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February 17, 2016
File No. 02214704.00

Ms. Jackie Drummond, Hydrogeologist
North Carolina Department of Environment and Natural Resources
Division of Waste Management, Solid Waste Section
2090 US Highway 70
Swannanoa, North Carolina 28778

Subject: **A-1 Sandrock Construction and Demolition Debris Landfill, Guilford County**
Facility Permit Number 41-17
Water Quality Monitoring Report
November 2015 Semiannual Sampling Event

Dear Ms. Drummond:

On behalf of A-1 Sandrock, Inc., SCS Engineers, PC is submitting the attached Water Quality Monitoring Report documenting November 2015 Semiannual Sampling Event for A-1 Sandrock Construction and Demolition Debris Landfill (C&D Landfill), Facility Permit Number 41-17. The November 2015 monitoring event is the 2nd of the required semiannual groundwater monitoring events for year 2015. In addition to the report, the signed Environmental Monitoring Reporting Form and the electronic data deliverable (EDD) are being submitted. This groundwater and surface water sampling event was performed on November 23, 24, and 25, 2015. The report provides details pertaining to the sampling event including field activities, laboratory analysis, water quality findings and conclusions. Historical groundwater and surface water results are also included in the report.

In summary, the results of the surface water monitoring event indicate conditions consistent with historic field and analytical data. The results of the groundwater monitoring event do not indicate any groundwater impact associated with the landfill, and there is no indication of any risk to the public. The next water quality monitoring event at the A-1 Sandrock C&D Landfill is scheduled for May 2016.

If you have any questions or need additional information, please do not hesitate to contact David Garrett at 919-418-4375 (dgarrett@scsengineers.com).

Sincerely,

NORTH CAROLINA LICENSED SEAL 983 GEOLOGIST G. DAVID GARRETT

David Garrett, P.G., P.E.
Project Manager
SCS ENGINEERS, PC

Marta A. VanDussen
Project Professional
SCS ENGINEERS, PC

cc: Ronnie Petty – A-1 Sandrock, Inc.

Enclosures: Water Quality Monitoring Report May 2015 Semiannual Sampling Event
Environmental Monitoring Reporting Form
Electronic Data Deliverable (EDD)

SCS ENGINEERS

WATER QUALITY MONITORING REPORT
NOVEMBER 2015
SEMIANNUAL SAMPLING EVENT

A-1 SANDROCK CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL
FACILITY PERMIT NO. 41-17

Prepared for:

A-1 Sandrock, Inc.
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Date: February 17, 2016
File No.: 02214704.00 Task 3

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WATER QUALITY MONITORING REPORT
NOVEMBER 2015 SEMIANNUAL SAMPLING EVENT

A-1 SANDROCK CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL FACILITY PERMIT NO. 41-17

Presented To:

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Attachment 1 – Pace Analytical Services, Inc. Report of Laboratory Analysis
Attachment 2 – Environmental Monitoring Reporting Form and Electronic Data Deliverable (EDD)

SCS Engineers, PC (SCS) is submitting this Water Quality Monitoring Report for the A-1 Sandrock Construction and Demolition Debris Landfill, located in Guilford County, North Carolina on behalf of the A-1 Sandrock, Inc. This report provides background information, description of field activities, data, summary and analysis of the laboratory analytical results from the groundwater and surface water monitoring sampling event performed in November 2015.

1 INTRODUCTION

A-1 Sandrock, Inc. operates the Construction and Demolition Debris Landfill (C&D Landfill) located at Bishop Road (State Road 1116), south of the city of Greensboro, Guilford County, North Carolina. The location of the landfill is shown on **Figure 1.** This C&D Landfill became operational in April 2009. The baseline monitoring was conducted in November 2006. Based on review of previously prepared documentation, groundwater monitoring has been performed at the permitted landfill since October 2009.

State and federal regulations applicable to landfills are enforced by the North Carolina Department of Environmental Quality (NCDEQ), Division of Waste Management (DWM), Solid Waste Section (SWS). The C&D Landfill is permitted by the DEQ DWM under Permit No. 41-17, which requires semiannual monitoring of groundwater and surface water quality. This monitoring event is the second (2nd) semiannual monitoring event for year 2015 as required by the Permit to Operate issued by the NCDEQ DWM on December 6, 2013. This report provides an evaluation of surface water and groundwater quality for the C&D Landfill.

Currently, the monitoring program network at the landfill consists of six (6) groundwater monitoring wells and four (4) on-site surface water sampling locations.

There is one (1) up gradient, natural background well designated as MW-1, and five (5) down gradient compliance wells being designated as MW-2, MW-3, MW-4, MW-5, and MW-6.

The surface water sample locations are SW-1, SW-2, SW-3, and SW-4. SW-1 is located at the northwest boundary of the site where Hickory Creek enters the facility. SW-2 is located along an unnamed tributary to Hickory Creek where it enters the east side of the landfill. SW-3 is located along an unnamed tributary to Hickory Creek where it enters the south side of the landfill. And SW-4 is located downstream where Hickory Creek exits the southwest corner of the landfill. The locations of the monitoring wells and surface water points are showed on **Figure 1**.

2 FIELD ACTIVITIES

On November 23, 24, and 25, 2015, Pace Analytical Services, Inc. (Pace) personnel collected groundwater samples from six (6) groundwater monitoring wells and four (4) surface water sampling locations at the C&D Landfill. One duplicate sample, designated as MW2 DUP, was also collected during this monitoring event. Collected samples were analyzed for constituents listed in Appendix I of the 40 Code of Federal Regulations (CFR) Part 258, mercury, tetrahydrofuran, alkalinity, chloride, sulfate, and total dissolved solids (TDS).

Monitoring well MW-6 was a newly installed well (completed on April 2, 2015) and was included for sampling during this monitoring event.

The groundwater and surface water samples were collected and handled in accordance with the sampling protocols included in the Water Quality Monitoring Plan prepared for the site, as well as the SWS Guidelines for Groundwater, Soil, and Surface Water Sampling.

Groundwater was purged and samples were collected from the monitoring wells using bailing sampling procedures. Total well depth, condition of the casing, and the groundwater recharge rate were used to determine the purging and sample collection method employed at each monitoring well. Prior to groundwater sampling, each monitoring well was purged of a minimum of three well volumes of water. During purging, measurements were taken in the field of conductivity, dissolved oxygen, pH, temperature, water levels, and turbidity. Measured field parameters and additional observations pertaining to the C&D Landfill sampling locations are provided in **Attachment 1**. All groundwater samples were placed into laboratory-supplied sample bottles by a technician wearing a new pair of nitrile gloves.

Surface water samples were collected into sample containers by direct submersion in the creek and/or tributary. One round of surface water field parameters consisting of conductivity, dissolved oxygen (DO), oxygen reduction potential (ORP), pH, temperature, and turbidity, was measured and recorded at each sampling location prior to collecting the sample. Surface water samples were placed into laboratory-supplied sample containers by a technician wearing a new pair of nitrile gloves. All reusable sampling equipment was properly decontaminated between sampling locations. Disposable sampling equipment and material was discarded after each use.

Following collection, each groundwater and surface water sample was immediately placed on ice in a sample cooler for shipment to Pace, a North Carolina certified laboratory located in Charlotte, North Carolina. Proper chain-of-custody documentation practices were followed during collection and transportation of each sample; the documentation is included in **Attachment 1** of this report. Chain-of-custody provides details of the laboratory analyses requested and performed on the samples. The laboratory analytical report is provided in the **Attachment 1** also.

3 GROUNDWATER LEVELS AND FLOW

Groundwater levels were gauged in the monitoring wells on November 23, 24, and 25, 2015. Depths to groundwater were measured using an electronic water level meter that was thoroughly decontaminated between wells. Depth-to-water measurements were taken after the wells were opened for a sufficient period of time to allow water levels to equilibrate with atmospheric pressure. Water level data and groundwater elevation data are summarized on **Table 1**. The depth to groundwater across the site measured relative to the top of the polyvinyl chloride (PVC) casing ranged from 2.94 feet (MW-3) to 29.40 feet (MW-1), consistent with site surface topography.

Based on the water level data collected during this monitoring event, a Groundwater Surface Contour Map was prepared and is presented as **Figure 1**. The pattern of the water-table contours indicates that the horizontal component of shallow groundwater flow at the site generally varies from north to west, which is consistent with the site surface topography and drainage features. The hydraulic gradient of the water table, based on data from **Figure 1**, varies from approximately 0.011 to 0.076 at the site. The groundwater flow velocity calculated based on modified Darcy equation on **Table 1** varies from 0.37 to 2.50 feet per year.

The groundwater flow direction is primarily towards the western property boundary, with radial flow to the north and south, toward the unnamed tributaries.

The calculated groundwater flow velocity and estimated values for hydraulic conductivity and porosity are included in **Table 1**. Please note that for all the monitoring wells, the estimated value for hydraulic conductivity comes from individual well aquifer tests (David Garrett, 2002) and effective porosity in the shallow aquifer is published empirical value from Groundwater and Wells (Driscoll, 1986).

4 WATER QUALITY FINDINGS

Concentrations of detected constituents in groundwater samples were compared to analyte-specific Solid Waste Section Limits (SWSLs) established by the SWS and the NCDEQ rule 15A NCAC 02L .0202 Groundwater Quality Standards (2L). Concentrations of detected constituents in surface water samples were compared to analyte-specific SWSLs and the 15A NCAC 2B.0211 surface water quality standards (2B) established for class C waters. If the reported concentration was less than the SWSL, the analytical result was qualified as estimated per DEQ requirement, and was flagged with a "J" qualifier.

Table 2 presents summary of detected constituents only, in groundwater. **Table 3** presents summary of detected constituents only, in surface water. In both tables, constituent analytical results that exceed their associated 2L or 2B standards, where applicable, are shaded. **Table 4** presents summary of historically detected constituents only, in the groundwater and/ or surface water samples collected at the C&D Landfill.

A hard copy of the laboratory report from Pace Analytical Services, Inc. with a copy of the chain-of-custody form is included in **Attachment 1**. All laboratory analytical results and field parameter data for groundwater and surface water are included in an electronic data deliverable (EDD) format file specified by the SWS (available in electronic form only, see **Attachment 2**). Also **Attachment 2** includes Environmental Monitoring Reporting (EMR) Form required to be submitted by the SWS.

4.1 GROUNDWATER ANALYTICAL RESULTS

The summary of constituents detected in the groundwater during the November 2015 semiannual water quality monitoring event is provided in the sections below.

4.1.1 VOLATILE ORGANIC COMPOUNDS (VOCS)

VOCs were not detected in the groundwater samples collected from all six monitoring wells.

4.1.2 METALS

Eight metals, barium, chromium, cobalt, copper, iron, manganese, vanadium, and zinc, were detected at or above the applicable SWSLs in one or more of the monitoring wells during this monitoring event.

Chromium, cobalt, iron, manganese, and vanadium were detected above their respective 2L standard in one or more of the monitoring wells. Iron was reported above its 2L standard in the groundwater samples collected from all monitoring wells. No other metals were reported above their applicable standards. All these metals are suspect to be background constituents. All reported detections are summarized on **Table 2**.

4.1.3 INORGANIC PARAMETERS

At least one of inorganic parameters that were analyzed [alkalinity, chloride, sulfate, and total dissolved solids (TDS)] was detected in the groundwater samples collected from the monitoring wells. The detections are summarized in **Table 2**. SWSLs are not established for the analyzed inorganics with the exception of sulfate. The detected concentrations of sulfate were below its SWSL. Chloride, sulfate, and TDS have established 2L standards. All detected concentrations of these compounds were below their applicable groundwater standards.

4.1.4 FIELD PARAMETERS

The pH readings measured in all monitoring wells ranged between 6.0 (MW-4) Standard Units (SU) to 6.4 SU (MW-1) were outside the 2L standard pH range of 6.5 to 8.5 SU specified in the 15A NCAC 02L .0202[c] (**Table 2**).

Turbidity values at the time of sampling the monitoring wells ranged from 8.47 (MW-5) to 1,000+ (MW-3) nephelometric turbidity units (NTUs). Specific conductivity values ranged between 163.5 (MW-3) and 466.6 (MW-5) microsiemens per centimeter (µS/cm). Dissolved oxygen values ranged between 0.15 mg/L (MW-6) and 4.43 mg/L (MW-1).

4.2 SURFACE WATER ANALYTICAL RESULTS

The summary of constituents detected in the surface water during the November 2015 semiannual water quality monitoring event is provided in the sections below.

4.2.1 VOCS

VOCs were not detected in the surface water samples collected at all sampling locations.

4.2.2 METALS

Copper, iron, manganese, and zinc were detected at concentrations above their applicable SWSL in at least one or more surface water sampled locations. Copper was reported in excess of 2B surface water quality standard at SW-3. Iron was reported in excess of 2B surface water quality standard at SW-2. None of the other detected metals were present at concentrations exceeding 2B standards (**Table 3**).

4.2.3 INORGANIC PARAMETERS

Alkalinity, chloride, sulfate, and TDS were found in all four surface water samples. The detections are summarized in **Table 3**. SWSLs are not established for the analyzed inorganics with the exception of sulfate. The detected concentrations of sulfate were below its SWSL. Only chloride has established 2B standard, and chloride concentrations detected in surface water were below its standard.

4.2.4 FIELD PARAMETERS

The pH readings measured in sampled surface water locations ranged between 6.6 SU (SW-4) to 7.1 SU (SW-3) and were within the 2B surface water quality standard pH range of 6.0 to 9.0 SU specified in the 15A NCAC 2B (**Table 3**).

Specific conductivity values ranged between 83.4 (SW-3) and 373.4 (SW-1) µS/cm. Dissolved oxygen values ranged between 9.47 mg/L (SW-3) and 11.29 mg/L (SW-1).

5 SUMMARY

The results of the November 2015 groundwater and surface water quality monitoring event performed at the A-1 Sandrock C&D Landfill indicate that the overall water quality is stable and the reported data were comparable to the results reported during previous semiannual sampling events. The results are summarized in more detail in the sections below.

5.1 VOCS DETECTION SUMMARY

During the November 2015 monitoring event VOCs were not detected in the groundwater samples collected from monitoring wells and surface water samples.

Historically, two VOCs (acetone and toluene) were detected. Acetone was detected once (November 2010), and toluene was detected twice (October 2009 and April 2010). Both constituents have not been found either in the groundwater or surface water since May 2011. The historical analytical data for previously detected VOCs are presented in **Table 4**.

5.2 METALS DETECTION SUMMARY

Chromium, cobalt, iron, manganese, and vanadium were reported in the groundwater samples collected from one or more monitoring wells at concentrations in excess of the respective 2L standard during this monitoring event.

Chromium was detected in wells MW-3 and MW-4 in excess of its 2L standard. This is the fifth instance where chromium was reported at concentration above its 2L standard in well MW-3, and fourth in well MW-4. Chromium was reported last time above 2L standard in MW-3 during November 2012 monitoring event.

Cobalt was detected in excess of the 2L standard in wells MW-2, MW-3, and MW-5. There were six instances in the past where cobalt was reported at concentrations exceeding 2L standard in well MW-2. Cobalt has been consistently present in well MW-5 above its 2L standard and the detected concentration was higher comparing to the one reported during May 2015 monitoring event. Since June 2013 monitoring event this was the first detection of cobalt at concentration above 2L standard for well MW-3.

Iron was reported above its 2L standard in the groundwater samples collected from all monitoring wells. This was the fourth detection of iron at concentration above 2L standard for well MW-1. Iron was reported in wells MW-2, MW-3, and MW-4 at concentrations above 2L standard during the last two monitoring events and it has been consistently reported for these wells. For well MW-5 this was the seventh occurrence for iron to be detected at the concentration in excess of its regulatory limit. This was the second occurrence of iron reported above its 2L standard for well MW-6. The highest concentration was reported for well MW-3, as its turbidity was the highest at this well as well.

Manganese was reported in excess of the 2L standard in all sampled wells. There were three instances in the past where manganese was reported at concentrations exceeding 2L standard in well MW-1 and five in well MW-2. In wells MW-3, MW-4, MW-5, and MW-6 manganese has

been consistently present at concentrations in excess of 2L standard. The concentrations appeared higher comparing to the May 2015 monitoring event results.

Vanadium was reported in excess of the 2L standard in wells MW-1, MW-2, MW-3, MW-4, and MW-6. Vanadium has been consistently present above its regulatory limit in the groundwater sampled from these wells.

Two metals, copper and iron, were present at concentrations in excess of the 2B surface water quality standards in SW-3 and SW-2 surface water locations, respectively. There were two instances in the past where iron was reported at concentration exceeding 2B standard at SW-2, and there were ten instances of copper concentrations reported in excess of 2B standard at SW-3.

Metal concentrations in groundwater are often dependent on the turbidity or suspended particulates (from the aquifer formation) retrieved with the groundwater sample and also metals natural occurring in the in-situ soil. The turbidity is a function of the sampling method, well construction, well development, depth to groundwater, and grain size/consolidation of the water-bearing zone. Since unfiltered samples are acidified in the field at the time of sample collection, metals contained within the particulates are dissolved into the water sample. Thus, the presence of turbidity in groundwater samples often results in elevated (false positive) analytical concentrations for metals. Therefore, the presence of elevated metal concentrations does not necessarily indicate a groundwater impact.

Additionally, certain metals are considered natural occurring within the in-situ soils and not caused by a release from a landfill. It is known that the landfill is located in a historic mining district, where mineralization by concentrated metals has occurred. Further monitoring will pay attention to any reported constituents.

The historical analytical data for metals detected in the past are presented in **Table 4.**

5.3 INORGANIC AND FIELD PARAMETERS

Alkalinity, chloride, sulfate, and total dissolved solids were reported in all groundwater and surface water samples collected during November 2015 monitoring event. The reported concentrations of all inorganics appear consistent with historically reported data for these parameters.

The results of the field-measured groundwater quality parameters indicate that the values measured in the collected samples were generally consistent comparing to the already existing data set. Turbidity was the highest and elevated in the monitoring well MW-3. The pH readings measured in majority of monitoring wells were outside the 2L standard pH range specified in the 15A NCAC 02L .0202[c] and continue indicate acidic groundwater.

The field parameters measured in the surface water samples were consistent with the values reported in the past.

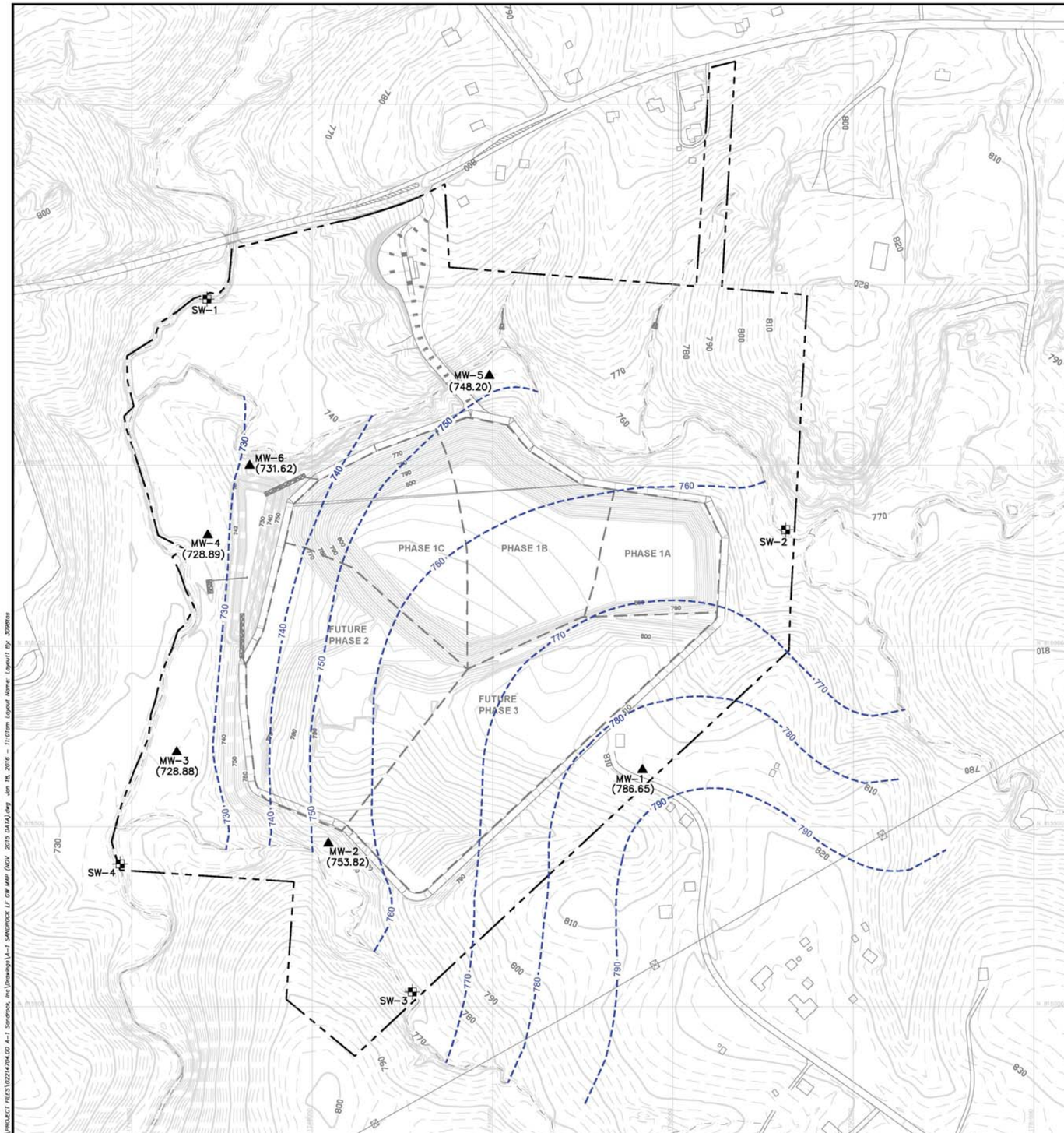
5.4 CONCLUSIONS

The results of the groundwater monitoring event indicate consistent presence of metals in the groundwater. There is no indication that the landfill is causing, or contributing to any degradation of groundwater quality. Furthermore, no down gradient groundwater users are present or anticipated, therefore there is no indication of any risk to the public at this time.

The results of the surface water monitoring event indicate conditions consistent with historic field and analytical data reported, and do not demonstrate an impact on surface water quality due to landfill activities.

At this time, no changes or other recommendations for the monitoring program are warranted. The next water quality monitoring event at the A-1 Sandrock C&D Landfill is scheduled for May 2016.

FIGURES



dgarrett@scsengineers.com

N

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SCALE IN FEET

LEGEND:

- 2 FOOT ELEVATION CONTOUR
- 800 – 10 FOOT ELEVATION CONTOUR
- FACILITY BOUNDARY
- CELL BOUNDARY
- STREAM/WATER IMPOUNDMENT
- POWERLINE
- 780 – GROUNDWATER ELEVATION CONTOUR
- MW-1 (786.65) – GROUNDWATER MONITORING LOCATION AND GROUNDWATER ELEVATION
- SW-1 – SURFACE WATER MONITORING LOCATION

NOTES:

1. GROUNDWATER POTENTIOMETRIC CONTOURS TAKEN FROM PERMITTING STUDIES, MODIFIED WITH CURRENT DATA FOR MONITORING WELLS MEASURED ON NOVEMBER 23–25, 2015.
2. MONITORING WELL MW–06 WAS INSTALLED ON APRIL 2, 2015.
3. GUILFORD COUNTY TAX MAP FOR SUMTER TOWNSHIP: ACL–3–185–755S–7, D.B. 4459, PG. 780.
4. TOPOGRAPHY WITHIN PROPERTY BOUNDARY FROM AERIAL PHOTOGRAPHY DATED 3/27/01, BY SPATIAL DATA. TOPOGRAPHY OUTSIDE PROPERTY BOUNDARY FROM AERIAL PHOTOGRAPHY DATED 1995, BY GUILFORD COUNTY GIS DEPARTMENT.
5. BOUNDARY INFORMATION FROM BOUNDARY MAP PREPARED BY L. DENNIS LEE, P.A., DATED NOVEMBER 14, 2002.
6. BASE GRADES SHOWN HERE ARE AS PERMITTED IN FEBRUARY 2004 BY NCDENR DIVISION OF WASTE MANAGEMENT (PERMIT #41–17). AS–BUILT SURVEY FOR PHASE 1A COMPLETED IN DECEMBER 2006 BY DENNIS LEE, RLS.

