58	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/12/14 04:58	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/12/14 04:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/12/14 04:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/12/14 04:58	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/12/14 04:58	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/12/14 04:58	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/12/14 04:58	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/12/14 04:58	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/12/14 04:58	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/12/14 04:58	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		12/12/14 04:58	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130		1		12/12/14 04:58	17060-07-0	
Toluene-d8 (S)	96	%	70-130		1		12/12/14 04:58	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-23 **Lab ID: 92228163032** Collected: 12/05/14 14:30 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/10/14 15:10	12/12/14 17:29	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:29	7440-38-2	
Barium	**34.0J**	ug/L	100	2.5	1	12/10/14 15:10	12/12/14 17:29	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/10/14 15:10	12/12/14 17:29	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/10/14 15:10	12/12/14 17:29	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:29	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:29	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:29	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:29	7439-92-1	
Nickel	**2.9J**	ug/L	50.0	2.5	1	12/10/14 15:10	12/12/14 17:29	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/10/14 15:10	12/12/14 17:29	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:29	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/10/14 15:10	12/12/14 17:29	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/10/14 15:10	12/12/14 17:29	7440-62-2	
Zinc	**6.7J**	ug/L	10.0	5.0	1	12/10/14 15:10	12/12/14 17:29	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/12/14 05:15	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/12/14 05:15	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		12/12/14 05:15	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/12/14 05:15	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/12/14 05:15	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/12/14 05:15	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/12/14 05:15	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/12/14 05:15	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/12/14 05:15	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/12/14 05:15	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/12/14 05:15	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/12/14 05:15	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/12/14 05:15	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/12/14 05:15	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/12/14 05:15	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/12/14 05:15	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/12/14 05:15	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/12/14 05:15	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/12/14 05:15	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/12/14 05:15	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/12/14 05:15	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		12/12/14 05:15	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/12/14 05:15	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/12/14 05:15	75-35-4	
cis-1,2-Dichloroethene	**2.5J**	ug/L	5.0	0.19	1		12/12/14 05:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/12/14 05:15	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/12/14 05:15	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/12/14 05:15	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/12/14 05:15	10061-01-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: MW-23 **Lab ID: 92228163032** Collected: 12/05/14 14:30 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/12/14 05:15	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/12/14 05:15	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/12/14 05:15	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/12/14 05:15	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/12/14 05:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/12/14 05:15	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/12/14 05:15	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/12/14 05:15	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/12/14 05:15	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/12/14 05:15	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/12/14 05:15	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/12/14 05:15	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/12/14 05:15	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/12/14 05:15	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/12/14 05:15	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/12/14 05:15	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/12/14 05:15	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/12/14 05:15	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/12/14 05:15	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		12/12/14 05:15	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		12/12/14 05:15	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		12/12/14 05:15	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: SW-3 **Lab ID: 92228163033** Collected: 12/05/14 09:30 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/10/14 15:10	12/12/14 17:33	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:33	7440-38-2	
Barium	**31.8J**	ug/L	100	2.5	1	12/10/14 15:10	12/12/14 17:33	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/10/14 15:10	12/12/14 17:33	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/10/14 15:10	12/12/14 17:33	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:33	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:33	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:33	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:33	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	12/10/14 15:10	12/12/14 17:33	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/10/14 15:10	12/12/14 17:33	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:33	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/10/14 15:10	12/12/14 17:33	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/10/14 15:10	12/12/14 17:33	7440-62-2	
Zinc	**7.4J**	ug/L	10.0	5.0	1	12/10/14 15:10	12/12/14 17:33	7440-66-6	B
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/12/14 05:32	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/12/14 05:32	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		12/12/14 05:32	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/12/14 05:32	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/12/14 05:32	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/12/14 05:32	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/12/14 05:32	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/12/14 05:32	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/12/14 05:32	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/12/14 05:32	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/12/14 05:32	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/12/14 05:32	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/12/14 05:32	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/12/14 05:32	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/12/14 05:32	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/12/14 05:32	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/12/14 05:32	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/12/14 05:32	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/12/14 05:32	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/12/14 05:32	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/12/14 05:32	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		12/12/14 05:32	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/12/14 05:32	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/12/14 05:32	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		12/12/14 05:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/12/14 05:32	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/12/14 05:32	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/12/14 05:32	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/12/14 05:32	10061-01-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: SW-3 **Lab ID: 92228163033** Collected: 12/05/14 09:30 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/12/14 05:32	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/12/14 05:32	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/12/14 05:32	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/12/14 05:32	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/12/14 05:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/12/14 05:32	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/12/14 05:32	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/12/14 05:32	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/12/14 05:32	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/12/14 05:32	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/12/14 05:32	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/12/14 05:32	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/12/14 05:32	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/12/14 05:32	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/12/14 05:32	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/12/14 05:32	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/12/14 05:32	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/12/14 05:32	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/12/14 05:32	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		12/12/14 05:32	460-00-4	
1,2-Dichloroethane-d4 (S)	90	%	70-130		1		12/12/14 05:32	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		12/12/14 05:32	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: SW-4R **Lab ID: 92228163034** Collected: 12/05/14 14:20 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/10/14 15:10	12/12/14 17:36	7440-36-0	
Arsenic	**5.7J**	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:36	7440-38-2	
Barium	**32.2J**	ug/L	100	2.5	1	12/10/14 15:10	12/12/14 17:36	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/10/14 15:10	12/12/14 17:36	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/10/14 15:10	12/12/14 17:36	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:36	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:36	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:36	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:36	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	12/10/14 15:10	12/12/14 17:36	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/10/14 15:10	12/12/14 17:36	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:36	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/10/14 15:10	12/12/14 17:36	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/10/14 15:10	12/12/14 17:36	7440-62-2	
Zinc	ND	ug/L	10.0	5.0	1	12/10/14 15:10	12/12/14 17:36	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/12/14 05:48	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/12/14 05:48	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		12/12/14 05:48	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/12/14 05:48	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/12/14 05:48	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/12/14 05:48	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/12/14 05:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/12/14 05:48	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/12/14 05:48	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/12/14 05:48	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/12/14 05:48	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/12/14 05:48	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/12/14 05:48	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/12/14 05:48	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/12/14 05:48	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/12/14 05:48	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/12/14 05:48	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/12/14 05:48	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/12/14 05:48	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/12/14 05:48	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/12/14 05:48	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		12/12/14 05:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/12/14 05:48	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/12/14 05:48	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		12/12/14 05:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/12/14 05:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/12/14 05:48	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/12/14 05:48	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/12/14 05:48	10061-01-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: SW-4R **Lab ID: 92228163034** Collected: 12/05/14 14:20 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/12/14 05:48	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/12/14 05:48	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/12/14 05:48	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/12/14 05:48	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/12/14 05:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/12/14 05:48	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/12/14 05:48	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/12/14 05:48	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/12/14 05:48	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/12/14 05:48	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/12/14 05:48	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/12/14 05:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/12/14 05:48	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/12/14 05:48	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/12/14 05:48	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/12/14 05:48	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/12/14 05:48	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/12/14 05:48	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/12/14 05:48	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		12/12/14 05:48	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	70-130		1		12/12/14 05:48	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		12/12/14 05:48	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: EB **Lab ID: 92228163035** Collected: 12/05/14 08:10 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/10/14 15:10	12/12/14 17:39	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:39	7440-38-2	
Barium	ND	ug/L	100	2.5	1	12/10/14 15:10	12/12/14 17:39	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/10/14 15:10	12/12/14 17:39	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/10/14 15:10	12/12/14 17:39	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:39	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:39	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:39	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:39	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	12/10/14 15:10	12/12/14 17:39	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/10/14 15:10	12/12/14 17:39	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:39	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/10/14 15:10	12/12/14 17:39	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/10/14 15:10	12/12/14 17:39	7440-62-2	
Zinc	ND	ug/L	10.0	5.0	1	12/10/14 15:10	12/12/14 17:39	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	12/11/14 12:20	12/11/14 15:44	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/12/14 06:05	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/12/14 06:05	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		12/12/14 06:05	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/12/14 06:05	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/12/14 06:05	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/12/14 06:05	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/12/14 06:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/12/14 06:05	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/12/14 06:05	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/12/14 06:05	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/12/14 06:05	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/12/14 06:05	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/12/14 06:05	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/12/14 06:05	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/12/14 06:05	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/12/14 06:05	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/12/14 06:05	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/12/14 06:05	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/12/14 06:05	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/12/14 06:05	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/12/14 06:05	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		12/12/14 06:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/12/14 06:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/12/14 06:05	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		12/12/14 06:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/12/14 06:05	156-60-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: EB **Lab ID: 92228163035** Collected: 12/05/14 08:10 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/12/14 06:05	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/12/14 06:05	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/12/14 06:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/12/14 06:05	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/12/14 06:05	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/12/14 06:05	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/12/14 06:05	74-88-4	
Methylene Chloride	**1.1**	ug/L	1.0	0.97	1		12/12/14 06:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/12/14 06:05	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/12/14 06:05	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/12/14 06:05	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/12/14 06:05	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/12/14 06:05	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/12/14 06:05	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/12/14 06:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/12/14 06:05	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/12/14 06:05	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/12/14 06:05	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/12/14 06:05	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/12/14 06:05	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/12/14 06:05	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/12/14 06:05	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		12/12/14 06:05	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		12/12/14 06:05	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		12/12/14 06:05	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: FB **Lab ID: 92228163036** Collected: 12/05/14 08:20 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	3.8	1	12/10/14 15:10	12/12/14 17:42	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:42	7440-38-2	
Barium	ND	ug/L	100	2.5	1	12/10/14 15:10	12/12/14 17:42	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	12/10/14 15:10	12/12/14 17:42	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	12/10/14 15:10	12/12/14 17:42	7440-43-9	
Chromium	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:42	7440-47-3	
Cobalt	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:42	7440-48-4	
Copper	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:42	7440-50-8	
Lead	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:42	7439-92-1	
Nickel	ND	ug/L	50.0	2.5	1	12/10/14 15:10	12/12/14 17:42	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	12/10/14 15:10	12/12/14 17:42	7782-49-2	
Silver	ND	ug/L	10.0	2.5	1	12/10/14 15:10	12/12/14 17:42	7440-22-4	
Thallium	ND	ug/L	5.5	5.0	1	12/10/14 15:10	12/12/14 17:42	7440-28-0	
Vanadium	ND	ug/L	25.0	2.5	1	12/10/14 15:10	12/12/14 17:42	7440-62-2	
Zinc	**6.1J**	ug/L	10.0	5.0	1	12/10/14 15:10	12/12/14 17:42	7440-66-6	B
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	12/11/14 12:20	12/11/14 15:47	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/12/14 06:22	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/12/14 06:22	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		12/12/14 06:22	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/12/14 06:22	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/12/14 06:22	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/12/14 06:22	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/12/14 06:22	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/12/14 06:22	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/12/14 06:22	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/12/14 06:22	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/12/14 06:22	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/12/14 06:22	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/12/14 06:22	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/12/14 06:22	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/12/14 06:22	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/12/14 06:22	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/12/14 06:22	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/12/14 06:22	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/12/14 06:22	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/12/14 06:22	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/12/14 06:22	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		12/12/14 06:22	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/12/14 06:22	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/12/14 06:22	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		12/12/14 06:22	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/12/14 06:22	156-60-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: FB **Lab ID: 92228163036** Collected: 12/05/14 08:20 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/12/14 06:22	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/12/14 06:22	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/12/14 06:22	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/12/14 06:22	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/12/14 06:22	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/12/14 06:22	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/12/14 06:22	74-88-4	
Methylene Chloride	**1.2**	ug/L	1.0	0.97	1		12/12/14 06:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/12/14 06:22	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/12/14 06:22	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/12/14 06:22	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/12/14 06:22	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/12/14 06:22	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/12/14 06:22	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/12/14 06:22	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/12/14 06:22	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/12/14 06:22	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/12/14 06:22	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/12/14 06:22	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/12/14 06:22	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/12/14 06:22	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/12/14 06:22	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		12/12/14 06:22	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	70-130		1		12/12/14 06:22	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		12/12/14 06:22	2037-26-5	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: TB **Lab ID: 92228163037** Collected: 12/05/14 00:00 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		12/12/14 06:39	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		12/12/14 06:39	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		12/12/14 06:39	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		12/12/14 06:39	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		12/12/14 06:39	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		12/12/14 06:39	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		12/12/14 06:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		12/12/14 06:39	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		12/12/14 06:39	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		12/12/14 06:39	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		12/12/14 06:39	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		12/12/14 06:39	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		12/12/14 06:39	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		12/12/14 06:39	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.0	1		12/12/14 06:39	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		12/12/14 06:39	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		12/12/14 06:39	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		12/12/14 06:39	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		12/12/14 06:39	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		12/12/14 06:39	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		12/12/14 06:39	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		12/12/14 06:39	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		12/12/14 06:39	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		12/12/14 06:39	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		12/12/14 06:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		12/12/14 06:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		12/12/14 06:39	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		12/12/14 06:39	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		12/12/14 06:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		12/12/14 06:39	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		12/12/14 06:39	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		12/12/14 06:39	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		12/12/14 06:39	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		12/12/14 06:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		12/12/14 06:39	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		12/12/14 06:39	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		12/12/14 06:39	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		12/12/14 06:39	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		12/12/14 06:39	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		12/12/14 06:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		12/12/14 06:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		12/12/14 06:39	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		12/12/14 06:39	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		12/12/14 06:39	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		12/12/14 06:39	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		12/12/14 06:39	108-05-4	

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ANALYTICAL RESULTS

Project: Alexander LF-SWS
Pace Project No.: 92228163

Sample: TB **Lab ID: 92228163037** Collected: 12/05/14 00:00 Received: 12/09/14 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Vinyl chloride	ND	ug/L	1.0	0.62	1		12/12/14 06:39	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		12/12/14 06:39	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		12/12/14 06:39	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130		1		12/12/14 06:39	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		12/12/14 06:39	2037-26-5	

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

QC Batch: MERP/7378 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 92228163012, 92228163013, 92228163014, 92228163019, 92228163025

METHOD BLANK: 1345664 Matrix: Water
Associated Lab Samples: 92228163012, 92228163013, 92228163014, 92228163019, 92228163025

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	12/11/14 13:10	

LABORATORY CONTROL SAMPLE: 1345665

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.5	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1345666 1345667

Parameter	Units	92228242001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.4	2.4	97	97	75-125	0	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

QC Batch: MERP/7392 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 92228163027, 92228163030, 92228163035, 92228163036

METHOD BLANK: 1348903 Matrix: Water
Associated Lab Samples: 92228163027, 92228163030, 92228163035, 92228163036

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	12/11/14 15:04	

LABORATORY CONTROL SAMPLE: 1348904

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.5	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1348905 1348906

Parameter	Units	92228692001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.7	2.5	110	99	75-125	10	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

QC Batch: MPRP/17481 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010 | Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92228163001, 92228163002, 92228163003, 92228163004, 92228163005, 92228163006, 92228163011

METHOD BLANK: 1345047 | Matrix: Water
Associated Lab Samples: 92228163001, 92228163002, 92228163003, 92228163004, 92228163005, 92228163006, 92228163011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	6.0	12/11/14 18:05	
Arsenic	ug/L	ND	10.0	12/11/14 18:05	
Barium	ug/L	ND	100	12/11/14 18:05	
Beryllium	ug/L	ND	1.0	12/11/14 18:05	
Cadmium	ug/L	ND	1.0	12/11/14 18:05	
Chromium	ug/L	ND	10.0	12/11/14 18:05	
Cobalt	ug/L	ND	10.0	12/11/14 18:05	
Copper	ug/L	ND	10.0	12/11/14 18:05	
Iron	ug/L	47.1J	300	12/11/14 18:05	
Lead	ug/L	ND	10.0	12/11/14 18:05	
Nickel	ug/L	ND	50.0	12/11/14 18:05	
Selenium	ug/L	ND	10.0	12/11/14 18:05	
Silver	ug/L	ND	10.0	12/11/14 18:05	
Thallium	ug/L	ND	5.5	12/11/14 18:05	
Vanadium	ug/L	ND	25.0	12/11/14 18:05	
Zinc	ug/L	6.9J	10.0	12/11/14 18:05	

LABORATORY CONTROL SAMPLE: 1345048

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	491	98	80-120	
Arsenic	ug/L	500	484	97	80-120	
Barium	ug/L	500	486	97	80-120	
Beryllium	ug/L	500	499	100	80-120	
Cadmium	ug/L	500	492	98	80-120	
Chromium	ug/L	500	484	97	80-120	
Cobalt	ug/L	500	486	97	80-120	
Copper	ug/L	500	498	100	80-120	
Iron	ug/L	5000	4960	99	80-120	
Lead	ug/L	500	487	97	80-120	
Nickel	ug/L	500	494	99	80-120	
Selenium	ug/L	500	485	97	80-120	
Silver	ug/L	250	244	98	80-120	
Thallium	ug/L	500	485	97	80-120	
Vanadium	ug/L	500	492	98	80-120	
Zinc	ug/L	500	485	97	80-120	

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1345049 1345050

Parameter	Units	92228073022 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	500	500	482	483	96	96	75-125	0	25	
Arsenic	ug/L	ND	500	500	475	480	95	96	75-125	1	25	
Barium	ug/L	5.0	500	500	485	486	96	96	75-125	0	25	
Beryllium	ug/L	ND	500	500	498	497	99	99	75-125	0	25	
Cadmium	ug/L	ND	500	500	483	484	97	97	75-125	0	25	
Chromium	ug/L	ND	500	500	481	482	96	96	75-125	0	25	
Cobalt	ug/L	ND	500	500	474	475	95	95	75-125	0	25	
Copper	ug/L	3.8J	500	500	492	493	98	98	75-125	0	25	
Iron	ug/L	176	5000	5000	5170	5150	100	99	75-125	0	25	
Lead	ug/L	ND	500	500	473	473	95	95	75-125	0	25	
Nickel	ug/L	ND	500	500	484	483	97	97	75-125	0	25	
Selenium	ug/L	ND	500	500	476	481	95	96	75-125	1	25	
Silver	ug/L	ND	250	250	240	240	96	96	75-125	0	25	
Thallium	ug/L	ND	500	500	473	473	95	95	75-125	0	25	
Vanadium	ug/L	ND	500	500	490	489	98	98	75-125	0	25	
Zinc	ug/L	6.9J	500	500	480	481	95	95	75-125	0	25	

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

QC Batch: MPRP/17494 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010 | Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92228163012, 92228163013, 92228163014, 92228163015, 92228163016, 92228163017, 92228163018, 92228163019, 92228163020, 92228163021, 92228163022, 92228163023, 92228163024, 92228163025

METHOD BLANK: 1346098 | Matrix: Water
Associated Lab Samples: 92228163012, 92228163013, 92228163014, 92228163015, 92228163016, 92228163017, 92228163018, 92228163019, 92228163020, 92228163021, 92228163022, 92228163023, 92228163024, 92228163025