NORTH CAROLINA LICENSED PROFESSIONAL ENGINEER DAVID GARRETT

NC CORP. LICENSE NO. C–1837

NO.	REVISION	DATE

SHEET TITLE
NOVEMBER 2015
GROUNDWATER SURFACE CONTOUR MAP

PROJECT TITLE
A-1 SANDROCK C&D LANDFILL (41-17)
WATER QUALITY REPORT

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PROJ. NO. 02214704.00
SCALE: 0 FEET
DWN. BY: TAS
CHK. BY: DMC
QA RVW BY: MV
APVD. BY: GDG

DATE:
JANUARY 2016

SCALE:
AS SHOWN

DRAWING NO.
1 of 1

W:\PROJECT FILES\02214704.00 A-1 Sandrock, Inc\Drawings\A-1 SANDROCK LF GW MAP (NOV 2015 DATA).dwg Jan 18, 2016 - 11:01am Layout Name: Layout1 By: 3098rse

TABLES

Table 1
Groundwater Level and Flow Data
A-1 Sandrock, Inc. Construction and Demolition Debris (C&D) Landfill, Permit #41-17
November 2015

Well ID	GS Elevation	TOC Elevation	Depth To Water	Water Level Elevation	Total Well Depth
	(feet)				
MW-1	813.40	816.05	29.40	786.65	46.65
MW-2	759.90	761.92	8.10	753.82	32.72
MW-3	729.80	731.82	2.94	728.88	33.71
MW-4	731.10	733.17	4.28	728.89	26.10
MW-5	761.10	762.88	14.68	748.20	31.14
MW-6	753.10	755.89	24.27	731.62	47.45

Well ID	Water Level Elevation	Reference Elevation	Vertical Change	Horizontal Change	K*		n	I	v
	(feet)				(cm/sec)	(ft/year)		(ft/ft)	(ft/year)
MW-1	786.65	790	3.35	103	6.32E-06	6.54	0.20	0.033	1.06
MW-2	753.82	750	3.82	50	6.32E-06	6.54	0.20	0.076	2.50
MW-3	728.88	730	1.12	100	6.32E-06	6.54	0.20	0.011	0.37
MW-4	728.89	730	1.11	60	6.32E-06	6.54	0.20	0.019	0.61
MW-5	748.20	750	1.80	46	6.32E-06	6.54	0.20	0.039	1.28
MW-6	731.62	740	8.38	228	6.32E-06	6.54	0.20	0.037	1.20

NOTES:

1. Depth To Water was measured on November 23, 24, and 25, 2015 for all monitoring wells.
2. Monitoring well MW-06 is the most recent installed well, on April 2, 2015.
3. **GS** - ground surface.
4. **TOC** - top of casing.
5. **Depth To Water** in feet from TOC.
6. Monitoring wells were surveyed by Allied Associates, P.A., April 7, 2009.
7. GS and TOC elevation in NGVD29.
8. **K** - hydraulic conductivity.
9. **cm/sec** = centimeters per second. **ft** = feet.
10. **n** - effective porosity. The effective porosity used in velocity calculations is published empirical value from Driscoll, 1986.
11. **I** - hydraulic gradient. Values obtained by dividing water level elevation difference by horizontal distance between closest two contour lines to each well location
12. **v** - flow rate; GW flow rate calculated based on the modified Darcy equation: v = (K*I)/n.

*- The geometric mean of K from individual well aquifer tests was used to calculate the hydraulic conductivity
(tests conducted by David Garrett, P.G., P.E. as part of the Site Suitability Report).

Table 2
Summary of Groundwater Quality Data - Detected Constituents Only
A-1 Sandrock, Inc. Construction and Demolition Debris (C&D) Landfill, Permit # 41-17
November 2015

Parameter		MDL	MRL	Compliance Limit		Monitoring Well ID and Analytical Results						
				SWSL	2L Standard	MW-1	MW-2	MW-2DUP	MW-3	MW-4	MW-5	MW-6
Metals (µg/L)	Barium	2.5	5.0	100	700	48.4 J	**146**	**154**	**193**	**154**	75.3 J	**115**
	Chromium	2.5	5.0	10	10	9.3 J	6.9 J	**17.5**	**15.3**	**19.0**	2.5 U	7.3 J
	Cobalt	2.5	5.0	10	1	2.5 U	**8.6 J**	**9.0 J**	**6.1 J**	2.5 U	**16.5**	2.5 U
	Copper	2.5	5.0	10	1,000	2.5 U	2.5 U	2.5 U	7.7 J	**10.2**	2.5 U	2.5 U
	Iron	25	50.0	300	300	**1,000**	**1,840**	**3,140**	**12,400**	**4,950**	**1,850**	**6,710**
	Manganese	2.5	5.0	50	50	**50.8**	**5,900**	**5,860**	**192**	**394**	**2,230**	**321**
	Nickel	2.5	5.0	50	100	5.6 J	2.5 U	8.2 J	11.8 J	17.4 J	2.5 U	6.7 J
	Vanadium	2.5	5.0	25	0.3	**9.1 J**	**8.3 J**	**11.4 J**	**26.5**	**15.9 J**	2.5 U	**13.2 J**
	Zinc	5.0	10.0	10	1,000	**53.9**	**24.1**	**27.6**	**31.6**	5.0 U	**29.5**	**20.4**
Inorganics (mg/L)	Alkalinity	1.0	5.0	NE	NE	49.500	135.000	135.000	66.200	61.300	145.000	56.100
	Chloride	0.50	1.0	NE	250	4.430	8.710	8.870	4.110	5.680	9.030	11.300
	Sulfate	4.0	8.0	250	250	30.900 J	40.500 J	39.900 J	9.860 J	59.900 J	86.800 J	29.200 J
	Total Dissolved Solids	25.0	25.0	NE	500	195.000	277.000	297.000	172.000	225.000	374.000	206.000
Field Parameters	Dissolved Oxygen (DO; mg/L)	NA	NA	NE	NE	4.43	0.21	0.21	3.04	0.96	0.33	0.15
	Oxygen Reduction Potential (ORP; mV)	NA	NA	NE	NE	104.1	40.2	40.2	159.6	168.2	-12.4	29.3
	pH (S.U.)	NA	NA	NE	6.5 - 8.5	6.4	6.1	6.1	6.1	6.0	6.3	6.3
	Specific Conductivity (µS/cm)	NA	NA	NE	NE	186.6	363.5	363.5	163.5	273.7	466.6	213.3
	Turbidity (NTU)	NA	NA	NE	NE	20.27	9.62	9.6	1,000+	125.1	8.47	148.5

NOTES:

1. Table 2 lists all detected compounds in the groundwater. Please refer to Pace Analytical Services, Inc. laboratory analysis report for further details.
2. MDL = Method Detection Limit.
3. MRL = Method Reporting Limit.
4. Compliance Limit = SWSL or 2L Standard.
5. SWSL = Solid Waste Section Limit (June 13, 2011).
6. 2L Standard = NCAC Title 15A Subchapter 2L Classifications and Water Quality Standards Applicable to the GWs of North Carolina (April 1, 2013).
7. J indicates the detected result is below the SWSL.
8. U indicates the compound was analyzed for, but not detected.
9. µg/L = micrograms per liter.
10. NE = Not Established. NA = Not Applicable or Not Analyzed.
11. **Bold font** indicates analyte detection above SWSL.
12. **Shaded field** denotes result that was at or above the 2L Standard.

mg/L = milligrams per liter.
mV = millivolts.
S.U. = Standard Units.
µS/cm = micro Siemens per centimeter.
NTU = Nephelometric Turbidity Units.

Table 3
Summary of Surface Water Quality Data - Detected Constituents Only
A-1 Sandrock, Inc. Construction and Demolition Debris (C&D) Landfill, Permit # 41-17
November 2015

Parameter		MDL	MRL	Compliance Limit		Sample Location ID and Analytical Results			
				SWSL	2B Standard	SW-1	SW-2	SW-3	SW-4
Metals (µg/L)	Barium	2.5	5.0	100	200,000	82.0 J	53.3 J	28.4 J	77.0 J
	Copper	5.0	5.0	10	7 (AL)	2.5 U	2.5 U	**134**	2.5 U
	Iron	25	50	300	1,000	**926**	**1,160**	**884**	**904**
	Manganese	2.5	5.0	50	NE	**198**	**191**	35.4 J	**255**
	Zinc	5.0	10.0	10	50	5.0 U	5.0 U	**11.4**	5.0 U
Inorganics (mg/L)	Alkalinity	1.0	5.0	NE	NE	146.000	61.500	20.600	131.000
	Chloride	0.50	1.0	NE	230	20.100	6.800	4.200	17.100
	Sulfate	1.0	2.0	250	NE	17.200 J	12.500 J	8.540 J	19.600 J
	Total Dissolved Solids	25.0	25.0	NE	NE	243.000	129.000	81.000	213.000
Field Parameters	Dissolved Oxygen (DO; mg/L)	NA	NA	NE	NE	11.29	10.08	9.47	9.62
	Oxygen Reduction Potential (ORP; mV)	NA	NA	NE	NE	112	102.0	95.2	117.1
	pH (S.U.)	NA	NA	NE	6.0 - 9.0	7.0	7.0	7.1	6.6
	Specific Conductivity (µS/cm)	NA	NA	NE	NE	373.4	181.7	83.4	333.3
	Turbidity (NTU)	NA	NA	NE	50	10.54	12.28	27.17	14.97

NOTES:

1. Table 3 lists all detected compounds in the surface water. Please refer to Pace Analytical Services, Inc. laboratory analysis report for further details.
2. MDL = Method Detection Limit.
3. MRL = Method Reporting Limit.
4. Compliance Limit = SWSL or 2L Standard.
5. SWSL = Solid Waste Section Limit (June 13, 2011).
6. 2B Standard = Standards, criteria, or toxic concentrations either adopted per 15A NCAC 2B or National Criteria per EPA (Current as of 5/15/2013).
7. (AL) = Action Level Standard (See 2B .0211 for additional information).
8. J indicates the detected result is below the SWSL.
9. µg/L = micrograms per liter. mg/L = milligram per liter.
10. NE = Not Established. NA = Not Applicable or Not Analyzed. NM = Not Measured.
11. **Bold font** indicates analyte detection above SWSL.
12. **Shaded field** denotes result that was at or above the 2B Standard.

mV = millivolts.
S.U. = Standard Units.
µS/cm = microsiemens per centimeter.
NTU = Nephelometric Turbidity Units.

Table 4

Historical Groundwater and Surface Water Quality Data

A-1 Sandrock, Inc. Construction and Demolition Debris (C&D) Landfill

Parameter : Antimony CAS No. 7440-36-0

Sample	Compliance Limit (µg/L)			MDL	Analytical Results (µg/L)									
Date	SWSL	2L Standard	2B Standard		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	6	1	640	NA	ND	ND	ND	ND	ND		ND	ND	ND	ND
Oct-2009				2.95	ND	ND	ND	ND	ND		ND	ND	ND	ND
Apr-2010				2.95	ND	ND	ND	ND	ND		ND	ND	ND	ND
Nov-2010				2.95	ND	ND	ND	ND	ND		ND	ND	ND	ND
May-2011				0.220	ND	ND	ND	ND	ND		ND	ND	ND	ND
Nov-2011				0.220	ND	ND	ND	ND	ND		ND	ND	ND	ND
May-2012				0.220	**0.567 J**	**1.12 J**	**0.287 J**	ND	ND		**0.224 J**	ND	ND	**0.573 J**
Nov-2012				0.220	ND	**0.328 J**	ND	ND	ND		ND	ND	ND	ND
Jun-2013				0.220	ND	**0.484 J**	ND	ND	ND		ND	ND	ND	ND
Apr-2014				5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0		**63.1**	ND<5.0	ND<5.0	ND<5.0
Nov-2014				3.8	ND<3.8	ND<3.8	ND<3.8	ND<3.8	ND<3.8		ND<3.8	ND<3.8	ND<3.8	ND<3.8
May-2015				3.8	ND<3.8	ND<3.8	ND<3.8	ND<3.8	ND<3.8	ND<3.8	ND<3.8	ND<3.8	NS	NS
Nov-2015				3.8	ND<3.8	ND<3.8	ND<3.8	ND<3.8	ND<3.8	ND<3.8	ND<3.8	ND<3.8	ND<3.8	ND<3.8

Parameter : Arsenic CAS No. 7440-38-2

Sample	Compliance Limit (µg/L)			MDL	Analytical Results (µg/L)									
Date	SWSL	2L Standard	2B Standard		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	10	10	10	NA	ND	ND	ND	ND	ND		ND	ND	ND	ND
Oct-2009				4.91	ND	ND	ND	ND	ND		ND	ND	ND	ND
Apr-2010				4.91	ND	ND	ND	ND	ND		ND	ND	ND	ND
Nov-2010				4.91	**7.75 J**	ND	ND	ND	ND		ND	ND	ND	ND
May-2011				2.80	ND	ND	ND	ND	ND		ND	ND	ND	ND
Nov-2011				2.80	ND	ND	ND	ND	ND		ND	ND	ND	ND
May-2012				2.80	ND	**3.49 J**	**3.78 J**	**3.24 J**	**3.17 J**		ND	**4.23 J**	**5.20 J**	**3.98 J**
Nov-2012				2.80	ND	ND	ND	ND	ND		**2.98 J**	ND	ND	ND
Jun-2013				5.40	ND	ND	ND	ND	ND		ND	ND	ND	ND
Apr-2014				5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0		ND<5.0	ND<5.0	ND<5.0	ND<5.0
Nov-2014				2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5		ND<2.5	ND<2.5	ND<2.5	ND<2.5
May-2015				2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	NS	NS
Nov-2015				2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5

Parameter : Barium CAS No. 7440-39-3

Sample	Compliance Limit (µg/L)			MDL	Analytical Results (µg/L)									
Date	SWSL	2L Standard	2B Standard		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	100	700	200,000	NA	**390**	**449**	**860**	**768**	**534**		**82 J**	**47 J**	ND	**70 J**
Oct-2009				2.06	**22.9 BJ**	**50.8 BJ**	**334 B**	**163 B**	**42.4 BJ**		**57.7 BJ**	**81.7 BJ**	**61.7 BJ**	**62.6 BJ**
Apr-2010				2.06	**26.9 BJ**	**42.8 BJ**	**75.2 BJ**	**63.8 BJ**	**37.6 BJ**		**59.8 BJ**	**61.6 BJ**	**38.5 BJ**	**70.9 BJ**
Nov-2010				2.06	**64.7 J**	**59.5 J**	**46.4 J**	**49.5 J**	**52.9 J**		**88.2 J**	**110**	**80.9 J**	**96.3 J**
May-2011				1.0	**20.2 J**	**45.3 J**	**106**	**53.8 J**	**51.9 J**		**79.8 J**	**83.7 J**	**52.0 J**	**75.4 J**
Nov-2011				1.0	**42.8 J**	**43.6 J**	**95.5 J**	**101**	**58.5 J**		**66.1 J**	**69.3 J**	**59.6 J**	**76.2 J**
May-2012				1.0	**31.8 J**	**47.2 J**	**118**	**109**	**52..9 J**		**60.7 J**	**76.8 J**	**31.9 J**	**61.7 J**
Nov-2012				1.0	**31.5 J**	**68.2 J**	**68.7 J**	**105**	**69.8 J**		**83.8 J**	**69.1 J**	**138**	**76.8 J**
Jun-2013				1.0	**27.5 J**	**58.1 J**	**75.3 J**	**94.5 J**	**63.3 J**		**70.6 J**	**61.3 J**	**53.4 J**	**63.6 J**
Apr-2014				5.0	**52.5 J**	**48.6 J**	**37.9 J**	**94.0 J**	**51.8 J**		ND<5.0	**52.1 J**	**34.6 J**	**35.5 J**
Nov-2014				2.5	**38.4 J**	**51.9 J**	**39.4 J**	**108**	**91.8 J**		**65.8 J**	**65.1 J**	**80.7 J**	**63.4 J**
May-2015				2.5	**40.3 J**	**94.7 J**	**61.9 J**	**175**	**61.4 J**	**262**	**70.7 J**	**75.7 J**	NS	NS
Nov-2015				2.5	**48.4 J**	**146**	**193**	**154**	**75.3 J**	**115**	**82.0 J**	**53.3 J**	**28.4 J**	**77.0 J**

Table 4

Historical Groundwater and Surface Water Quality Data
A-1 Sandrock, Inc. Construction and Demolition Debris (C&D) Landfill

Parameter : Beryllium CAS No. 7440-41-7

Sample	Compliance Limit (µg/L)			MDL	Analytical Results (µg/L)									
Date	SWSL	2L Standard	2B Standard		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	1	4	6.5	NA	ND	ND	ND	ND	ND		ND	ND	ND	ND
Oct-2009				0.442	ND	ND	ND	ND	ND		ND	ND	ND	ND
Apr-2010				0.088	ND	ND	ND	ND	ND		ND	ND	ND	ND
Nov-2010				0.442	ND	ND	ND	ND	ND		ND	ND	ND	ND
May-2011				0.100	ND	**0.103 J**	ND	ND	ND		ND	ND	ND	ND
Nov-2011				0.100	ND	ND	ND	ND	ND		ND	ND	ND	ND
May-2012				0.100	ND	ND	ND	ND	ND		ND	ND	ND	ND
Nov-2012				0.100	ND	ND	ND	ND	ND		ND	ND	ND	ND
Jun-2013				0.100	ND	ND	ND	ND	ND		ND	ND	ND	ND
Apr-2014				1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		ND<1.0	ND<1.0	ND<1.0	ND<1.0
Nov-2014				0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	ND<0.50	ND<0.50	ND<0.50
May-2015				0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NS	NS
Nov-2015				0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50

Parameter : Chromium CAS No. 7440-47-3

Sample	Compliance Limit (µg/L)			MDL	Analytical Results (µg/L)									
Date	SWSL	2L Standard	2B Standard		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	10	10	50	NA	ND	ND	**29**	**11**	**11**		ND	ND	ND	ND
Oct-2009				1.46	ND	ND	**28.7 B**	**24.5 B**	ND		**3.33 B**	ND	ND	ND
Apr-2010				1.46	**3.58 J**	**2.81 J**	**6.43 J**	**4.24 J**	**2.38 J**		**5.55 J**	**3.47 J**	**3.47 J**	**4.46 J**
Nov-2010				1.46	**7.88 J**	**5.92 J**	**7.88 J**	**7.36 J**	**5.71 J**		**5.71 J**	**6.53 J**	**6.43 J**	**7.05 J**
May-2011				1.0	**1.55 J**	ND	**9.76 J**	**1.75 J**	**4.22 J**		ND	ND	ND	ND
Nov-2011				1.0	**6.48 J**	**1.43 J**	**8.87 J**	**7.84 J**	**1.40 J**		**1.37 J**	**1.10 J**	**1.35 J**	**1.52 J**
May-2012				1.0	**1.32 J**	**2.28 J**	**10.5**	**6.98 J**	ND		ND	ND	**1.19 J**	ND
Nov-2012				1.0	**1.43 J**	**2.01 J**	**10.9**	**4.30 J**	**4.89 J**		**4.39 J**	ND	**3.64 J**	ND
Jun-2013				1.40	**2.29 J**	ND	**6.39 J**	**6.83 J**	ND		ND	ND	ND	ND
Apr-2014				5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0		ND<5.0	ND<5.0	ND<5.0	ND<5.0
Nov-2014				2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5		ND<2.5	ND<2.5	ND<2.5	ND<2.5
May-2015				2.5	ND<2.5	ND<2.5	**9.4 J**	**27.8**	ND<2.5	**9.0 J**	ND<2.5	ND<2.5	NS	NS
Nov-2015				2.5	**9.3 J**	**6.9 J**	**15.3**	**19.0**	ND<2.5	**7.3 J**	ND<2.5	ND<2.5	ND<2.5	ND<2.5

Parameter : Cobalt CAS No. 7440-48-4

Sample	Compliance Limit (µg/L)			MDL	Analytical Results (µg/L)									
Date	SWSL	2L Standard	2B Standard		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	10	1	4	NA	**9 J**	**9 J**	**30.0**	**11**	**14**		ND	ND	ND	ND
Oct-2009				1.72	ND	ND	**20.0**	**9.53 J**	**1.96 J**		ND	ND	**4.84 J**	ND
Apr-2010				1.72	ND	ND	**3.08 J**	**4.97 J**	**2.13 J**		ND	ND	ND	ND
Nov-2010				1.72	ND	ND	ND	ND	ND		ND	ND	**2.30 J**	ND
May-2011				1.10	ND	ND	**5.10 J**	**5.49 J**	**2.08 J**		ND	**1.20 J**	**2.17 J**	ND
Nov-2011				1.10	**2.10 J**	ND	**3.41 J**	**3.76 J**	ND		ND	**1.13 J**	ND	ND
May-2012				1.10	ND	**2.33 J**	**5.16 J**	**7.22 J**	**3.25 J**		ND	**1.17 J**	**2.65 J**	ND
Nov-2012				1.10	ND	**1.38 J**	**2.14 J**	**2.02 J**	**2.77 J**		ND	ND	**26.7**	**1.17 J**
Jun-2013				1.10	ND	**1.19 J**	**3.12 J**	**2.31 J**	**6.13 J**		ND	ND	**9.42 J**	ND
Apr-2014				5.0	ND<5.0	ND<5.0	ND<5.0	**8.5 J**	**60.3**		ND<5.0	ND<5.0	ND<5.0	ND<5.0
Nov-2014				2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5		ND<2.5	ND<2.5	ND<2.5	ND<2.5
May-2015				2.5	ND<2.5	**5.8 J**	ND<2.5	ND<2.5	**9.2 J**	**10.2**	ND<2.5	ND<2.5	NS	NS
Nov-2015				2.5	ND<2.5	**8.6 J**	**6.1 J**	ND<2.5	**16.5**	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5

Table 4

Historical Groundwater and Surface Water Quality Data
A-1 Sandrock, Inc. Construction and Demolition Debris (C&D) Landfill

Parameter : Copper CAS No. 7440-50-8

Sample	Compliance Limit (µg/L)			MDL	Analytical Results (µg/L)									
Date	SWSL	2L Standard	2B Standard		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	10	1,000	7	NA	**36**	**45**	**60**	**67**	**55**		ND	ND	**42 J**	ND
Oct-2009				1.29	**3.02 BJ**	**8.77 BJ**	**27.8 B**	**35.0 B**	**8.49 BJ**		**7.56 BJ**	**2.69 BJ**	**11.2 B**	**3.21 BJ**
Apr-2010				1.29	**1.71 J**	**2.39 J**	**6.71 J**	**5.07 J**	**6.21 J**		**5.69 J**	**7.82 J**	**53.1**	**5.67 J**
Nov-2010				1.29	**13.7**	**6.64 J**	**5.98 J**	**7.09 J**	**7.07 J**		**7.26 J**	**7.90 J**	**12.0**	**6.32 J**
May-2011				1.60	ND	ND	**4.70 J**	**1.79 J**	**10.9**		ND	**1.94 J**	**23.0**	ND
Nov-2011				1.60	**7.29 BJ**	**4.06 BJ**	**5.51 BJ**	**11.2 B**	**4.97 BJ**		**3.08 BJ**	**5.34 BJ**	**19.2 B**	**3.65 BJ**
May-2012				1.60	ND	**2.91 J**	**4.85 J**	**9.56 J**	**2.80 J**		ND	**1.86 J**	**105**	**1.97 J**
Nov-2012				1.60	ND	ND	**6.39 J**	**4.02 J**	**5.03 J**		ND	ND	**33.8**	ND
Jun-2013				1.60	ND	ND	ND	**6.24 J**	**3.96 J**		ND	**1.71 J**	**51.1**	ND
Apr-2014				5.0	**6.7 J**	ND<5.0	ND<5.0	ND<5.0	**9.8 J**		ND<5.0	ND<5.0	**41.9**	**41.6**
Nov-2014				2.5	**7.1 J**	ND< 2.5	ND< 2.5	ND< 2.5	**5.3 J**		ND< 2.5	ND< 2.5	ND< 2.5	ND<2.5
May-2015				2.5	ND< 2.5	**326**	ND< 2.5	**24.1**	**5.1 J**	**10.4**	ND< 2.5	ND< 2.5	NS	NS
Nov-2015				2.5	ND< 2.5	ND< 2.5	**7.7 J**	**10.2**	ND< 2.5	ND< 2.5	ND< 2.5	ND< 2.5	**134**	ND< 2.5

Parameter : Lead CAS No. 7439-92-1

Sample	Compliance Limit (µg/L)			MDL	Analytical Results (µg/L)									
Date	SWSL	2L Standard	2B Standard		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	10	15	25	NA	**11**	ND	ND	60	ND		ND	ND	ND	ND
Oct-2009				6.79	ND	ND	**10.4**	ND	ND		ND	ND	ND	ND
Apr-2010				6.79	ND	ND	ND	**6.82 J**	ND		**7.08 J**	ND	ND	ND
Nov-2010				6.79	ND	**10.1 B**	**7.96 B**	**8.01 B**	ND		**7.46 B**	**7.71 B**	**8.08 B**	ND
May-2011				1.90	ND	ND	**2.94 J**	ND	ND		ND	ND	ND	ND
Nov-2011				1.90	ND	ND	ND	ND	ND		ND	ND	ND	ND
May-2012				1.90	**2.43 J**	ND	ND	**2.24 J**	ND		ND	ND	**2.30 J**	ND
Nov-2012				1.90	ND	ND	ND	ND	ND		ND	ND	**3.75 J**	ND
Jun-2013				2.10	ND	ND	ND	ND	ND		ND	ND	ND	ND
Apr-2014				5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0		ND<5.0	ND<5.0	ND<5.0	ND<5.0
Nov-2014				2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5		ND<2.5	ND<2.5	ND<2.5	ND<2.5
May-2015				2.5	ND<2.5	**10.2**	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	NS	NS
Nov-2015				2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5

Parameter : Nickel CAS No. 7440-02-0

Sample	Compliance Limit (µg/L)			MDL	Analytical Results (µg/L)									
Date	SWSL	2L Standard	2B Standard		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	50	100	88	NA	**10 J**	ND	**67**	**15 J**	**14 J**		ND	ND	ND	ND
Oct-2009				2.36	ND	ND	**31.0 J**	**20.5 J**	**3.02 J**		**4.92 J**	ND	ND	ND
Apr-2010				2.36	ND	ND	**10.6 J**	**6.29 J**	**3.11 J**		**2.60 J**	**2.98 J**	**3.91 J**	**5.68 J**
Nov-2010				2.36	**7.28 J**	**2.59 J**	**6.82 J**	**3.80 J**	**5.01 J**		**3.89 J**	**4.19 J**	**3.88 J**	**3.77 J**
May-2011				1.80	ND	ND	**9.74 J**	**3.86 J**	**2.92 J**		ND	ND	ND	ND
Nov-2011				1.80	**2.84 J**	ND	**8.41 J**	**9.74 J**	**4.41 J**		ND	ND	ND	ND
May-2012				1.80	ND	ND	**8.54 J**	**9.60 J**	**3.23 J**		ND	ND	ND	ND
Nov-2012				1.80	ND	ND	**7.45 J**	**8.64 J**	**7.47 J**		**2.39 J**	ND	**4.59 J**	ND
Jun-2013				1.80	ND	ND	**3.62 J**	**6.24 J**	**5.67 J**		ND	ND	ND	ND
Apr-2014				5.0	ND<5.0	ND<5.0	ND<5.0	**8.4 J**	ND<5.0		ND<5.0	ND<5.0	ND<5.0	ND<5.0
Nov-2014				2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	**13.2 J**		ND<2.5	ND<2.5	ND<2.5	ND<2.5
May-2015				2.5	ND<2.5	ND<2.5	**7.1 J**	**17.1 J**	ND<2.5	**10.9 J**	ND<2.5	ND<2.5	NS	NS
Nov-2015				2.5	**5.6 J**	ND<2.5	**11.8 J**	**17.4 J**	ND<2.5	**6.7 J**	ND<2.5	ND<2.5	ND<2.5	ND<2.5

Table 4

Historical Groundwater and Surface Water Quality Data
A-1 Sandrock, Inc. Construction and Demolition Debris (C&D) Landfill

Parameter : Selenium CAS No. 7782-49-2

Sample	Compliance Limit (µg/L)			MDL	Analytical Results (µg/L)									
Date	SWSL	2L Standard	2B Standard		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	10	20	5	NA	ND	ND	ND	ND	ND		ND	ND	ND	ND
Oct-2009				2.78	ND	ND	**6.34 J**	ND	ND		ND	ND	ND	ND
Apr-2010				2.78	**2.90 J**	**2.89 J**	ND	ND	ND		**4.67 J**	ND	ND	ND
Nov-2010				2.78	ND	ND	ND	ND	ND		ND	**3.97 J**	ND	ND
May-2011				2.70	ND	ND	ND	ND	ND		ND	ND	ND	ND
Nov-2011				2.70	ND	ND	ND	ND	ND		ND	ND	ND	ND
May-2012				4.50	ND	ND	ND	ND	ND		ND	ND	**7.92 J**	ND
Nov-2012				4.50	ND	ND	ND	ND	ND		ND	ND	ND	ND
Jun-2013				5.0	ND	ND	ND	ND	ND		ND	ND	ND	ND
Apr-2014				10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0		ND<10.0	ND<10.0	ND<10.0	ND<10.0
Nov-2014				5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0		ND<5.0	ND<5.0	ND<5.0	ND<5.0
May-2015				5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	NS	NS
Nov-2015				5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0

Parameter : Silver CAS No. 7440-22-4

Sample	Compliance Limit (µg/L)			MDL	Analytical Results (µg/L)									
Date	SWSL	2L Standard	2B Standard		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	10	20	0.06	NA	**12 J**	ND	ND	ND	ND		ND	ND	ND	ND
Oct-2009				0.656	**1.24 BJ**	**3.43 BJ**	ND	**0.88 BJ**	**1.09 BJ**		**0.67 BJ**	ND	ND	ND
Apr-2010				0.656	ND	**1.04 J**	ND	ND	ND		ND	ND	ND	ND
Nov-2010				0.656	**7.14 J**	**7.32 J**	**6.32 J**	**6.57 J**	**6.99 J**		**6.72 J**	**6.96 J**	**6.84 J**	**7.14 J**
May-2011				1.90	ND	ND	ND	ND	ND		ND	ND	ND	ND
Nov-2011				1.90	**3.81 J**	ND	ND	ND	ND		ND	ND	ND	ND
May-2012				1.90	ND	ND	ND	ND	ND		ND	ND	ND	ND
Nov-2012				1.90	ND	ND	ND	ND	ND		ND	ND	ND	ND
Jun-2013				1.90	**1.90 J**	**2.09 J**	ND	ND	ND		ND	ND	ND	**1.91 J**
Apr-2014				5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0		ND<5.0	ND<5.0	ND<5.0	ND<5.0
Nov-2014				2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5		ND<2.5	ND<2.5	ND<2.5	ND<2.5
May-2015				2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	NS	NS
Nov-2015				2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5

Parameter : Vanadium CAS No. 7440-62-2

Sample	Compliance Limit (µg/L)			MDL	Analytical Results (µg/L)									
Date	SWSL	2L Standard	2B Standard		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	25	0.3	NE	NA	**200**	**200**	**135**	**106**	**145**		ND	ND	ND	ND
Oct-2009				0.586	**12.3 J**	**8.3 J**	**61.5**	**34.8**	**11.2 J**		**9.74 J**	**4.43 J**	**3.27 J**	ND
Apr-2010				0.059	**9.79 BJ**	ND	**2.44 BJ**	ND	ND		ND	ND	**0.379 BJ**	ND
Nov-2010				0.586	ND	ND	ND	ND	ND		ND	ND	ND	ND
May-2011				1.40	**9.29 J**	**2.23 J**	**17.3 J**	**2.07 J**	**9.21 J**		ND	ND	**2.71 J**	ND
Nov-2011				1.40	**14.9 J**	**2.55 J**	**13.3 J**	**10.5 J**	ND		ND	ND	ND	ND
May-2012				1.40	**9.03 J**	**5.35 J**	**19.4 J**	**12.6 J**	**2.01 J**		ND	ND	**3.03 J**	ND
Nov-2012				1.40	**8.78 J**	**5.25 J**	**9.30 J**	**8.88 J**	**2.92 J**		ND	ND	**12.1 J**	ND
Jun-2013				1.40	**9.81 J**	**2.45 J**	**11.4 J**	**10.3 J**	**1.57 J**		**2.66 J**	ND	**1.85 J**	**1.45 J**
Apr-2014				5.0	ND<5.0	ND<5.0	ND<5.0	**8.5 J**	**11.3 J**		ND<5.0	ND<5.0	ND<5.0	ND<5.0
Nov-2014				2.5	**9.8 J**	ND<2.5	ND<2.5	**7.3 J**	ND<2.5		ND<2.5	ND<2.5	ND<2.5	ND<2.5
May-2015				2.5	**10.1 J**	ND<2.5	**7.6 J**	**37.2**	ND<2.5	**37.8**	ND<2.5	ND<2.5	NS	NS
Nov-2015				2.5	**9.1 J**	**8.3 J**	**26.5**	**15.9 J**	ND<2.5	**13.2 J**	ND<2.5	ND<2.5	ND<2.5	ND<2.5

Table 4

Historical Groundwater and Surface Water Quality Data
A-1 Sandrock, Inc. Construction and Demolition Debris (C&D) Landfill

Parameter : Zinc CAS No. 7440-66-6

Sample	Compliance Limit (µg/L)			MDL	Analytical Results (µg/L)									
Date	SWSL	2L Standard	2B Standard		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	10	1,000	50	NA	**202**	**236**	**219**	**354**	**501**		ND	ND	ND	ND
Oct-2009				1.29	**2.0 J**	**4.41 J**	**65.7**	**18.2**	**2.68 J**		**17.2**	**1.40 J**	**4.66 J**	**2.20 J**
Apr-2010				1.29	ND	ND	**9.32 J**	**2.41 J**	**1.91 J**		**3.96 J**	**6.98 J**	**5.59 J**	**8.19 J**
Nov-2010				1.29	**18.8 B**	**7.99 JB**	**7.30 JB**	**9.02 JB**	**6.58 JB**		**6.85 JB**	**8.55 JB**	**10.2 B**	**10.3 B**
May-2011				3.80	ND	**6.68 J**	**21.3**	**13.5**	**6.38 J**		ND	**3.97 J**	**3.95 J**	**4.18 J**
Nov-2011				3.80	**10.2**	ND	**16.4**	**17.2**	ND		**4.47 J**	**4.76 J**	**4.40 J**	**4.91 J**
May-2012				3.80	ND	**9.70 J**	**23.7**	**8.69 J**	ND		ND	ND	**5.38 J**	**4.43 J**
Nov-2012				3.80	ND	ND	**15.1**	**3.83 J**	**5.79 J**		**5.53 J**	ND	**24.5**	ND
Jun-2013				3.80	**6.16 J**	**4.32 J**	**11.2**	**6.33 J**	**4.10 J**		**4.83 J**	**6.45 J**	ND	**5.35 J**
Apr-2014				10.0	**18.5**	ND<10.0	ND<10.0	ND<10.0	ND<10.0		ND<10.0	ND<10.0	ND<10.0	ND<10.0
Nov-2014				5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	**10.0**		**10.3**	ND<5.0	ND<5.0	ND<5.0
May-2015				5.0	ND<5.0	**178**	**10.1**	**15.2**	ND<5.0	**72.8**	ND<5.0	ND<5.0	NS	NS
Nov-2015				5.0	**53.9**	**24.1**	**31.6**	ND<5.0	**29.5**	**20.4**	ND<5.0	ND<5.0	**11.4**	ND<5.0

Parameter : Iron CAS No. 7439-89-6

Sample	Compliance Limit (µg/L)			MDL	Analytical Results (µg/L)									
Date	SWSL	2L Standard	2B Standard		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	300	300	1,000	NA	ND	ND	ND	ND	ND		ND	ND	ND	ND
Oct-2009				20.0	**158 BJ**	**2,360 B**	**35,200 B**	**17,700 B**	**1,250 B**		**2,530**	**1,040**	**2,050**	**553**
Apr-2010				20.0	**71.2 J**	**94.0 J**	**2,890**	**6,860**	**162 J**		ND	ND	ND	ND
Nov-2010				20.0	**81.6 J**	ND	**48.6 JB**	**2,160**	**245 J**		ND	ND	ND	ND
May-2011				22.0	**145 J**	**394**	**8,960**	**3,050**	**2,290**		NA	NA	NA	NA
Nov-2011				22.0	**2,790**	**821**	**6,660**	**4,410**	**332**		ND	ND	ND	ND
May-2012				22.0	**123 J**	**2,090**	**9,690**	**6,190**	**550**		ND	ND	ND	ND
Nov-2012				22.0	**43.1 J**	**1,690**	**3,810**	**2,590**	**428**		ND	ND	ND	ND
Jun-2013				22.0	**630**	**474**	**4,720**	**3,260**	**184 J**		ND	ND	ND	ND
Apr-2014				NA	NA	NA	NA	NA	NA		NA	NA	NA	NA
Nov-2014				NA	NA	NA	NA	NA	NA		NA	NA	NA	NA
May-2015				25.0	**896**	**1,070**	**2,420**	**10,300**	**691**	**23,800**	**826**	**1,520**	NS	NS
Nov-2015				25.0	**1,000**	**1,840**	**12,400**	**4,950**	**1,850**	**6,710**	**926**	**1,160**	**884**	**904**

Parameter : Manganese CAS No. 7439-96-5

Sample	Compliance Limit (µg/L)			MDL	Analytical Results (µg/L)									
Date	SWSL	2L Standard	2B Standard		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	50	50	NE	NA	ND	ND	ND	ND	ND		ND	ND	ND	ND
Oct-2009				0.64	**13.6 J**	**63.4**	**481**	**767**	**418**		**97.4**	**284**	**422**	**447**
Apr-2010				0.64	**7.45 J**	**13.8 J**	**187**	**992**	**146**		ND	ND	ND	ND
Nov-2010				0.64	**118**	**8.31 JB**	**4.37 JB**	**32.5 J**	**73.9**		ND	ND	ND	ND
May-2011				1.10	**6.53 J**	**12.5 J**	**181**	**879**	**240**		NA	NA	NA	NA
Nov-2011				1.10	**84.0**	**23.9 J**	**125**	**360**	**202**		ND	ND	ND	ND
May-2012				1.10	**5.67 J**	**49.9 J**	**125**	**765**	**403**		ND	ND	ND	ND
Nov-2012				1.10	**2.75 J**	**76.8**	**59.2**	**280**	**691**		ND	ND	ND	ND
Jun-2013				1.10	**15.3 J**	**131**	**58.6**	**184**	**776**		ND	ND	ND	ND
Apr-2014				NA	NA	NA	NA	NA	NA		NA	NA	NA	NA
Nov-2014				NA	NA	NA	NA	NA	NA		NA	NA	NA	NA
May-2015				2.5	**19.9 J**	**2,010**	**73.5**	**232**	**1,560**	**558**	**233**	**249**	NS	NS
Nov-2015				2.5	**50.8**	**5,900**	**192**	**394**	**2,230**	**321**	**198**	**191**	**35.4 J**	**255**

Table 4

Historical Groundwater and Surface Water Quality Data
A-1 Sandrock, Inc. Construction and Demolition Debris (C&D) Landfill

Parameter : Acetone CAS No. 67-64-1

Sample	Compliance Limit (µg/L)			MDL	Analytical Results (µg/L)									
Date	SWSL	2L Standard	2B Standard		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	100	6,000	2,000	NA	ND	ND	ND	ND	ND		ND	ND	ND	ND
Oct-2009				2.18	ND	ND	ND	ND	ND		**2.98 J**	ND	ND	**2.57 J**
Apr-2010				2.18	ND	ND	ND	ND	ND		ND	ND	ND	ND
Nov-2010				2.18	**2.40 J**	ND	ND	ND	ND		**2.26 J**	ND	ND	**3.17 J**
May-2011				1.2	ND	ND	ND	ND	ND		ND	ND	ND	ND
Nov-2011				1.2	ND	ND	ND	ND	ND		ND	ND	ND	ND
May-2012				1.2	ND	ND	ND	ND	ND		ND	ND	ND	ND
Nov-2012				1.2	ND	ND	ND	ND	ND		ND	ND	ND	ND
Jun-2013				1.2	ND	ND	ND	ND	ND		ND	ND	ND	ND
Apr-2014				10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0		ND<10.0	ND<10.0	ND<10.0	ND<10.0
Nov-2014				10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0		ND<10.0	ND<10.0	ND<10.0	ND<10.0
May-2015				10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	NS	NS
Nov-2015				10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0

Parameter: Toluene CAS No. 108-88-3

Sample	Compliance Limit (µg/L)			MDL	Analytical Results (µg/L)									
Date	SWSL	2L Standard	2B Standard		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	1	600	11	NA	ND	ND	ND	ND	ND		ND	ND	ND	ND
Oct-2009				0.0760	ND	ND	ND	ND	**0.830 J**		ND	ND	ND	ND
Apr-2010				0.0760	ND	ND	ND	ND	**0.340 J**		ND	ND	ND	ND
Nov-2010				0.0760	ND	ND	ND	ND	ND		ND	ND	ND	ND
May-2011				0.85	ND	ND	ND	ND	ND		ND	ND	ND	ND
Nov-2011				0.85	ND	ND	ND	ND	ND		ND	ND	ND	ND
May-2012				0.14	ND	ND	ND	ND	ND		ND	ND	ND	ND
Nov-2012				0.14	ND	ND	ND	ND	ND		ND	ND	ND	ND
Jun-2013				0.14	ND	ND	ND	ND	ND		ND	ND	ND	ND
Apr-2014				0.26	ND<0.26	ND<0.26	ND<0.26	ND<0.26	ND<0.26		ND<0.26	ND<0.26	ND<0.26	ND<0.26
Nov-2014				0.26	ND<0.26	ND<0.26	ND<0.26	ND<0.26	ND<0.26		ND<0.26	ND<0.26	ND<0.26	ND<0.26
May-2015				0.26	ND<0.26	ND<0.26	ND<0.26	ND<0.26	ND<0.26	ND<0.26	ND<0.26	ND<0.26	NS	NS
Nov-2015				1.26	ND<0.26	ND<0.26	ND<0.26	ND<0.26	ND<0.26	ND<0.26	ND<0.26	ND<0.26	ND<0.26	ND<0.26

Table 4

Historical Groundwater and Surface Water Quality Data
A-1 Sandrock, Inc. Construction and Demolition Debris (C&D) Landfill

Parameter : Chloride CAS No. 16887-00-6

Sample	Compliance Limit (mg/L)			MDL	Analytical Results (mg/L)									
Date	SWSL	2L Standard	2B Standard		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	NE	250	230	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA
Oct-2009				0.0107	**4.05**	**3.24**	**2.61**	**2.94**	**7.00**		**22.0**	**12.2**	**6.27**	**18.6**
Apr-2010				NA	**4.9**	**3.6**	**3.1**	**4.1**	**3.9**		**19.0**	**8.6**	**4.70**	**18.3**
Nov-2010				0.0107	**5.27**	**3.23**	**2.74**	**3.38**	**5.96**		**22.5**	**12.5**	**6.45**	**20.3**
May-2011				0.047	**4.90 B**	**4.50 B**	**4.10 B**	**4.30 B**	**7.20 B**		NA	NA	NA	NA
Nov-2011				0.047	**4.70 B**	**4.20 B**	**3.60 B**	**3.80 B**	**8.80**		NA	NA	NA	NA
May-2012				0.43	**4.50 B**	**4.30 B**	**3.60 B**	**4.20 B**	**6.90**		NA	NA	NA	NA
Nov-2012				0.43	**4.60 B**	**5.00**	**3.80 B**	**4.20 B**	**11.0**		NA	NA	NA	NA
Jun-2013				2.2	**4.70 J**	**5.10**	**3.80 J**	**4.30 J**	**8.30**		NA	NA	NA	NA
Apr-2014				1.0	**4.4**	**5.7**	**4.1**	**5**	**11.9**		**29.1**	**8**	**5**	**4.8**
Nov-2014				0.50	**4.9**	**5.1**	**4.8**	**5.2**	**16.5**		**29.7**	**10.8**	**12.1**	**27.2**
May-2015				0.50	**4.50**	**6.82**	**3.75**	**4.89**	**11.10**	**11.80**	**37.10**	**12.90**	NS	NS
Nov-2015				0.50	**4.430**	**8.710**	**4.110**	**5.680**	**9.030**	**11.300**	**20.100**	**6.800**	**4.200**	**17.100**

Parameter : Nitrogen, Nitrate CAS No. SW303

Sample	Compliance Limit (mg/L)			MDL	Analytical Results (mg/L)									
Date	SWSL	2L Standard	2B Standard		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Apr-2014	10	250	10	0.020	**0.84 J**	**0.028 J**	**0.15 J**	ND<0.020	ND<0.020		**0.27 J**	**0.13 J**	ND<0.020	ND<0.020
Nov-2014				0.010	**0.60 J**	**0.052 J**	**0.17 J**	**0.21 J**	**0.028 J**		**0.077 J**	**0.034 J**	ND< 0.010	**0.048 J**
May-2015				NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
Nov-2015				NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS

Parameter : Sulfate CAS No. 14808-79-8

Sample	Compliance Limit (mg/L)			MDL	Analytical Results (mg/L)									
Date	SWSL	2L Standard	2B Standard		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	250	250	NE	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA
Oct-2009				0.10	**26.7 J**	**10.5 J**	**7.43 J**	**8.35 J**	**16.1 J**		**9.20 J**	**11.8 J**	**8.67 J**	**10.2 J**
Apr-2010				NA	**33.5 J**	**12.1 J**	**6.3 J**	**12.2 J**	**39.1 J**		**28.6 J**	**14.2 J**	**11.0 J**	**26.6 J**
Nov-2010				NA	**13.1 J**	**9.8 J**	**6.0 J**	**7.4 J**	**28.5 J**		**14.1 J**	**19.3 J**	**20.3 J**	**16.3 J**
May-2011				0.020	**25.0 J**	**11.0 J**	**8.70 J**	**11.0 J**	**42.0 J**		NA	NA	NA	NA
Nov-2011				0.020	**26.0 J**	**11.0 J**	**8.70 J**	**9.40 J**	**48.0 J**		NA	NA	NA	NA
May-2012				0.040	**28.0 J**	**11.0 J**	**9.20 J**	**14.0 J**	**51.0 J**		NA	NA	NA	NA
Nov-2012				0.040	**28.0 J**	**12.0 J**	**9.50 J**	**17.0 J**	**43.0 J**		NA	NA	NA	NA
Jun-2013				0.040	**26.0 J**	**12.0 J**	**8.90 J**	**19.0 J**	**63.0 J**		NA	NA	NA	NA
Apr-2014				NA	NA	NA	NA	NA	NA		NA	NA	NA	NA
Nov-2014				NA	NA	NA	NA	NA	NA		NA	NA	NA	NA
May-2015				1.0	**36.20 J**	**25.60 J**	**9.91 J**	**38.00 J**	**68.60 J**	**15.20 J**	**20.70 J**	**13.60 J**	NS	NS
Nov-2015				4.0	**30.900 J**	**40.500 J**	**9.860 J**	**59.900 J**	**86.800 J**	**29.200 J**	**17.200 J**	**12.500 J**	**8.540 J**	**19.600 J**

Table 4

Historical Groundwater and Surface Water Quality Data
A-1 Sandrock, Inc. Construction and Demolition Debris (C&D) Landfill

Parameter : Total Dissolved Solids CAS No. ECL-0156 (SW311)

Sample	Compliance Limit (mg/L)			MDL	Analytical Results (mg/L)									
Date	SWSL	2L Standard	2B Standard		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	NE	500	NE	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA
Oct-2009				10.0	**84.0**	**75.0**	**84.0**	**77.0**	**132**		**166**	**241**	**92.0**	**181**
Apr-2010				NA	**176.0**	**109.0**	**128.0**	**101.0**	**129.0**		**295**	**131**	**95.0**	**409**
Nov-2010				NA	**19**	**23**	**20**	**22**	**169**		**230**	**256**	**141**	**231**
May-2011				10.0	**170**	**110**	**130**	**110**	**210**		NA	NA	NA	NA
Nov-2011				10.0	**150**	**92**	**130**	**140**	**180**		NA	NA	NA	NA
May-2012				10.0	**190**	**140**	**160**	**140**	**160**		NA	NA	NA	NA
Nov-2012				10.0	**170**	**130**	**140**	**170**	**250**		NA	NA	NA	NA
Jun-2013				10.0	**160**	**120**	**130**	**160**	**240**		NA	NA	NA	NA
Apr-2014				NA	NA	NA	NA	NA	NA		NA	NA	NA	NA
Nov-2014				NA	NA	NA	NA	NA	NA		NA	NA	NA	NA
May-2015				25.0	**193.00**	**159.00**	**111.00**	**183.00**	**283.00**	**288.00**	**313.00**	**234.00**	NS	NS
Nov-2015				25.0	**195.000**	**277.000**	**172.000**	**225.000**	**374.000**	**206.000**	**243.000**	**129.000**	**81.000**	**213.000**