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	6.0	12/11/14 19:51	
Arsenic	ug/L	ND	10.0	12/11/14 19:51	
Barium	ug/L	ND	100	12/11/14 19:51	
Beryllium	ug/L	ND	1.0	12/11/14 19:51	
Cadmium	ug/L	ND	1.0	12/11/14 19:51	
Chromium	ug/L	ND	10.0	12/11/14 19:51	
Cobalt	ug/L	ND	10.0	12/11/14 19:51	
Copper	ug/L	ND	10.0	12/11/14 19:51	
Iron	ug/L	ND	300	12/11/14 19:51	
Lead	ug/L	ND	10.0	12/11/14 19:51	
Nickel	ug/L	ND	50.0	12/11/14 19:51	
Selenium	ug/L	ND	10.0	12/11/14 19:51	
Silver	ug/L	ND	10.0	12/11/14 19:51	
Thallium	ug/L	ND	5.5	12/11/14 19:51	
Vanadium	ug/L	ND	25.0	12/11/14 19:51	
Zinc	ug/L	ND	10.0	12/11/14 19:51	

LABORATORY CONTROL SAMPLE: 1346099

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	496	99	80-120	
Arsenic	ug/L	500	493	99	80-120	
Barium	ug/L	500	491	98	80-120	
Beryllium	ug/L	500	509	102	80-120	
Cadmium	ug/L	500	500	100	80-120	
Chromium	ug/L	500	491	98	80-120	
Cobalt	ug/L	500	492	98	80-120	
Copper	ug/L	500	500	100	80-120	
Iron	ug/L	5000	5100	102	80-120	
Lead	ug/L	500	495	99	80-120	
Nickel	ug/L	500	502	100	80-120	
Selenium	ug/L	500	498	100	80-120	
Silver	ug/L	250	247	99	80-120	
Thallium	ug/L	500	491	98	80-120	
Vanadium	ug/L	500	500	100	80-120	
Zinc	ug/L	500	492	98	80-120	

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1346100 1346101

Parameter	Units	92228163012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	500	500	488	489	98	98	75-125	0	25	
Arsenic	ug/L	ND	500	500	496	489	99	97	75-125	1	25	
Barium	ug/L	41.8J	500	500	530	528	98	97	75-125	0	25	
Beryllium	ug/L	ND	500	500	509	508	102	102	75-125	0	25	
Cadmium	ug/L	0.51J	500	500	499	495	100	99	75-125	1	25	
Chromium	ug/L	ND	500	500	487	485	97	97	75-125	0	25	
Cobalt	ug/L	22.3	500	500	502	500	96	96	75-125	0	25	
Copper	ug/L	ND	500	500	506	503	101	100	75-125	1	25	
Iron	ug/L	75200	5000	5000	80500	79800	106	92	75-125	1	25	
Lead	ug/L	3.0J	500	500	481	477	96	95	75-125	1	25	
Nickel	ug/L	10.2J	500	500	500	497	98	97	75-125	1	25	
Selenium	ug/L	ND	500	500	484	487	97	97	75-125	1	25	
Silver	ug/L	ND	250	250	248	247	99	99	75-125	0	25	
Thallium	ug/L	ND	500	500	478	476	95	95	75-125	0	25	
Vanadium	ug/L	ND	500	500	502	499	100	100	75-125	1	25	
Zinc	ug/L	27.8	500	500	514	508	97	96	75-125	1	25	

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

QC Batch: MPRP/17520 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010 | Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92228163026, 92228163027, 92228163028, 92228163029, 92228163030, 92228163031, 92228163032, 92228163033, 92228163034, 92228163035, 92228163036

METHOD BLANK: 1348166 | Matrix: Water
Associated Lab Samples: 92228163026, 92228163027, 92228163028, 92228163029, 92228163030, 92228163031, 92228163032, 92228163033, 92228163034, 92228163035, 92228163036

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	6.0	12/12/14 16:12	
Arsenic	ug/L	ND	10.0	12/12/14 16:12	
Barium	ug/L	ND	100	12/12/14 16:12	
Beryllium	ug/L	ND	1.0	12/12/14 16:12	
Cadmium	ug/L	ND	1.0	12/12/14 16:12	
Chromium	ug/L	ND	10.0	12/12/14 16:12	
Cobalt	ug/L	ND	10.0	12/12/14 16:12	
Copper	ug/L	ND	10.0	12/12/14 16:12	
Lead	ug/L	ND	10.0	12/12/14 16:12	
Nickel	ug/L	ND	50.0	12/12/14 16:12	
Selenium	ug/L	ND	10.0	12/12/14 16:12	
Silver	ug/L	ND	10.0	12/12/14 16:12	
Thallium	ug/L	ND	5.5	12/12/14 16:12	
Vanadium	ug/L	ND	25.0	12/12/14 16:12	
Zinc	ug/L	5.4J	10.0	12/12/14 16:12	

LABORATORY CONTROL SAMPLE: 1348167

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	503	101	80-120	
Arsenic	ug/L	500	484	97	80-120	
Barium	ug/L	500	492	98	80-120	
Beryllium	ug/L	500	498	100	80-120	
Cadmium	ug/L	500	494	99	80-120	
Chromium	ug/L	500	489	98	80-120	
Cobalt	ug/L	500	493	99	80-120	
Copper	ug/L	500	498	100	80-120	
Lead	ug/L	500	496	99	80-120	
Nickel	ug/L	500	494	99	80-120	
Selenium	ug/L	500	489	98	80-120	
Silver	ug/L	250	246	99	80-120	
Thallium	ug/L	500	492	98	80-120	
Vanadium	ug/L	500	491	98	80-120	
Zinc	ug/L	500	485	97	80-120	

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1348168 1348169

Parameter	Units	92228752001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	500	500	435	426	87	85	75-125	2	25	
Arsenic	ug/L	2.7J	500	500	491	475	98	94	75-125	3	25	
Barium	ug/L	98.7	500	500	598	583	100	97	75-125	3	25	
Beryllium	ug/L	1.6	500	500	508	490	101	98	75-125	4	25	
Cadmium	ug/L	ND	500	500	498	479	100	96	75-125	4	25	
Chromium	ug/L	4.4J	500	500	495	483	98	96	75-125	2	25	
Cobalt	ug/L	7.7	500	500	496	482	98	95	75-125	3	25	
Copper	ug/L	9.9	500	500	514	498	101	98	75-125	3	25	
Lead	ug/L	3.1J	500	500	494	477	98	95	75-125	3	25	
Nickel	ug/L	10.7	500	500	501	486	98	95	75-125	3	25	
Selenium	ug/L	ND	500	500	496	472	99	94	75-125	5	25	
Silver	ug/L	ND	250	250	246	239	98	96	75-125	3	25	
Thallium	ug/L	ND	500	500	478	476	95	95	75-125	0	25	
Vanadium	ug/L	7.8	500	500	506	490	100	97	75-125	3	25	
Zinc	ug/L	24.7	500	500	509	492	97	93	75-125	3	25	

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

QC Batch: MSV/29504 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92228163001, 92228163002, 92228163003, 92228163004, 92228163005, 92228163006, 92228163011

METHOD BLANK: 1345070 | Matrix: Water
Associated Lab Samples: 92228163001, 92228163002, 92228163003, 92228163004, 92228163005, 92228163006, 92228163011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	12/05/14 12:08	
1,1,1-Trichloroethane	ug/L	ND	1.0	12/05/14 12:08	
1,1,2,2-Tetrachloroethane	ug/L	ND	3.0	12/05/14 12:08	
1,1,2-Trichloroethane	ug/L	ND	1.0	12/05/14 12:08	
1,1-Dichloroethane	ug/L	ND	5.0	12/05/14 12:08	
1,1-Dichloroethene	ug/L	ND	5.0	12/05/14 12:08	
1,2,3-Trichloropropane	ug/L	ND	1.0	12/05/14 12:08	
1,2-Dibromo-3-chloropropane	ug/L	ND	13.0	12/05/14 12:08	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	12/05/14 12:08	
1,2-Dichlorobenzene	ug/L	ND	5.0	12/05/14 12:08	
1,2-Dichloroethane	ug/L	ND	1.0	12/05/14 12:08	
1,2-Dichloropropane	ug/L	ND	1.0	12/05/14 12:08	
1,3-Dichloropropane	ug/L	ND	1.0	12/05/14 12:08	
1,4-Dichlorobenzene	ug/L	ND	1.0	12/05/14 12:08	
2-Butanone (MEK)	ug/L	ND	100	12/05/14 12:08	
2-Hexanone	ug/L	ND	50.0	12/05/14 12:08	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	12/05/14 12:08	
Acetone	ug/L	ND	100	12/05/14 12:08	
Acrylonitrile	ug/L	ND	200	12/05/14 12:08	
Benzene	ug/L	ND	1.0	12/05/14 12:08	
Bromochloromethane	ug/L	ND	3.0	12/05/14 12:08	
Bromodichloromethane	ug/L	ND	1.0	12/05/14 12:08	
Bromoform	ug/L	ND	3.0	12/05/14 12:08	
Bromomethane	ug/L	4.4J	10.0	12/05/14 12:08	
Carbon disulfide	ug/L	ND	100	12/05/14 12:08	
Carbon tetrachloride	ug/L	ND	1.0	12/05/14 12:08	
Chlorobenzene	ug/L	ND	3.0	12/05/14 12:08	
Chloroethane	ug/L	ND	10.0	12/05/14 12:08	
Chloroform	ug/L	ND	5.0	12/05/14 12:08	
Chloromethane	ug/L	ND	1.0	12/05/14 12:08	
cis-1,2-Dichloroethene	ug/L	ND	5.0	12/05/14 12:08	
cis-1,3-Dichloropropene	ug/L	ND	1.0	12/05/14 12:08	
Dibromochloromethane	ug/L	ND	3.0	12/05/14 12:08	
Dibromomethane	ug/L	ND	10.0	12/05/14 12:08	
Ethylbenzene	ug/L	ND	1.0	12/05/14 12:08	
Iodomethane	ug/L	ND	10.0	12/05/14 12:08	
Methylene Chloride	ug/L	ND	1.0	12/05/14 12:08	
Styrene	ug/L	ND	1.0	12/05/14 12:08	
Tetrachloroethene	ug/L	ND	1.0	12/05/14 12:08	
Toluene	ug/L	ND	1.0	12/05/14 12:08	
trans-1,2-Dichloroethene	ug/L	ND	5.0	12/05/14 12:08	

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

METHOD BLANK: 1345070 Matrix: Water
Associated Lab Samples: 92228163001, 92228163002, 92228163003, 92228163004, 92228163005, 92228163006, 92228163011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,3-Dichloropropene	ug/L	ND	1.0	12/05/14 12:08	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	12/05/14 12:08	
Trichloroethene	ug/L	ND	1.0	12/05/14 12:08	
Trichlorofluoromethane	ug/L	ND	1.0	12/05/14 12:08	
Vinyl acetate	ug/L	ND	50.0	12/05/14 12:08	
Vinyl chloride	ug/L	ND	1.0	12/05/14 12:08	
Xylene (Total)	ug/L	ND	5.0	12/05/14 12:08	
1,2-Dichloroethane-d4 (S)	%	108	70-130	12/05/14 12:08	
4-Bromofluorobenzene (S)	%	87	70-130	12/05/14 12:08	
Toluene-d8 (S)	%	104	70-130	12/05/14 12:08	

LABORATORY CONTROL SAMPLE: 1345071

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	47.3	95	80-125	
1,1,1-Trichloroethane	ug/L	50	43.5	87	71-129	
1,1,2,2-Tetrachloroethane	ug/L	50	47.2	94	79-124	
1,1,2-Trichloroethane	ug/L	50	50.9	102	85-125	
1,1-Dichloroethane	ug/L	50	44.8	90	73-126	
1,1-Dichloroethene	ug/L	50	42.9	86	66-135	
1,2,3-Trichloropropane	ug/L	50	41.9	84	75-130	
1,2-Dibromo-3-chloropropane	ug/L	50	48.7	97	71-133	
1,2-Dibromoethane (EDB)	ug/L	50	53.9	108	83-124	
1,2-Dichlorobenzene	ug/L	50	48.8	98	80-133	
1,2-Dichloroethane	ug/L	50	41.8	84	67-128	
1,2-Dichloropropane	ug/L	50	50.2	100	75-132	
1,3-Dichloropropane	ug/L	50	53.3	107	76-131	
1,4-Dichlorobenzene	ug/L	50	47.6	95	78-130	
2-Butanone (MEK)	ug/L	100	97.5J	98	61-144	
2-Hexanone	ug/L	100	106	106	68-143	
4-Methyl-2-pentanone (MIBK)	ug/L	100	113	113	72-135	
Acetone	ug/L	100	97.3J	97	48-146	
Acrylonitrile	ug/L	250	138J	55	40-160	
Benzene	ug/L	50	52.8	106	80-125	
Bromochloromethane	ug/L	50	51.4	103	71-125	
Bromodichloromethane	ug/L	50	44.0	88	78-124	
Bromoform	ug/L	50	38.5	77	71-128	
Bromomethane	ug/L	50	47.8	96	40-160	
Carbon disulfide	ug/L	50	52.0J	104	50-160	
Carbon tetrachloride	ug/L	50	44.3	89	69-131	
Chlorobenzene	ug/L	50	47.3	95	81-122	
Chloroethane	ug/L	50	47.0	94	39-148	
Chloroform	ug/L	50	39.7	79	73-127	
Chloromethane	ug/L	50	54.7	109	44-146	

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

LABORATORY CONTROL SAMPLE: 1345071

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	50	47.7	95	74-124	
cis-1,3-Dichloropropene	ug/L	50	52.1	104	72-132	
Dibromochloromethane	ug/L	50	41.9	84	78-125	
Dibromomethane	ug/L	50	47.1	94	82-120	
Ethylbenzene	ug/L	50	47.1	94	79-121	
Iodomethane	ug/L	100	90.1	90	39-154	
Methylene Chloride	ug/L	50	48.5	97	64-133	
Styrene	ug/L	50	51.0	102	84-126	
Tetrachloroethene	ug/L	50	45.0	90	78-122	
Toluene	ug/L	50	51.6	103	80-121	
trans-1,2-Dichloroethene	ug/L	50	46.9	94	71-127	
trans-1,3-Dichloropropene	ug/L	50	50.7	101	69-141	
trans-1,4-Dichloro-2-butene	ug/L	50	49.0J	98	40-160	
Trichloroethene	ug/L	50	46.5	93	78-122	
Trichlorofluoromethane	ug/L	50	49.8	100	53-137	
Vinyl acetate	ug/L	100	104	104	40-160	
Vinyl chloride	ug/L	50	64.3	129	58-137	
Xylene (Total)	ug/L	150	139	93	81-126	
1,2-Dichloroethane-d4 (S)	%			102	70-130	
4-Bromofluorobenzene (S)	%			93	70-130	
Toluene-d8 (S)	%			108	70-130	

MATRIX SPIKE SAMPLE: 1345073

Parameter	Units	92228187001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	18.8	94	70-130	
1,1,1-Trichloroethane	ug/L	ND	20	19.8	99	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20.9	105	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	22.3	112	70-130	
1,1-Dichloroethane	ug/L	1.5	20	24.6	115	70-130	
1,1-Dichloroethene	ug/L	ND	20	22.1	111	70-166	
1,2,3-Trichloropropane	ug/L	ND	20	16.8	84	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	18.0	90	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	19.9	99	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	20.9	104	70-130	
1,2-Dichloroethane	ug/L	ND	20	20.0	100	70-130	
1,2-Dichloropropane	ug/L	ND	20	24.6	123	70-130	
1,3-Dichloropropane	ug/L	ND	20	21.2	106	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	22.0	107	70-130	
2-Butanone (MEK)	ug/L	ND	40	43.3J	108	70-130	
2-Hexanone	ug/L	ND	40	48.1J	120	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	49.1J	123	70-130	
Acetone	ug/L	ND	40	42.9J	107	70-130	
Acrylonitrile	ug/L	ND	100	61.4J	61	70-130	M0
Benzene	ug/L	1.2	20	25.6	122	70-148	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

MATRIX SPIKE SAMPLE: 1345073

Parameter	Units	92228187001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromochloromethane	ug/L	ND	20	23.5	118	70-130	
Bromodichloromethane	ug/L	ND	20	18.8	94	70-130	
Bromoform	ug/L	ND	20	14.5	73	70-130	
Bromomethane	ug/L	ND	20	18.7	93	70-130	
Carbon disulfide	ug/L	ND	20	23.3J	116	70-130	
Carbon tetrachloride	ug/L	ND	20	20.3	101	70-130	
Chlorobenzene	ug/L	ND	20	21.0	105	70-146	
Chloroethane	ug/L	ND	20	26.4	128	70-130	
Chloroform	ug/L	ND	20	19.2	96	70-130	
Chloromethane	ug/L	ND	20	26.0	130	70-130	
cis-1,2-Dichloroethene	ug/L	1.3	20	24.2	114	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	22.1	111	70-130	
Dibromochloromethane	ug/L	ND	20	16.2	81	70-130	
Dibromomethane	ug/L	ND	20	19.3	96	70-130	
Ethylbenzene	ug/L	ND	20	21.3	106	70-130	
Iodomethane	ug/L	ND	40	26.4	66	70-130	M0
Methylene Chloride	ug/L	ND	20	27.8	139	70-130	M0
Styrene	ug/L	ND	20	20.5	102	70-130	
Tetrachloroethene	ug/L	ND	20	18.3	89	70-130	
Toluene	ug/L	ND	20	22.7	113	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	23.0	115	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	21.5	107	70-130	
trans-1,4-Dichloro-2-butene	ug/L	ND	20	16.4J	82	70-130	
Trichloroethene	ug/L	ND	20	20.8	102	69-151	
Trichlorofluoromethane	ug/L	ND	20	25.7	128	70-130	
Vinyl acetate	ug/L	ND	40	44.7J	112	70-130	
Vinyl chloride	ug/L	ND	20	29.7	149	70-130	M0
1,2-Dichloroethane-d4 (S)	%				107	70-130	
4-Bromofluorobenzene (S)	%				86	70-130	
Toluene-d8 (S)	%				107	70-130	

SAMPLE DUPLICATE: 1345072

Parameter	Units	92228156001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND			
1,1,1-Trichloroethane	ug/L	ND	ND			
1,1,2,2-Tetrachloroethane	ug/L	ND	ND			
1,1,2-Trichloroethane	ug/L	ND	ND			
1,1-Dichloroethane	ug/L	0.68J	0.65J			
1,1-Dichloroethene	ug/L	ND	ND			
1,2,3-Trichloropropane	ug/L	ND	ND			
1,2-Dibromo-3-chloropropane	ug/L	ND	ND			
1,2-Dibromoethane (EDB)	ug/L	ND	ND			
1,2-Dichlorobenzene	ug/L	0.48J	0.46J			
1,2-Dichloroethane	ug/L	ND	ND			