Parameter : Total Alkalinity CAS No. 471-34-1

Sample	Compliance Limit (mg/L)			MDL	Analytical Results (mg/L)									
Date	SWSL	2L Standard	2B Standard		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	NE	NE	NE	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA
Oct-2009				1.0	**71.4**	**47.9**	**52.8**	**46.9**	**84.1**		**89.9**	**182**	**53.8**	**117**
Apr-2010				NA	**80.0**	**64.0**	**60.5**	**97.5**	**35.5**		**18.7**	**60.5**	**33.0**	**172**
Nov-2010				NA	**10.0 B**	**53.0**	**59.0**	**42.8**	**77.0**		**145**	**155**	**64.5**	**150**
May-2011				12.0	**68.0**	**51.0**	**56.0**	**39.0**	**61.0**		NA	NA	NA	NA
Nov-2011				12.0	**70.0**	**49.0**	**52.0**	**60.0**	**77.0**		NA	NA	NA	NA
May-2012				12.0	**72.0**	**53.0**	**53.0**	**48.0**	**71.0**		NA	NA	NA	NA
Nov-2012				12.0	**69.0**	**53.0**	**54.0**	**75.0**	**120**		NA	NA	NA	NA
Jun-2013				14.0	**81.0**	**56.0 J**	**58.0**	**73.0**	**100**		NA	NA	NA	NA
Apr-2014				NA	NA	NA	NA	NA	NA		NA	NA	NA	NA
Nov-2014				NA	NA	NA	NA	NA	NA		NA	NA	NA	NA
May-2015				1.0	**68.20**	**76.50**	**57.60**	**67.20**	**124.00**	**57.70**	**159.00**	**116.00**	NS	NS
Nov-2015				1.0	**49.500**	**135.000**	**66.200**	**61.300**	**145.000**	**56.100**	**146.000**	**61.500**	**20.600**	**131.000**

Parameter : Total Organic Carbon CAS No. 7440-44-0

Sample	Compliance Limit (mg/L)			MDL	Analytical Results (mg/L)									
Date	SWSL	2L Standard	2B Standard		*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Apr-2014	NE	NE	NE	1.0	**11.6**	**33.8**	**4.9**	**4.4**	**13.6**		**8.1**	**7.8**	**5.2**	**3.8**
Nov-2014				0.50	**12.0**	**1.3**	**2.8**	**1.7**	**10.1**		**6.9**	**10.8**	**4.4**	**6.4**
May-2015				NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
Nov-2015				NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS

Table 4
Historical Groundwater and Surface Water Quality Data
A-1 Sandrock, Inc. Construction and Demolition Debris (C&D) Landfill

Parameter : pH (field)

Sample	Compliance Limit (S.U.)			Results (S.U. = Standard Units)									
Date	SWSL	2L Standard	2B Standard	*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	NE	6.5 - 8.5	6.0 - 9.0	6.42	6.20	6.28	6.01	6.27		7.14	6.82	6.96	6.96
Oct-2009				7.07	7.07	7.06	6.11	6.07		7.28	7.04	6.85	7.65
Apr-2010				6.55	6.01	6.04	5.70	5.93		7.70	6.92	6.61	7.70
May-2010				NA	NA	NA	NA	5.93		NA	NA	NA	NA
Nov-2010				5.73	6.01	5.97	5.75	6.00		7.52	6.71	6.35	7.10
May-2011				5.71	5.61	5.91	5.61	5.33		7.03	6.54	6.22	6.39
Nov-2011				6.50	6.16	6.08	6.39	5.99		7.85	7.27	6.62	6.93
May-2012				6.65	6.27	6.10	6.09	5.96		7.42	7.06	7.23	7.20
Nov-2012				7.09	6.33	6.25	6.21	6.25		7.06	6.95	6.18	6.22
Jun-2013				4.51	5.16	5.14	5.61	5.76		7.52	6.47	6.69	7.13
Apr-2014				5.75	5.21	5.16	5.48	5.08		7.55	6.48	6.64	7.09
Nov-2014				5.98	5.79	5.75	5.76	5.68		7.44	7.22	6.2	7.18
May-2015				6.51	6.04	6.07	6.24	6.15	6.71	7.95	7.57	NS	NS
Nov-2015				6.4	6.1	6.1	6.0	6.3	6.3	7.0	7.0	7.1	6.6

Parameter : Specific Conductance (field)

Sample	Compliance Limit (µS/cm)			Results (µS/cm = microsiemens per centimeter)									
Date	SWSL	2L Standard	2B Standard	*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	NE	NE	NE	216	125	128	128	218		335	152	109	280
Oct-2009				260	140	130	150	260		300	430	200	360
Apr-2010				221	126.1	131	125.3	182.2		436	167	104	420
May-2010				NA	NA	NA	NA	179		NA	NA	NA	NA
Nov-2010				93.9	124.1	117.7	129.7	232		117.1	279	60.3	273.8
May-2011				234	145	145	133	251		428	311	152	370
Nov-2011				226.0	165.1	161.7	187.1	291		426	256	174	479
May-2012				251	168.1	168.6	176	304		292	299	130	277
Nov-2012				190	135	127	165	305		413	225	128	261
Jun-2013				237	177	159	201	381		347	240	174	323
Apr-2014				243	178	155	193	385		362	256	171	331
Nov-2014				241	177	162	281	494		359	264	111	456
May-2015				252.0	260.3	165.0	255.7	434.9	229.9	500.6	323.7	NS	NS
Nov-2015				186.6	363.5	163.5	273.7	466.6	213.3	373.4	181.7	83.4	333.3

Parameter : Turbidity (field)

Sample	Compliance Limit (NTU)			Results (NTU = Nephelometric Turbidity Units)									
Date	SWSL	2L Standard	2B Standard	*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*	*SW-1*	*SW-2*	*SW-3*	*SW-4*
Nov-2006	NE	NE	50	> 1,000	> 1,000	> 1,000	> 1,000	725		22	15	38	32
Oct-2009				> 1,000	972	> 1,000	378	> 1,000		2.1	4.5	4.6	4.8
Apr-2010				7.91	36.98	772.8	> 1,000	40.83		18.63	33.63	23.06	26.99
May-2010				NA	NA	NA	NA	29.34		NA	NA	NA	NA
Nov-2010				0.98	148.5	1.13	71	23.7		1.64	1.97	2.79	1.38
May-2011				6.49	11.9	216	35.7	133		2.94	6.61	5.79	4.11
Nov-2011				10.2	51.7	152	83.1	10.9		6.92	6.16	26.8	122
May-2012				13.3	92.6	136	135	44.0		22.6	17.8	40.6	20.5
Nov-2012				3.42	50.5	139	61.3	10.9		7.81	4.27	33.7	18.6
Jun-2013				14.9	7.93	143	86.8	21.3		12.2	14.6	13.0	12.6
Apr-2014				29.8	11.2	19.5	42.7	< 1,000		25.4	19.8	11.2	14.5
Nov-2014				34.81	15.43	18.88	8.12	4.11		66.7	50.66	420.9	41.3
May-2015				29.91	8.61	32.00	254.80	7.58	0.08	NM	NM	NS	NS
Nov-2015				20.27	9.62	> 1,000	125.10	8.47	148.50	10.54	12.28	27.17	14.97

Table 4

Historical Groundwater and Surface Water Quality Data
A-1 Sandrock, Inc. Construction and Demolition Debris (C&D) Landfill

Parameter : Groundwater Elevation

Sample Date	Compliance Limit			Elevation (feet)					
	SWSL	2L Standard	2B Standard	*MW-1*	*MW-2*	*MW-3*	*MW-4*	*MW-5*	*MW-6*
Nov-2006	Not Applicable			790.20	753.51	727.39	728.62	747.92	NA
Oct-2009				787.02	752.51	725.90	726.30	747.35	NA
Apr-2010				791.96	753.13	727.72	728.35	747.94	NA
Nov-2010				787.14	752.57	725.53	726.73	747.30	NA
May-2011				787.68	752.47	724.83	727.26	747.45	NA
Nov-2011				784.96	752.72	727.91	727.52	747.64	NA
May-2012				788.55	752.51	728.07	728.13	747.79	NA
Nov-2012				785.21	752.49	725.71	727.85	747.38	NA
Jun-2013				788.75	752.73	728.47	727.27	747.53	NA
Apr-2014				790.73	753.19	727.27	728.42	747.54	NA
Nov-2014				784.94	752.57	725.39	726.46	747.39	NA
May-2015				787.44	752.62	726.33	727.54	747.44	730.84
Nov-2015				29.40	8.10	2.94	4.28	14.68	24.27

NOTES:

1. This table shows historically detected constituents only, in either groundwater or surface water samples.
   Historical data is taken from August 2013 Water Quality Monitoring Report prepared by Golder Associates.
2. MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6 indicate monitoring groundwater wells. MW-1 is the background monitoring location.
3. SW-1, SW-2, SW-3, and SW-4 indicate surface water sampling locations.
4. Compliance Limit = SWSL or 2L or 2B Standard.
5. SWSL = Solid Waste Section Limit (June 13, 2011).
6. µg/L = micrograms per liter. mg/L = milligrams per liter.
7. 2L Standard = NCAC Title 15A Subchapter 2L Classifications and Water Quality Standards Applicable to the GWs of North Carolina (April 1, 2013).
8. 2B Standard = Standards, criteria, or toxic concentrations either adopted per 15A NCAC 2B or National Criteria per EPA (Current as of 5/15/2013).
9. MDL = Method Detection Limit.
10. ND< = not detected above the detection limit.
11. J indicates the detected result is below the SWSL.
12. NA = Not Analyzed or Not Applicable. NE = Not Established. NM = Not Measured.
13. **Bold font** indicates analyte detection above MDL.
14. **Shaded field** denotes result that was at or above the Compliance Limit.
15. Blank cells indicate that there is no relevant information available

ATTACHMENT 1

Pace Analytical Services, Inc.

Report of Laboratory Analysis

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

December 10, 2015

David Garrett
SCS Engineers
322 Chapanoke Road
Suite 101
Raleigh, NC 27603

RE: Project: A1 Sandrock
Pace Project No.: 92277499

Dear David Garrett:
Enclosed are the analytical results for sample(s) received by the laboratory between November 24, 2015 and November 25, 2015. 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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Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
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CERTIFICATIONS

Project: A1 Sandrock
Pace Project No.: 92277499

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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Huntersville, NC 28078
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SAMPLE ANALYTE COUNT

Project: A1 Sandrock
Pace Project No.: 92277499

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92277499001	**4117-MW5**	EPA 6010	CDF	17	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8260	NB	51	PASI-C
		SM 2320B	MLS	1	PASI-A
		SM 2540C	MJP	1	PASI-A
		EPA 300.0	MDW	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
92277499002	**4117-MW1**	EPA 6010	CDF	17	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8260	NB	51	PASI-C
		SM 2320B	MLS	1	PASI-A
		SM 2540C	MJP	1	PASI-A
		EPA 300.0	MDW	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
92277499003	**4117-MW2**	EPA 6010	CDF	17	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8260	NB	51	PASI-C
		SM 2320B	MLS	1	PASI-A
		SM 2540C	MJP	1	PASI-A
		EPA 300.0	MDW	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
92277499004	**4117-MW2 DUP**	EPA 6010	CDF	17	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8260	NB	51	PASI-C
		SM 2320B	MLS	1	PASI-A
		SM 2540C	MJP	1	PASI-A
		EPA 300.0	MDW	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
92277499005	**4117-SW-1**	EPA 6010	CDF	17	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8260	NB	51	PASI-C
		SM 2320B	MLS	1	PASI-A
		SM 2540C	MJP	1	PASI-A
		EPA 300.0	MDW	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
92277499006	**4117-SW-2**	EPA 6010	CDF	17	PASI-A
		EPA 7470	SH1	1	PASI-A

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SAMPLE ANALYTE COUNT

Project: A1 Sandrock
Pace Project No.: 92277499

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260	NB	51	PASI-C
		SM 2320B	MLS	1	PASI-A
		SM 2540C	MJP	1	PASI-A
		EPA 300.0	MDW	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
92277499007	**4117-SW-3**	EPA 6010	CDF	17	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8260	NB	51	PASI-C
		SM 2320B	MLS	1	PASI-A
		SM 2540C	MJP	1	PASI-A
		EPA 300.0	MDW	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
92277499008	**4117-SW-4**	EPA 6010	CDF	17	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8260	NB	51	PASI-C
		SM 2320B	MLS	1	PASI-A
		SM 2540C	MJP	1	PASI-A
		EPA 300.0	MDW	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
92277499009	**4117-MW-3**	EPA 6010	CDF	17	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8260	NB	51	PASI-C
		SM 2320B	MLS	1	PASI-A
		SM 2540C	MJP	1	PASI-A
		EPA 300.0	MDW	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
92277499010	**4117-MW-4**	EPA 6010	CDF	17	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8260	NB	51	PASI-C
		SM 2320B	MLS	1	PASI-A
		SM 2540C	MJP	1	PASI-A
		EPA 300.0	MDW	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A
92277499011	**4117-MW-6**	EPA 6010	CDF	17	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8260	NB	51	PASI-C
		SM 2320B	MLS	1	PASI-A

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SAMPLE ANALYTE COUNT

Project: A1 Sandrock
Pace Project No.: 92277499

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2540C	MJP	1	PASI-A
		EPA 300.0	MDW	1	PASI-A
		SM 4500-Cl-E	WRC	1	PASI-A

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Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-MW5 **Lab ID: 92277499001** Collected: 11/23/15 10:30 Received: 11/24/15 10:23 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MRM**			1		11/23/15 10:30		
Field pH	**6.3**	Std. Units	0.10	1		11/23/15 10:30		
Field Temperature	**10.5**	deg C	0.50	1		11/23/15 10:30		
Static Water Level	**14.68**	feet		1		11/23/15 10:30		
Field Specific Conductance	**466.6**	umhos/cm	1.0	1		11/23/15 10:30		
Oxygen, Dissolved	**0.33**	mg/L		1		11/23/15 10:30	7782-44-7	
Total Well Depth	**31.20**	feet		1		11/23/15 10:30		
REDOX	**-12.4**	mV		1		11/23/15 10:30		
Turbidity	**8.47**	NTU	1.0	1		11/23/15 10:30		
Odor	**stink**			1		11/23/15 10:30		
Appearance	**clear**			1		11/23/15 10:30		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010A							
Antimony	ND	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:03	7440-36-0	
Arsenic	ND	ug/L	10.0	1	11/30/15 21:15	12/05/15 00:03	7440-38-2	
Barium	**75.3**	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:03	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/30/15 21:15	12/05/15 00:03	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/30/15 21:15	12/05/15 00:03	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:03	7440-47-3	
Cobalt	**16.5**	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:03	7440-48-4	
Copper	ND	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:03	7440-50-8	
Iron	**1850**	ug/L	50.0	1	11/30/15 21:15	12/05/15 00:03	7439-89-6	
Lead	ND	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:03	7439-92-1	
Manganese	**2230**	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:03	7439-96-5	
Nickel	ND	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:03	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/30/15 21:15	12/05/15 00:03	7782-49-2	
Silver	ND	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:03	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/30/15 21:15	12/05/15 00:03	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:03	7440-62-2	
Zinc	**29.5**	ug/L	10.0	1	11/30/15 21:15	12/05/15 00:03	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	1	12/04/15 16:30	12/08/15 11:26	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/26/15 02:26	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/26/15 02:26	107-13-1	
Benzene	ND	ug/L	1.0	1		11/26/15 02:26	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/26/15 02:26	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/26/15 02:26	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/26/15 02:26	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/26/15 02:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/26/15 02:26	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/26/15 02:26	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/26/15 02:26	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/26/15 02:26	108-90-7	

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-MW5 **Lab ID: 92277499001** Collected: 11/23/15 10:30 Received: 11/24/15 10:23 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Chloroethane	ND	ug/L	1.0	1		11/26/15 02:26	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/26/15 02:26	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/26/15 02:26	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		11/26/15 02:26	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/26/15 02:26	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/26/15 02:26	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/26/15 02:26	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/26/15 02:26	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/26/15 02:26	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		11/26/15 02:26	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/26/15 02:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/26/15 02:26	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/26/15 02:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/26/15 02:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/26/15 02:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/26/15 02:26	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/26/15 02:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/26/15 02:26	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/26/15 02:26	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/26/15 02:26	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/26/15 02:26	74-88-4	
Methylene Chloride	ND	ug/L	1.0	1		11/26/15 02:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/26/15 02:26	108-10-1	
Styrene	ND	ug/L	1.0	1		11/26/15 02:26	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/26/15 02:26	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/26/15 02:26	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/26/15 02:26	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		11/26/15 02:26	109-99-9	
Toluene	ND	ug/L	1.0	1		11/26/15 02:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/26/15 02:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/26/15 02:26	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/26/15 02:26	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/26/15 02:26	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/26/15 02:26	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/26/15 02:26	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/26/15 02:26	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/26/15 02:26	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	103	%	70-130	1		11/26/15 02:26	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130	1		11/26/15 02:26	17060-07-0	
Toluene-d8 (S)	96	%	70-130	1		11/26/15 02:26	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**145000**	ug/L	5000	1		12/02/15 16:43		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-MW5 **Lab ID: 92277499001** Collected: 11/23/15 10:30 Received: 11/24/15 10:23 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**374000**	ug/L	25000	1		11/25/15 14:04		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**86800**	ug/L	8000	4		12/01/15 14:10	14808-79-8	
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**9030**	ug/L	1000	1		12/09/15 23:49	16887-00-6	

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-MW1 **Lab ID: 92277499002** Collected: 11/23/15 13:30 Received: 11/24/15 10:23 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MRM**			1		11/23/15 13:30		
Field pH	**6.4**	Std. Units	0.10	1		11/23/15 13:30		
Field Temperature	**11.5**	deg C	0.50	1		11/23/15 13:30		
Static Water Level	**29.40**	feet		1		11/23/15 13:30		
Field Specific Conductance	**186.6**	umhos/cm	1.0	1		11/23/15 13:30		
Oxygen, Dissolved	**4.43**	mg/L		1		11/23/15 13:30	7782-44-7	
Total Well Depth	**46.65**	feet		1		11/23/15 13:30		
REDOX	**104.1**	mV		1		11/23/15 13:30		
Turbidity	**20.27**	NTU	1.0	1		11/23/15 13:30		
Odor	**none**			1		11/23/15 13:30		
Appearance	**hazy**			1		11/23/15 13:30		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010A							
Antimony	ND	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:06	7440-36-0	
Arsenic	ND	ug/L	10.0	1	11/30/15 21:15	12/05/15 00:06	7440-38-2	
Barium	**48.4**	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:06	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/30/15 21:15	12/05/15 00:06	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/30/15 21:15	12/05/15 00:06	7440-43-9	
Chromium	**9.3**	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:06	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:06	7440-48-4	
Copper	ND	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:06	7440-50-8	
Iron	**1000**	ug/L	50.0	1	11/30/15 21:15	12/05/15 00:06	7439-89-6	
Lead	ND	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:06	7439-92-1	
Manganese	**50.8**	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:06	7439-96-5	
Nickel	**5.6**	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:06	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/30/15 21:15	12/05/15 00:06	7782-49-2	
Silver	ND	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:06	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/30/15 21:15	12/05/15 00:06	7440-28-0	
Vanadium	**9.1**	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:06	7440-62-2	
Zinc	**53.9**	ug/L	10.0	1	11/30/15 21:15	12/05/15 00:06	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	1	12/04/15 16:30	12/08/15 11:33	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/26/15 02:43	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/26/15 02:43	107-13-1	
Benzene	ND	ug/L	1.0	1		11/26/15 02:43	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/26/15 02:43	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/26/15 02:43	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/26/15 02:43	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/26/15 02:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/26/15 02:43	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/26/15 02:43	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/26/15 02:43	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/26/15 02:43	108-90-7	

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-MW1 **Lab ID: 92277499002** Collected: 11/23/15 13:30 Received: 11/24/15 10:23 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Chloroethane	ND	ug/L	1.0	1		11/26/15 02:43	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/26/15 02:43	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/26/15 02:43	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		11/26/15 02:43	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/26/15 02:43	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/26/15 02:43	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/26/15 02:43	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/26/15 02:43	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/26/15 02:43	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		11/26/15 02:43	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/26/15 02:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/26/15 02:43	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/26/15 02:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/26/15 02:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/26/15 02:43	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/26/15 02:43	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/26/15 02:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/26/15 02:43	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/26/15 02:43	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/26/15 02:43	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/26/15 02:43	74-88-4	
Methylene Chloride	ND	ug/L	1.0	1		11/26/15 02:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/26/15 02:43	108-10-1	
Styrene	ND	ug/L	1.0	1		11/26/15 02:43	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/26/15 02:43	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/26/15 02:43	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/26/15 02:43	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		11/26/15 02:43	109-99-9	
Toluene	ND	ug/L	1.0	1		11/26/15 02:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/26/15 02:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/26/15 02:43	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/26/15 02:43	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/26/15 02:43	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/26/15 02:43	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/26/15 02:43	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/26/15 02:43	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/26/15 02:43	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	101	%	70-130	1		11/26/15 02:43	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130	1		11/26/15 02:43	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		11/26/15 02:43	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**49500**	ug/L	5000	1		12/02/15 17:24		

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-MW1 **Lab ID: 92277499002** Collected: 11/23/15 13:30 Received: 11/24/15 10:23 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**195000**	ug/L	25000	1		11/25/15 14:04		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**30900**	ug/L	2000	1		12/01/15 14:51	14808-79-8	
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**4430**	ug/L	1000	1		12/09/15 23:51	16887-00-6	

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-MW2 **Lab ID: 92277499003** Collected: 11/23/15 16:15 Received: 11/24/15 10:23 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MRM**			1		11/23/15 16:15		
Field pH	**6.1**	Std. Units	0.10	1		11/23/15 16:15		
Field Temperature	**7.0**	deg C	0.50	1		11/23/15 16:15		
Static Water Level	**8.10**	feet		1		11/23/15 16:15		
Field Specific Conductance	**363.5**	umhos/cm	1.0	1		11/23/15 16:15		
Oxygen, Dissolved	**0.21**	mg/L		1		11/23/15 16:15	7782-44-7	
Total Well Depth	**32.80**	feet		1		11/23/15 16:15		
REDOX	**40.2**	mV		1		11/23/15 16:15		
Turbidity	**9.62**	NTU	1.0	1		11/23/15 16:15		
Odor	**none**			1		11/23/15 16:15		
Appearance	**clear**			1		11/23/15 16:15		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010A							
Antimony	ND	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:09	7440-36-0	
Arsenic	ND	ug/L	10.0	1	11/30/15 21:15	12/05/15 00:09	7440-38-2	
Barium	**146**	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:09	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/30/15 21:15	12/05/15 00:09	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/30/15 21:15	12/05/15 00:09	7440-43-9	
Chromium	**6.9**	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:09	7440-47-3	
Cobalt	**8.6**	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:09	7440-48-4	
Copper	ND	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:09	7440-50-8	
Iron	**1840**	ug/L	50.0	1	11/30/15 21:15	12/05/15 00:09	7439-89-6	
Lead	ND	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:09	7439-92-1	
Manganese	**5900**	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:09	7439-96-5	
Nickel	ND	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:09	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/30/15 21:15	12/05/15 00:09	7782-49-2	
Silver	ND	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:09	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/30/15 21:15	12/05/15 00:09	7440-28-0	
Vanadium	**8.3**	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:09	7440-62-2	
Zinc	**24.1**	ug/L	10.0	1	11/30/15 21:15	12/05/15 00:09	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	1	12/04/15 16:30	12/08/15 11:36	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/26/15 03:00	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/26/15 03:00	107-13-1	
Benzene	ND	ug/L	1.0	1		11/26/15 03:00	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/26/15 03:00	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/26/15 03:00	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/26/15 03:00	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/26/15 03:00	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/26/15 03:00	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/26/15 03:00	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/26/15 03:00	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/26/15 03:00	108-90-7	

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-MW2 **Lab ID: 92277499003** Collected: 11/23/15 16:15 Received: 11/24/15 10:23 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Chloroethane	ND	ug/L	1.0	1		11/26/15 03:00	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/26/15 03:00	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/26/15 03:00	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		11/26/15 03:00	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/26/15 03:00	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/26/15 03:00	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/26/15 03:00	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/26/15 03:00	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/26/15 03:00	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		11/26/15 03:00	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/26/15 03:00	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/26/15 03:00	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/26/15 03:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/26/15 03:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/26/15 03:00	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/26/15 03:00	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/26/15 03:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/26/15 03:00	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/26/15 03:00	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/26/15 03:00	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/26/15 03:00	74-88-4	
Methylene Chloride	ND	ug/L	1.0	1		11/26/15 03:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/26/15 03:00	108-10-1	
Styrene	ND	ug/L	1.0	1		11/26/15 03:00	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/26/15 03:00	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/26/15 03:00	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/26/15 03:00	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		11/26/15 03:00	109-99-9	
Toluene	ND	ug/L	1.0	1		11/26/15 03:00	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/26/15 03:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/26/15 03:00	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/26/15 03:00	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/26/15 03:00	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/26/15 03:00	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/26/15 03:00	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/26/15 03:00	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/26/15 03:00	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	105	%	70-130	1		11/26/15 03:00	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130	1		11/26/15 03:00	17060-07-0	
Toluene-d8 (S)	98	%	70-130	1		11/26/15 03:00	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**135000**	ug/L	5000	1		12/02/15 17:36		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-MW2 **Lab ID: 92277499003** Collected: 11/23/15 16:15 Received: 11/24/15 10:23 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**277000**	ug/L	25000	1		11/25/15 14:05		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**40500**	ug/L	4000	2		12/02/15 11:57	14808-79-8	
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**8710**	ug/L	1000	1		12/09/15 23:52	16887-00-6	