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

SAMPLE DUPLICATE: 1345072

Parameter	Units	92228156001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloropropane	ug/L	ND	ND			
1,3-Dichloropropane	ug/L	ND	ND			
1,4-Dichlorobenzene	ug/L	7.2	6.9	4		
2-Butanone (MEK)	ug/L	ND	ND			
2-Hexanone	ug/L	ND	ND			
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND			
Acetone	ug/L	ND	ND			
Acrylonitrile	ug/L	ND	ND			
Benzene	ug/L	6.0	5.5	8		
Bromochloromethane	ug/L	ND	ND			
Bromodichloromethane	ug/L	ND	ND			
Bromoform	ug/L	ND	ND			
Bromomethane	ug/L	ND	ND			
Carbon disulfide	ug/L	ND	ND			
Carbon tetrachloride	ug/L	ND	ND			
Chlorobenzene	ug/L	0.98J	0.94J			
Chloroethane	ug/L	ND	0.81J			
Chloroform	ug/L	ND	ND			
Chloromethane	ug/L	ND	ND			
cis-1,2-Dichloroethene	ug/L	7.2	7.2	0		
cis-1,3-Dichloropropene	ug/L	ND	ND			
Dibromochloromethane	ug/L	ND	ND			
Dibromomethane	ug/L	ND	ND			
Ethylbenzene	ug/L	1.7	1.7	2		
Iodomethane	ug/L	ND	ND			
Methylene Chloride	ug/L	ND	ND			
Styrene	ug/L	ND	ND			
Tetrachloroethene	ug/L	ND	ND			
Toluene	ug/L	1.3	1.2	7		
trans-1,2-Dichloroethene	ug/L	ND	ND			
trans-1,3-Dichloropropene	ug/L	ND	ND			
trans-1,4-Dichloro-2-butene	ug/L	ND	ND			
Trichloroethene	ug/L	0.98J	1.1			
Trichlorofluoromethane	ug/L	ND	ND			
Vinyl acetate	ug/L	ND	ND			
Vinyl chloride	ug/L	ND	ND			
Xylene (Total)	ug/L	8.1	8.4	4		
1,2-Dichloroethane-d4 (S)	%	107	113	5		
4-Bromofluorobenzene (S)	%	86	89	4		
Toluene-d8 (S)	%	106	104	2		

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

QC Batch: MSV/29579 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92228163012, 92228163013, 92228163014, 92228163015, 92228163016, 92228163017, 92228163018, 92228163019, 92228163020

METHOD BLANK: 1348741 | Matrix: Water
Associated Lab Samples: 92228163012, 92228163013, 92228163014, 92228163015, 92228163016, 92228163017, 92228163018, 92228163019, 92228163020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	12/11/14 08:58	
1,1,1-Trichloroethane	ug/L	ND	1.0	12/11/14 08:58	
1,1,2,2-Tetrachloroethane	ug/L	ND	3.0	12/11/14 08:58	
1,1,2-Trichloroethane	ug/L	ND	1.0	12/11/14 08:58	
1,1-Dichloroethane	ug/L	ND	5.0	12/11/14 08:58	
1,1-Dichloroethene	ug/L	ND	5.0	12/11/14 08:58	
1,2,3-Trichloropropane	ug/L	ND	1.0	12/11/14 08:58	
1,2-Dibromo-3-chloropropane	ug/L	ND	13.0	12/11/14 08:58	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	12/11/14 08:58	
1,2-Dichlorobenzene	ug/L	ND	5.0	12/11/14 08:58	
1,2-Dichloroethane	ug/L	ND	1.0	12/11/14 08:58	
1,2-Dichloropropane	ug/L	ND	1.0	12/11/14 08:58	
1,3-Dichloropropane	ug/L	ND	1.0	12/11/14 08:58	
1,4-Dichlorobenzene	ug/L	ND	1.0	12/11/14 08:58	
2-Butanone (MEK)	ug/L	ND	100	12/11/14 08:58	
2-Hexanone	ug/L	ND	50.0	12/11/14 08:58	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	12/11/14 08:58	
Acetone	ug/L	ND	100	12/11/14 08:58	
Acrylonitrile	ug/L	ND	200	12/11/14 08:58	
Benzene	ug/L	ND	1.0	12/11/14 08:58	
Bromochloromethane	ug/L	ND	3.0	12/11/14 08:58	
Bromodichloromethane	ug/L	ND	1.0	12/11/14 08:58	
Bromoform	ug/L	ND	3.0	12/11/14 08:58	
Bromomethane	ug/L	ND	10.0	12/11/14 08:58	
Carbon disulfide	ug/L	ND	100	12/11/14 08:58	
Carbon tetrachloride	ug/L	ND	1.0	12/11/14 08:58	
Chlorobenzene	ug/L	ND	3.0	12/11/14 08:58	
Chloroethane	ug/L	ND	10.0	12/11/14 08:58	
Chloroform	ug/L	ND	5.0	12/11/14 08:58	
Chloromethane	ug/L	ND	1.0	12/11/14 08:58	
cis-1,2-Dichloroethene	ug/L	ND	5.0	12/11/14 08:58	
cis-1,3-Dichloropropene	ug/L	ND	1.0	12/11/14 08:58	
Dibromochloromethane	ug/L	ND	3.0	12/11/14 08:58	
Dibromomethane	ug/L	ND	10.0	12/11/14 08:58	
Ethylbenzene	ug/L	ND	1.0	12/11/14 08:58	
Iodomethane	ug/L	ND	10.0	12/11/14 08:58	
Methylene Chloride	ug/L	ND	1.0	12/11/14 08:58	
Styrene	ug/L	ND	1.0	12/11/14 08:58	
Tetrachloroethene	ug/L	ND	1.0	12/11/14 08:58	
Toluene	ug/L	ND	1.0	12/11/14 08:58	

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

METHOD BLANK: 1348741 Matrix: Water

Associated Lab Samples: 92228163012, 92228163013, 92228163014, 92228163015, 92228163016, 92228163017, 92228163018, 92228163019, 92228163020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	5.0	12/11/14 08:58	
trans-1,3-Dichloropropene	ug/L	ND	1.0	12/11/14 08:58	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	12/11/14 08:58	
Trichloroethene	ug/L	ND	1.0	12/11/14 08:58	
Trichlorofluoromethane	ug/L	ND	1.0	12/11/14 08:58	
Vinyl acetate	ug/L	ND	50.0	12/11/14 08:58	
Vinyl chloride	ug/L	ND	1.0	12/11/14 08:58	
Xylene (Total)	ug/L	ND	5.0	12/11/14 08:58	
1,2-Dichloroethane-d4 (S)	%	94	70-130	12/11/14 08:58	
4-Bromofluorobenzene (S)	%	103	70-130	12/11/14 08:58	
Toluene-d8 (S)	%	97	70-130	12/11/14 08:58	

LABORATORY CONTROL SAMPLE: 1348742

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	57.5	115	80-125	
1,1,1-Trichloroethane	ug/L	50	58.9	118	71-129	
1,1,2,2-Tetrachloroethane	ug/L	50	51.0	102	79-124	
1,1,2-Trichloroethane	ug/L	50	49.2	98	85-125	
1,1-Dichloroethane	ug/L	50	50.1	100	73-126	
1,1-Dichloroethene	ug/L	50	53.7	107	66-135	
1,2,3-Trichloropropane	ug/L	50	55.3	111	75-130	
1,2-Dibromo-3-chloropropane	ug/L	50	51.9	104	71-133	
1,2-Dibromoethane (EDB)	ug/L	50	53.2	106	83-124	
1,2-Dichlorobenzene	ug/L	50	49.2	98	80-133	
1,2-Dichloroethane	ug/L	50	57.0	114	67-128	
1,2-Dichloropropane	ug/L	50	45.9	92	75-132	
1,3-Dichloropropane	ug/L	50	46.6	93	76-131	
1,4-Dichlorobenzene	ug/L	50	48.9	98	78-130	
2-Butanone (MEK)	ug/L	100	105	105	61-144	
2-Hexanone	ug/L	100	123	123	68-143	
4-Methyl-2-pentanone (MIBK)	ug/L	100	123	123	72-135	
Acetone	ug/L	100	116	116	48-146	
Acrylonitrile	ug/L	250	255	102	40-160	
Benzene	ug/L	50	48.0	96	80-125	
Bromochloromethane	ug/L	50	44.6	89	71-125	
Bromodichloromethane	ug/L	50	55.9	112	78-124	
Bromoform	ug/L	50	46.2	92	71-128	
Bromomethane	ug/L	50	47.5	95	40-160	
Carbon disulfide	ug/L	50	41.9J	84	50-160	
Carbon tetrachloride	ug/L	50	66.6	133	69-131	L3
Chlorobenzene	ug/L	50	49.6	99	81-122	
Chloroethane	ug/L	50	41.0	82	39-148	

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

LABORATORY CONTROL SAMPLE: 1348742

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloroform	ug/L	50	51.6	103	73-127	
Chloromethane	ug/L	50	48.3	97	44-146	
cis-1,2-Dichloroethene	ug/L	50	51.6	103	74-124	
cis-1,3-Dichloropropene	ug/L	50	51.1	102	72-132	
Dibromochloromethane	ug/L	50	47.9	96	78-125	
Dibromomethane	ug/L	50	50.0	100	82-120	
Ethylbenzene	ug/L	50	50.4	101	79-121	
Iodomethane	ug/L	100	79.7	80	39-154	
Methylene Chloride	ug/L	50	50.7	101	64-133	
Styrene	ug/L	50	50.0	100	84-126	
Tetrachloroethene	ug/L	50	46.5	93	78-122	
Toluene	ug/L	50	48.4	97	80-121	
trans-1,2-Dichloroethene	ug/L	50	51.0	102	71-127	
trans-1,3-Dichloropropene	ug/L	50	54.6	109	69-141	
trans-1,4-Dichloro-2-butene	ug/L	50	59.3J	119	40-160	
Trichloroethene	ug/L	50	51.2	102	78-122	
Trichlorofluoromethane	ug/L	50	53.3	107	53-137	
Vinyl acetate	ug/L	100	105	105	40-160	
Vinyl chloride	ug/L	50	45.8	92	58-137	
Xylene (Total)	ug/L	150	154	103	81-126	
1,2-Dichloroethane-d4 (S)	%			93	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Toluene-d8 (S)	%			102	70-130	

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

QC Batch: MSV/29604 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92228163021, 92228163022, 92228163023, 92228163024, 92228163025, 92228163026, 92228163027, 92228163028, 92228163029, 92228163030, 92228163031, 92228163032, 92228163033, 92228163034, 92228163035, 92228163036, 92228163037

METHOD BLANK: 1349818 | Matrix: Water
Associated Lab Samples: 92228163021, 92228163022, 92228163023, 92228163024, 92228163025, 92228163026, 92228163027, 92228163028, 92228163029, 92228163030, 92228163031, 92228163032, 92228163033, 92228163034, 92228163035, 92228163036, 92228163037

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	12/12/14 01:39	
1,1,1-Trichloroethane	ug/L	ND	1.0	12/12/14 01:39	
1,1,2,2-Tetrachloroethane	ug/L	ND	3.0	12/12/14 01:39	
1,1,2-Trichloroethane	ug/L	ND	1.0	12/12/14 01:39	
1,1-Dichloroethane	ug/L	ND	5.0	12/12/14 01:39	
1,1-Dichloroethene	ug/L	ND	5.0	12/12/14 01:39	
1,2,3-Trichloropropane	ug/L	ND	1.0	12/12/14 01:39	
1,2-Dibromo-3-chloropropane	ug/L	ND	13.0	12/12/14 01:39	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	12/12/14 01:39	
1,2-Dichlorobenzene	ug/L	ND	5.0	12/12/14 01:39	
1,2-Dichloroethane	ug/L	0.25J	1.0	12/12/14 01:39	
1,2-Dichloropropane	ug/L	ND	1.0	12/12/14 01:39	
1,3-Dichloropropane	ug/L	ND	1.0	12/12/14 01:39	
1,4-Dichlorobenzene	ug/L	ND	1.0	12/12/14 01:39	
2-Butanone (MEK)	ug/L	ND	100	12/12/14 01:39	
2-Hexanone	ug/L	ND	50.0	12/12/14 01:39	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	12/12/14 01:39	
Acetone	ug/L	ND	100	12/12/14 01:39	
Acrylonitrile	ug/L	ND	200	12/12/14 01:39	
Benzene	ug/L	ND	1.0	12/12/14 01:39	
Bromochloromethane	ug/L	ND	3.0	12/12/14 01:39	
Bromodichloromethane	ug/L	ND	1.0	12/12/14 01:39	
Bromoform	ug/L	ND	3.0	12/12/14 01:39	
Bromomethane	ug/L	ND	10.0	12/12/14 01:39	
Carbon disulfide	ug/L	ND	100	12/12/14 01:39	
Carbon tetrachloride	ug/L	ND	1.0	12/12/14 01:39	
Chlorobenzene	ug/L	ND	3.0	12/12/14 01:39	
Chloroethane	ug/L	ND	10.0	12/12/14 01:39	
Chloroform	ug/L	ND	5.0	12/12/14 01:39	
Chloromethane	ug/L	ND	1.0	12/12/14 01:39	
cis-1,2-Dichloroethene	ug/L	ND	5.0	12/12/14 01:39	
cis-1,3-Dichloropropene	ug/L	ND	1.0	12/12/14 01:39	
Dibromochloromethane	ug/L	ND	3.0	12/12/14 01:39	
Dibromomethane	ug/L	ND	10.0	12/12/14 01:39	
Ethylbenzene	ug/L	ND	1.0	12/12/14 01:39	
Iodomethane	ug/L	ND	10.0	12/12/14 01:39	
Methylene Chloride	ug/L	ND	1.0	12/12/14 01:39	
Styrene	ug/L	ND	1.0	12/12/14 01:39	

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

METHOD BLANK: 1349818 Matrix: Water

Associated Lab Samples: 92228163021, 92228163022, 92228163023, 92228163024, 92228163025, 92228163026, 92228163027, 92228163028, 92228163029, 92228163030, 92228163031, 92228163032, 92228163033, 92228163034, 92228163035, 92228163036, 92228163037

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Tetrachloroethene	ug/L	ND	1.0	12/12/14 01:39	
Toluene	ug/L	ND	1.0	12/12/14 01:39	
trans-1,2-Dichloroethene	ug/L	ND	5.0	12/12/14 01:39	
trans-1,3-Dichloropropene	ug/L	ND	1.0	12/12/14 01:39	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	12/12/14 01:39	
Trichloroethene	ug/L	ND	1.0	12/12/14 01:39	
Trichlorofluoromethane	ug/L	ND	1.0	12/12/14 01:39	
Vinyl acetate	ug/L	ND	50.0	12/12/14 01:39	
Vinyl chloride	ug/L	ND	1.0	12/12/14 01:39	
Xylene (Total)	ug/L	ND	5.0	12/12/14 01:39	
1,2-Dichloroethane-d4 (S)	%	96	70-130	12/12/14 01:39	
4-Bromofluorobenzene (S)	%	101	70-130	12/12/14 01:39	
Toluene-d8 (S)	%	98	70-130	12/12/14 01:39	

LABORATORY CONTROL SAMPLE: 1349819

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	51.9	104	80-125	
1,1,1-Trichloroethane	ug/L	50	54.2	108	71-129	
1,1,2,2-Tetrachloroethane	ug/L	50	49.0	98	79-124	
1,1,2-Trichloroethane	ug/L	50	45.4	91	85-125	
1,1-Dichloroethane	ug/L	50	47.0	94	73-126	
1,1-Dichloroethene	ug/L	50	51.7	103	66-135	
1,2,3-Trichloropropane	ug/L	50	51.0	102	75-130	
1,2-Dibromo-3-chloropropane	ug/L	50	49.4	99	71-133	
1,2-Dibromoethane (EDB)	ug/L	50	49.9	100	83-124	
1,2-Dichlorobenzene	ug/L	50	45.7	91	80-133	
1,2-Dichloroethane	ug/L	50	50.9	102	67-128	
1,2-Dichloropropane	ug/L	50	43.0	86	75-132	
1,3-Dichloropropane	ug/L	50	45.3	91	76-131	
1,4-Dichlorobenzene	ug/L	50	45.1	90	78-130	
2-Butanone (MEK)	ug/L	100	98.3J	98	61-144	
2-Hexanone	ug/L	100	112	112	68-143	
4-Methyl-2-pentanone (MIBK)	ug/L	100	115	115	72-135	
Acetone	ug/L	100	106	106	48-146	
Acrylonitrile	ug/L	250	244	98	40-160	
Benzene	ug/L	50	44.7	89	80-125	
Bromochloromethane	ug/L	50	42.9	86	71-125	
Bromodichloromethane	ug/L	50	52.3	105	78-124	
Bromoform	ug/L	50	46.2	92	71-128	
Bromomethane	ug/L	50	42.8	86	40-160	
Carbon disulfide	ug/L	50	44.3J	89	50-160	

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

LABORATORY CONTROL SAMPLE: 1349819

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	59.2	118	69-131	
Chlorobenzene	ug/L	50	45.5	91	81-122	
Chloroethane	ug/L	50	34.6	69	39-148	
Chloroform	ug/L	50	49.0	98	73-127	
Chloromethane	ug/L	50	44.1	88	44-146	
cis-1,2-Dichloroethene	ug/L	50	46.8	94	74-124	
cis-1,3-Dichloropropene	ug/L	50	47.7	95	72-132	
Dibromochloromethane	ug/L	50	46.5	93	78-125	
Dibromomethane	ug/L	50	47.0	94	82-120	
Ethylbenzene	ug/L	50	45.9	92	79-121	
Iodomethane	ug/L	100	76.1	76	39-154	
Methylene Chloride	ug/L	50	46.2	92	64-133	
Styrene	ug/L	50	47.1	94	84-126	
Tetrachloroethene	ug/L	50	42.9	86	78-122	
Toluene	ug/L	50	44.0	88	80-121	
trans-1,2-Dichloroethene	ug/L	50	47.2	94	71-127	
trans-1,3-Dichloropropene	ug/L	50	50.9	102	69-141	
trans-1,4-Dichloro-2-butene	ug/L	50	58.9J	118	40-160	
Trichloroethene	ug/L	50	48.1	96	78-122	
Trichlorofluoromethane	ug/L	50	45.0	90	53-137	
Vinyl acetate	ug/L	100	98.5	98	40-160	
Vinyl chloride	ug/L	50	42.6	85	58-137	
Xylene (Total)	ug/L	150	136	91	81-126	
1,2-Dichloroethane-d4 (S)	%			96	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE SAMPLE: 1349821

Parameter	Units	92228163024 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	23.7	119	70-130	
1,1,1-Trichloroethane	ug/L	ND	20	27.3	136	70-130	M0
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20.8	104	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	19.9	99	70-130	
1,1-Dichloroethane	ug/L	ND	20	22.3	112	70-130	
1,1-Dichloroethene	ug/L	ND	20	25.5	128	70-166	
1,2,3-Trichloropropane	ug/L	ND	20	23.1	115	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	21.6	108	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20.8	104	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	19.4	97	70-130	
1,2-Dichloroethane	ug/L	ND	20	25.2	126	70-130	
1,2-Dichloropropane	ug/L	ND	20	19.1	95	70-130	
1,3-Dichloropropane	ug/L	ND	20	19.0	95	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	20.7	103	70-130	
2-Butanone (MEK)	ug/L	ND	40	37.1J	93	70-130	

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

MATRIX SPIKE SAMPLE: 1349821

Parameter	Units	92228163024 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
2-Hexanone	ug/L	ND	40	45.3J	113	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	50.7J	127	70-130	
Acetone	ug/L	ND	40	42.9J	107	70-130	
Acrylonitrile	ug/L	ND	100	98.1J	98	70-130	
Benzene	ug/L	ND	20	20.6	103	70-148	
Bromochloromethane	ug/L	ND	20	20.9	104	70-130	
Bromodichloromethane	ug/L	ND	20	24.6	123	70-130	
Bromoform	ug/L	ND	20	21.7	109	70-130	
Bromomethane	ug/L	ND	20	17.8	89	70-130	
Carbon disulfide	ug/L	ND	20	18.8J	94	70-130	
Carbon tetrachloride	ug/L	ND	20	31.2	156	70-130	M0
Chlorobenzene	ug/L	ND	20	21.3	107	70-146	
Chloroethane	ug/L	ND	20	21.8	109	70-130	
Chloroform	ug/L	ND	20	22.0	110	70-130	
Chloromethane	ug/L	ND	20	21.5	108	70-130	
cis-1,2-Dichloroethene	ug/L	0.19J	20	22.6	112	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	19.2	96	70-130	
Dibromochloromethane	ug/L	ND	20	22.6	113	70-130	
Dibromomethane	ug/L	ND	20	20.6	103	70-130	
Ethylbenzene	ug/L	ND	20	22.2	111	70-130	
Iodomethane	ug/L	ND	40	28.0	70	70-130	
Methylene Chloride	ug/L	ND	20	23.6	116	70-130	
Styrene	ug/L	ND	20	21.0	105	70-130	
Tetrachloroethene	ug/L	ND	20	20.3	102	70-130	
Toluene	ug/L	ND	20	20.7	103	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	22.3	111	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	20.8	104	70-130	
trans-1,4-Dichloro-2-butene	ug/L	ND	20	23.2J	116	70-130	
Trichloroethene	ug/L	ND	20	23.2	116	69-151	
Trichlorofluoromethane	ug/L	ND	20	29.5	147	70-130	M0
Vinyl acetate	ug/L	ND	40	42.4J	106	70-130	
Vinyl chloride	ug/L	ND	20	20.1	101	70-130	
1,2-Dichloroethane-d4 (S)	%				93	70-130	
4-Bromofluorobenzene (S)	%				101	70-130	
Toluene-d8 (S)	%				100	70-130	

SAMPLE DUPLICATE: 1349820

Parameter	Units	92228163023 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND			
1,1,1-Trichloroethane	ug/L	ND	ND			
1,1,2,2-Tetrachloroethane	ug/L	ND	ND			
1,1,2-Trichloroethane	ug/L	ND	ND			
1,1-Dichloroethane	ug/L	ND	ND			
1,1-Dichloroethene	ug/L	ND	ND			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

SAMPLE DUPLICATE: 1349820

Parameter	Units	92228163023 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2,3-Trichloropropane	ug/L	ND	ND			
1,2-Dibromo-3-chloropropane	ug/L	ND	ND			
1,2-Dibromoethane (EDB)	ug/L	ND	ND			
1,2-Dichlorobenzene	ug/L	ND	ND			
1,2-Dichloroethane	ug/L	ND	ND			
1,2-Dichloropropane	ug/L	ND	ND			
1,3-Dichloropropane	ug/L	ND	ND			
1,4-Dichlorobenzene	ug/L	ND	ND			
2-Butanone (MEK)	ug/L	ND	ND			
2-Hexanone	ug/L	ND	ND			
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND			
Acetone	ug/L	ND	ND			
Acrylonitrile	ug/L	ND	ND			
Benzene	ug/L	ND	ND			
Bromochloromethane	ug/L	ND	ND			
Bromodichloromethane	ug/L	ND	ND			
Bromoform	ug/L	ND	ND			
Bromomethane	ug/L	ND	ND			
Carbon disulfide	ug/L	ND	ND			
Carbon tetrachloride	ug/L	ND	ND			
Chlorobenzene	ug/L	ND	ND			
Chloroethane	ug/L	ND	ND			
Chloroform	ug/L	ND	ND			
Chloromethane	ug/L	ND	ND			
cis-1,2-Dichloroethene	ug/L	ND	ND			
cis-1,3-Dichloropropene	ug/L	ND	ND			
Dibromochloromethane	ug/L	ND	ND			
Dibromomethane	ug/L	ND	ND			
Ethylbenzene	ug/L	ND	ND			
Iodomethane	ug/L	ND	ND			
Methylene Chloride	ug/L	ND	ND			
Styrene	ug/L	ND	ND			
Tetrachloroethene	ug/L	ND	ND			
Toluene	ug/L	ND	ND			
trans-1,2-Dichloroethene	ug/L	ND	ND			
trans-1,3-Dichloropropene	ug/L	ND	ND			
trans-1,4-Dichloro-2-butene	ug/L	ND	ND			
Trichloroethene	ug/L	ND	ND			
Trichlorofluoromethane	ug/L	ND	ND			
Vinyl acetate	ug/L	ND	ND			
Vinyl chloride	ug/L	ND	ND			
Xylene (Total)	ug/L	ND	ND			
1,2-Dichloroethane-d4 (S)	%	96	98	2		
4-Bromofluorobenzene (S)	%	103	100	3		
Toluene-d8 (S)	%	99	98	2		

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

QC Batch: WET/34725
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Associated Lab Samples: 92228163025

METHOD BLANK: 1349705
Matrix: Water
Associated Lab Samples: 92228163025

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	ug/L	ND	5000	12/11/14 21:51	

LABORATORY CONTROL SAMPLE: 1349706

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	ug/L	50000	49000	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1349707 1349708

Parameter	Units	92228156001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	ug/L	103000	50000	50000	144000	147000	83	88	90-110	2	4	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

QC Batch: WET/34769 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 92228163001, 92228163002, 92228163003, 92228163004, 92228163005, 92228163006

METHOD BLANK: 1351776 Matrix: Water
Associated Lab Samples: 92228163001, 92228163002, 92228163003, 92228163004, 92228163005, 92228163006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	ug/L	ND	5000	12/15/14 16:12	

LABORATORY CONTROL SAMPLE: 1351777

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	ug/L	50000	48100	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1351778 1351779

Parameter	Units	92228163001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	ug/L	ND	50000	50000	171000	173000	342	347	90-110	2	4	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1351780 1351781

Parameter	Units	92228782001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	ug/L	141 mg/L	50000	50000	182000	187000	81	92	90-110	3	4	M1

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

QC Batch: WET/34630 | Analysis Method: SM 4500-S2D
QC Batch Method: SM 4500-S2D | Analysis Description: 4500S2D Sulfide Water
Associated Lab Samples: 92228163001, 92228163002, 92228163003, 92228163004, 92228163005, 92228163006

METHOD BLANK: 1345730 | Matrix: Water
Associated Lab Samples: 92228163001, 92228163002, 92228163003, 92228163004, 92228163005, 92228163006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide	ug/L	ND	1000	12/06/14 15:00	

LABORATORY CONTROL SAMPLE: 1345731

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	ug/L	500	531J	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1345732 1345733

Parameter	Units	92227838002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	ug/L	ND	500	500	576J	574J	113	113	90-110	0	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1345734 1345735

Parameter	Units	92227909002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	ug/L	ND	500	500	509J	509J	99	99	90-110	0	10	

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

QC Batch: WET/34699
QC Batch Method: SM 4500-S2D
Analysis Method: SM 4500-S2D
Analysis Description: 4500S2D Sulfide Water
Associated Lab Samples: 92228163025

METHOD BLANK: 1348176
Matrix: Water
Associated Lab Samples: 92228163025

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide	ug/L	ND	1000	12/10/14 15:00	

LABORATORY CONTROL SAMPLE: 1348177

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	ug/L	500	538J	108	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1348178 1348179

Parameter	Units	92228311002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	ug/L	ND	500	500	538J	538J	107	107	90-110	0	10	

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

QC Batch: WETA/21328 | Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 | Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92228163001, 92228163002, 92228163003, 92228163004, 92228163005, 92228163006

METHOD BLANK: 1354588 | Matrix: Water
Associated Lab Samples: 92228163001, 92228163002, 92228163003, 92228163004, 92228163005, 92228163006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	ug/L	ND	250000	12/18/14 13:05	

LABORATORY CONTROL SAMPLE: 1354590

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	ug/L	20000	19500J	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1354591 1354592

Parameter	Units	92228156003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	ug/L	4320J	20000	20000	23800J	23500J	97	96	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1354593 1354594

Parameter	Units	92228073039 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	ug/L	ND	20000	20000	19900J	20100J	99	100	90-110	1	10	

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

QC Batch: WETA/21331
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92228163025

METHOD BLANK: 1354607
Matrix: Water
Associated Lab Samples: 92228163025

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	ug/L	ND	250000	12/18/14 19:55	

LABORATORY CONTROL SAMPLE: 1354608

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	ug/L	20000	19700J	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1354609 1354610

Parameter	Units	92229267002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	ug/L	3.1 mg/L	20000	20000	21800J	21700J	93	93	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1354611 1354612

Parameter	Units	92229267012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	ug/L	3.0 mg/L	20000	20000	21900J	21900J	94	95	90-110	0	10	

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

QC Batch: WETA/21144 | Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 | Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92228163001, 92228163002, 92228163003, 92228163004

METHOD BLANK: 1344247 | Matrix: Water
Associated Lab Samples: 92228163001, 92228163002, 92228163003, 92228163004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	ug/L	ND	20.0	12/05/14 01:10	

LABORATORY CONTROL SAMPLE: 1344248

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	ug/L	2500	2520	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1344249 1344250

Parameter	Units	92228095001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	ug/L	ND	2500	2500	2440	2430	98	97	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1344251 1344252

Parameter	Units	92228095002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	ug/L	ND	2500	2500	2440	2430	97	97	90-110	0	10	

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

QC Batch: WETA/21145
Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92228163005, 92228163006

METHOD BLANK: 1344253
Matrix: Water
Associated Lab Samples: 92228163005, 92228163006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	ug/L	ND	20.0	12/05/14 01:54	

LABORATORY CONTROL SAMPLE: 1344254

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	ug/L	2500	2510	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1344255 1344256

Parameter	Units	92228073040 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	ug/L	0.18 mg/L	2500	2500	2680	2680	100	100	90-110	0	10	

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

QC Batch: WETA/21159
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92228163025

METHOD BLANK: 1345505
Matrix: Water
Associated Lab Samples: 92228163025

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	ug/L	ND	20.0	12/05/14 21:27	

LABORATORY CONTROL SAMPLE: 1345506

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	ug/L	2500	2470	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1345507 1345508

Parameter	Units	92228278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	ug/L	10.1 mg/L	12500	12500	16300	16400	50	50	90-110	1	10	M1

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

QC Batch: WETA/21190 | Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E | Analysis Description: 4500 Chloride
Associated Lab Samples: 92228163001, 92228163002, 92228163003, 92228163004, 92228163005, 92228163006, 92228163025

METHOD BLANK: 1346459 | Matrix: Water
Associated Lab Samples: 92228163001, 92228163002, 92228163003, 92228163004, 92228163005, 92228163006, 92228163025

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	ug/L	ND	1000	12/09/14 03:29	

LABORATORY CONTROL SAMPLE: 1346460

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	ug/L	20000	20500	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1346461 1346462

Parameter	Units	92228156001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	ug/L	22000	20000	20000	35900	35800	70	69	90-110	0	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1346463 1346464

Parameter	Units	92228163006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	ug/L	20200	20000	20000	32900	32900	64	64	90-110	0	10	M1

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

QC Batch: WETA/21289 Analysis Method: SM 5220D
QC Batch Method: SM 5220D Analysis Description: 5220D COD
Associated Lab Samples: 92228163001, 92228163002, 92228163003, 92228163004, 92228163005

METHOD BLANK: 1352166 Matrix: Water
Associated Lab Samples: 92228163001, 92228163002, 92228163003, 92228163004, 92228163005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	ug/L	ND	25000	12/16/14 10:30	

LABORATORY CONTROL SAMPLE: 1352167

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	ug/L	750000	746000	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1352168 1352169

Parameter	Units	92228966001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	ug/L	47.0 mg/L	750000	750000	790000	793000	99	99	90-110	0	3	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1352170 1352171

Parameter	Units	92228156001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	ug/L	33000	750000	750000	785000	785000	100	100	90-110	0	3	

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

QC Batch: WETA/21290 | Analysis Method: SM 5220D
QC Batch Method: SM 5220D | Analysis Description: 5220D COD
Associated Lab Samples: 92228163006, 92228163025

METHOD BLANK: 1352172 | Matrix: Water
Associated Lab Samples: 92228163006, 92228163025

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	ug/L	ND	25000	12/16/14 11:30	

LABORATORY CONTROL SAMPLE: 1352173

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	ug/L	750000	724000	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1352174 1352175

Parameter	Units	92228163006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	ug/L	ND	750000	750000	754000	760000	99	100	90-110	1	3	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1352176 1352177

Parameter	Units	92229239004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	ug/L	479 mg/L	750000	750000	958000	955000	64	63	90-110	0	3	M1

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

QC Batch: WETA/21150 Analysis Method: SM 5310B
QC Batch Method: SM 5310B Analysis Description: 5310B TOC
Associated Lab Samples: 92228163001, 92228163002, 92228163003, 92228163004

METHOD BLANK: 1344752 Matrix: Water
Associated Lab Samples: 92228163001, 92228163002, 92228163003, 92228163004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	ug/L	ND	1000	12/06/14 01:23	

LABORATORY CONTROL SAMPLE: 1344753

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	ug/L	25000	24700	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1344754 1344755

Parameter	Units	92227454005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	ug/L	10.1 mg/L	25000	25000	33900	32400	95	89	90-110	5	5	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1344756 1344757

Parameter	Units	92227984005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	ug/L	7.0 mg/L	25000	25000	31700	31300	99	97	90-110	1	5	

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QUALITY CONTROL DATA

Project: Alexander LF-SWS
Pace Project No.: 92228163

QC Batch: WETA/21220 Analysis Method: SM 5310B
QC Batch Method: SM 5310B Analysis Description: 5310B TOC
Associated Lab Samples: 92228163005, 92228163006, 92228163025

METHOD BLANK: 1347942 Matrix: Water
Associated Lab Samples: 92228163005, 92228163006, 92228163025

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	ug/L	ND	1000	12/10/14 19:34	

LABORATORY CONTROL SAMPLE: 1347943

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	ug/L	25000	24100	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1347944 1347945

Parameter	Units	92228341001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	ug/L	5.1 mg/L	25000	25000	29800	29600	99	98	90-110	1	5	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1347946 1347947

Parameter	Units	92228475004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	ug/L	0.68J mg/L	25000	25000	25000	24500	97	95	90-110	2	5	

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QUALIFIERS

Project: Alexander LF-SWS
Pace Project No.: 92228163

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville
PASI-C	Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
L3	Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Alexander LF-SWS
Pace Project No.: 92228163

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92228163001	**MW-5**	EPA 3010	MPRP/17481	EPA 6010	ICP/15755
92228163002	**MW-12**	EPA 3010	MPRP/17481	EPA 6010	ICP/15755
92228163003	**MW-12D**	EPA 3010	MPRP/17481	EPA 6010	ICP/15755
92228163004	**MW-16**	EPA 3010	MPRP/17481	EPA 6010	ICP/15755
92228163005	**MW-24**	EPA 3010	MPRP/17481	EPA 6010	ICP/15755
92228163006	**MW-25**	EPA 3010	MPRP/17481	EPA 6010	ICP/15755
92228163011	**MW-9**	EPA 3010	MPRP/17481	EPA 6010	ICP/15755
92228163012	**MW-1**	EPA 3010	MPRP/17494	EPA 6010	ICP/15761
92228163013	**MW-1B**	EPA 3010	MPRP/17494	EPA 6010	ICP/15761
92228163014	**MW-2**	EPA 3010	MPRP/17494	EPA 6010	ICP/15761
92228163015	**MW-4R**	EPA 3010	MPRP/17494	EPA 6010	ICP/15761
92228163016	**MW-10**	EPA 3010	MPRP/17494	EPA 6010	ICP/15761
92228163017	**MW-13**	EPA 3010	MPRP/17494	EPA 6010	ICP/15761
92228163018	**MW-14**	EPA 3010	MPRP/17494	EPA 6010	ICP/15761
92228163019	**MW-15**	EPA 3010	MPRP/17494	EPA 6010	ICP/15761
92228163020	**MW-32**	EPA 3010	MPRP/17494	EPA 6010	ICP/15761
92228163021	**MW-33**	EPA 3010	MPRP/17494	EPA 6010	ICP/15761
92228163022	**MW-34**	EPA 3010	MPRP/17494	EPA 6010	ICP/15761
92228163023	**SW-5**	EPA 3010	MPRP/17494	EPA 6010	ICP/15761
92228163024	**SW-6**	EPA 3010	MPRP/17494	EPA 6010	ICP/15761
92228163025	**MW-6**	EPA 3010	MPRP/17494	EPA 6010	ICP/15761
92228163026	**MW-7**	EPA 3010	MPRP/17520	EPA 6010	ICP/15784
92228163027	**MW-17**	EPA 3010	MPRP/17520	EPA 6010	ICP/15784
92228163028	**MW-19**	EPA 3010	MPRP/17520	EPA 6010	ICP/15784
92228163029	**MW-20**	EPA 3010	MPRP/17520	EPA 6010	ICP/15784
92228163030	**MW-21**	EPA 3010	MPRP/17520	EPA 6010	ICP/15784
92228163031	**MW-22**	EPA 3010	MPRP/17520	EPA 6010	ICP/15784
92228163032	**MW-23**	EPA 3010	MPRP/17520	EPA 6010	ICP/15784
92228163033	**SW-3**	EPA 3010	MPRP/17520	EPA 6010	ICP/15784
92228163034	**SW-4R**	EPA 3010	MPRP/17520	EPA 6010	ICP/15784
92228163035	**EB**	EPA 3010	MPRP/17520	EPA 6010	ICP/15784
92228163036	**FB**	EPA 3010	MPRP/17520	EPA 6010	ICP/15784
92228163012	**MW-1**	EPA 7470	MERP/7378	EPA 7470	MERC/7087
92228163013	**MW-1B**	EPA 7470	MERP/7378	EPA 7470	MERC/7087
92228163014	**MW-2**	EPA 7470	MERP/7378	EPA 7470	MERC/7087
92228163019	**MW-15**	EPA 7470	MERP/7378	EPA 7470	MERC/7087
92228163025	**MW-6**	EPA 7470	MERP/7378	EPA 7470	MERC/7087
92228163027	**MW-17**	EPA 7470	MERP/7392	EPA 7470	MERC/7100
92228163030	**MW-21**	EPA 7470	MERP/7392	EPA 7470	MERC/7100
92228163035	**EB**	EPA 7470	MERP/7392	EPA 7470	MERC/7100
92228163036	**FB**	EPA 7470	MERP/7392	EPA 7470	MERC/7100
92228163001	**MW-5**	EPA 8260	MSV/29504		
92228163002	**MW-12**	EPA 8260	MSV/29504		
92228163003	**MW-12D**	EPA 8260	MSV/29504		
92228163004	**MW-16**	EPA 8260	MSV/29504		
92228163005	**MW-24**	EPA 8260	MSV/29504		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Alexander LF-SWS
Pace Project No.: 92228163