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-MW2 DUP **Lab ID: 92277499004** Collected: 11/23/15 16:35 Received: 11/24/15 10:23 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010A							
Antimony	ND	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:13	7440-36-0	
Arsenic	ND	ug/L	10.0	1	11/30/15 21:15	12/05/15 00:13	7440-38-2	
Barium	**154**	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:13	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/30/15 21:15	12/05/15 00:13	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/30/15 21:15	12/05/15 00:13	7440-43-9	
Chromium	**17.5**	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:13	7440-47-3	
Cobalt	**9.0**	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:13	7440-48-4	
Copper	ND	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:13	7440-50-8	
Iron	**3140**	ug/L	50.0	1	11/30/15 21:15	12/05/15 00:13	7439-89-6	
Lead	ND	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:13	7439-92-1	
Manganese	**5860**	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:13	7439-96-5	
Nickel	**8.2**	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:13	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/30/15 21:15	12/05/15 00:13	7782-49-2	
Silver	ND	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:13	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/30/15 21:15	12/05/15 00:13	7440-28-0	
Vanadium	**11.4**	ug/L	5.0	1	11/30/15 21:15	12/05/15 00:13	7440-62-2	
Zinc	**27.6**	ug/L	10.0	1	11/30/15 21:15	12/05/15 00:13	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	1	12/04/15 16:30	12/08/15 11:38	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/26/15 03:17	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/26/15 03:17	107-13-1	
Benzene	ND	ug/L	1.0	1		11/26/15 03:17	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/26/15 03:17	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/26/15 03:17	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/26/15 03:17	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/26/15 03:17	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/26/15 03:17	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/26/15 03:17	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/26/15 03:17	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/26/15 03:17	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/26/15 03:17	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/26/15 03:17	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/26/15 03:17	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		11/26/15 03:17	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/26/15 03:17	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/26/15 03:17	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/26/15 03:17	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/26/15 03:17	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/26/15 03:17	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		11/26/15 03:17	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/26/15 03:17	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/26/15 03:17	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/26/15 03:17	75-35-4	

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-MW2 DUP **Lab ID: 92277499004** Collected: 11/23/15 16:35 Received: 11/24/15 10:23 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/26/15 03:17	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/26/15 03:17	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/26/15 03:17	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/26/15 03:17	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/26/15 03:17	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/26/15 03:17	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/26/15 03:17	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/26/15 03:17	74-88-4	
Methylene Chloride	ND	ug/L	1.0	1		11/26/15 03:17	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/26/15 03:17	108-10-1	
Styrene	ND	ug/L	1.0	1		11/26/15 03:17	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/26/15 03:17	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/26/15 03:17	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/26/15 03:17	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		11/26/15 03:17	109-99-9	
Toluene	ND	ug/L	1.0	1		11/26/15 03:17	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/26/15 03:17	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/26/15 03:17	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/26/15 03:17	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/26/15 03:17	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/26/15 03:17	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/26/15 03:17	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/26/15 03:17	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/26/15 03:17	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	103	%	70-130	1		11/26/15 03:17	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130	1		11/26/15 03:17	17060-07-0	
Toluene-d8 (S)	98	%	70-130	1		11/26/15 03:17	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**135000**	ug/L	5000	1		12/02/15 17:49		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**297000**	ug/L	25000	1		11/25/15 14:05		D6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**39900**	ug/L	4000	2		12/02/15 12:11	14808-79-8	
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**8870**	ug/L	1000	1		12/09/15 23:53	16887-00-6	

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-SW-1 **Lab ID: 92277499005** Collected: 11/25/15 09:45 Received: 11/25/15 13:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MRM**			1		11/25/15 09:45		
Field pH	**7.0**	Std. Units	0.10	1		11/25/15 09:45		
Field Temperature	**6.9**	deg C	0.50	1		11/25/15 09:45		
Field Specific Conductance	**373.4**	umhos/cm	1.0	1		11/25/15 09:45		
Oxygen, Dissolved	**11.29**	mg/L		1		11/25/15 09:45	7782-44-7	
REDOX	**112**	mV		1		11/25/15 09:45		
Turbidity	**10.54**	NTU	1.0	1		11/25/15 09:45		
Odor	**none**			1		11/25/15 09:45		
Appearance	**clear**			1		11/25/15 09:45		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010A							
Antimony	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:05	7440-36-0	
Arsenic	ND	ug/L	10.0	1	12/01/15 19:00	12/05/15 04:05	7440-38-2	
Barium	**82.0**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:05	7440-39-3	
Beryllium	ND	ug/L	1.0	1	12/01/15 19:00	12/07/15 19:17	7440-41-7	
Cadmium	ND	ug/L	1.0	1	12/01/15 19:00	12/05/15 04:05	7440-43-9	
Chromium	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:05	7440-47-3	
Cobalt	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:05	7440-48-4	
Copper	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:05	7440-50-8	
Iron	**926**	ug/L	50.0	1	12/01/15 19:00	12/05/15 04:05	7439-89-6	
Lead	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:05	7439-92-1	
Manganese	**198**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:05	7439-96-5	
Nickel	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:05	7440-02-0	
Selenium	ND	ug/L	10.0	1	12/01/15 19:00	12/05/15 04:05	7782-49-2	
Silver	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:05	7440-22-4	
Thallium	ND	ug/L	5.4	1	12/01/15 19:00	12/07/15 19:17	7440-28-0	
Vanadium	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:05	7440-62-2	
Zinc	ND	ug/L	10.0	1	12/01/15 19:00	12/05/15 04:05	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	1	12/04/15 16:30	12/08/15 11:41	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		12/06/15 05:29	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		12/06/15 05:29	107-13-1	
Benzene	ND	ug/L	1.0	1		12/06/15 05:29	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		12/06/15 05:29	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		12/06/15 05:29	75-27-4	
Bromoform	ND	ug/L	1.0	1		12/06/15 05:29	75-25-2	
Bromomethane	ND	ug/L	2.0	1		12/06/15 05:29	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		12/06/15 05:29	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		12/06/15 05:29	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		12/06/15 05:29	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		12/06/15 05:29	108-90-7	
Chloroethane	ND	ug/L	1.0	1		12/06/15 05:29	75-00-3	
Chloroform	ND	ug/L	1.0	1		12/06/15 05:29	67-66-3	

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-SW-1 **Lab ID: 92277499005** Collected: 11/25/15 09:45 Received: 11/25/15 13:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Chloromethane	ND	ug/L	1.0	1		12/06/15 05:29	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		12/06/15 05:29	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		12/06/15 05:29	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		12/06/15 05:29	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		12/06/15 05:29	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		12/06/15 05:29	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		12/06/15 05:29	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		12/06/15 05:29	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		12/06/15 05:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		12/06/15 05:29	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		12/06/15 05:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		12/06/15 05:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		12/06/15 05:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		12/06/15 05:29	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		12/06/15 05:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		12/06/15 05:29	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		12/06/15 05:29	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		12/06/15 05:29	591-78-6	
Iodomethane	ND	ug/L	5.0	1		12/06/15 05:29	74-88-4	
Methylene Chloride	ND	ug/L	1.0	1		12/06/15 05:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		12/06/15 05:29	108-10-1	
Styrene	ND	ug/L	1.0	1		12/06/15 05:29	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		12/06/15 05:29	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		12/06/15 05:29	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		12/06/15 05:29	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		12/06/15 05:29	109-99-9	
Toluene	ND	ug/L	1.0	1		12/06/15 05:29	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		12/06/15 05:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		12/06/15 05:29	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		12/06/15 05:29	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		12/06/15 05:29	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		12/06/15 05:29	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		12/06/15 05:29	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		12/06/15 05:29	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		12/06/15 05:29	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	99	%	70-130	1		12/06/15 05:29	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	70-130	1		12/06/15 05:29	17060-07-0	
Toluene-d8 (S)	95	%	70-130	1		12/06/15 05:29	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**146000**	ug/L	5000	1		12/02/15 18:02		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**243000**	ug/L	25000	1		11/30/15 18:53		

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-SW-1 **Lab ID: 92277499005** Collected: 11/25/15 09:45 Received: 11/25/15 13:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**17200**	ug/L	2000	1		12/01/15 15:32	14808-79-8	
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**20100**	ug/L	1000	1		12/09/15 23:54	16887-00-6	

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-SW-2 **Lab ID: 92277499006** Collected: 11/25/15 09:25 Received: 11/25/15 13:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MRM**			1		11/25/15 09:25		
Field pH	**7.0**	Std. Units	0.10	1		11/25/15 09:25		
Field Temperature	**7.0**	deg C	0.50	1		11/25/15 09:25		
Field Specific Conductance	**181.7**	umhos/cm	1.0	1		11/25/15 09:25		
Oxygen, Dissolved	**10.08**	mg/L		1		11/25/15 09:25	7782-44-7	
REDOX	**102.0**	mV		1		11/25/15 09:25		
Turbidity	**12.28**	NTU	1.0	1		11/25/15 09:25		
Odor	**none**			1		11/25/15 09:25		
Appearance	**clear**			1		11/25/15 09:25		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010A							
Antimony	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:08	7440-36-0	
Arsenic	ND	ug/L	10.0	1	12/01/15 19:00	12/05/15 04:08	7440-38-2	
Barium	**53.3**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:08	7440-39-3	
Beryllium	ND	ug/L	1.0	1	12/01/15 19:00	12/07/15 19:20	7440-41-7	
Cadmium	ND	ug/L	1.0	1	12/01/15 19:00	12/05/15 04:08	7440-43-9	
Chromium	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:08	7440-47-3	
Cobalt	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:08	7440-48-4	
Copper	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:08	7440-50-8	
Iron	**1160**	ug/L	50.0	1	12/01/15 19:00	12/05/15 04:08	7439-89-6	
Lead	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:08	7439-92-1	
Manganese	**191**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:08	7439-96-5	
Nickel	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:08	7440-02-0	
Selenium	ND	ug/L	10.0	1	12/01/15 19:00	12/05/15 04:08	7782-49-2	
Silver	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:08	7440-22-4	
Thallium	ND	ug/L	5.4	1	12/01/15 19:00	12/07/15 19:20	7440-28-0	
Vanadium	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:08	7440-62-2	
Zinc	ND	ug/L	10.0	1	12/01/15 19:00	12/05/15 04:08	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	1	12/04/15 16:30	12/08/15 11:43	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		12/06/15 05:47	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		12/06/15 05:47	107-13-1	
Benzene	ND	ug/L	1.0	1		12/06/15 05:47	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		12/06/15 05:47	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		12/06/15 05:47	75-27-4	
Bromoform	ND	ug/L	1.0	1		12/06/15 05:47	75-25-2	
Bromomethane	ND	ug/L	2.0	1		12/06/15 05:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		12/06/15 05:47	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		12/06/15 05:47	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		12/06/15 05:47	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		12/06/15 05:47	108-90-7	
Chloroethane	ND	ug/L	1.0	1		12/06/15 05:47	75-00-3	
Chloroform	ND	ug/L	1.0	1		12/06/15 05:47	67-66-3	

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-SW-2 **Lab ID: 92277499006** Collected: 11/25/15 09:25 Received: 11/25/15 13:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Chloromethane	ND	ug/L	1.0	1		12/06/15 05:47	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		12/06/15 05:47	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		12/06/15 05:47	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		12/06/15 05:47	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		12/06/15 05:47	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		12/06/15 05:47	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		12/06/15 05:47	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		12/06/15 05:47	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		12/06/15 05:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		12/06/15 05:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		12/06/15 05:47	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		12/06/15 05:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		12/06/15 05:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		12/06/15 05:47	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		12/06/15 05:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		12/06/15 05:47	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		12/06/15 05:47	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		12/06/15 05:47	591-78-6	
Iodomethane	ND	ug/L	5.0	1		12/06/15 05:47	74-88-4	
Methylene Chloride	ND	ug/L	1.0	1		12/06/15 05:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		12/06/15 05:47	108-10-1	
Styrene	ND	ug/L	1.0	1		12/06/15 05:47	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		12/06/15 05:47	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		12/06/15 05:47	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		12/06/15 05:47	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		12/06/15 05:47	109-99-9	
Toluene	ND	ug/L	1.0	1		12/06/15 05:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		12/06/15 05:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		12/06/15 05:47	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		12/06/15 05:47	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		12/06/15 05:47	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		12/06/15 05:47	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		12/06/15 05:47	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		12/06/15 05:47	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		12/06/15 05:47	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	102	%	70-130	1		12/06/15 05:47	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130	1		12/06/15 05:47	17060-07-0	
Toluene-d8 (S)	97	%	70-130	1		12/06/15 05:47	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**61500**	ug/L	5000	1		12/02/15 18:14		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**129000**	ug/L	25000	1		11/30/15 18:53		

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-SW-2 **Lab ID: 92277499006** Collected: 11/25/15 09:25 Received: 11/25/15 13:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**12500**	ug/L	2000	1		12/01/15 15:45	14808-79-8	
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**6800**	ug/L	1000	1		12/09/15 23:55	16887-00-6	

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-SW-3 **Lab ID: 92277499007** Collected: 11/25/15 08:40 Received: 11/25/15 13:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MRM**			1		11/25/15 08:40		
Field pH	**7.1**	Std. Units	0.10	1		11/25/15 08:40		
Field Temperature	**7.4**	deg C	0.50	1		11/25/15 08:40		
Field Specific Conductance	**83.4**	umhos/cm	1.0	1		11/25/15 08:40		
Oxygen, Dissolved	**9.47**	mg/L		1		11/25/15 08:40	7782-44-7	
REDOX	**95.2**	mV		1		11/25/15 08:40		
Turbidity	**27.17**	NTU	1.0	1		11/25/15 08:40		
Odor	**none**			1		11/25/15 08:40		
Appearance	**clear**			1		11/25/15 08:40		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010A							
Antimony	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:11	7440-36-0	
Arsenic	ND	ug/L	10.0	1	12/01/15 19:00	12/05/15 04:11	7440-38-2	
Barium	**28.4**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:11	7440-39-3	
Beryllium	ND	ug/L	1.0	1	12/01/15 19:00	12/07/15 19:23	7440-41-7	
Cadmium	ND	ug/L	1.0	1	12/01/15 19:00	12/05/15 04:11	7440-43-9	
Chromium	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:11	7440-47-3	
Cobalt	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:11	7440-48-4	
Copper	**134**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:11	7440-50-8	
Iron	**884**	ug/L	50.0	1	12/01/15 19:00	12/05/15 04:11	7439-89-6	
Lead	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:11	7439-92-1	
Manganese	**35.4**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:11	7439-96-5	
Nickel	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:11	7440-02-0	
Selenium	ND	ug/L	10.0	1	12/01/15 19:00	12/05/15 04:11	7782-49-2	
Silver	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:11	7440-22-4	
Thallium	ND	ug/L	5.4	1	12/01/15 19:00	12/07/15 19:23	7440-28-0	
Vanadium	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:11	7440-62-2	
Zinc	**11.4**	ug/L	10.0	1	12/01/15 19:00	12/05/15 04:11	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	1	12/04/15 16:30	12/08/15 11:50	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		12/01/15 18:10	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		12/01/15 18:10	107-13-1	
Benzene	ND	ug/L	1.0	1		12/01/15 18:10	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		12/01/15 18:10	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		12/01/15 18:10	75-27-4	
Bromoform	ND	ug/L	1.0	1		12/01/15 18:10	75-25-2	
Bromomethane	ND	ug/L	2.0	1		12/01/15 18:10	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		12/01/15 18:10	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		12/01/15 18:10	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		12/01/15 18:10	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		12/01/15 18:10	108-90-7	
Chloroethane	ND	ug/L	1.0	1		12/01/15 18:10	75-00-3	
Chloroform	ND	ug/L	1.0	1		12/01/15 18:10	67-66-3	

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-SW-3 **Lab ID: 92277499007** Collected: 11/25/15 08:40 Received: 11/25/15 13:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Chloromethane	ND	ug/L	1.0	1		12/01/15 18:10	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		12/01/15 18:10	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		12/01/15 18:10	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		12/01/15 18:10	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		12/01/15 18:10	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		12/01/15 18:10	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		12/01/15 18:10	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		12/01/15 18:10	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		12/01/15 18:10	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		12/01/15 18:10	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		12/01/15 18:10	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		12/01/15 18:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		12/01/15 18:10	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		12/01/15 18:10	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		12/01/15 18:10	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		12/01/15 18:10	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		12/01/15 18:10	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		12/01/15 18:10	591-78-6	
Iodomethane	ND	ug/L	5.0	1		12/01/15 18:10	74-88-4	
Methylene Chloride	ND	ug/L	1.0	1		12/01/15 18:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		12/01/15 18:10	108-10-1	
Styrene	ND	ug/L	1.0	1		12/01/15 18:10	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		12/01/15 18:10	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		12/01/15 18:10	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		12/01/15 18:10	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		12/01/15 18:10	109-99-9	
Toluene	ND	ug/L	1.0	1		12/01/15 18:10	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		12/01/15 18:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		12/01/15 18:10	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		12/01/15 18:10	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		12/01/15 18:10	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		12/01/15 18:10	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		12/01/15 18:10	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		12/01/15 18:10	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		12/01/15 18:10	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	102	%	70-130	1		12/01/15 18:10	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130	1		12/01/15 18:10	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		12/01/15 18:10	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**20600**	ug/L	5000	1		12/02/15 18:45		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**81000**	ug/L	25000	1		11/30/15 18:53		

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-SW-3 **Lab ID: 92277499007** Collected: 11/25/15 08:40 Received: 11/25/15 13:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**8540**	ug/L	2000	1		12/01/15 17:22	14808-79-8	
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**4200**	ug/L	1000	1		12/09/15 23:59	16887-00-6	

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-SW-4 **Lab ID: 92277499008** Collected: 11/25/15 09:07 Received: 11/25/15 13:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MRM**			1		11/25/15 09:07		
Field pH	**6.6**	Std. Units	0.10	1		11/25/15 09:07		
Field Temperature	**6.4**	deg C	0.50	1		11/25/15 09:07		
Field Specific Conductance	**333.3**	umhos/cm	1.0	1		11/25/15 09:07		
Oxygen, Dissolved	**9.62**	mg/L		1		11/25/15 09:07	7782-44-7	
REDOX	**117.1**	mV		1		11/25/15 09:07		
Turbidity	**14.97**	NTU	1.0	1		11/25/15 09:07		
Odor	**none**			1		11/25/15 09:07		
Appearance	**clear**			1		11/25/15 09:07		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010A							
Antimony	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:14	7440-36-0	
Arsenic	ND	ug/L	10.0	1	12/01/15 19:00	12/05/15 04:14	7440-38-2	
Barium	**77.0**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:14	7440-39-3	
Beryllium	ND	ug/L	1.0	1	12/01/15 19:00	12/07/15 19:26	7440-41-7	
Cadmium	ND	ug/L	1.0	1	12/01/15 19:00	12/05/15 04:14	7440-43-9	
Chromium	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:14	7440-47-3	
Cobalt	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:14	7440-48-4	
Copper	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:14	7440-50-8	
Iron	**904**	ug/L	50.0	1	12/01/15 19:00	12/05/15 04:14	7439-89-6	
Lead	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:14	7439-92-1	
Manganese	**255**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:14	7439-96-5	
Nickel	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:14	7440-02-0	
Selenium	ND	ug/L	10.0	1	12/01/15 19:00	12/05/15 04:14	7782-49-2	
Silver	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:14	7440-22-4	
Thallium	ND	ug/L	5.4	1	12/01/15 19:00	12/07/15 19:26	7440-28-0	
Vanadium	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:14	7440-62-2	
Zinc	ND	ug/L	10.0	1	12/01/15 19:00	12/05/15 04:14	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	1	12/04/15 16:30	12/08/15 11:52	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		12/01/15 18:27	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		12/01/15 18:27	107-13-1	
Benzene	ND	ug/L	1.0	1		12/01/15 18:27	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		12/01/15 18:27	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		12/01/15 18:27	75-27-4	
Bromoform	ND	ug/L	1.0	1		12/01/15 18:27	75-25-2	
Bromomethane	ND	ug/L	2.0	1		12/01/15 18:27	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		12/01/15 18:27	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		12/01/15 18:27	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		12/01/15 18:27	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		12/01/15 18:27	108-90-7	
Chloroethane	ND	ug/L	1.0	1		12/01/15 18:27	75-00-3	
Chloroform	ND	ug/L	1.0	1		12/01/15 18:27	67-66-3	

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-SW-4 **Lab ID: 92277499008** Collected: 11/25/15 09:07 Received: 11/25/15 13:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Chloromethane	ND	ug/L	1.0	1		12/01/15 18:27	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		12/01/15 18:27	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		12/01/15 18:27	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		12/01/15 18:27	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		12/01/15 18:27	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		12/01/15 18:27	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		12/01/15 18:27	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		12/01/15 18:27	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		12/01/15 18:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		12/01/15 18:27	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		12/01/15 18:27	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		12/01/15 18:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		12/01/15 18:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		12/01/15 18:27	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		12/01/15 18:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		12/01/15 18:27	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		12/01/15 18:27	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		12/01/15 18:27	591-78-6	
Iodomethane	ND	ug/L	5.0	1		12/01/15 18:27	74-88-4	
Methylene Chloride	ND	ug/L	1.0	1		12/01/15 18:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		12/01/15 18:27	108-10-1	
Styrene	ND	ug/L	1.0	1		12/01/15 18:27	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		12/01/15 18:27	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		12/01/15 18:27	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		12/01/15 18:27	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		12/01/15 18:27	109-99-9	
Toluene	ND	ug/L	1.0	1		12/01/15 18:27	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		12/01/15 18:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		12/01/15 18:27	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		12/01/15 18:27	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		12/01/15 18:27	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		12/01/15 18:27	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		12/01/15 18:27	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		12/01/15 18:27	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		12/01/15 18:27	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	103	%	70-130	1		12/01/15 18:27	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130	1		12/01/15 18:27	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		12/01/15 18:27	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**131000**	ug/L	5000	1		12/02/15 18:55		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**213000**	ug/L	25000	1		11/30/15 18:53		

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-SW-4 **Lab ID: 92277499008** Collected: 11/25/15 09:07 Received: 11/25/15 13:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**19600**	ug/L	2000	1		12/01/15 17:36	14808-79-8	
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**17100**	ug/L	1000	1		12/10/15 00:00	16887-00-6	

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-MW-3 **Lab ID: 92277499009** Collected: 11/24/15 10:45 Received: 11/25/15 13:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MRM**			1		11/24/15 10:45		
Field pH	**6.1**	Std. Units	0.10	1		11/24/15 10:45		
Field Temperature	**10.5**	deg C	0.50	1		11/24/15 10:45		
Static Water Level	**2.94**	feet		1		11/24/15 10:45		
Field Specific Conductance	**163.5**	umhos/cm	1.0	1		11/24/15 10:45		
Oxygen, Dissolved	**3.04**	mg/L		1		11/24/15 10:45	7782-44-7	
Total Well Depth	**33.80**	feet		1		11/24/15 10:45		
REDOX	**159.6**	mV		1		11/24/15 10:45		
Turbidity	**1000+**	NTU	1.0	1		11/24/15 10:45		
Odor	**none**			1		11/24/15 10:45		
Appearance	**muddy**			1		11/24/15 10:45		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010A							
Antimony	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:17	7440-36-0	
Arsenic	ND	ug/L	10.0	1	12/01/15 19:00	12/05/15 04:17	7440-38-2	
Barium	**193**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:17	7440-39-3	
Beryllium	ND	ug/L	1.0	1	12/01/15 19:00	12/07/15 19:30	7440-41-7	
Cadmium	ND	ug/L	1.0	1	12/01/15 19:00	12/05/15 04:17	7440-43-9	
Chromium	**15.3**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:17	7440-47-3	
Cobalt	**6.1**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:17	7440-48-4	
Copper	**7.7**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:17	7440-50-8	
Iron	**12400**	ug/L	50.0	1	12/01/15 19:00	12/05/15 04:17	7439-89-6	
Lead	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:17	7439-92-1	
Manganese	**192**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:17	7439-96-5	
Nickel	**11.8**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:17	7440-02-0	
Selenium	ND	ug/L	10.0	1	12/01/15 19:00	12/05/15 04:17	7782-49-2	
Silver	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:17	7440-22-4	
Thallium	ND	ug/L	5.4	1	12/01/15 19:00	12/07/15 19:30	7440-28-0	
Vanadium	**26.5**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:17	7440-62-2	
Zinc	**31.6**	ug/L	10.0	1	12/01/15 19:00	12/05/15 04:17	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	1	12/04/15 16:30	12/08/15 11:55	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		12/01/15 18:44	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		12/01/15 18:44	107-13-1	
Benzene	ND	ug/L	1.0	1		12/01/15 18:44	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		12/01/15 18:44	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		12/01/15 18:44	75-27-4	
Bromoform	ND	ug/L	1.0	1		12/01/15 18:44	75-25-2	
Bromomethane	ND	ug/L	2.0	1		12/01/15 18:44	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		12/01/15 18:44	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		12/01/15 18:44	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		12/01/15 18:44	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		12/01/15 18:44	108-90-7	