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92228163006	**MW-25**	EPA 8260	MSV/29504		
92228163011	**MW-9**	EPA 8260	MSV/29504		
92228163012	**MW-1**	EPA 8260	MSV/29579		
92228163013	**MW-1B**	EPA 8260	MSV/29579		
92228163014	**MW-2**	EPA 8260	MSV/29579		
92228163015	**MW-4R**	EPA 8260	MSV/29579		
92228163016	**MW-10**	EPA 8260	MSV/29579		
92228163017	**MW-13**	EPA 8260	MSV/29579		
92228163018	**MW-14**	EPA 8260	MSV/29579		
92228163019	**MW-15**	EPA 8260	MSV/29579		
92228163020	**MW-32**	EPA 8260	MSV/29579		
92228163021	**MW-33**	EPA 8260	MSV/29604		
92228163022	**MW-34**	EPA 8260	MSV/29604		
92228163023	**SW-5**	EPA 8260	MSV/29604		
92228163024	**SW-6**	EPA 8260	MSV/29604		
92228163025	**MW-6**	EPA 8260	MSV/29604		
92228163026	**MW-7**	EPA 8260	MSV/29604		
92228163027	**MW-17**	EPA 8260	MSV/29604		
92228163028	**MW-19**	EPA 8260	MSV/29604		
92228163029	**MW-20**	EPA 8260	MSV/29604		
92228163030	**MW-21**	EPA 8260	MSV/29604		
92228163031	**MW-22**	EPA 8260	MSV/29604		
92228163032	**MW-23**	EPA 8260	MSV/29604		
92228163033	**SW-3**	EPA 8260	MSV/29604		
92228163034	**SW-4R**	EPA 8260	MSV/29604		
92228163035	**EB**	EPA 8260	MSV/29604		
92228163036	**FB**	EPA 8260	MSV/29604		
92228163037	**TB**	EPA 8260	MSV/29604		
92228163001	**MW-5**	SM 2320B	WET/34769		
92228163002	**MW-12**	SM 2320B	WET/34769		
92228163003	**MW-12D**	SM 2320B	WET/34769		
92228163004	**MW-16**	SM 2320B	WET/34769		
92228163005	**MW-24**	SM 2320B	WET/34769		
92228163006	**MW-25**	SM 2320B	WET/34769		
92228163025	**MW-6**	SM 2320B	WET/34725		
92228163001	**MW-5**	SM 4500-S2D	WET/34630		
92228163002	**MW-12**	SM 4500-S2D	WET/34630		
92228163003	**MW-12D**	SM 4500-S2D	WET/34630		
92228163004	**MW-16**	SM 4500-S2D	WET/34630		
92228163005	**MW-24**	SM 4500-S2D	WET/34630		
92228163006	**MW-25**	SM 4500-S2D	WET/34630		
92228163025	**MW-6**	SM 4500-S2D	WET/34699		
92228163001	**MW-5**	EPA 300.0	WETA/21328		
92228163002	**MW-12**	EPA 300.0	WETA/21328		
92228163003	**MW-12D**	EPA 300.0	WETA/21328		

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without the written consent of Pace Analytical Services, Inc..

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Alexander LF-SWS
Pace Project No.: 92228163

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92228163004	**MW-16**	EPA 300.0	WETA/21328		
92228163005	**MW-24**	EPA 300.0	WETA/21328		
92228163006	**MW-25**	EPA 300.0	WETA/21328		
92228163025	**MW-6**	EPA 300.0	WETA/21331		
92228163001	**MW-5**	EPA 353.2	WETA/21144		
92228163002	**MW-12**	EPA 353.2	WETA/21144		
92228163003	**MW-12D**	EPA 353.2	WETA/21144		
92228163004	**MW-16**	EPA 353.2	WETA/21144		
92228163005	**MW-24**	EPA 353.2	WETA/21145		
92228163006	**MW-25**	EPA 353.2	WETA/21145		
92228163025	**MW-6**	EPA 353.2	WETA/21159		
92228163001	**MW-5**	SM 4500-Cl-E	WETA/21190		
92228163002	**MW-12**	SM 4500-Cl-E	WETA/21190		
92228163003	**MW-12D**	SM 4500-Cl-E	WETA/21190		
92228163004	**MW-16**	SM 4500-Cl-E	WETA/21190		
92228163005	**MW-24**	SM 4500-Cl-E	WETA/21190		
92228163006	**MW-25**	SM 4500-Cl-E	WETA/21190		
92228163025	**MW-6**	SM 4500-Cl-E	WETA/21190		
92228163001	**MW-5**	SM 5220D	WETA/21289		
92228163002	**MW-12**	SM 5220D	WETA/21289		
92228163003	**MW-12D**	SM 5220D	WETA/21289		
92228163004	**MW-16**	SM 5220D	WETA/21289		
92228163005	**MW-24**	SM 5220D	WETA/21289		
92228163006	**MW-25**	SM 5220D	WETA/21290		
92228163025	**MW-6**	SM 5220D	WETA/21290		
92228163001	**MW-5**	SM 5310B	WETA/21150		
92228163002	**MW-12**	SM 5310B	WETA/21150		
92228163003	**MW-12D**	SM 5310B	WETA/21150		
92228163004	**MW-16**	SM 5310B	WETA/21150		
92228163005	**MW-24**	SM 5310B	WETA/21220		
92228163006	**MW-25**	SM 5310B	WETA/21220		
92228163025	**MW-6**	SM 5310B	WETA/21220		

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Pace Analytical®	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: September 22, 2014 Page 1 of 2
	Document Number: **F-CHR-CS-003-rev.15**	Issuing Authority: Pace Huntersville Quality Office

Client Name: Municipal

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ (Pace) Other_____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other_____

Thermometer Used: IR Gun T1401 **Type of Ice:** (Wet) Blue None ☐ Samples on ice, cooling process has begun

Temp Correction Factor **T1401** No Correction

Corrected Cooler Temp.: 2.3 °C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Optional
Proj. Due Date:
Proj. Name:

Date and Initials of person examining contents: [illegible] 12/4/14

				Comments:
Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☑Yes	☐No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☐Yes	☑No	☐N/A	8. missing MW33, MW34, SW4
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11.
Sample Labels match COC:	☐Yes	☑No	☐N/A	12. COC's say 14 but only 3 COC's
-Includes date/time/ID/Analysis Matrix:_____				Read metals - Alk - Chloride - SO4 for MW33 not on COC
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	13. no date/time on bottles
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☑No	☐N/A	1 metals pH = 4 for MW5 1 metals pH = 6 for MW5
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes	☐No		
Samples checked for dechlorination:	☑Yes	☐No	☐N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes	☑No	☐N/A	15.
Trip Blank Present:	☐Yes	☐No	☑N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased):_____				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review:	JG	Date:	12/4/14
SRF Review:	AMB	Date:	12-9-14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

WO#: 92228163

92228163

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 4

Section A — Required Client Information:

Company:	Municipal Engineering Services
Address:	P.O. Box 97
	Garner, NC 27529
Email To:	jpfohl@mesco.com
Phone:	919-772-5393 Fax:
Requested Due Date/TAT:	10 Day (Default)

Section B — Required Project Information:

Report To:	Jonathan Pfohl
Copy To:	
Purchase Order No.	
Client Project ID:	Alexander LF- SWS
Container Order Number:	

Section C — Invoice Information:

Attention:	Municipal Engineering Services
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Godwin
Pace Profile #:	

Regulatory Agency	
State / Location	
	North Carolina

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

Requested Analysis Filtered (Y/N)

ITEM#	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	VOCs Appendix 1	Total Metals App. 1	Alkalinity	Chloride	Sulfate	Sulfide	TOC	COD	Iron	Nitrate	VFA (AM23G)	Dissolved Hydrogen (AM20GAX)	Methane Dissolved (AM20GAX)	Ethene/Ethane (AM20GAX) MDL ~0.01	Mercury	
																			N	N	N	N	N	N	N	N	N	N	N	N	N	N		9222 8163
1	MW-1	WT	G						4			1	3						x	x												x		
2	MW-1A	WT	G						4			1	3						x	x												x		
3	MW-1B	WT	G						4			1	3						x	x												x		
4	MW-2	WT	G						4			1	3						x	x												x		
5	MW-4R	WT	G						4			1	3						x	x														
6	MW-5	WT	G			12/3/14	12:00												x	x	x	x	x	x	x	x	x	x	x	x	x			001
7	MW-6	WT	G																x	x	x	x	x	x	x	x	x	x	x	x	x	x		
8	MW-9	WT	G			12/3/14	12:00		4			1	3						x	x														011
9	MW-10	WT	G						4			1	3						x	x														
10	MW-12	WT	G			12/3/14	10:30												x	x	x	x	x	x	x	x	x	x	x	x	x			002
11	MW-12D	WT	G			12/3/14	11:15												x	x	x	x	x	x	x	x	x	x	x	x	x			003
12	MW-13	WT	G						4			1	3						x	x														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	MESCO	12/4/14	7:55		12-4	755	
		12/4/14	12:30		12/4/14	12:30	2.3 y y y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jonathan Pfohl

SIGNATURE of SAMPLER:

DATE Signed: 12/3/14

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 2 Of 4

Section A — Required Client Information:

Company:	Municipal Engineering Services
Address:	P.O. Box 97
	Garner, NC 27529
Email To:	jpfohl@mesco.com
Phone:	(919) 772-5393 Fax:
Requested Due Date/TAT:	10 Day (Default)

Section B — Required Project Information:

Report To:	Jonathan Pfohl
Copy To:	
Purchase Order No.	
Client Project ID:	Alexander LF- SWS
Container Order Number:	

Section C — Invoice Information:

Attention:	Municipal Engineering Services
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Godwin
Pace Profile #:	

Regulatory Agency:

State / Location: North Carolina

Requested Analysis Filtered (Y/N)

SAMPLE ID — One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM#	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	VOCs Appendix 1	Total Metals App. 1	Alkalinity	Chloride	Sulfate	Sulfide	TOC	COD	Iron	Nitrate	Dissolved Hydrogen (AM20GAX)	Methane Dissolved (AM20GAX)	Ethene/Ethane (AM20GAX) MDL ~0.01	Mercury	VFA (AM23G)	
																			N	N	N	N	N	N	N	N	N	N	N	N	N	N		
1	MW-14	WT	G						4			3	1						x	x														
2	MW-15	WT	G						4			3	1						x	x												x		
3	MW-16	WT	G			12/3/14	1:15												x	x	x	x	x	x	x	x	x	x	x	x		X		004
4	MW-17	WT	G						4			3	1						x	x												x		
5	MW-19	WT	G						4			3	1						x	x														
6	MW-20	WT	G						4			3	1						x	x														
7	MW-21	WT	G						4			3	1						x	x												x		
8	MW-22	WT	G						4			3	1						x	x														
9	MW-23	WT	G						4			3	1						x	x														
10	MW-24	WT	G			12/3/14	4:50												x	x	x	x	x	x	x	x	x	x	x	x	x		X	005
11	MW-25	WT	G			12/3/14	3:45												x	x	x	x	x	x	x	x	x	x	x	x	x		X	006
12	MW-26	WT	G			12/3/14	3:10																						x	x	x			007

92228163

Tell microseeps 10ml gas in sample NOT 15ml as preferred

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	MESCO	7:55	12/4/14	[signature]	12-4	7:55	
	[signature]	7:55	12/4/14	12:30 [signature]	12/4/14	12:30	23 / Y / N / Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jonathan Pfohl

SIGNATURE of SAMPLER: [signature]

DATE Signed: 12/4/14

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 3 Of 4

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Municipal Engineering Services	Report To: Jonathan Pfohl	Attention: Municipal Engineering Services
Address: P.O. Box 97	Copy To:	Company Name:
Garner, NC 27529		Address:
Email To: jpfohl@mesco.com	Purchase Order No.	Pace Quote Reference:
Phone: 919-772-5393 Fax:	Client Project ID: Alexander LF (SWS)	Pace Project Manager: Kevin Godwin
Requested Due Date/TAT: 10 Day (Default)	Container Order Number:	Pace Profile #:

Regulatory Agency
State / Location
North Carolina

Requested Analysis Filtered (Y/N)

ITEM#	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	VOCs Appendix 1	Total Metals App. 1	Alkalinity	Chloride	Sulfate	Sulfide	TOC	COD	Iron	Nitrate	Dissolved Hydrogen (AM20GAX)	Methane Dissolved (AM20GAX)	Ethene/Ethane (AM20GAX) MDL ~0.01	[illegible]	
																			N	N	N	N	N	N	N	N	N	N	N	N	N		
1	MW-11	WT	G			12/3/14	5:35																					x	x	x			008
2	MW-27	WT	G			12/3/14	2:30																					x	x	x			009
3	MW-31	WT	G			12/3/14	2:00																					x	x	x			010
4	MW-32	WT	G						4			3	1						x	x													
5	MW-33	WT	G			12/2/14	1:10		4			3	1						x	x													
6	MW-34	WT	G			12/2/14	2:00		4			3	1						x	x													
7	SW-3	WT	G						4			3	1						x	x													
8	SW-4R	WT	G						4			3	1						x	x													
9	SW-5	WT	G						4			3	1						x	x													
10	SW-6	WT	G			12/2/14	2:20		4			3	1						x	x													
11																																	
12																																	

9222 8163

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	MESCO	12/4/14	7:55	Pace	12/4/14	7:55	
	Pace	12/4/14	1230		12/4/14	12:30	2.3

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER: Jonathan Pfohl	
SIGNATURE of SAMPLER:	DATE Signed: 12/3/14

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler	Samples Intact (Y/N)
	Y	Y	Y

Pace Analytical	Sample Condition Upon Receipt (SCUR)	Page 1 of 2
	Document Number: F-CHR-CS-003-rev.15	Issuing Authority: Pace Huntersville Quality Office

Client Name: Municipal Engineering

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Optional
Proj. Due Date:
Proj. Name:

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

Thermometer Used: IR Gun T1401 Type of Ice: Wet Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor T1401 No Correction

Corrected Cooler Temp.: 5.2 °C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: AP 12-5-N

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☑Yes ☐No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☐Yes ☐No ☐N/A	12. No dates and times on bottles
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☑No ☐N/A	P.1 Items: 1, 3-5, 9 RH:6
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	P.2 item #2: PH:6
Samples checked for dechlorination:	☑Yes ☐No ☐N/A	14. P.3 - item 6, 9 PH-6
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: JG Date: 12/5/14

SRF Review: Date:

Place label here

92228163

OR

Handwrite project number (if no label available)

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 4

Section A — Required Client Information:

Company:	Municipal Engineering Services
Address:	P.O. Box 97
	Garner, NC 27529
Email To:	jpfohl@mesco.com
Phone:	919-772-5393 Fax:
Requested Due Date/TAT:	10 Day (Default)

Section B — Required Project Information:

Report To:	Jonathan Pfohl
Copy To:	
Purchase Order No.	
Client Project ID:	Alexander LF- SWS
Container Order Number:	

Section C — Invoice Information:

Attention:	Municipal Engineering Services
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Godwin
Pace Profile #:	

Regulatory Agency
State / Location
North Carolina

Requested Analysis Filtered (Y/N)

ITEM#	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	VOCs Appendix 1	Total Metals App. 1	Alkalinity	Chloride	Sulfate	Sulfide	TOC	COD	Iron	Nitrate	VFA (AM23G)	Dissolved Hydrogen (AM20GAX)	Methane Dissolved (AM20GAX)	Ethene/Ethane (AM20GAX) MDL ~0.0	Mercury	
	MATRIX: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Other OT, Tissue TS																		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	92228163
1	MW-1	WT	G			12/4/14	5:40		4			1	3						x	x													x	012
2	~~MW-1A~~	WT	G						4			1	3						x	x														
3	MW-1B	WT	G			12/4/14	5:10		4			1	3						x	x													x	013
4	MW-2	WT	G				11:15		4			1	3						x	x													X	014
5	MW-4R	WT	G				3:10		4			1	3						x	x														015
6	~~MW-5~~ P	WT	G																x	x	x	x	x	x	x	x	x	x	x	x	x			
7	MW-6	WT	G			12/4	4:00												x	x	x	x	x	x	x	x	x	x	x	x	x	X		025
8	~~MW-9~~ P	WT	G						4			1	3						x	x														
9	~~MW-10~~ MW-10	WT	G			12/4	2:40		4			1	3						x	x														016
10	MW-12 P	WT	G																x	x	x	x	x	x	x	x	x	x	x	x	x			
11	MW-12D P	WT	G																x	x	x	x	x	x	x	x	x	x	x	x	x			
12	MW-13	WT	G			12/4/14	4:55		4			1	3						x	x														017

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
P= Previously submitted	/ MESCO	12/5/14	0830	PACE			
	PACE	12-5-14	1420	Pace	12-5-14	1420	5.2 Y N Y

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER:	Jonathan Pfohl
SIGNATURE of SAMPLER:	DATE Signed:

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 2 Of 4

92228163

Section A — Required Client Information:

Company:	Municipal Engineering Services
Address:	P.O. Box 97
	Garner, NC 27529
Email To:	jpfohl@mesco.com
Phone:	(919) 772-5393 Fax:
Requested Due Date/TAT:	10 Day (Default)

Section B — Required Project Information:

Report To:	Jonathan Pfohl
Copy To:	
Purchase Order No.	
Client Project ID:	Alexander LF- SWS
Container Order Number:	

Section C — Invoice Information:

Attention:	Municipal Engineering Services
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Godwin
Pace Profile #:	

Regulatory Agency
State / Location
North Carolina

Requested Analysis Filtered (Y/N)