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-MW-3 **Lab ID: 92277499009** Collected: 11/24/15 10:45 Received: 11/25/15 13:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Chloroethane	ND	ug/L	1.0	1		12/01/15 18:44	75-00-3	
Chloroform	ND	ug/L	1.0	1		12/01/15 18:44	67-66-3	
Chloromethane	ND	ug/L	1.0	1		12/01/15 18:44	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		12/01/15 18:44	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		12/01/15 18:44	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		12/01/15 18:44	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		12/01/15 18:44	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		12/01/15 18:44	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		12/01/15 18:44	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		12/01/15 18:44	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		12/01/15 18:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		12/01/15 18:44	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		12/01/15 18:44	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		12/01/15 18:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		12/01/15 18:44	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		12/01/15 18:44	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		12/01/15 18:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		12/01/15 18:44	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		12/01/15 18:44	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		12/01/15 18:44	591-78-6	
Iodomethane	ND	ug/L	5.0	1		12/01/15 18:44	74-88-4	
Methylene Chloride	ND	ug/L	1.0	1		12/01/15 18:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		12/01/15 18:44	108-10-1	
Styrene	ND	ug/L	1.0	1		12/01/15 18:44	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		12/01/15 18:44	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		12/01/15 18:44	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		12/01/15 18:44	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		12/01/15 18:44	109-99-9	
Toluene	ND	ug/L	1.0	1		12/01/15 18:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		12/01/15 18:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		12/01/15 18:44	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		12/01/15 18:44	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		12/01/15 18:44	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		12/01/15 18:44	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		12/01/15 18:44	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		12/01/15 18:44	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		12/01/15 18:44	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	102	%	70-130	1		12/01/15 18:44	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		12/01/15 18:44	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		12/01/15 18:44	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**66200**	ug/L	5000	1		12/02/15 19:07		

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-MW-3 **Lab ID: 92277499009** Collected: 11/24/15 10:45 Received: 11/25/15 13:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**172000**	ug/L	25000	1		11/30/15 18:52		D6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**9860**	ug/L	2000	1		12/01/15 17:49	14808-79-8	
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**4110**	ug/L	1000	1		12/10/15 00:00	16887-00-6	

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-MW-4 **Lab ID: 92277499010** Collected: 11/24/15 13:30 Received: 11/25/15 13:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MRM**			1		11/24/15 13:30		
Field pH	**6.0**	Std. Units	0.10	1		11/24/15 13:30		
Field Temperature	**19.8**	deg C	0.50	1		11/24/15 13:30		
Static Water Level	**4.28**	feet		1		11/24/15 13:30		
Field Specific Conductance	**273.7**	umhos/cm	1.0	1		11/24/15 13:30		
Oxygen, Dissolved	**0.96**	mg/L		1		11/24/15 13:30	7782-44-7	
Total Well Depth	**25.78**	feet		1		11/24/15 13:30		
REDOX	**168.2**	mV		1		11/24/15 13:30		
Turbidity	**125.1**	NTU	1.0	1		11/24/15 13:30		
Odor	**none**			1		11/24/15 13:30		
Appearance	**murky**			1		11/24/15 13:30		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010A							
Antimony	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:30	7440-36-0	
Arsenic	ND	ug/L	10.0	1	12/01/15 19:00	12/05/15 04:30	7440-38-2	
Barium	**154**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:30	7440-39-3	
Beryllium	ND	ug/L	1.0	1	12/01/15 19:00	12/07/15 19:33	7440-41-7	
Cadmium	ND	ug/L	1.0	1	12/01/15 19:00	12/05/15 04:30	7440-43-9	
Chromium	**19.0**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:30	7440-47-3	
Cobalt	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:30	7440-48-4	
Copper	**10.2**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:30	7440-50-8	
Iron	**4950**	ug/L	50.0	1	12/01/15 19:00	12/05/15 04:30	7439-89-6	
Lead	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:30	7439-92-1	
Manganese	**394**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:30	7439-96-5	
Nickel	**17.4**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:30	7440-02-0	
Selenium	ND	ug/L	10.0	1	12/01/15 19:00	12/05/15 04:30	7782-49-2	
Silver	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:30	7440-22-4	
Thallium	ND	ug/L	5.4	1	12/01/15 19:00	12/07/15 19:33	7440-28-0	
Vanadium	**15.9**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:30	7440-62-2	
Zinc	ND	ug/L	10.0	1	12/01/15 19:00	12/05/15 04:30	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	1	12/04/15 16:30	12/08/15 11:57	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		12/01/15 19:02	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		12/01/15 19:02	107-13-1	
Benzene	ND	ug/L	1.0	1		12/01/15 19:02	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		12/01/15 19:02	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		12/01/15 19:02	75-27-4	
Bromoform	ND	ug/L	1.0	1		12/01/15 19:02	75-25-2	
Bromomethane	ND	ug/L	2.0	1		12/01/15 19:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		12/01/15 19:02	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		12/01/15 19:02	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		12/01/15 19:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		12/01/15 19:02	108-90-7	

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-MW-4 **Lab ID: 92277499010** Collected: 11/24/15 13:30 Received: 11/25/15 13:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Chloroethane	ND	ug/L	1.0	1		12/01/15 19:02	75-00-3	
Chloroform	ND	ug/L	1.0	1		12/01/15 19:02	67-66-3	
Chloromethane	ND	ug/L	1.0	1		12/01/15 19:02	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		12/01/15 19:02	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		12/01/15 19:02	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		12/01/15 19:02	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		12/01/15 19:02	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		12/01/15 19:02	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		12/01/15 19:02	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		12/01/15 19:02	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		12/01/15 19:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		12/01/15 19:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		12/01/15 19:02	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		12/01/15 19:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		12/01/15 19:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		12/01/15 19:02	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		12/01/15 19:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		12/01/15 19:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		12/01/15 19:02	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		12/01/15 19:02	591-78-6	
Iodomethane	ND	ug/L	5.0	1		12/01/15 19:02	74-88-4	
Methylene Chloride	ND	ug/L	1.0	1		12/01/15 19:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		12/01/15 19:02	108-10-1	
Styrene	ND	ug/L	1.0	1		12/01/15 19:02	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		12/01/15 19:02	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		12/01/15 19:02	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		12/01/15 19:02	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		12/01/15 19:02	109-99-9	
Toluene	ND	ug/L	1.0	1		12/01/15 19:02	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		12/01/15 19:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		12/01/15 19:02	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		12/01/15 19:02	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		12/01/15 19:02	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		12/01/15 19:02	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		12/01/15 19:02	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		12/01/15 19:02	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		12/01/15 19:02	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	101	%	70-130	1		12/01/15 19:02	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130	1		12/01/15 19:02	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		12/01/15 19:02	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**61300**	ug/L	5000	1		12/02/15 19:19		

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-MW-4 **Lab ID: 92277499010** Collected: 11/24/15 13:30 Received: 11/25/15 13:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**225000**	ug/L	25000	1		11/30/15 18:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**59900**	ug/L	4000	2		12/02/15 12:24	14808-79-8	
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**5680**	ug/L	1000	1		12/10/15 00:01	16887-00-6	

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-MW-6 **Lab ID: 92277499011** Collected: 11/24/15 16:20 Received: 11/25/15 13:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MRM**			1		11/24/15 16:20		
Field pH	**6.3**	Std. Units	0.10	1		11/24/15 16:20		
Field Temperature	**15.1**	deg C	0.50	1		11/24/15 16:20		
Static Water Level	**24.27**	feet		1		11/24/15 16:20		
Field Specific Conductance	**213.3**	umhos/cm	1.0	1		11/24/15 16:20		
Oxygen, Dissolved	**0.15**	mg/L		1		11/24/15 16:20	7782-44-7	
Total Well Depth	**42.8**	feet		1		11/24/15 16:20		
REDOX	**29.3**	mV		1		11/24/15 16:20		
Turbidity	**148.5**	NTU	1.0	1		11/24/15 16:20		
Odor	**none**			1		11/24/15 16:20		
Appearance	**murky**			1		11/24/15 16:20		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010A							
Antimony	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:33	7440-36-0	
Arsenic	ND	ug/L	10.0	1	12/01/15 19:00	12/05/15 04:33	7440-38-2	
Barium	**115**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:33	7440-39-3	
Beryllium	ND	ug/L	1.0	1	12/01/15 19:00	12/07/15 19:36	7440-41-7	
Cadmium	ND	ug/L	1.0	1	12/01/15 19:00	12/05/15 04:33	7440-43-9	
Chromium	**7.3**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:33	7440-47-3	
Cobalt	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:33	7440-48-4	
Copper	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:33	7440-50-8	
Iron	**6710**	ug/L	50.0	1	12/01/15 19:00	12/05/15 04:33	7439-89-6	
Lead	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:33	7439-92-1	
Manganese	**321**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:33	7439-96-5	
Nickel	**6.7**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:33	7440-02-0	
Selenium	ND	ug/L	10.0	1	12/01/15 19:00	12/05/15 04:33	7782-49-2	
Silver	ND	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:33	7440-22-4	
Thallium	ND	ug/L	5.4	1	12/01/15 19:00	12/07/15 19:36	7440-28-0	
Vanadium	**13.2**	ug/L	5.0	1	12/01/15 19:00	12/05/15 04:33	7440-62-2	
Zinc	**20.4**	ug/L	10.0	1	12/01/15 19:00	12/05/15 04:33	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	1	12/04/15 16:30	12/08/15 11:59	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		12/01/15 19:19	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		12/01/15 19:19	107-13-1	
Benzene	ND	ug/L	1.0	1		12/01/15 19:19	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		12/01/15 19:19	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		12/01/15 19:19	75-27-4	
Bromoform	ND	ug/L	1.0	1		12/01/15 19:19	75-25-2	
Bromomethane	ND	ug/L	2.0	1		12/01/15 19:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		12/01/15 19:19	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		12/01/15 19:19	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		12/01/15 19:19	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		12/01/15 19:19	108-90-7	

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-MW-6 **Lab ID: 92277499011** Collected: 11/24/15 16:20 Received: 11/25/15 13:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Chloroethane	ND	ug/L	1.0	1		12/01/15 19:19	75-00-3	
Chloroform	ND	ug/L	1.0	1		12/01/15 19:19	67-66-3	
Chloromethane	ND	ug/L	1.0	1		12/01/15 19:19	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		12/01/15 19:19	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		12/01/15 19:19	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		12/01/15 19:19	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		12/01/15 19:19	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		12/01/15 19:19	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		12/01/15 19:19	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		12/01/15 19:19	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		12/01/15 19:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		12/01/15 19:19	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		12/01/15 19:19	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		12/01/15 19:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		12/01/15 19:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		12/01/15 19:19	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		12/01/15 19:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		12/01/15 19:19	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		12/01/15 19:19	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		12/01/15 19:19	591-78-6	
Iodomethane	ND	ug/L	5.0	1		12/01/15 19:19	74-88-4	
Methylene Chloride	ND	ug/L	1.0	1		12/01/15 19:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		12/01/15 19:19	108-10-1	
Styrene	ND	ug/L	1.0	1		12/01/15 19:19	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		12/01/15 19:19	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		12/01/15 19:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		12/01/15 19:19	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		12/01/15 19:19	109-99-9	
Toluene	ND	ug/L	1.0	1		12/01/15 19:19	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		12/01/15 19:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		12/01/15 19:19	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		12/01/15 19:19	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		12/01/15 19:19	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		12/01/15 19:19	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		12/01/15 19:19	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		12/01/15 19:19	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		12/01/15 19:19	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	102	%	70-130	1		12/01/15 19:19	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130	1		12/01/15 19:19	17060-07-0	
Toluene-d8 (S)	98	%	70-130	1		12/01/15 19:19	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**56100**	ug/L	5000	1		12/02/15 19:31		

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ANALYTICAL RESULTS

Project: A1 Sandrock
Pace Project No.: 92277499

Sample: 4117-MW-6 **Lab ID: 92277499011** Collected: 11/24/15 16:20 Received: 11/25/15 13:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**206000**	ug/L	25000	1		11/30/15 18:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**29200**	ug/L	2000	1		12/01/15 18:16	14808-79-8	
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**11300**	ug/L	1000	1		12/10/15 00:02	16887-00-6	

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

QC Batch: MERP/8723 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 92277499001, 92277499002, 92277499003, 92277499004, 92277499005, 92277499006, 92277499007, 92277499008, 92277499009, 92277499010, 92277499011

METHOD BLANK: 1619743 Matrix: Water
Associated Lab Samples: 92277499001, 92277499002, 92277499003, 92277499004, 92277499005, 92277499006, 92277499007, 92277499008, 92277499009, 92277499010, 92277499011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	12/08/15 11:22	

LABORATORY CONTROL SAMPLE: 1619744

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.9	117	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1619745 1619746

Parameter	Units	92277499001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.8	2.8	108	110	75-125	1	

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

QC Batch: MPRP/20132 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010A | Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92277499001, 92277499002, 92277499003, 92277499004

METHOD BLANK: 1616702 | Matrix: Water
Associated Lab Samples: 92277499001, 92277499002, 92277499003, 92277499004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	12/04/15 22:37	
Arsenic	ug/L	ND	10.0	12/04/15 22:37	
Barium	ug/L	ND	5.0	12/04/15 22:37	
Beryllium	ug/L	ND	1.0	12/04/15 22:37	
Cadmium	ug/L	ND	1.0	12/04/15 22:37	
Chromium	ug/L	ND	5.0	12/04/15 22:37	
Cobalt	ug/L	ND	5.0	12/04/15 22:37	
Copper	ug/L	ND	5.0	12/04/15 22:37	
Iron	ug/L	ND	50.0	12/04/15 22:37	
Lead	ug/L	ND	5.0	12/04/15 22:37	
Manganese	ug/L	ND	5.0	12/04/15 22:37	
Nickel	ug/L	ND	5.0	12/04/15 22:37	
Selenium	ug/L	ND	10.0	12/04/15 22:37	
Silver	ug/L	ND	5.0	12/04/15 22:37	
Thallium	ug/L	ND	5.4	12/04/15 22:37	
Vanadium	ug/L	ND	5.0	12/04/15 22:37	
Zinc	ug/L	ND	10.0	12/04/15 22:37	

LABORATORY CONTROL SAMPLE: 1616703

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	450	90	80-120	
Arsenic	ug/L	500	426	85	80-120	
Barium	ug/L	500	496	99	80-120	
Beryllium	ug/L	500	505	101	80-120	
Cadmium	ug/L	500	459	92	80-120	
Chromium	ug/L	500	482	96	80-120	
Cobalt	ug/L	500	448	90	80-120	
Copper	ug/L	500	475	95	80-120	
Iron	ug/L	5000	4590	92	80-120	
Lead	ug/L	500	445	89	80-120	
Manganese	ug/L	500	459	92	80-120	
Nickel	ug/L	500	462	92	80-120	
Selenium	ug/L	500	432	86	80-120	
Silver	ug/L	250	234	93	80-120	
Thallium	ug/L	500	450	90	80-120	
Vanadium	ug/L	500	470	94	80-120	
Zinc	ug/L	500	436	87	80-120	

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1616704 1616705

Parameter	Units	92277334004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Antimony	ug/L	ND	500	500	491	451	98	90	75-125	8	
Arsenic	ug/L	ND	500	500	465	428	93	86	75-125	8	
Barium	ug/L	68.8	500	500	608	570	108	100	75-125	6	
Beryllium	ug/L	ND	500	500	547	504	109	101	75-125	8	
Cadmium	ug/L	ND	500	500	499	460	100	92	75-125	8	
Chromium	ug/L	5.2	500	500	526	487	104	96	75-125	8	
Cobalt	ug/L	ND	500	500	488	450	98	90	75-125	8	
Copper	ug/L	ND	500	500	517	478	103	96	75-125	8	
Iron	ug/L	134	5000	5000	5460	5370	106	105	75-125	2	
Lead	ug/L	ND	500	500	482	444	96	89	75-125	8	
Manganese	ug/L	17.6	500	500	521	486	101	94	75-125	7	
Nickel	ug/L	6.4	500	500	506	468	100	92	75-125	8	
Selenium	ug/L	ND	500	500	471	433	94	87	75-125	8	
Silver	ug/L	ND	250	250	253	233	101	93	75-125	8	
Thallium	ug/L	ND	500	500	496	465	99	92	75-125	6	
Vanadium	ug/L	ND	500	500	514	476	103	95	75-125	8	
Zinc	ug/L	9.7J	500	500	484	448	95	88	75-125	8	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1616706 1616707

Parameter	Units	92277427005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Antimony	ug/L	ND	500	500	485	443	97	88	75-125	9	
Arsenic	ug/L	ND	500	500	459	420	92	84	75-125	9	
Barium	ug/L	72.2	500	500	618	558	109	97	75-125	10	
Beryllium	ug/L	ND	500	500	560	497	112	99	75-125	12	
Cadmium	ug/L	ND	500	500	498	454	100	91	75-125	9	
Chromium	ug/L	ND	500	500	528	472	106	94	75-125	11	
Cobalt	ug/L	4.6J	500	500	487	443	96	88	75-125	9	
Copper	ug/L	ND	500	500	520	462	104	92	75-125	12	
Iron	ug/L	246	5000	5000	5350	4800	102	91	75-125	11	
Lead	ug/L	ND	500	500	478	433	95	87	75-125	10	
Manganese	ug/L	359	500	500	861	806	101	89	75-125	7	
Nickel	ug/L	10.5	500	500	507	462	99	90	75-125	9	
Selenium	ug/L	ND	500	500	466	423	93	85	75-125	10	
Silver	ug/L	ND	250	250	256	227	102	91	75-125	12	
Thallium	ug/L	ND	500	500	488	455	98	91	75-125	7	
Vanadium	ug/L	ND	500	500	518	462	103	92	75-125	11	
Zinc	ug/L	12.2	500	500	476	433	93	84	75-125	10	

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

QC Batch: MPRP/20148 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010A | Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92277499005, 92277499006, 92277499007, 92277499008, 92277499009, 92277499010, 92277499011

METHOD BLANK: 1617591 | Matrix: Water
Associated Lab Samples: 92277499005, 92277499006, 92277499007, 92277499008, 92277499009, 92277499010, 92277499011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	12/05/15 03:31	
Arsenic	ug/L	ND	10.0	12/05/15 03:31	
Barium	ug/L	ND	5.0	12/05/15 03:31	
Beryllium	ug/L	ND	1.0	12/07/15 18:44	
Cadmium	ug/L	ND	1.0	12/05/15 03:31	
Chromium	ug/L	ND	5.0	12/05/15 03:31	
Cobalt	ug/L	ND	5.0	12/05/15 03:31	
Copper	ug/L	ND	5.0	12/05/15 03:31	
Iron	ug/L	ND	50.0	12/05/15 03:31	
Lead	ug/L	ND	5.0	12/05/15 03:31	
Manganese	ug/L	ND	5.0	12/05/15 03:31	
Nickel	ug/L	ND	5.0	12/05/15 03:31	
Selenium	ug/L	ND	10.0	12/05/15 03:31	
Silver	ug/L	ND	5.0	12/05/15 03:31	
Thallium	ug/L	ND	5.4	12/07/15 18:44	
Vanadium	ug/L	ND	5.0	12/05/15 03:31	
Zinc	ug/L	ND	10.0	12/05/15 03:31	

LABORATORY CONTROL SAMPLE: 1617592

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	433	87	80-120	
Arsenic	ug/L	500	412	82	80-120	
Barium	ug/L	500	415	83	80-120	
Beryllium	ug/L	500	409	82	80-120	
Cadmium	ug/L	500	421	84	80-120	
Chromium	ug/L	500	415	83	80-120	
Cobalt	ug/L	500	422	84	80-120	
Copper	ug/L	500	426	85	80-120	
Iron	ug/L	5000	4090	82	80-120	
Lead	ug/L	500	418	84	80-120	
Manganese	ug/L	500	409	82	80-120	
Nickel	ug/L	500	422	84	80-120	
Selenium	ug/L	500	417	83	80-120	
Silver	ug/L	250	209	84	80-120	
Thallium	ug/L	500	411	82	80-120	
Vanadium	ug/L	500	416	83	80-120	
Zinc	ug/L	500	415	83	80-120	

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1617593 1617594

Parameter	Units	92277674005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Antimony	ug/L	ND	500	500	456	424	91	85	75-125	7	
Arsenic	ug/L	ND	500	500	436	405	87	81	75-125	7	
Barium	ug/L	20.5J	500	500	515	485	99	93	75-125	6	
Beryllium	ug/L	ND	500	500	473	449	95	90	75-125	5	
Cadmium	ug/L	ND	500	500	465	433	93	87	75-125	7	
Chromium	ug/L	ND	500	500	488	459	98	92	75-125	6	
Cobalt	ug/L	ND	500	500	453	421	91	84	75-125	7	
Copper	ug/L	ND	500	500	480	451	96	90	75-125	6	
Iron	ug/L	126J	5000	5000	4810	4480	94	87	75-125	7	
Lead	ug/L	ND	500	500	448	419	90	84	75-125	7	
Manganese	ug/L	3.0J	500	500	469	437	93	87	75-125	7	
Nickel	ug/L	ND	500	500	466	435	93	87	75-125	7	
Selenium	ug/L	ND	500	500	440	408	88	82	75-125	8	
Silver	ug/L	ND	250	250	237	222	95	89	75-125	7	
Thallium	ug/L	ND	500	500	480	461	95	91	75-125	4	
Vanadium	ug/L	ND	500	500	477	445	95	89	75-125	7	
Zinc	ug/L	ND	500	500	444	415	89	83	75-125	7	

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

QC Batch: MSV/34440 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92277499001, 92277499002, 92277499003, 92277499004

METHOD BLANK: 1615384 Matrix: Water
Associated Lab Samples: 92277499001, 92277499002, 92277499003, 92277499004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	11/25/15 23:35	
1,1,1-Trichloroethane	ug/L	ND	1.0	11/25/15 23:35	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/25/15 23:35	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/25/15 23:35	
1,1-Dichloroethane	ug/L	ND	1.0	11/25/15 23:35	
1,1-Dichloroethene	ug/L	ND	1.0	11/25/15 23:35	
1,2,3-Trichloropropane	ug/L	ND	1.0	11/25/15 23:35	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	11/25/15 23:35	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	11/25/15 23:35	
1,2-Dichlorobenzene	ug/L	ND	1.0	11/25/15 23:35	
1,2-Dichloroethane	ug/L	ND	1.0	11/25/15 23:35	
1,2-Dichloropropane	ug/L	ND	1.0	11/25/15 23:35	
1,4-Dichlorobenzene	ug/L	ND	1.0	11/25/15 23:35	
2-Butanone (MEK)	ug/L	ND	5.0	11/25/15 23:35	
2-Hexanone	ug/L	ND	5.0	11/25/15 23:35	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	11/25/15 23:35	
Acetone	ug/L	ND	25.0	11/25/15 23:35	
Acrylonitrile	ug/L	ND	10.0	11/25/15 23:35	
Benzene	ug/L	ND	1.0	11/25/15 23:35	
Bromochloromethane	ug/L	ND	1.0	11/25/15 23:35	
Bromodichloromethane	ug/L	ND	1.0	11/25/15 23:35	
Bromoform	ug/L	ND	1.0	11/25/15 23:35	
Bromomethane	ug/L	ND	2.0	11/25/15 23:35	
Carbon disulfide	ug/L	ND	2.0	11/25/15 23:35	
Carbon tetrachloride	ug/L	ND	1.0	11/25/15 23:35	
Chlorobenzene	ug/L	ND	1.0	11/25/15 23:35	
Chloroethane	ug/L	ND	1.0	11/25/15 23:35	
Chloroform	ug/L	ND	1.0	11/25/15 23:35	
Chloromethane	ug/L	ND	1.0	11/25/15 23:35	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/25/15 23:35	
cis-1,3-Dichloropropene	ug/L	ND	1.0	11/25/15 23:35	
Dibromochloromethane	ug/L	ND	1.0	11/25/15 23:35	
Dibromomethane	ug/L	ND	1.0	11/25/15 23:35	
Ethylbenzene	ug/L	ND	1.0	11/25/15 23:35	
Iodomethane	ug/L	ND	5.0	11/25/15 23:35	
Methylene Chloride	ug/L	ND	1.0	11/25/15 23:35	
Styrene	ug/L	ND	1.0	11/25/15 23:35	
Tetrachloroethene	ug/L	ND	1.0	11/25/15 23:35	
Tetrahydrofuran	ug/L	ND	10.0	11/25/15 23:35	
Toluene	ug/L	ND	1.0	11/25/15 23:35	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/25/15 23:35	

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

METHOD BLANK: 1615384 Matrix: Water
Associated Lab Samples: 92277499001, 92277499002, 92277499003, 92277499004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,3-Dichloropropene	ug/L	ND	1.0	11/25/15 23:35	
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	11/25/15 23:35	
Trichloroethene	ug/L	ND	1.0	11/25/15 23:35	
Trichlorofluoromethane	ug/L	ND	1.0	11/25/15 23:35	
Vinyl acetate	ug/L	ND	2.0	11/25/15 23:35	
Vinyl chloride	ug/L	ND	1.0	11/25/15 23:35	
Xylene (Total)	ug/L	ND	2.0	11/25/15 23:35	
1,2-Dichloroethane-d4 (S)	%	95	70-130	11/25/15 23:35	
4-Bromofluorobenzene (S)	%	102	70-130	11/25/15 23:35	
Toluene-d8 (S)	%	99	70-130	11/25/15 23:35	

LABORATORY CONTROL SAMPLE: 1615385

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	44.3	89	80-125	
1,1,1-Trichloroethane	ug/L	50	42.4	85	71-129	
1,1,2,2-Tetrachloroethane	ug/L	50	42.7	85	79-124	
1,1,2-Trichloroethane	ug/L	50	44.6	89	85-125	
1,1-Dichloroethane	ug/L	50	42.3	85	73-126	
1,1-Dichloroethene	ug/L	50	44.7	89	66-135	
1,2,3-Trichloropropane	ug/L	50	47.0	94	75-130	
1,2-Dibromo-3-chloropropane	ug/L	50	40.9	82	71-133	
1,2-Dibromoethane (EDB)	ug/L	50	44.7	89	83-124	
1,2-Dichlorobenzene	ug/L	50	46.5	93	80-133	
1,2-Dichloroethane	ug/L	50	41.5	83	67-128	
1,2-Dichloropropane	ug/L	50	41.6	83	75-132	
1,4-Dichlorobenzene	ug/L	50	46.8	94	78-130	
2-Butanone (MEK)	ug/L	100	86.9	87	61-144	
2-Hexanone	ug/L	100	85.7	86	68-143	
4-Methyl-2-pentanone (MIBK)	ug/L	100	91.1	91	72-135	
Acetone	ug/L	100	84.8	85	48-146	
Acrylonitrile	ug/L	250	222	89	40-160	
Benzene	ug/L	50	45.2	90	80-125	
Bromochloromethane	ug/L	50	45.5	91	71-125	
Bromodichloromethane	ug/L	50	40.3	81	78-124	
Bromoform	ug/L	50	39.3	79	71-128	
Bromomethane	ug/L	50	41.3	83	40-160	
Carbon disulfide	ug/L	50	45.3	91	50-160	
Carbon tetrachloride	ug/L	50	44.1	88	69-131	
Chlorobenzene	ug/L	50	44.6	89	81-122	
Chloroethane	ug/L	50	47.2	94	39-148	
Chloroform	ug/L	50	43.4	87	73-127	
Chloromethane	ug/L	50	41.9	84	44-146	
cis-1,2-Dichloroethene	ug/L	50	44.4	89	74-124	

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

LABORATORY CONTROL SAMPLE: 1615385

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,3-Dichloropropene	ug/L	50	41.3	83	72-132	
Dibromochloromethane	ug/L	50	42.7	85	78-125	
Dibromomethane	ug/L	50	46.3	93	82-120	
Ethylbenzene	ug/L	50	44.2	88	79-121	
Iodomethane	ug/L	100	85.6	86	39-154	
Methylene Chloride	ug/L	50	44.9	90	64-133	
Styrene	ug/L	50	44.5	89	84-126	
Tetrachloroethene	ug/L	50	45.4	91	78-122	
Tetrahydrofuran	ug/L	500	431	86	69-148	
Toluene	ug/L	50	43.2	86	80-121	
trans-1,2-Dichloroethene	ug/L	50	46.3	93	71-127	
trans-1,3-Dichloropropene	ug/L	50	41.5	83	69-141	
trans-1,4-Dichloro-2-butene	ug/L	50	36.0	72	40-160	
Trichloroethene	ug/L	50	44.0	88	78-122	
Trichlorofluoromethane	ug/L	50	44.8	90	53-137	
Vinyl acetate	ug/L	100	84.6	85	40-160	
Vinyl chloride	ug/L	50	49.1	98	58-137	
Xylene (Total)	ug/L	150	131	87	81-126	
1,2-Dichloroethane-d4 (S)	%			96	70-130	
4-Bromofluorobenzene (S)	%			105	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE SAMPLE: 1615386

Parameter	Units	92277227001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	18.7	93	70-130	
1,1,1-Trichloroethane	ug/L	ND	20	19.2	96	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	17.4	87	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	19.0	95	70-130	
1,1-Dichloroethane	ug/L	ND	20	19.6	98	70-130	
1,1-Dichloroethene	ug/L	ND	20	20.8	104	70-166	
1,2,3-Trichloropropane	ug/L	ND	20	18.0	90	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	17.8	89	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	18.8	94	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	19.5	98	70-130	
1,2-Dichloroethane	ug/L	ND	20	18.0	90	70-130	
1,2-Dichloropropane	ug/L	ND	20	18.4	92	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	19.9	99	70-130	
2-Butanone (MEK)	ug/L	ND	40	38.0	95	70-130	
2-Hexanone	ug/L	ND	40	35.7	89	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	38.2	95	70-130	
Acetone	ug/L	ND	40	38.9	97	70-130	
Acrylonitrile	ug/L	ND	100	91.2	91	70-130	
Benzene	ug/L	ND	20	20.4	102	70-148	
Bromochloromethane	ug/L	ND	20	20.0	100	70-130	

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

MATRIX SPIKE SAMPLE: 1615386

Parameter	Units	92277227001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	ND	20	17.6	88	70-130	
Bromoform	ug/L	ND	20	15.6	78	70-130	
Bromomethane	ug/L	ND	20	11.5	58	70-130	M1
Carbon disulfide	ug/L	ND	20	20.2	101	70-130	
Carbon tetrachloride	ug/L	ND	20	20.4	102	70-130	
Chlorobenzene	ug/L	ND	20	19.4	97	70-146	
Chloroethane	ug/L	ND	20	20.4	102	70-130	
Chloroform	ug/L	ND	20	19.0	95	70-130	
Chloromethane	ug/L	ND	20	16.6	83	70-130	
cis-1,2-Dichloroethene	ug/L	ND	20	20.1	100	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	17.4	87	70-130	
Dibromochloromethane	ug/L	ND	20	16.9	85	70-130	
Dibromomethane	ug/L	ND	20	19.4	97	70-130	
Ethylbenzene	ug/L	ND	20	19.4	97	70-130	
Iodomethane	ug/L	ND	40	19.8	49	70-130	M1
Methylene Chloride	ug/L	ND	20	20.1	101	70-130	
Styrene	ug/L	ND	20	18.7	94	70-130	
Tetrachloroethene	ug/L	ND	20	19.4	97	70-130	
Tetrahydrofuran	ug/L	ND	200	186	93	70-130	
Toluene	ug/L	ND	20	19.3	97	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	21.1	105	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	16.9	85	70-130	
trans-1,4-Dichloro-2-butene	ug/L	ND	20	10.3	51	70-130	M1
Trichloroethene	ug/L	ND	20	19.3	97	69-151	
Trichlorofluoromethane	ug/L	ND	20	20.1	101	70-130	
Vinyl acetate	ug/L	ND	40	28.7	72	70-130	
Vinyl chloride	ug/L	ND	20	22.3	111	70-130	
1,2-Dichloroethane-d4 (S)	%				97	70-130	
4-Bromofluorobenzene (S)	%				103	70-130	
Toluene-d8 (S)	%				98	70-130	

SAMPLE DUPLICATE: 1615387

Parameter	Units	92277227002 Result	Dup Result	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		
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		

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

SAMPLE DUPLICATE: 1615387

Parameter	Units	92277227002 Result	Dup Result	RPD	Qualifiers
1,2-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		
Tetrahydrofuran	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)	%	95	95	0	
4-Bromofluorobenzene (S)	%	104	100	4	
Toluene-d8 (S)	%	98	98	0	

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

QC Batch: MSV/34501 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92277499007, 92277499008, 92277499009, 92277499010, 92277499011

METHOD BLANK: 1617419 Matrix: Water
Associated Lab Samples: 92277499007, 92277499008, 92277499009, 92277499010, 92277499011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	12/01/15 15:20	
1,1,1-Trichloroethane	ug/L	ND	1.0	12/01/15 15:20	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	12/01/15 15:20	
1,1,2-Trichloroethane	ug/L	ND	1.0	12/01/15 15:20	
1,1-Dichloroethane	ug/L	ND	1.0	12/01/15 15:20	
1,1-Dichloroethene	ug/L	ND	1.0	12/01/15 15:20	
1,2,3-Trichloropropane	ug/L	ND	1.0	12/01/15 15:20	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	12/01/15 15:20	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	12/01/15 15:20	
1,2-Dichlorobenzene	ug/L	ND	1.0	12/01/15 15:20	
1,2-Dichloroethane	ug/L	ND	1.0	12/01/15 15:20	
1,2-Dichloropropane	ug/L	ND	1.0	12/01/15 15:20	
1,4-Dichlorobenzene	ug/L	ND	1.0	12/01/15 15:20	
2-Butanone (MEK)	ug/L	ND	5.0	12/01/15 15:20	
2-Hexanone	ug/L	ND	5.0	12/01/15 15:20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	12/01/15 15:20	
Acetone	ug/L	ND	25.0	12/01/15 15:20	
Acrylonitrile	ug/L	ND	10.0	12/01/15 15:20	
Benzene	ug/L	ND	1.0	12/01/15 15:20	
Bromochloromethane	ug/L	ND	1.0	12/01/15 15:20	
Bromodichloromethane	ug/L	ND	1.0	12/01/15 15:20	
Bromoform	ug/L	ND	1.0	12/01/15 15:20	
Bromomethane	ug/L	ND	2.0	12/01/15 15:20	
Carbon disulfide	ug/L	ND	2.0	12/01/15 15:20	
Carbon tetrachloride	ug/L	ND	1.0	12/01/15 15:20	
Chlorobenzene	ug/L	ND	1.0	12/01/15 15:20	
Chloroethane	ug/L	ND	1.0	12/01/15 15:20	
Chloroform	ug/L	ND	1.0	12/01/15 15:20	
Chloromethane	ug/L	ND	1.0	12/01/15 15:20	
cis-1,2-Dichloroethene	ug/L	ND	1.0	12/01/15 15:20	
cis-1,3-Dichloropropene	ug/L	ND	1.0	12/01/15 15:20	
Dibromochloromethane	ug/L	ND	1.0	12/01/15 15:20	
Dibromomethane	ug/L	ND	1.0	12/01/15 15:20	
Ethylbenzene	ug/L	ND	1.0	12/01/15 15:20	
Iodomethane	ug/L	ND	5.0	12/01/15 15:20	
Methylene Chloride	ug/L	ND	1.0	12/01/15 15:20	
Styrene	ug/L	ND	1.0	12/01/15 15:20	
Tetrachloroethene	ug/L	ND	1.0	12/01/15 15:20	
Tetrahydrofuran	ug/L	ND	10.0	12/01/15 15:20	
Toluene	ug/L	ND	1.0	12/01/15 15:20	
trans-1,2-Dichloroethene	ug/L	ND	1.0	12/01/15 15:20	

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

METHOD BLANK: 1617419 Matrix: Water
Associated Lab Samples: 92277499007, 92277499008, 92277499009, 92277499010, 92277499011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,3-Dichloropropene	ug/L	ND	1.0	12/01/15 15:20	
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	12/01/15 15:20	
Trichloroethene	ug/L	ND	1.0	12/01/15 15:20	
Trichlorofluoromethane	ug/L	ND	1.0	12/01/15 15:20	
Vinyl acetate	ug/L	ND	2.0	12/01/15 15:20	
Vinyl chloride	ug/L	ND	1.0	12/01/15 15:20	
Xylene (Total)	ug/L	ND	2.0	12/01/15 15:20	
1,2-Dichloroethane-d4 (S)	%	100	70-130	12/01/15 15:20	
4-Bromofluorobenzene (S)	%	104	70-130	12/01/15 15:20	
Toluene-d8 (S)	%	101	70-130	12/01/15 15:20	

LABORATORY CONTROL SAMPLE: 1617420

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	44.6	89	80-125	
1,1,1-Trichloroethane	ug/L	50	48.7	97	71-129	
1,1,2,2-Tetrachloroethane	ug/L	50	43.7	87	79-124	
1,1,2-Trichloroethane	ug/L	50	48.8	98	85-125	
1,1-Dichloroethane	ug/L	50	50.3	101	73-126	
1,1-Dichloroethene	ug/L	50	53.5	107	66-135	
1,2,3-Trichloropropane	ug/L	50	46.6	93	75-130	
1,2-Dibromo-3-chloropropane	ug/L	50	38.4	77	71-133	
1,2-Dibromoethane (EDB)	ug/L	50	46.4	93	83-124	
1,2-Dichlorobenzene	ug/L	50	47.4	95	80-133	
1,2-Dichloroethane	ug/L	50	46.9	94	67-128	
1,2-Dichloropropane	ug/L	50	47.0	94	75-132	
1,4-Dichlorobenzene	ug/L	50	46.4	93	78-130	
2-Butanone (MEK)	ug/L	100	97.8	98	61-144	
2-Hexanone	ug/L	100	83.3	83	68-143	
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.4	96	72-135	
Acetone	ug/L	100	93.9	94	48-146	
Acrylonitrile	ug/L	250	247	99	40-160	
Benzene	ug/L	50	50.6	101	80-125	
Bromochloromethane	ug/L	50	52.6	105	71-125	
Bromodichloromethane	ug/L	50	44.5	89	78-124	
Bromoform	ug/L	50	38.9	78	71-128	
Bromomethane	ug/L	50	49.4	99	40-160	
Carbon disulfide	ug/L	50	49.5	99	50-160	
Carbon tetrachloride	ug/L	50	48.5	97	69-131	
Chlorobenzene	ug/L	50	45.4	91	81-122	
Chloroethane	ug/L	50	52.5	105	39-148	
Chloroform	ug/L	50	49.8	100	73-127	
Chloromethane	ug/L	50	48.7	97	44-146	
cis-1,2-Dichloroethene	ug/L	50	52.4	105	74-124	

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

LABORATORY CONTROL SAMPLE: 1617420

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,3-Dichloropropene	ug/L	50	46.9	94	72-132	
Dibromochloromethane	ug/L	50	42.0	84	78-125	
Dibromomethane	ug/L	50	50.6	101	82-120	
Ethylbenzene	ug/L	50	45.6	91	79-121	
Iodomethane	ug/L	100	99.6	100	39-154	
Methylene Chloride	ug/L	50	53.1	106	64-133	
Styrene	ug/L	50	46.7	93	84-126	
Tetrachloroethene	ug/L	50	48.2	96	78-122	
Tetrahydrofuran	ug/L	500	490	98	69-148	
Toluene	ug/L	50	48.5	97	80-121	
trans-1,2-Dichloroethene	ug/L	50	53.6	107	71-127	
trans-1,3-Dichloropropene	ug/L	50	46.5	93	69-141	
trans-1,4-Dichloro-2-butene	ug/L	50	37.0	74	40-160	
Trichloroethene	ug/L	50	48.0	96	78-122	
Trichlorofluoromethane	ug/L	50	55.6	111	53-137	
Vinyl acetate	ug/L	100	99.3	99	40-160	
Vinyl chloride	ug/L	50	57.3	115	58-137	
Xylene (Total)	ug/L	150	136	90	81-126	
1,2-Dichloroethane-d4 (S)	%			97	70-130	
4-Bromofluorobenzene (S)	%			104	70-130	
Toluene-d8 (S)	%			98	70-130	

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

QC Batch: MSV/34557 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92277499005, 92277499006

METHOD BLANK: 1621073 | Matrix: Water
Associated Lab Samples: 92277499005, 92277499006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	12/06/15 04:54	
1,1,1-Trichloroethane	ug/L	ND	1.0	12/06/15 04:54	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	12/06/15 04:54	
1,1,2-Trichloroethane	ug/L	ND	1.0	12/06/15 04:54	
1,1-Dichloroethane	ug/L	ND	1.0	12/06/15 04:54	
1,1-Dichloroethene	ug/L	ND	1.0	12/06/15 04:54	
1,2,3-Trichloropropane	ug/L	ND	1.0	12/06/15 04:54	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	12/06/15 04:54	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	12/06/15 04:54	
1,2-Dichlorobenzene	ug/L	ND	1.0	12/06/15 04:54	
1,2-Dichloroethane	ug/L	ND	1.0	12/06/15 04:54	
1,2-Dichloropropane	ug/L	ND	1.0	12/06/15 04:54	
1,4-Dichlorobenzene	ug/L	ND	1.0	12/06/15 04:54	
2-Butanone (MEK)	ug/L	ND	5.0	12/06/15 04:54	
2-Hexanone	ug/L	ND	5.0	12/06/15 04:54	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	12/06/15 04:54	
Acetone	ug/L	ND	25.0	12/06/15 04:54	
Acrylonitrile	ug/L	ND	10.0	12/06/15 04:54	
Benzene	ug/L	ND	1.0	12/06/15 04:54	
Bromochloromethane	ug/L	ND	1.0	12/06/15 04:54	
Bromodichloromethane	ug/L	ND	1.0	12/06/15 04:54	
Bromoform	ug/L	ND	1.0	12/06/15 04:54	
Bromomethane	ug/L	ND	2.0	12/06/15 04:54	
Carbon disulfide	ug/L	ND	2.0	12/06/15 04:54	
Carbon tetrachloride	ug/L	ND	1.0	12/06/15 04:54	
Chlorobenzene	ug/L	ND	1.0	12/06/15 04:54	
Chloroethane	ug/L	ND	1.0	12/06/15 04:54	
Chloroform	ug/L	ND	1.0	12/06/15 04:54	
Chloromethane	ug/L	ND	1.0	12/06/15 04:54	
cis-1,2-Dichloroethene	ug/L	ND	1.0	12/06/15 04:54	
cis-1,3-Dichloropropene	ug/L	ND	1.0	12/06/15 04:54	
Dibromochloromethane	ug/L	ND	1.0	12/06/15 04:54	
Dibromomethane	ug/L	ND	1.0	12/06/15 04:54	
Ethylbenzene	ug/L	ND	1.0	12/06/15 04:54	
Iodomethane	ug/L	ND	5.0	12/06/15 04:54	
Methylene Chloride	ug/L	1.0	1.0	12/06/15 04:54	C9
Styrene	ug/L	ND	1.0	12/06/15 04:54	
Tetrachloroethene	ug/L	ND	1.0	12/06/15 04:54	
Tetrahydrofuran	ug/L	ND	10.0	12/06/15 04:54	
Toluene	ug/L	ND	1.0	12/06/15 04:54	
trans-1,2-Dichloroethene	ug/L	ND	1.0	12/06/15 04:54	

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

METHOD BLANK: 1621073 Matrix: Water
Associated Lab Samples: 92277499005, 92277499006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,3-Dichloropropene	ug/L	ND	1.0	12/06/15 04:54	
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	12/06/15 04:54	
Trichloroethene	ug/L	ND	1.0	12/06/15 04:54	
Trichlorofluoromethane	ug/L	ND	1.0	12/06/15 04:54	
Vinyl acetate	ug/L	ND	2.0	12/06/15 04:54	
Vinyl chloride	ug/L	ND	1.0	12/06/15 04:54	
Xylene (Total)	ug/L	ND	2.0	12/06/15 04:54	
1,2-Dichloroethane-d4 (S)	%	95	70-130	12/06/15 04:54	
4-Bromofluorobenzene (S)	%	99	70-130	12/06/15 04:54	
Toluene-d8 (S)	%	97	70-130	12/06/15 04:54	

LABORATORY CONTROL SAMPLE: 1621074

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	46.7	93	80-125	
1,1,1-Trichloroethane	ug/L	50	43.9	88	71-129	
1,1,2,2-Tetrachloroethane	ug/L	50	45.1	90	79-124	
1,1,2-Trichloroethane	ug/L	50	42.6	85	85-125	
1,1-Dichloroethane	ug/L	50	44.1	88	73-126	
1,1-Dichloroethene	ug/L	50	46.6	93	66-135	
1,2,3-Trichloropropane	ug/L	50	49.1	98	75-130	
1,2-Dibromo-3-chloropropane	ug/L	50	44.3	89	71-133	
1,2-Dibromoethane (EDB)	ug/L	50	47.9	96	83-124	
1,2-Dichlorobenzene	ug/L	50	52.2	104	80-133	
1,2-Dichloroethane	ug/L	50	42.3	85	67-128	
1,2-Dichloropropane	ug/L	50	45.0	90	75-132	
1,4-Dichlorobenzene	ug/L	50	51.2	102	78-130	
2-Butanone (MEK)	ug/L	100	92.5	92	61-144	
2-Hexanone	ug/L	100	97.5	97	68-143	
4-Methyl-2-pentanone (MIBK)	ug/L	100	100	100	72-135	
Acetone	ug/L	100	92.7	93	48-146	
Acrylonitrile	ug/L	250	232	93	40-160	
Benzene	ug/L	50	48.5	97	80-125	
Bromochloromethane	ug/L	50	44.8	90	71-125	
Bromodichloromethane	ug/L	50	42.6	85	78-124	
Bromoform	ug/L	50	39.7	79	71-128	
Bromomethane	ug/L	50	29.5	59	40-160	
Carbon disulfide	ug/L	50	41.8	84	50-160	
Carbon tetrachloride	ug/L	50	47.1	94	69-131	
Chlorobenzene	ug/L	50	48.4	97	81-122	
Chloroethane	ug/L	50	39.4	79	39-148	
Chloroform	ug/L	50	44.8	90	73-127	
Chloromethane	ug/L	50	45.2	90	44-146	
cis-1,2-Dichloroethene	ug/L	50	47.0	94	74-124	

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

LABORATORY CONTROL SAMPLE: 1621074

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,3-Dichloropropene	ug/L	50	43.4	87	72-132	
Dibromochloromethane	ug/L	50	42.9	86	78-125	
Dibromomethane	ug/L	50	50.7	101	82-120	
Ethylbenzene	ug/L	50	48.1	96	79-121	
Iodomethane	ug/L	100	84.8	85	39-154	
Methylene Chloride	ug/L	50	43.0	86	64-133	
Styrene	ug/L	50	48.9	98	84-126	
Tetrachloroethene	ug/L	50	51.5	103	78-122	
Tetrahydrofuran	ug/L	500	478	96	69-148	
Toluene	ug/L	50	46.5	93	80-121	
trans-1,2-Dichloroethene	ug/L	50	47.8	96	71-127	
trans-1,3-Dichloropropene	ug/L	50	42.2	84	69-141	
trans-1,4-Dichloro-2-butene	ug/L	50	40.1	80	40-160	
Trichloroethene	ug/L	50	45.8	92	78-122	
Trichlorofluoromethane	ug/L	50	48.4	97	53-137	
Vinyl acetate	ug/L	100	86.5	86	40-160	
Vinyl chloride	ug/L	50	48.4	97	58-137	
Xylene (Total)	ug/L	150	143	95	81-126	
1,2-Dichloroethane-d4 (S)	%			95	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE SAMPLE: 1621075