ITEM#	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N)	VOCs Appendix 1	Total Metals App. 1	Alkalinity	Chloride	Sulfate	Sulfide	TOC	COD	Iron	Nitrate	Dissolved Hydrogen (AM20GAX)	Methane Dissolved (AM20GAX)	Ethene/Ethane (AM20GAX) MDL ~0.01	Mercury	
		MATRIX: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS																	N	N	N	N	N	N	N	N	N	N	N	N	N		
1	MW-14	WT	G			12/4/14	10:30		4			3	1						x	x													018
2	MW-15	WT	G			"	12:00		4			3	1						x	x												X	019
3	MW-16 P	WT	G																x	x	x	x	x	x	x	x	x	x	x	x	x		
4	MW-17	WT	G						4			3	1						x	x													
5	MW-19	WT	G						4			3	1						x	x													
6	MW-20 F	WT	G						4			3	1						x	x													
7	MW-21	WT	G						4			3	1						x	x													
8	MW-22	WT	G						4			3	1						x	x													
9	MW-23	WT	G						4			3	1						x	x													
10	MW-24 P	WT	G																x	x	x	x	x	x	x	x	x	x	x	x	x		
11	MW-25	WT	G																x	x	x	x	x	x	x	x	x	x	x	x	x		
12	MW-26	WT	G																										x	x	x		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
P = Past	[signature]	12/5/14	0830	[signature] PACE	12-5-14	0830	
F = Future	[signature] PACE	12-5-14	1420	[signature] PACE	12-5-14	1420	S.I. Y N Y

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER:	Jonathan Pfohl
SIGNATURE of SAMPLER: [signature]	DATE Signed: 12/5/14

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Pace Analytical

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Page : 3 Of 4

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Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Godwin
Pace Profile #:	

Regulatory Agency
State / Location
North Carolina

Requested Analysis Filtered (Y/N)

ITEM#	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	VOCs Appendix 1	Total Metals App. 1	Alkalinity	Chloride	Sulfate	Sulfide	TOC	COD	Iron	Nitrate	Dissolved Hydrogen (AM20GAX)	Methane Dissolved (AM20GAX)	Ethene/Ethane (AM20GAX) MDL ~0.01	
																			N	N	N	N	N	N	N	N	N	N	N	N		
1	MW-11 P	WT	G																										x	x	x	
2	MW-27 P	WT	G																										x	x	x	
3	MW-31 P	WT	G																										x	x	x	
4	MW-32	WT	G			12/4/14	9:30		4			3	1						x	x												020
5	MW-33	WT	G			12/2/14	1:10		4			3	1						x	x												021
6	MW-34	WT	G			12/2/14	2:00		4			3	1						x	x												022
7	SW-3 F	WT	G						4			3	1						x	x												
8	SW-4R F	WT	G						4			3	1						x	x												
9	SW-5	WT	G	12/4/14		12/5/14	9:55		4			3	1						x	x												023
10	SW-6	WT	G			12/2/14	2:20		4			3	1						x	x												024
11																																
12																																

9222 8163

SAMPLE ID — One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
		12/5/14	0830		12-5-14	0830	
		12-5-14	1420		12-5-14	1420	5.2 Y N Y

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler | Samples Intact (Y/N)

P= Previous submittal
F= Future submittal

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jonathan Pfohl

SIGNATURE of SAMPLER: [signature]

DATE Signed: 12/5/14

aux Power Pace 12-5 IN 1420

Pace Analytical	Sample Condition Upon Receipt (SCUR)	Page 1 of 2
	Document Number: F-CHR-CS-003-rev.15	Issuing Authority: Pace Huntersville Quality Office

Client Name: Municipal

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other_____

Custody Seal on Cooler/Box Present: ☐ yes ☐ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other_____

Thermometer Used: IR Gun T1401 **Type of Ice:** Wet Blue None ☐ Samples on ice, cooling process has begun

Temp Correction Factor T1401 No Correction

Corrected Cooler Temp.: 3.8 °C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Optional
Proj. Due Date:
Proj. Name:

Date and Initials of person examining contents: AP 12-9-14

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☐Yes ☑No ☐N/A	12. No times on bottles
-Includes date/time/ID/Analysis Matrix:_____		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13. AP 12-9-14
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No	
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☑Yes ☐No ☐N/A	16.
Trip Blank Custody Seals Present	☑Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):_____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: JJ Date: 12/9/14

SRF Review: JJ Date: 12/10/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Place label here

OR

9222 8163

Handwrite project number (if no label available)

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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Page : 1 Of 2

Section A — Required Client Information:

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Email To:	jpfohl@mesco.com
Phone:	919-772-5393 Fax:
Requested Due Date/TAT:	10 Day (Default)

Section B — Required Project Information:

Report To:	Jonathan Pfohl
Copy To:	
Purchase Order No.	
Client Project ID:	Alexander LF (SWS)
Container Order Number:	

Section C — Invoice Information:

Attention:	Municipal Engineering Services
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Godwin
Pace Profile #:	

Regulatory Agency
State / Location
North Carolina

Requested Analysis Filtered (Y/N)

ITEM#	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique. MATRIX: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Other OT, Tissue TS)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test	VOCs Appendix 1	Total Metals App. 1	Mercury	92228163
																		Y/N	N	N	N	
1	MW-7	WT	G			12/5/14	12:00 PM		4			1	3						x	x		
2	MW-17	WT	G				11:00		4			1	3						x	x	X	
3	MW-19	WT	G				10:15		4			1	3						x	x		
4	MW-20	WT	G				1:15		4			1	3						x	x		
5	~~MW~~ MW-21	WT	G				3:00		4			1	3						x	x	X	
6	MW-22	WT	G				3:40		4			1	3						x	x		
7	MW-23	WT	G				2:30		4			1	3						x	x		
8	SW-3	WT	G				9:30		4			1	3						x	x		
9	SW-4R	WT	G				2:30		4			1	3						x	x		
10		WT	G																x	x		
11		WT	G																x	x		
12		WT	G																x	x		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	/ MESCO	12/9/14	1646		12-9-14	1646				
		12-9-14	1510		12-9-14	1510	3.8	Y	N	Y

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER: Jonathan Pfohl					
SIGNATURE of SAMPLER:	DATE Signed: 12/5/14				

3rd & Final Submittal for this project

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 2 Of 2

Section A — Required Client Information:

Company: Municipal Engineering Services
Address: P.O. Box 97
Garner, NC 27529
Email To: jpfohl@mesco.com
Phone: 919-772-5393 Fax:
Requested Due Date/TAT: 10 Day (Default)

Section B — Required Project Information:

Report To: Jonathan Pfohl
Copy To:
Purchase Order No.
Client Project ID: Alexander LF (SWS)
Container Order Number:

Section C — Invoice Information:

Attention: Municipal Engineering Services
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: Kevin Godwin
Pace Profile #:

Regulatory Agency:
State / Location: North Carolina

Requested Analysis Filtered (Y/N): N, N, N

ITEM#	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test	VOCs Appendix 1	Total Metals App. 1	Mercury	Provide 1 Liter DI Water
1	EB	WT	G			12/5/14	8:10		4			3	1						x	x	X	~~034~~
2	FB	WT	G				8:20		4			3	1						x	x	X	036
3	TB	WT	G				Pick		2				2						x			037
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

92228163

12/9/14 035

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	MESCO	12/9/14	1146	NACL	12-9-14	1146
	Pace	12-9-14	1510	Pace	12-9-14	1510

SAMPLE CONDITIONS: TEMP in C: 3.8; Received on Ice (Y/N): Y; Custody Sealed Cooler (Y/N): N; Samples Intact (Y/N): Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jonathan Pfohl

SIGNATURE of SAMPLER:

DATE Signed: 12/5/14

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

December 16, 2014

Kevin Godwin
Pace Analytical Services, Inc.
9800 Kincey Avenue
Suite 100
Huntersville, NC 28078

RE: **ALEXANDER / 92228163**
Microseeps Workorder: 14241

Dear Kevin Godwin:

Enclosed are the analytical results for sample(s) received by the laboratory on Tuesday, December 09, 2014. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Robbin Robl 12/16/2014 RW 12-16-14
rrobl@microseeps.com

Customer Service Representative

Enclosures

As a valued client we would appreciate your comments on our service.
Please email info@microseeps.com.

Total Number of Pages 13

CERTIFICATE OF ANALYSIS

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Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

LABORATORY ACCREDITATIONS & CERTIFICATIONS

Accreditor:	Pennsylvania Department of Environmental Protection, Bureau of Laboratories
Accreditation ID:	02-00538
Scope:	NELAP Non-Potable Water and Solid & Hazardous Waste
Accreditor:	South Carolina Department of Health and Environmental Control, Office of Environmental Laboratory Certification
Accreditation ID:	89009003
Scope:	Clean Water Act (CWA); Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: New Jersey, Department of Environmental Protection
Accreditation ID:	PA026
Scope:	Non-Potable Water; Solid and Chemical Materials
Accreditor:	NELAP: New York, Department of Health Wadsworth Center
Accreditation ID:	11815
Scope:	Non-Potable Water; Solid and Hazardous Waste
Accreditor:	State of Connecticut, Department of Public Health, Division of Environmental Health
Accreditation ID:	PH-0263
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: Texas, Commission on Environmental Quality
Accreditation ID:	T104704453-09-TX
Scope:	Non-Potable Water
Accreditor:	State of New Hampshire
Accreditation ID:	299409
Scope:	Non-potable water
Accreditor:	State of Georgia
Accreditation ID:	Chapter 391-3-26
Scope:	As per the Georgia EPD Rules and Regulations for Commercial Laboratories, Microseeps is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC).

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220 William Pitt Way
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Phone: (412) 826-5245
Fax: (412) 826-3433

SAMPLE SUMMARY

Workorder: 14241 ALEXANDER / 92228163

Lab ID	Sample ID	Matrix	Date Collected	Date Received
142410001	MW-6	Water	12/4/2014 16:00	12/9/2014 11:00
142410002	MW-6	Bubble Strip	12/4/2014 16:00	12/9/2014 11:00

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ANALYTICAL RESULTS

Workorder: 14241 ALEXANDER / 92228163

Lab ID: **142410001** Date Received: 12/9/2014 11:00 Matrix: Water
Sample ID: **MW-6** Date Collected: 12/4/2014 16:00

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
EDonors - MICR										
Analysis Desc: AM23G			Analytical Method: AM23G							
Lactic Acid	**0.30**	mg/l	0.10	0.0020	1			12/13/2014 11:36	KB	
Acetic Acid	**0.025J**	mg/l	0.070	0.0020	1			12/13/2014 11:36	KB	
Propionic Acid	**0.027J**	mg/l	0.050	0.0010	1			12/13/2014 11:36	KB	
Butyric Acid	**0.051**	mg/l	0.050	0.0010	1			12/13/2014 11:36	KB	
Pyruvic Acid	**0.079J**	mg/l	0.15	0.0020	1			12/13/2014 11:36	KB	

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Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 14241 ALEXANDER / 92228163

Lab ID: **142410002** Date Received: 12/9/2014 11:00 Matrix: Bubble Strip
Sample ID: **MW-6** Date Collected: 12/4/2014 16:00

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
RISK - MICR										
Analysis Desc: AM20GAX			Analytical Method: AM20GAX							
Methane	**45**	ug/l	0.015	0.0060	1			12/10/2014 11:56	GT	
Ethane	**0.0085J**	ug/l	0.010	0.0010	1			12/10/2014 11:56	GT	
Ethene	**0.016**	ug/l	0.010	0.0080	1			12/10/2014 11:56	GT	
Hydrogen	**0.75**	nM	0.60	0.13	1			12/10/2014 11:56	GT	

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ANALYTICAL RESULTS QUALIFIERS

Workorder: 14241 ALEXANDER / 92228163

DEFINITIONS/QUALIFIERS

Disclaimer : The Pennsylvania Department of Environmental Protection (PADEP) has decided to no longer recognize analyses that do not produce data for primary compliance, for NELAP accreditation. The methods affected by this decision are AM20GAx, AM21G, SW846 7199 and AM4.02. The laboratory shall continue to administer the NELAP/TNI standard requirements in the performance of these methods.

MDL	Method Detection Limit. Can be used synonymously with LOD; Limit Of Detection.
PQL	Practical Quanitation Limit. Can be used synonymously with LOQ; Limit Of Quantitation.
ND	Not detected at or above reporting limit.
DF	Dilution Factor.
S	Surrogate.
RPD	Relative Percent Difference.
% Rec	Percent Recovery.
U	Indicates the compound was analyzed for, but not detected at or above the noted concentration.
J	Estimated concentration greater than the set method detection limit (MDL) and less than the set reporting limit (PQL).

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Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

QUALITY CONTROL DATA

Workorder: 14241 ALEXANDER / 92228163

QC Batch: DISG/4245 Analysis Method: AM20GAX
QC Batch Method: AM20GAX
Associated Lab Samples: 142410002

METHOD BLANK: 32189

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Methane	ug/l	0.0060U	0.0060	
Ethane	ug/l	0.0010U	0.0010	
Ethene	ug/l	0.0080U	0.0080	

METHOD BLANK: 32190

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Hydrogen	nM	0.13U	0.13	

LABORATORY CONTROL SAMPLE & LCSD: 32191 32193

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Methane	ug/l	8.3	8.6	8.6	104	104	80-120	0	20	
Ethane	ug/l	6.5	6.7	6.7	103	103	80-120	0	20	
Ethene	ug/l	16	16	16	102	102	80-120	0	20	

LABORATORY CONTROL SAMPLE & LCSD: 32192 32194

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Hydrogen	nM	24	24	24	100	99	80-120	1	20	

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QUALITY CONTROL DATA

Workorder: 14241 ALEXANDER / 92228163

QC Batch: EDON/2354 Analysis Method: AM23G

QC Batch Method: AM23G

Associated Lab Samples: 142410001

METHOD BLANK: 32251

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
EDonors				
Lactic Acid	mg/l	0.10 U	0.10	
Acetic Acid	mg/l	0.0087J	0.070	
Propionic Acid	mg/l	0.050 U	0.050	
Butyric Acid	mg/l	0.050 U	0.050	
Pyruvic Acid	mg/l	0.15 U	0.15	

LABORATORY CONTROL SAMPLE: 32252

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
EDonors						
Lactic Acid	mg/l	2	1.9	96	70-130	
Acetic Acid	mg/l	2	2.1	107	70-130	
Propionic Acid	mg/l	2	2.1	105	70-130	
Butyric Acid	mg/l	2	2.0	102	70-130	
Pyruvic Acid	mg/l	2	1.9	97	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 32253 32254 Original: 142410001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
EDonors											
Lactic Acid	mg/l	0.3	2	2.2	2.2	95	93	70-130	2.1	30	
Acetic Acid	mg/l	0.025	2	2.1	2.1	104	104	70-130	0	30	
Propionic Acid	mg/l	0.027	2	2.1	2.1	103	103	70-130	0	30	
Butyric Acid	mg/l	0.051	2	2.0	2.0	99	100	70-130	1	30	
Pyruvic Acid	mg/l	0.079	2	1.9	1.9	93	93	70-130	0	30	

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 14241 ALEXANDER / 92228163

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
142410002	MW-6			AM20GAX	DISG/4245
142410001	MW-6			AM23G	EDON/2354

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Chain of Custody

Pace Analytical®
www.pacelabs.com

Workorder: 92228163 **Workorder Name:** Alexander LF-SWS **Results Requested** 12/18/2014

Report / Invoice To

Kevin Godwin
Pace Analytical Charlotte
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
Phone (704)875-9092
Email: kevin.godwin@pacelabs.com

Subcontract To

Microseeps
14241

P.O. KRG14120

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	Requested Analysis: Hydrogen AM20 GAX	Methane, Ethane, Ethene AM20GAX	VFA AM236	LAB USE ONLY
1	~~MW-5~~	~~12/3/2014 12:00~~	92228163001	~~Water~~					
2	~~MW-12~~	~~12/3/2014 10:30~~	~~92228163002~~	~~Water~~					
3	~~MW-12B~~	~~12/3/2014 11:45~~	~~92228163003~~	~~Water~~					
4	~~MW-18~~	~~12/3/2014 13:15~~	92228163004	~~Water~~					
5	~~MW-24~~	~~12/3/2014 16:30~~	~~92228163005~~	~~Water~~					
6	~~MW-25~~	~~12/3/2014 15:45~~	~~92228163006~~	~~Water~~					
7	~~MW-26~~	~~12/3/2014 13:10~~	92228163007	~~Water~~					
8	~~MW-11~~	~~12/3/2014 17:35~~	92228163008	~~Water~~					
9	~~MW-27~~	~~12/3/2014 14:30~~	~~92228163009~~	~~Water~~					
10	~~MW-31~~	~~12/3/2014 14:00~~	~~92228163010~~	~~Water~~					
11	MW-6	12/4/2014 16:00	92228163025	Water	2	X	X	X	
12									
13									
14									
15									

KG 12/8/14

* VFA report only: Acetic Acid
propionic Acid
butyric Acid
Pyruvic Acid
Lactic Acid

units = ug/L

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	[illegible]	12/8/14 17:00	[illegible] PBES	12.9.14	1100
2					
3					

Cooler Temperature on Receipt 4 °C	Custody Seal Y or (N)	Received on Ice (Y) or N	Samples Intact (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.

NON-CONFORMANCE FORM

Microseeps Project Number: 14241

Date: 12.9.14 Time of Receipt: 1130 Receiver: LY

Client: Pace - H

REASON FOR NON-CONFORMANCE:

Received only 1 BAK vial for LLVFA.
No back-up if needed.

ACTION TAKEN:

Client name: Date: Time:

OK to proceed

Customer Service Initials: RW Date: 12.10.14

Cooler Receipt Form

Client Name: Pace - H Project: 92228163 Lab Work Order: 14241

A. Shipping/Container Information (circle appropriate response)

Courier: (FedEx) UPS USPS Client Other:_____ Air bill Present: (Yes) No

Tracking Number: 6196 8499 8410

Custody Seal on Cooler/Box Present: Yes (No) Seals Intact: Yes No

Cooler/Box Packing Material: (Bubble Wrap) Absorbent Foam Other:_____

Type of Ice: (Wet) Blue None Ice Intact: (Yes) Melted

Cooler Temperature: 4°C Radiation Screened: Yes (No) Chain of Custody Present: (Yes) No

Comments:_____

B. Laboratory Assignment/Log-in (check appropriate response)

	YES	NO	N/A	Comment Reference non-Conforman
Chain of Custody properly filled out	✓			
Chain of Custody relinquished	✓			
Sampler Name & Signature on COC		✓		
Containers intact	✓			
Were samples in separate bags	✓			
Sample container labels match COC Sample name/date and time collected	✓			
Sufficient volume provided		✓		
Microseeps containers used	✓			
Are containers properly preserved for the requested testing? (as labeled)	✓			
If an unknown preservation state, were containers checked? Exception: VOA's coliform			✓	If yes, see pH form.
Was volume for dissolved testing field filtered, as noted on the COC? Was volume received in a preserved container?			✓	

Comments:_____

Cooler contents examined/received by: LY Date: 12.9.14

Project Manager Review: RW Date: 12-10-14

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December 15, 2014

Kevin Godwin
Pace Analytical Services, Inc.
9800 Kincey Avenue
Suite 100
Huntersville, NC 28078

RE: **ALEXANDER LF-SWS / 92228163**

Microseeps Workorder: 14210

Dear Kevin Godwin:

Enclosed are the analytical results for sample(s) received by the laboratory on Friday, December 05, 2014. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Robbin Robl 12/15/2014
rrobl@microseeps.com

Customer Service Representative

Enclosures

As a valued client we would appreciate your comments on our service.
Please email info@microseeps.com.

Total Number of Pages 26

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LABORATORY ACCREDITATIONS & CERTIFICATIONS

Accreditor:	Pennsylvania Department of Environmental Protection, Bureau of Laboratories
Accreditation ID:	02-00538
Scope:	NELAP Non-Potable Water and Solid & Hazardous Waste
Accreditor:	South Carolina Department of Health and Environmental Control, Office of Environmental Laboratory Certification
Accreditation ID:	89009003
Scope:	Clean Water Act (CWA); Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: New Jersey, Department of Environmental Protection
Accreditation ID:	PA026
Scope:	Non-Potable Water; Solid and Chemical Materials
Accreditor:	NELAP: New York, Department of Health Wadsworth Center
Accreditation ID:	11815
Scope:	Non-Potable Water; Solid and Hazardous Waste
Accreditor:	State of Connecticut, Department of Public Health, Division of Environmental Health
Accreditation ID:	PH-0263
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: Texas, Commission on Environmental Quality
Accreditation ID:	T104704453-09-TX
Scope:	Non-Potable Water
Accreditor:	State of New Hampshire
Accreditation ID:	299409
Scope:	Non-potable water
Accreditor:	State of Georgia
Accreditation ID:	Chapter 391-3-26
Scope:	As per the Georgia EPD Rules and Regulations for Commercial Laboratories, Microseeps is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC).

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SAMPLE SUMMARY

Workorder: 14210 ALEXANDER LF-SWS / 92228163

Lab ID	Sample ID	Matrix	Date Collected	Date Received
142100001	MW-5	Water	12/3/2014 12:00	12/5/2014 12:00
142100002	MW-5	Bubble Strip	12/3/2014 12:00	12/5/2014 12:00
142100003	MW-12	Water	12/3/2014 10:30	12/5/2014 12:00
142100004	MW-12	Bubble Strip	12/3/2014 10:30	12/5/2014 12:00
142100005	MW-12D	Water	12/3/2014 11:45	12/5/2014 12:00
142100006	MW-12D	Bubble Strip	12/3/2014 11:45	12/5/2014 12:00
142100007	MW-16	Water	12/3/2014 13:15	12/5/2014 12:00
142100008	MW-16	Bubble Strip	12/3/2014 13:15	12/5/2014 12:00
142100009	MW-24	Water	12/3/2014 16:50	12/5/2014 12:00
142100010	MW-24	Bubble Strip	12/3/2014 16:50	12/5/2014 12:00
142100011	MW-25	Water	12/3/2014 15:45	12/5/2014 12:00
142100012	MW-25	Bubble Strip	12/3/2014 15:45	12/5/2014 12:00
142100013	MW-26	Bubble Strip	12/3/2014 15:10	12/5/2014 12:00
142100014	MW-11	Bubble Strip	12/3/2014 17:35	12/5/2014 12:00
142100015	MW-27	Bubble Strip	12/3/2014 14:30	12/5/2014 12:00
142100016	MW-31	Bubble Strip	12/3/2014 14:00	12/5/2014 12:00

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ANALYTICAL RESULTS

Workorder: 14210 ALEXANDER LF-SWS / 92228163

Lab ID: **142100001** Date Received: 12/5/2014 12:00 Matrix: Water

Sample ID: **MW-5** Date Collected: 12/3/2014 12:00

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
EDonors - MICR										
Analysis Desc: AM23G			Analytical Method: AM23G							
Lactic Acid	**0.26**	mg/l	0.10	0.012	1			12/11/2014 09:09	KB	
Acetic Acid	**0.12**	mg/l	0.070	0.0080	1			12/11/2014 09:09	KB	
Propionic Acid	**0.044J**	mg/l	0.050	0.011	1			12/11/2014 09:09	KB	
Butyric Acid	**0.0070U**	mg/l	0.050	0.0070	1			12/11/2014 09:09	KB	
Pyruvic Acid	**0.0090U**	mg/l	0.15	0.0090	1			12/11/2014 09:09	KB	

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ANALYTICAL RESULTS

Workorder: 14210 ALEXANDER LF-SWS / 92228163

Lab ID: **142100002** Date Received: 12/5/2014 12:00 Matrix: Bubble Strip

Sample ID: **MW-5** Date Collected: 12/3/2014 12:00

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
RISK - MICR										
Analysis Desc: AM20GAX			Analytical Method: AM20GAX							
Methane	**4100**	ug/l	0.015	0.0060	1			12/6/2014 11:28	TD	
Ethane	**0.015**	ug/l	0.010	0.0010	1			12/6/2014 11:28	TD	
Ethene	**0.0080U**	ug/l	0.010	0.0080	1			12/6/2014 11:28	TD	
Hydrogen	**0.98**	nM	0.60	0.13	1			12/6/2014 11:28	TD	

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ANALYTICAL RESULTS

Workorder: 14210 ALEXANDER LF-SWS / 92228163

Lab ID: **142100003** Date Received: 12/5/2014 12:00 Matrix: Water

Sample ID: **MW-12** Date Collected: 12/3/2014 10:30

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
EDonors - MICR										
Analysis Desc: AM23G			Analytical Method: AM23G							
Lactic Acid	**0.11**	mg/l	0.10	0.012	1			12/11/2014 09:59	KB	
Acetic Acid	**0.054J**	mg/l	0.070	0.0080	1			12/11/2014 09:59	KB	
Propionic Acid	**0.038J**	mg/l	0.050	0.011	1			12/11/2014 09:59	KB	
Butyric Acid	**0.0070U**	mg/l	0.050	0.0070	1			12/11/2014 09:59	KB	
Pyruvic Acid	**0.0090U**	mg/l	0.15	0.0090	1			12/11/2014 09:59	KB	

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ANALYTICAL RESULTS

Workorder: 14210 ALEXANDER LF-SWS / 92228163

Lab ID: **142100004** Date Received: 12/5/2014 12:00 Matrix: Bubble Strip

Sample ID: **MW-12** Date Collected: 12/3/2014 10:30

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
RISK - MICR										
Analysis Desc: AM20GAX			Analytical Method: AM20GAX							
Methane	**1700**	ug/l	0.015	0.0060	1			12/6/2014 11:41	TD	
Ethane	**0.63**	ug/l	0.010	0.0010	1			12/6/2014 11:41	TD	
Ethene	**0.011**	ug/l	0.010	0.0080	1			12/6/2014 11:41	TD	
Hydrogen	**1.4**	nM	0.60	0.13	1			12/6/2014 11:41	TD	

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ANALYTICAL RESULTS

Workorder: 14210 ALEXANDER LF-SWS / 92228163

Lab ID: **142100005** Date Received: 12/5/2014 12:00 Matrix: Water

Sample ID: **MW-12D** Date Collected: 12/3/2014 11:45

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
EDonors - MICR										
Analysis Desc: AM23G			Analytical Method: AM23G							
Lactic Acid	**0.44**	mg/l	0.10	0.012	1			12/11/2014 10:49	KB	
Acetic Acid	**0.12**	mg/l	0.070	0.0080	1			12/11/2014 10:49	KB	
Propionic Acid	**0.011U**	mg/l	0.050	0.011	1			12/11/2014 10:49	KB	
Butyric Acid	**0.0070U**	mg/l	0.050	0.0070	1			12/11/2014 10:49	KB	
Pyruvic Acid	**0.0090U**	mg/l	0.15	0.0090	1			12/11/2014 10:49	KB	

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ANALYTICAL RESULTS

Workorder: 14210 ALEXANDER LF-SWS / 92228163

Lab ID: **142100006** Date Received: 12/5/2014 12:00 Matrix: Bubble Strip

Sample ID: **MW-12D** Date Collected: 12/3/2014 11:45

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
RISK - MICR										
Analysis Desc: AM20GAX			Analytical Method: AM20GAX							
Methane	**0.36**	ug/l	0.015	0.0060	1			12/6/2014 11:53	TD	
Ethane	**0.0011J**	ug/l	0.010	0.0010	1			12/6/2014 11:53	TD	
Ethene	**0.0080U**	ug/l	0.010	0.0080	1			12/6/2014 11:53	TD	
Hydrogen	**0.72**	nM	0.60	0.13	1			12/6/2014 11:53	TD	

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ANALYTICAL RESULTS

Workorder: 14210 ALEXANDER LF-SWS / 92228163

Lab ID: **142100007** Date Received: 12/5/2014 12:00 Matrix: Water

Sample ID: **MW-16** Date Collected: 12/3/2014 13:15

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
EDonors - MICR										
Analysis Desc: AM23G			Analytical Method: AM23G							
Lactic Acid	**0.11**	mg/l	0.10	0.012	1			12/11/2014 11:39	KB	
Acetic Acid	**0.067J**	mg/l	0.070	0.0080	1			12/11/2014 11:39	KB	
Propionic Acid	**0.040J**	mg/l	0.050	0.011	1			12/11/2014 11:39	KB	
Butyric Acid	**0.0070U**	mg/l	0.050	0.0070	1			12/11/2014 11:39	KB	
Pyruvic Acid	**0.0090U**	mg/l	0.15	0.0090	1			12/11/2014 11:39	KB	

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ANALYTICAL RESULTS

Workorder: 14210 ALEXANDER LF-SWS / 92228163

Lab ID: **142100008** Date Received: 12/5/2014 12:00 Matrix: Bubble Strip

Sample ID: **MW-16** Date Collected: 12/3/2014 13:15

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
RISK - MICR										
Analysis Desc: AM20GAX			Analytical Method: AM20GAX							
Methane	**4100**	ug/l	0.015	0.0060	1			12/6/2014 12:06	TD	
Ethane	**0.032**	ug/l	0.010	0.0010	1			12/6/2014 12:06	TD	
Ethene	**0.0080U**	ug/l	0.010	0.0080	1			12/6/2014 12:06	TD	
Hydrogen	**1.1**	nM	0.60	0.13	1			12/6/2014 12:06	TD	

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ANALYTICAL RESULTS

Workorder: 14210 ALEXANDER LF-SWS / 92228163

Lab ID: **142100009** Date Received: 12/5/2014 12:00 Matrix: Water

Sample ID: **MW-24** Date Collected: 12/3/2014 16:50

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
EDonors - MICR										
Analysis Desc: AM23G			Analytical Method: AM23G							
Lactic Acid	**0.16**	mg/l	0.10	0.012	1			12/11/2014 12:29	KB	
Acetic Acid	**0.072**	mg/l	0.070	0.0080	1			12/11/2014 12:29	KB	
Propionic Acid	**0.040J**	mg/l	0.050	0.011	1			12/11/2014 12:29	KB	
Butyric Acid	**0.0070U**	mg/l	0.050	0.0070	1			12/11/2014 12:29	KB	
Pyruvic Acid	**0.0090U**	mg/l	0.15	0.0090	1			12/11/2014 12:29	KB	

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ANALYTICAL RESULTS

Workorder: 14210 ALEXANDER LF-SWS / 92228163

Lab ID: **142100010** Date Received: 12/5/2014 12:00 Matrix: Bubble Strip

Sample ID: **MW-24** Date Collected: 12/3/2014 16:50

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
RISK - MICR										
Analysis Desc: AM20GAX			Analytical Method: AM20GAX							
Methane	**0.41**	ug/l	0.015	0.0060	1			12/6/2014 12:18	TD	
Ethane	**0.0017J**	ug/l	0.010	0.0010	1			12/6/2014 12:18	TD	
Ethene	**0.0080U**	ug/l	0.010	0.0080	1			12/6/2014 12:18	TD	
Hydrogen	**0.73**	nM	0.60	0.13	1			12/6/2014 12:18	TD	

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ANALYTICAL RESULTS

Workorder: 14210 ALEXANDER LF-SWS / 92228163

Lab ID: **142100011** Date Received: 12/5/2014 12:00 Matrix: Water

Sample ID: **MW-25** Date Collected: 12/3/2014 15:45

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
EDonors - MICR										
Analysis Desc: AM23G			Analytical Method: AM23G							
Lactic Acid	**0.12**	mg/l	0.10	0.012	1			12/11/2014 13:19	KB	
Acetic Acid	**0.051J**	mg/l	0.070	0.0080	1			12/11/2014 13:19	KB	
Propionic Acid	**0.011U**	mg/l	0.050	0.011	1			12/11/2014 13:19	KB	
Butyric Acid	**0.0070U**	mg/l	0.050	0.0070	1			12/11/2014 13:19	KB	
Pyruvic Acid	**0.0090U**	mg/l	0.15	0.0090	1			12/11/2014 13:19	KB	

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ANALYTICAL RESULTS

Workorder: 14210 ALEXANDER LF-SWS / 92228163

Lab ID: **142100012** Date Received: 12/5/2014 12:00 Matrix: Bubble Strip

Sample ID: **MW-25** Date Collected: 12/3/2014 15:45

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
RISK - MICR										
Analysis Desc: AM20GAX			Analytical Method: AM20GAX							
Methane	**0.34**	ug/l	0.015	0.0060	1			12/6/2014 12:30	TD	
Ethane	**0.0010J**	ug/l	0.010	0.0010	1			12/6/2014 12:30	TD	
Ethene	**0.0080U**	ug/l	0.010	0.0080	1			12/6/2014 12:30	TD	
Hydrogen	**0.81**	nM	0.60	0.13	1			12/6/2014 12:30	TD	

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Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 14210 ALEXANDER LF-SWS / 92228163

Lab ID: **142100013** Date Received: 12/5/2014 12:00 Matrix: Bubble Strip

Sample ID: **MW-26** Date Collected: 12/3/2014 15:10

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
RISK - MICR										
Analysis Desc: AM20GAX			Analytical Method: AM20GAX							
Methane	**850**	ug/l	0.015	0.0060	1			12/6/2014 12:43	TD	
Ethane	**0.025**	ug/l	0.010	0.0010	1			12/6/2014 12:43	TD	
Ethene	**0.024**	ug/l	0.010	0.0080	1			12/6/2014 12:43	TD	
Hydrogen	**1.5**	nM	0.60	0.13	1			12/6/2014 12:43	TD	

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ANALYTICAL RESULTS

Workorder: 14210 ALEXANDER LF-SWS / 92228163

Lab ID: **142100014** Date Received: 12/5/2014 12:00 Matrix: Bubble Strip

Sample ID: **MW-11** Date Collected: 12/3/2014 17:35

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
RISK - MICR										
Analysis Desc: AM20GAX			Analytical Method: AM20GAX							
Methane	**5000**	ug/l	0.015	0.0060	1			12/6/2014 12:55	TD	
Ethane	**0.040**	ug/l	0.010	0.0010	1			12/6/2014 12:55	TD	
Ethene	**0.028**	ug/l	0.010	0.0080	1			12/6/2014 12:55	TD	
Hydrogen	**0.71**	nM	0.60	0.13	1			12/6/2014 12:55	TD	

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ANALYTICAL RESULTS

Workorder: 14210 ALEXANDER LF-SWS / 92228163

Lab ID: **142100015** Date Received: 12/5/2014 12:00 Matrix: Bubble Strip

Sample ID: **MW-27** Date Collected: 12/3/2014 14:30

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
RISK - MICR										
Analysis Desc: AM20GAX			Analytical Method: AM20GAX							
Methane	**0.11**	ug/l	0.015	0.0060	1			12/6/2014 13:08	TD	
Ethane	**0.0012J**	ug/l	0.010	0.0010	1			12/6/2014 13:08	TD	
Ethene	**0.0080U**	ug/l	0.010	0.0080	1			12/6/2014 13:08	TD	
Hydrogen	**0.74**	nM	0.60	0.13	1			12/6/2014 13:08	TD	

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ANALYTICAL RESULTS

Workorder: 14210 ALEXANDER LF-SWS / 92228163

Lab ID: **142100016** Date Received: 12/5/2014 12:00 Matrix: Bubble Strip

Sample ID: **MW-31** Date Collected: 12/3/2014 14:00

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
RISK - MICR										
Analysis Desc: AM20GAX			Analytical Method: AM20GAX							
Methane	**0.11**	ug/l	0.015	0.0060	1			12/6/2014 13:20	TD	
Ethane	**0.0010U**	ug/l	0.010	0.0010	1			12/6/2014 13:20	TD	
Ethene	**0.0080U**	ug/l	0.010	0.0080	1			12/6/2014 13:20	TD	
Hydrogen	**0.71**	nM	0.60	0.13	1			12/6/2014 13:20	TD	

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ANALYTICAL RESULTS QUALIFIERS

Workorder: 14210 ALEXANDER LF-SWS / 92228163

DEFINITIONS/QUALIFIERS

Disclaimer : The Pennsylvania Department of Environmental Protection (PADEP) has decided to no longer recognize analyses that do not produce data for primary compliance, for NELAP accreditation. The methods affected by this decision are AM20GAx, AM21G, SW846 7199 and AM4.02. The laboratory shall continue to administer the NELAP/TNI standard requirements in the performance of these methods.

MDL	Method Detection Limit. Can be used synonymously with LOD; Limit Of Detection.
PQL	Practical Quanitation Limit. Can be used synonymously with LOQ; Limit Of Quantitation.
ND	Not detected at or above reporting limit.
DF	Dilution Factor.
S	Surrogate.
RPD	Relative Percent Difference.
% Rec	Percent Recovery.
U	Indicates the compound was analyzed for, but not detected at or above the noted concentration.
J	Estimated concentration greater than the set method detection limit (MDL) and less than the set reporting limit (PQL).

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QUALITY CONTROL DATA

Workorder: 14210 ALEXANDER LF-SWS / 92228163

QC Batch: DISG/4236 Analysis Method: AM20GAX

QC Batch Method: AM20GAX

Associated Lab Samples: 142100002, 142100004, 142100006, 142100008, 142100010, 142100012, 142100013, 142100014, 142100015, 142100016

METHOD BLANK: 32105

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Methane	ug/l	0.0060U	0.0060	
Ethane	ug/l	0.0010U	0.0010	
Ethene	ug/l	0.0080U	0.0080	

METHOD BLANK: 32106

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Hydrogen	nM	0.13U	0.13	

LABORATORY CONTROL SAMPLE & LCSD: 32107 32109

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Methane	ug/l	8.3	9.0	9.0	109	109	80-120	0	20	
Ethane	ug/l	6.5	7.0	7.0	108	108	80-120	0	20	
Ethene	ug/l	16	17	17	107	107	80-120	0	20	

LABORATORY CONTROL SAMPLE & LCSD: 32108 32110

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Hydrogen	nM	24	25	25	104	104	80-120	0	20	

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QUALITY CONTROL DATA

Workorder: 14210 ALEXANDER LF-SWS / 92228163

QC Batch: EDON/2347 Analysis Method: AM23G

QC Batch Method: AM23G

Associated Lab Samples: 142100001, 142100003, 142100005, 142100007, 142100009, 142100011

METHOD BLANK: 32169

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
EDonors				
Lactic Acid	mg/l	0.012U	0.012	
Acetic Acid	mg/l	0.063J	0.0080	
Propionic Acid	mg/l	0.045J	0.011	
Butyric Acid	mg/l	0.0070U	0.0070	
Pyruvic Acid	mg/l	0.0090U	0.0090	

LABORATORY CONTROL SAMPLE: 32170

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
EDonors						
Lactic Acid	mg/l	2	1.9	94	70-130	
Acetic Acid	mg/l	2	2.0	100	70-130	
Propionic Acid	mg/l	2	2.0	103	70-130	
Butyric Acid	mg/l	2	2.1	107	70-130	
Pyruvic Acid	mg/l	2	2.1	106	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 32171 32172 Original: 142090001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
EDonors											
Lactic Acid	mg/l	0.14	2	2.0	2.0	93	91	70-130	2.2	30	
Acetic Acid	mg/l	0.05	2	2.1	2.1	103	105	70-130	1.9	30	
Propionic Acid	mg/l	0	2	2.2	2.2	108	109	70-130	0.92	30	
Butyric Acid	mg/l	0	2	2.1	2.1	104	106	70-130	1.9	30	
Pyruvic Acid	mg/l	0	2	2.2	2.1	108	104	70-130	3.8	30	

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 14210 ALEXANDER LF-SWS / 92228163

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
142100002	MW-5			AM20GAX	DISG/4236
142100004	MW-12			AM20GAX	DISG/4236
142100006	MW-12D			AM20GAX	DISG/4236
142100008	MW-16			AM20GAX	DISG/4236
142100010	MW-24			AM20GAX	DISG/4236
142100012	MW-25			AM20GAX	DISG/4236
142100013	MW-26			AM20GAX	DISG/4236
142100014	MW-11			AM20GAX	DISG/4236
142100015	MW-27			AM20GAX	DISG/4236
142100016	MW-31			AM20GAX	DISG/4236
142100001	MW-5			AM23G	EDON/2347
142100003	MW-12			AM23G	EDON/2347
142100005	MW-12D			AM23G	EDON/2347
142100007	MW-16			AM23G	EDON/2347
142100009	MW-24			AM23G	EDON/2347
142100011	MW-25			AM23G	EDON/2347

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Chain of Custody

14210

Pace Analytical®
www.pacelabs.com

Workorder: 92228163 **Workorder Name:** Alexander LF-SWS **Results Requested** 12/18/2014

Report / Invoice To

Kevin Godwin
Pace Analytical Charlotte
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
Phone (704)875-9092
Email: kevin.godwin@pacelabs.com

Subcontract To

Microseeps

P.O. KKG 14117

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	BAK					VFA Amo3G	Hydrogen Amo20GAX	Methane, Ethane, Amo6G										LAB USE ONLY
1	MW-5	12/3/2014 12:00	92228163001	Water	1	1					X	X	X										
2	MW-12	12/3/2014 10:30	92228163002	Water	1	1					X	X	X										
3	MW-12D	12/3/2014 11:45	92228163003	Water	1	1					X	X	X										
4	MW-16	12/3/2014 13:15	92228163004	Water	1	1					X	X	X	→ Per client: 10ml's of gas in sample not preferred 15 ml.									
5	MW-24	12/3/2014 16:50	92228163005	Water	1	1					X	X	X										
6	MW-25	12/3/2014 15:45	92228163006	Water	1	1					X	X	X										
7	MW-26	12/3/2014 15:10	92228163007	Water	1							X	X										
8	MW-11	12/3/2014 17:35	92228163008	Water	1							X	X										
9	MW-27	12/3/2014 14:30	92228163009	Water	1							X	X										
10	MW-31	12/3/2014 14:00	92228163010	Water	1							X	X										
11																							
12																							
13																							
14																							

VFA report only: Acetic Acid
propionic Acid
butyric Acid
pyruvic Acid
Lactic Acid

units = ug/L

Please send results to project manager listed above and:
Tracy.Moore@pacelabs.com
704-875-9092 ext. 334

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	[illegible]	12/4/14 17:00	[illegible] PACS	12.5.14	1200
2					
3					

Cooler Temperature on Receipt 2 °C	Custody Seal (Y) or N	Received on Ice (Y) or N	Samples Intact Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Cooler Receipt Form

Client Name: Pace - H Project: 92222863 Lab Work Order: 1421C

A. Shipping/Container Information (circle appropriate response)

Courier: (FedEx) UPS USPS Client Other:_____ Air bill Present: (Yes) No

Tracking Number: 6196 8499 7321

Custody Seal on Cooler/Box Present: (Yes) No Seals Intact: (Yes) No

Cooler/Box Packing Material: (Bubble Wrap) Absorbent Foam Other:_____

Type of Ice: (Wet) Blue None Ice Intact: (Yes) Melted

Cooler Temperature: 2°C Radiation Screened: Yes (No) Chain of Custody Present: (Yes) No

Comments:_____

B. Laboratory Assignment/Log-in (check appropriate response)

	YES	NO	N/A	Comment Reference non-Conforman
Chain of Custody properly filled out	✓			
Chain of Custody relinquished	✓			
Sampler Name & Signature on COC		✓		
Containers intact	✓			
Were samples in separate bags		✓		
Sample container labels match COC Sample name/date and time collected	✓			
Sufficient volume provided		✓		No backup for LLVI
Microseeps containers used	✓			
Are containers properly preserved for the requested testing? (as labeled)	✓			
If an unknown preservation state, were containers checked? Exception: VOA's coliform			✓	If yes, see pH form.
Was volume for dissolved testing field filtered, as noted on the COC? Was volume received in a preserved container?			✓	

Comments:_____

Cooler contents examined/received by: LY Date: 12.5.14

Project Manager Review: PR Date: 12/5/14

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

December 16, 2014

Mr. Jonathan Pfohl
Municipal Engineering Services
PO Box 97
Garner, NC 27529

RE: Project: Alexander LF-Methane
Pace Project No.: 92228471

Dear Mr. Pfohl:
Enclosed are the analytical results for sample(s) received by the laboratory on December 05, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: Alexander LF-Methane
Pace Project No.: 92228471

Minnesota Certification IDs
1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Alabama Certification #40770
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: 8TMS-L
Florida/NELAP Certification #: E87605
Guam Certification #:14-008r
Georgia Certification #: 959
Georgia EPD #: Pace
Idaho Certification #: MN00064
Hawaii Certification #MN00064
Illinois Certification #: 200011
Indiana Certification#C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky Dept of Envi. Protection - DW #90062
Kentucky Dept of Envi. Protection - WW #:90062
Louisiana DEQ Certification #: 3086
Louisiana DHH #: LA140001
Maine Certification #: 2013011
Maryland Certification #: 322
Michigan DEPH Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Carolina State Public Health #: 27700
North Dakota Certification #: R-036
Ohio EPA #: 4150
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Saipan (CNMI) #:MP0003
South Carolina #:74003001
Texas Certification #: T104704192
Tennessee Certification #: 02818
Utah Certification #: MN000642013-4
Virginia DGS Certification #: 251
Virginia/VELAP Certification #: Pace
Washington Certification #: C486
West Virginia Certification #: 382
West Virginia DHHR #:9952C
Wisconsin Certification #: 999407970

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SAMPLE SUMMARY

Project: Alexander LF-Methane
Pace Project No.: 92228471

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92228471001	**MW-1**	Water	12/04/14 17:40	12/05/14 14:20
92228471002	**MW-1B**	Water	12/04/14 17:10	12/05/14 14:20

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SAMPLE ANALYTE COUNT

Project: Alexander LF-Methane
Pace Project No.: 92228471

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92228471001	**MW-1**	RSK 175	JRB	1	PASI-M
92228471002	**MW-1B**	RSK 175	JRB	1	PASI-M

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ANALYTICAL RESULTS

Project: Alexander LF-Methane
Pace Project No.: 92228471

Sample: MW-1 **Lab ID: 92228471001** Collected: 12/04/14 17:40 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Methane	**23.4**	ug/L	6.6	3.3	1		12/11/14 17:32	74-82-8	

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ANALYTICAL RESULTS

Project: Alexander LF-Methane
Pace Project No.: 92228471

Sample: MW-1B **Lab ID: 92228471002** Collected: 12/04/14 17:10 Received: 12/05/14 14:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Methane	**266**	ug/L	6.6	3.3	1		12/11/14 17:40	74-82-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Alexander LF-Methane
Pace Project No.: 92228471

QC Batch: AIR/22025 | Analysis Method: RSK 175
QC Batch Method: RSK 175 | Analysis Description: RSK 175 AIR HEADSPACE
Associated Lab Samples: 92228471001, 92228471002

METHOD BLANK: 1862700 | Matrix: Water
Associated Lab Samples: 92228471001, 92228471002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Methane	ug/L	ND	6.6	12/11/14 13:47	

LABORATORY CONTROL SAMPLE & LCSD: 1862701 1862702

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	60.7	58.3	58.3	96	96	85-115	0	20	

SAMPLE DUPLICATE: 1862703

Parameter	Units	60183873012 Result	Dup Result	RPD	Max RPD	Qualifiers
Methane	ug/L	ND	ND		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALIFIERS

Project: Alexander LF-Methane
Pace Project No.: 92228471

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

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TNI - The NELAC Institute.

LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Alexander LF-Methane
Pace Project No.: 92228471

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92228471001	**MW-1**	RSK 175	AIR/22025		
92228471002	**MW-1B**	RSK 175	AIR/22025		

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Pace Analytical	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: September 22, 2011 Page 1 of 2
	Document Number: **F-CHR-CS-003-rev.15**	Issuing Authority: Pace Huntersville Quality Office

Client Name: Municipal Engineering

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other_____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other_____

Thermometer Used: IR Gun T1401 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor **T1401** No Correction

Corrected Cooler Temp.: 5.2 °C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Optional
Proj. Due Date:
Proj. Name:

Date and Initials of person examining contents: AP 12-5-14

Comments:

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☐Yes ☑No ☐N/A	12. No dates or times on bottles
-Includes date/time/ID/Analysis Matrix:_____		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☑No	
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):_____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: JG Date: 12/6/14

SRF Review: AMB Date: 12-9-14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

WO# : 92228471

92228471

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Municipal Engineering Services	Report To:	Jonathan Pfohl	Attention:	Municipal Engineering Services
Address:	P.O. Box 97	Copy To:		Company Name:	
Garner, NC 27529				Address:	
Email To:	jpfohl@mesco.com	Purchase Order No.		Pace Quote Reference:	
Phone: 919-772-5393	Fax:	Client Project ID:	Alexander LF- Methane	Pace Project Manager:	
Requested Due Date/TAT:	10 Day (Default)	Container Order Number:		Pace Profile #:	

Regulatory Agency
State / Location
North Carolina

Requested Analysis Filtered (Y/N)

ITEM#	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test	Dissolved Methane (RSK175)		
																		Y/N	N		
1	MW-1	WT	G			12/4/14	5:40												x		001
2	MW-1B	WT	G				5:10												x		002
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

9222 8471

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	/MESCO	12/5/14	0830	PACL	12-5-14	0830				
	PACL	12-5-14	1420	Pace	12-5-14	1420	5.2	Y	N	Y

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	Jonathan Pfohl		
SIGNATURE of SAMPLER:		DATE Signed: 12/5/14	

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Appendix B
Field Sampling Parameter Data Sheet(s)

Sampling Data Sheet

Municipal Services Garner, NC — Engineering Company Boone, NC

Project: Alexander Co Closed MSWLF & Active C&D LF

Samplers: J. Pfohl Page_____of_____

Monitoring Point	Sample Date	Sample Time	Sampling Parameters: Depth to Water (BTOP) Static	Lab Parameters to be analyzed for	Volume Purged (Gal)	Sample Type	Goes Dry During Purge	Total Depth Measured as Expected	Total Depth Expected	Water Quality Parameters: CO2 (mg/l)	DO (mg/L)	ORP	pH	Temp. ©	Specific Cond. (us/cm	TDS (mg/L)	Turbidity	CH4 Gas Vapors (ppm)
MW-1	12/4/14	5:40	35.80	CH4 & Hg	2	DB	Y	Y	40		0.2	-86	6.58	16.9	460	130	C	0
MW-1A	NS		DRY	CH4 & Hg	—				48.5									0
MW-1B	12/4/14	5:10	44.23	CH4 & Hg	9	P&DB	N		Y 61		—	—	4.91	16.8	90	40	C	0
MW-2	12/4/14	11:15	28.12	Hg	4	DB	Y		30		—	—	5.88	17.3	420	200	ST	0
MW-3	12/3/14	9:50	25.89	App 1	2	DB	Y		33		0.1	-35	6.03	17.1	460	130	313 ST	NR
MW-4R	12/4/14	3:10	16.14	App 1	6	P&DB	N		21.5		—	—	5.89	15.9	80	40	C	NR
MW-5	12/3/14	12:00	42.40	MNA	7	P&DB	Y	Pud dry	49.1		0.2	-92	6.53	16.2	410	200	40.1 ST	NR
MW-6	12/4/14	4:00	34.28	MNA & Hg	3	P&DB	Y		Y 42		0.6	182	6.91	15.9	410	200	17.3 C	NR
MW-7	12/5/14	12:00	40.58	App 1	-	P&DB	-	[illegible]	54	-	-	-	-	-	-	-	-	
MW-9	12/2/14	12:00	10.88	App 1	10	P&DB	N		31.5		0.2	53	6.41	18.7	730	360	C	NR
MW-10	12/4/14	2:40	37.92	App 1	12	P&DB	Y		91		0.4	103	6.96	18.8	500	240	C	NR
MW-11	12/3/14	5:35	41.50	MNA	12	P&DB	N		56		0.8	121	6.12	12.3	410	200	C	NR
MW-12	12/3/14	10:30	55.05	MNA	9	P&DB	N	Pud crushed	66.5		0.7	93	5.98	10.7	220	110	16.5 C	NR
MW-12D	12/3/14	11:15	63.68	MNA	13	P&DB	Y		102.5		0.9	103	6.93	10.9	70	30	10.3 C	NR
MW-13	12/4/14	4:55	~~[illegible]~~ 43.50	App 1	12	P&DB	N		60.5		1.1	93	6.87	10.4	190	80	12.3 C	NR
MW-14	12/4/14	10:30	~~[illegible]~~ 42.81	App 1	3	DB	Y		40.5		0.7	11	6.93	14.5	80	30	C	NR
MW-15	12/4/14	12:00	29.44	App 1 & Hg	5	P&DB	Y		35		0.1	193	5.91	14.8	60	20	C	NR
MW-16	12/3/14	1:15	31.37	MNA	8	P&DB	N	Pud crushed	40.25		0.3	283	5.91	11.1	80	30	112 C	0
MW-17	12/5/14	11:00	17.76	App I & Hg	4	DB	Y		22.3		0.9	213	5.57	13.6	60	20	C	0
MW-18	12/4/14	1:55	52.73	App I & Hg	2	P&DB	Y		56.7		1.9	307	6.28	17.3	40	20	143 ST	0
MW-19	12/5/14	10:15	52.40	App 1	4	P&DB	Y		63.92		2.3	231	6.91	17.4	80	30	C	0

10 ml H2

Comments

SS B=Stainless Steel Baler, D B=Disposable Baler, P=Low flow Pump, PD=Purged Dry

VT=Very Turbid, MT=Moderately Turbid, ST=Slightly Turbid, C=Clear

NR=No Reading Attempted, NS=No Sample Obtained

Sampling Data Sheet

Municipal Service Engineering Company
Garner, NC Boone, NC

Project: Alexander Co Closed MSWLF & Active C&D LF

Samplers: J. Pfohl Page_____of_____

Monitoring Point	Sample Date	Sample Time	Sampling Parameters: Depth to Water (BTOP) Static	Lab Parameters to be analyzed for	Volume Purged (Gal)	Sample Type	Goes Dry During Purge	Total Depth Measured as Expected	Total Depth Expected	Water Quality Parameters: CO2 (mg/l)	DO (mg/L)	ORP	pH	Temp. ©	Specific Cond. (us/cm	TDS (mg/L)	Turbidity	CH4 Gas Vapors (ppm)
MW-20	12/5/14	1:15	40.40	App 1	14	P&DB	Y	Y	63.55		1.3	74	6.38	14.2	90	40	ST	NR
MW-21	12/5/14	3:00	31.52	App I & Hg	6	P&DB	N	Y	41.05		2.4	205	5.99	13.8	60	30	C	NR
MW-22	12/5/14	3:40	15.55	App 1	3	DB	Y	Y	18.12		4.9	213	6.37	15.5	80	40	ST	Q
MW-23	12/5/14	2:30	13.32	App 1	6	P&DB	N		21.54		5.8	203	6.97	15.4	110	50	ST	NR
MW-24	12/3/14	4:50	32.49	MNA	5	P&DB	N		35.35		0.4	297	5.93	11.3	190	90	128 c	Q
MW-25	12/3/14	3:45	31.76	MNA	6	P&DB	Y		44.48		0.5	223	6.53	13.8	180	90	203 ST	NR
MW-26	12/3/14	3:10	28.76	MNA	9	P&DB	N		49.8		0.4	231	6.42	15.3	280	130	27.2	NR
MW-27	12/3/14	2:30	21.95	MNA	6	P&DB	Y		49.82		3.5	288	6.53	14.8	510	250	41.6 c	NR
MW-31	12/3/14	2:00	24.28	MNA	9	P&DB	close N		32.56		0.4	211	5.99	14.4	90	40	ST	NR
MW-32	12/4/14	9:30	32.14	App 1	8	P&DB	N		42.7		1.3	228	6.99	14.3	280	130	ST	Q
MW-33	12/2/14	1:10	13.98	App 1	10	P&DB	N		21.38		4.4	135	6.21	15.1	110	50	ST	Q
MW-34	12/2/14	2:00	8.73	App 1	11	P&DB	N		21.19		4.6	141	6.86	15.2	80	30	ST	Q
SW-3	12/5/14	9:30	-	DM C	-	—	-	-	-		6.7	27	7.01	7.3	80	30	C	-
SW-4R	12/5/14	2:20	-	DM C	-	—	-	-	-		NR	19	7.03	7.2	80	30	C	-
SW-5	12/4/14	9:55	-	DM C	-	Dip	-	-	-		NR	21	7.07	7.3	80	30	C	-
SW-6	12/2/14	2:20	-	DM C	-	Dip	-	-	-		NR	35	6.99	7.5	90	40	C	-
EB	12/5/14	8:10	-	AM	-		-	-	-	-	-	-	-	-	-	-	-	-
FB		8:20	-	AM	-		-	-	-	-	-	-	-	-	-	-	-	-
TB		Place Filt.	-	AM	-		-	-	-	-	-	-	-	-	-	-	-	-

Comments

SS B=Stainless Steel Baler, D B=Disposable Baler, P=Low flow Pump, PD=Purged Dry
VT=Very Turbid, MT=Moderately Turbid, ST=Slightly Turbid, C=Clear
NR=No Reading Attempted, NS=No Sample Obtained

P-2 26.66