Parameter	Units	92277680002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20.9	104	70-130	
1,1,1-Trichloroethane	ug/L	ND	20	19.3	97	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	18.8	94	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	18.2	91	70-130	
1,1-Dichloroethane	ug/L	ND	20	18.9	95	70-130	
1,1-Dichloroethene	ug/L	ND	20	19.4	97	70-166	
1,2,3-Trichloropropane	ug/L	ND	20	21.0	105	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	18.5	92	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20.6	103	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	22.6	112	70-130	
1,2-Dichloroethane	ug/L	ND	20	17.8	89	70-130	
1,2-Dichloropropane	ug/L	ND	20	19.3	96	70-130	
1,4-Dichlorobenzene	ug/L	1.6	20	23.9	111	70-130	
2-Butanone (MEK)	ug/L	ND	40	40.0	100	70-130	
2-Hexanone	ug/L	ND	40	43.1	108	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	42.4	106	70-130	
Acetone	ug/L	ND	40	42.6	106	70-130	
Acrylonitrile	ug/L	ND	100	94.3	94	70-130	
Benzene	ug/L	ND	20	21.5	108	70-148	
Bromochloromethane	ug/L	ND	20	19.0	95	70-130	

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

MATRIX SPIKE SAMPLE: 1621075

Parameter	Units	92277680002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	ND	20	18.7	94	70-130	
Bromoform	ug/L	ND	20	16.8	84	70-130	
Bromomethane	ug/L	ND	20	6.8	34	70-130	M1
Carbon disulfide	ug/L	ND	20	16.7	83	70-130	
Carbon tetrachloride	ug/L	ND	20	21.1	105	70-130	
Chlorobenzene	ug/L	2.6J	20	23.3	104	70-146	
Chloroethane	ug/L	ND	20	16.5	82	70-130	
Chloroform	ug/L	ND	20	19.4	97	70-130	
Chloromethane	ug/L	ND	20	17.9	90	70-130	
cis-1,2-Dichloroethene	ug/L	ND	20	19.7	99	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	17.1	85	70-130	
Dibromochloromethane	ug/L	ND	20	17.9	90	70-130	
Dibromomethane	ug/L	ND	20	22.3	111	70-130	
Ethylbenzene	ug/L	ND	20	20.8	104	70-130	
Iodomethane	ug/L	ND	40	20.1	50	70-130	M1
Methylene Chloride	ug/L	ND	20	17.7	89	70-130	
Styrene	ug/L	ND	20	21.4	107	70-130	
Tetrachloroethene	ug/L	ND	20	22.2	111	70-130	
Tetrahydrofuran	ug/L	ND	200	195	96	70-130	
Toluene	ug/L	ND	20	20.8	104	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	19.3	97	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	16.7	84	70-130	
trans-1,4-Dichloro-2-butene	ug/L	ND	20	12.7	64	70-130	M1
Trichloroethene	ug/L	ND	20	19.8	99	69-151	
Trichlorofluoromethane	ug/L	ND	20	21.0	105	70-130	
Vinyl acetate	ug/L	ND	40	21.9	55	70-130	M1
Vinyl chloride	ug/L	ND	20	19.5	97	70-130	
1,2-Dichloroethane-d4 (S)	%				89	70-130	
4-Bromofluorobenzene (S)	%				103	70-130	
Toluene-d8 (S)	%				95	70-130	

MATRIX SPIKE SAMPLE: 1621078

Parameter	Units	92278313002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	22.6	113	70-130	
1,1,1-Trichloroethane	ug/L	ND	20	20.3	101	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20.0	100	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	19.6	98	70-130	
1,1-Dichloroethane	ug/L	0.34J	20	20.7	102	70-130	
1,1-Dichloroethene	ug/L	ND	20	20.2	101	70-166	
1,2,3-Trichloropropane	ug/L	ND	20	22.9	115	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	21.3	107	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	22.0	110	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	24.8	124	70-130	
1,2-Dichloroethane	ug/L	ND	20	19.2	96	70-130	

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

MATRIX SPIKE SAMPLE: 1621078

Parameter	Units	92278313002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloropropane	ug/L	ND	20	20.7	104	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	24.8	124	70-130	
2-Butanone (MEK)	ug/L	ND	40	41.9	105	70-130	
2-Hexanone	ug/L	ND	40	47.4	118	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	46.4	116	70-130	
Acetone	ug/L	ND	40	46.0	115	70-130	
Acrylonitrile	ug/L	ND	100	100	100	70-130	
Benzene	ug/L	ND	20	22.5	113	70-148	
Bromochloromethane	ug/L	ND	20	21.1	106	70-130	
Bromodichloromethane	ug/L	ND	20	20.4	102	70-130	
Bromoform	ug/L	ND	20	18.6	93	70-130	
Bromomethane	ug/L	ND	20	6.0	30	70-130	M1
Carbon disulfide	ug/L	ND	20	18.0	90	70-130	
Carbon tetrachloride	ug/L	ND	20	21.3	107	70-130	
Chlorobenzene	ug/L	0.35J	20	22.9	113	70-146	
Chloroethane	ug/L	ND	20	18.0	90	70-130	
Chloroform	ug/L	ND	20	21.2	106	70-130	
Chloromethane	ug/L	ND	20	20.3	101	70-130	
cis-1,2-Dichloroethene	ug/L	ND	20	21.2	106	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	18.1	91	70-130	
Dibromochloromethane	ug/L	ND	20	19.3	96	70-130	
Dibromomethane	ug/L	ND	20	23.8	119	70-130	
Ethylbenzene	ug/L	ND	20	22.4	112	70-130	
Iodomethane	ug/L	ND	40	22.8	57	70-130	M1
Methylene Chloride	ug/L	ND	20	18.4	92	70-130	
Styrene	ug/L	ND	20	22.7	114	70-130	
Tetrachloroethene	ug/L	ND	20	25.1	125	70-130	
Tetrahydrofuran	ug/L	ND	200	209	104	70-130	
Toluene	ug/L	ND	20	22.3	111	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	20.7	103	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	17.5	88	70-130	
trans-1,4-Dichloro-2-butene	ug/L	ND	20	14.7	74	70-130	
Trichloroethene	ug/L	ND	20	21.6	108	69-151	
Trichlorofluoromethane	ug/L	ND	20	22.1	111	70-130	
Vinyl acetate	ug/L	ND	40	21.3	53	70-130	M1
Vinyl chloride	ug/L	ND	20	21.3	106	70-130	
1,2-Dichloroethane-d4 (S)	%				89	70-130	
4-Bromofluorobenzene (S)	%				105	70-130	
Toluene-d8 (S)	%				95	70-130	

SAMPLE DUPLICATE: 1621076

Parameter	Units	92277680003 Result	Dup Result	RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		
1,1,1-Trichloroethane	ug/L	ND	ND		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

SAMPLE DUPLICATE: 1621076

Parameter	Units	92277680003 Result	Dup Result	RPD	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		
1,1,2-Trichloroethane	ug/L	ND	ND		
1,1-Dichloroethane	ug/L	2.1J	2.0	7	
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	1.0J	.82J		
1,2-Dichloroethane	ug/L	ND	.27J		
1,2-Dichloropropane	ug/L	ND	ND		
1,4-Dichlorobenzene	ug/L	5.2	5.0	3	
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	1.6	1.5	9	
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	1.8J	1.6	14	
Chloroethane	ug/L	1.6J	1.3	16	
Chloroform	ug/L	ND	ND		
Chloromethane	ug/L	ND	ND		
cis-1,2-Dichloroethene	ug/L	14.2	16.3	13	
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		
Tetrahydrofuran	ug/L	4.8J	4.3J		
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	7.9	7.1	11	
Xylene (Total)	ug/L	ND	ND		
1,2-Dichloroethane-d4 (S)	%	94	97	2	

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

SAMPLE DUPLICATE: 1621076

Parameter	Units	92277680003 Result	Dup Result	RPD	Qualifiers
4-Bromofluorobenzene (S)	%	101	99	2	
Toluene-d8 (S)	%	95	96	2	

SAMPLE DUPLICATE: 1621077

Parameter	Units	92278313001 Result	Dup Result	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	0.43J	.34J		
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	ND	ND		
1,2-Dichloroethane	ug/L	ND	ND		
1,2-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	2.4	2.2	6	
Chloroethane	ug/L	ND	ND		
Chloroform	ug/L	ND	ND		
Chloromethane	ug/L	ND	ND		
cis-1,2-Dichloroethene	ug/L	0.89J	.97J		
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		
Tetrahydrofuran	ug/L	ND	ND		

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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

SAMPLE DUPLICATE: 1621077

Parameter	Units	92278313001 Result	Dup Result	RPD	Qualifiers
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	0.70J	.7J		
Xylene (Total)	ug/L	ND	ND		
1,2-Dichloroethane-d4 (S)	%	93	94	1	
4-Bromofluorobenzene (S)	%	101	103	3	
Toluene-d8 (S)	%	97	97	0	

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

QC Batch: WET/41685 | Analysis Method: SM 2320B
QC Batch Method: SM 2320B | Analysis Description: 2320B Alkalinity
Associated Lab Samples: 92277499001, 92277499002, 92277499003, 92277499004, 92277499005, 92277499006, 92277499007, 92277499008, 92277499009, 92277499010, 92277499011

METHOD BLANK: 1617748 | Matrix: Water
Associated Lab Samples: 92277499001, 92277499002, 92277499003, 92277499004, 92277499005, 92277499006, 92277499007, 92277499008, 92277499009, 92277499010, 92277499011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	ug/L	ND	5000	12/02/15 16:22	

LABORATORY CONTROL SAMPLE: 1617749

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	ug/L	50000	50300	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1617750 | 1617751

Parameter	Units	92277499001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Alkalinity, Total as CaCO3	ug/L	145000	50000	50000	193000	191000	96	92	90-110	1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1617752 | 1617753

Parameter	Units	92277499011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Alkalinity, Total as CaCO3	ug/L	56100	50000	50000	106000	107000	100	102	90-110	1	

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

QC Batch: WET/41609 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 92277499001, 92277499002, 92277499003, 92277499004

METHOD BLANK: 1615289 Matrix: Water
Associated Lab Samples: 92277499001, 92277499002, 92277499003, 92277499004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	ug/L	ND	25000	11/25/15 14:00	

LABORATORY CONTROL SAMPLE: 1615290

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	ug/L	250000	252000	101	90-110	

SAMPLE DUPLICATE: 1615291

Parameter	Units	92277227004 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	ug/L	569 mg/L	576000	1	

SAMPLE DUPLICATE: 1615292

Parameter	Units	92277499004 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	ug/L	297000	270000	10	D6

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

QC Batch: WET/41654 | Analysis Method: SM 2540C
QC Batch Method: SM 2540C | Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 92277499005, 92277499006, 92277499007, 92277499008, 92277499009, 92277499010, 92277499011

METHOD BLANK: 1616632 | Matrix: Water
Associated Lab Samples: 92277499005, 92277499006, 92277499007, 92277499008, 92277499009, 92277499010, 92277499011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	ug/L	ND	25000	11/30/15 18:47	

LABORATORY CONTROL SAMPLE: 1616633

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	ug/L	250000	230000	92	90-110	

SAMPLE DUPLICATE: 1616634

Parameter	Units	92277372001 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	ug/L	1680 mg/L	1540000	9	D6

SAMPLE DUPLICATE: 1616635

Parameter	Units	92277499009 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	ug/L	172000	187000	8	D6

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

QC Batch: WETA/25578 — Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 — Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92277499001, 92277499002, 92277499003, 92277499004, 92277499005, 92277499006, 92277499007, 92277499008, 92277499009, 92277499010, 92277499011

METHOD BLANK: 1616840 — Matrix: Water
Associated Lab Samples: 92277499001, 92277499002, 92277499003, 92277499004, 92277499005, 92277499006, 92277499007, 92277499008, 92277499009, 92277499010, 92277499011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	ug/L	ND	2000	12/01/15 13:43	

LABORATORY CONTROL SAMPLE: 1616841

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1616842 — 1616843

Parameter	Units	92277499001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Sulfate	ug/L	86800	20000	20000	106000	107000	98	99	90-110	0	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1616844 — 1616845

Parameter	Units	92277499011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Sulfate	ug/L	29200	20000	20000	47700	47800	93	93	90-110	0	

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QUALITY CONTROL DATA

Project: A1 Sandrock
Pace Project No.: 92277499

QC Batch: WETA/25656 — Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E — Analysis Description: 4500 Chloride
Associated Lab Samples: 92277499001, 92277499002, 92277499003, 92277499004, 92277499005, 92277499006, 92277499007, 92277499008, 92277499009, 92277499010, 92277499011

METHOD BLANK: 1621616 — Matrix: Water
Associated Lab Samples: 92277499001, 92277499002, 92277499003, 92277499004, 92277499005, 92277499006, 92277499007, 92277499008, 92277499009, 92277499010, 92277499011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	ug/L	ND	1000	12/09/15 23:47	

LABORATORY CONTROL SAMPLE: 1621617

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	ug/L	20000	19900	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1621618 — 1621619

Parameter	Units	92277499001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chloride	ug/L	9030	20000	20000	29400	29300	102	101	90-110	0	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1621620 — 1621621

Parameter	Units	92277499011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chloride	ug/L	11300	20000	20000	30600	30700	97	97	90-110	0	

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QUALIFIERS

Project: A1 Sandrock
Pace Project No.: 92277499

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

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 decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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.

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

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

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

C9	Common Laboratory Contaminant.
D6	The relative percent difference (RPD) between the sample and sample duplicate exceeded 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: A1 Sandrock
Pace Project No.: 92277499

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92277499001	**4117-MW5**		FLD/		
92277499002	**4117-MW1**		FLD/		
92277499003	**4117-MW2**		FLD/		
92277499005	**4117-SW-1**		FLD/		
92277499006	**4117-SW-2**		FLD/		
92277499007	**4117-SW-3**		FLD/		
92277499008	**4117-SW-4**		FLD/		
92277499009	**4117-MW-3**		FLD/		
92277499010	**4117-MW-4**		FLD/		
92277499011	**4117-MW-6**		FLD/		
92277499001	**4117-MW5**	EPA 3010A	MPRP/20132	EPA 6010	ICP/18159
92277499002	**4117-MW1**	EPA 3010A	MPRP/20132	EPA 6010	ICP/18159
92277499003	**4117-MW2**	EPA 3010A	MPRP/20132	EPA 6010	ICP/18159
92277499004	**4117-MW2 DUP**	EPA 3010A	MPRP/20132	EPA 6010	ICP/18159
92277499005	**4117-SW-1**	EPA 3010A	MPRP/20148	EPA 6010	ICP/18176
92277499006	**4117-SW-2**	EPA 3010A	MPRP/20148	EPA 6010	ICP/18176
92277499007	**4117-SW-3**	EPA 3010A	MPRP/20148	EPA 6010	ICP/18176
92277499008	**4117-SW-4**	EPA 3010A	MPRP/20148	EPA 6010	ICP/18176
92277499009	**4117-MW-3**	EPA 3010A	MPRP/20148	EPA 6010	ICP/18176
92277499010	**4117-MW-4**	EPA 3010A	MPRP/20148	EPA 6010	ICP/18176
92277499011	**4117-MW-6**	EPA 3010A	MPRP/20148	EPA 6010	ICP/18176
92277499001	**4117-MW5**	EPA 7470	MERP/8723	EPA 7470	MERC/8384
92277499002	**4117-MW1**	EPA 7470	MERP/8723	EPA 7470	MERC/8384
92277499003	**4117-MW2**	EPA 7470	MERP/8723	EPA 7470	MERC/8384
92277499004	**4117-MW2 DUP**	EPA 7470	MERP/8723	EPA 7470	MERC/8384
92277499005	**4117-SW-1**	EPA 7470	MERP/8723	EPA 7470	MERC/8384
92277499006	**4117-SW-2**	EPA 7470	MERP/8723	EPA 7470	MERC/8384
92277499007	**4117-SW-3**	EPA 7470	MERP/8723	EPA 7470	MERC/8384
92277499008	**4117-SW-4**	EPA 7470	MERP/8723	EPA 7470	MERC/8384
92277499009	**4117-MW-3**	EPA 7470	MERP/8723	EPA 7470	MERC/8384
92277499010	**4117-MW-4**	EPA 7470	MERP/8723	EPA 7470	MERC/8384
92277499011	**4117-MW-6**	EPA 7470	MERP/8723	EPA 7470	MERC/8384
92277499001	**4117-MW5**	EPA 8260	MSV/34440		
92277499002	**4117-MW1**	EPA 8260	MSV/34440		
92277499003	**4117-MW2**	EPA 8260	MSV/34440		
92277499004	**4117-MW2 DUP**	EPA 8260	MSV/34440		
92277499005	**4117-SW-1**	EPA 8260	MSV/34557		
92277499006	**4117-SW-2**	EPA 8260	MSV/34557		
92277499007	**4117-SW-3**	EPA 8260	MSV/34501		
92277499008	**4117-SW-4**	EPA 8260	MSV/34501		
92277499009	**4117-MW-3**	EPA 8260	MSV/34501		
92277499010	**4117-MW-4**	EPA 8260	MSV/34501		
92277499011	**4117-MW-6**	EPA 8260	MSV/34501		
92277499001	**4117-MW5**	SM 2320B	WET/41685		
92277499002	**4117-MW1**	SM 2320B	WET/41685		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: A1 Sandrock
Pace Project No.: 92277499

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92277499003	**4117-MW2**	SM 2320B	WET/41685		
92277499004	**4117-MW2 DUP**	SM 2320B	WET/41685		
92277499005	**4117-SW-1**	SM 2320B	WET/41685		
92277499006	**4117-SW-2**	SM 2320B	WET/41685		
92277499007	**4117-SW-3**	SM 2320B	WET/41685		
92277499008	**4117-SW-4**	SM 2320B	WET/41685		
92277499009	**4117-MW-3**	SM 2320B	WET/41685		
92277499010	**4117-MW-4**	SM 2320B	WET/41685		
92277499011	**4117-MW-6**	SM 2320B	WET/41685		
92277499001	**4117-MW5**	SM 2540C	WET/41609		
92277499002	**4117-MW1**	SM 2540C	WET/41609		
92277499003	**4117-MW2**	SM 2540C	WET/41609		
92277499004	**4117-MW2 DUP**	SM 2540C	WET/41609		
92277499005	**4117-SW-1**	SM 2540C	WET/41654		
92277499006	**4117-SW-2**	SM 2540C	WET/41654		
92277499007	**4117-SW-3**	SM 2540C	WET/41654		
92277499008	**4117-SW-4**	SM 2540C	WET/41654		
92277499009	**4117-MW-3**	SM 2540C	WET/41654		
92277499010	**4117-MW-4**	SM 2540C	WET/41654		
92277499011	**4117-MW-6**	SM 2540C	WET/41654		
92277499001	**4117-MW5**	EPA 300.0	WETA/25578		
92277499002	**4117-MW1**	EPA 300.0	WETA/25578		
92277499003	**4117-MW2**	EPA 300.0	WETA/25578		
92277499004	**4117-MW2 DUP**	EPA 300.0	WETA/25578		
92277499005	**4117-SW-1**	EPA 300.0	WETA/25578		
92277499006	**4117-SW-2**	EPA 300.0	WETA/25578		
92277499007	**4117-SW-3**	EPA 300.0	WETA/25578		
92277499008	**4117-SW-4**	EPA 300.0	WETA/25578		
92277499009	**4117-MW-3**	EPA 300.0	WETA/25578		
92277499010	**4117-MW-4**	EPA 300.0	WETA/25578		
92277499011	**4117-MW-6**	EPA 300.0	WETA/25578		
92277499001	**4117-MW5**	SM 4500-Cl-E	WETA/25656		
92277499002	**4117-MW1**	SM 4500-Cl-E	WETA/25656		
92277499003	**4117-MW2**	SM 4500-Cl-E	WETA/25656		
92277499004	**4117-MW2 DUP**	SM 4500-Cl-E	WETA/25656		
92277499005	**4117-SW-1**	SM 4500-Cl-E	WETA/25656		
92277499006	**4117-SW-2**	SM 4500-Cl-E	WETA/25656		
92277499007	**4117-SW-3**	SM 4500-Cl-E	WETA/25656		
92277499008	**4117-SW-4**	SM 4500-Cl-E	WETA/25656		
92277499009	**4117-MW-3**	SM 4500-Cl-E	WETA/25656		
92277499010	**4117-MW-4**	SM 4500-Cl-E	WETA/25656		
92277499011	**4117-MW-6**	SM 4500-Cl-E	WETA/25656		

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Pace Analytical®	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: November 17, 2015 Page 1 of 2*
	Document Number: **F-CHR-CS-003-rev.16.1**	Issuing Authority: Pace Huntersville Quality Office

Client Name: SCS

* Page 2 of 2 is for Internal Use Only

ourier: ☐ Fed Ex ☐ UPS ☐ USP ☐ Client ☐ Commercial ☐ Pace Other_____

Optional
Proj. Due Date:
Proj. Name:

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

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

hermometer Used: IR Gun T1505 Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

emp Correction Factor No Correction

orrected Cooler Temp.: 18 °C Biological Tissue is Frozen: Yes No N/A

emp should be above freezing to 6°C

Date and Initials of person examining contents: 11-24

		Comments:
hain of Custody Present:	☑Yes ☐No ☐N/A	1.
hain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
hain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
ampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
amples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
hort Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
ush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
ufficient Volume:	☑Yes ☐No ☐N/A	8.
orrect Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
ontainers Intact:	☑Yes ☐No ☐N/A	10.
tered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
mple Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix:_____		
containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
containers needing preservation are found to be in mpliance with EPA recommendation.	☑Yes ☐No ☐N/A	
eptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No	
mples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
adspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
o Blank Present:	☐Yes ☐No ☑N/A	16.
o Blank Custody Seals Present	☐Yes ☐No ☑N/A	
ce Trip Blank Lot # (if purchased):_____		

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

Person Contacted: _____ Date/Time: _____

omments/ Resolution: _____

URF Review: [signature] Date: 11/24/15

SRF Review: [signature] Date: 11/24/15

ote: 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# : 92277499

92277499

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: of

2041893

Section A Required Client Information:

Company: ESC SCS	
Address: Greensboro	
A-1 Sandrock	
Email To:	
Phone:	Fax:
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	
Copy To:	
Purchase Order No.:	
Project Name:	
Project Number:	

Section C Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: _____

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	COLLECTED Composite Start TIME	COLLECTED Composite End/Grab DATE	COLLECTED Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): App 1 8260+THF	App 2 8010/7470+Fe,Mn	Alkalinity	Chloride	Sulfate	TDS	Conductivity (Field)	pH (Field)	Temp (Field)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-5					11-23-15	1030	11.5	7	3		1	3					1	1	1	1	1	1	1	1	1		001
2	MW-1					11-23-15	1330	11.5	7	3		1	3					1	1	1	1	1	1	1	1	1		002
3	MW-2					11-23-15	1615	7.0	7	3		1	3					1	1	1	1	1	1	1	1	1		003
4	MW-2 DUP					11-23-15	1635	7.0	7	3		1	3					1	1	1	1	1	1	1	1	1		004
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	[signature]	11-23-15	1805	[signature] Pace	11-24-15	1023				
	[signature] Pace	11-24-15	1415	[signature]	11-24-15	1415	0	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Michael A McCracken

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 11-23-15

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Pace Analytical	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: November 17, 2015 Page 1 of 2*
	Document Number: **F-CHR-CS-003-rev.16.1**	Issuing Authority: Pace Huntersville Quality Office

lient Name: SCS

* Page 2 of 2 is for Internal Use Only

urier: ☐ Fed Ex ☐ UPS ☐ USP ☐ Client ☐ Commercial ☑ Pace Other_____

Optional
Proj. Due Date:
Proj. Name:

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

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

ermometer Used: IR Gun T1505 Type of Ice: (Wet) Blue None ☑ Samples on ice, cooling process has begun

mp Correction Factor No Correction

rected Cooler Temp.: 2.8 °C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: 11/11/15

mp should be above freezing to 6°C

		Comments:
ain of Custody Present:	☑Yes ☐No ☐N/A	1.
ain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
ain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
mpler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
mples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
rt Hold Time Analysis (<72hr):	☑Yes ☐No ☐N/A	6.
h Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
icient Volume:	☑Yes ☐No ☐N/A	8.
ect Containers Used:	☑Yes ☐No ☐N/A	9.
Pace Containers Used:	☑Yes ☐No ☐N/A	
tainers Intact:	☑Yes ☐No ☐N/A	10.
red volume received for Dissolved tests	☑Yes ☐No ☐N/A	11.
mple Labels match COC:	☑Yes ☐No ☐N/A	12.
ncludes date/time/ID/Analysis Matrix: WT		
ntainers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
ontainers needing preservation are found to be in pliance with EPA recommendation.	☑Yes ☐No ☐N/A	
tions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	
ples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
dspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Blank Present:	☐Yes ☐No ☑N/A	16.
Blank Custody Seals Present	☐Yes ☐No ☐N/A	
Trip Blank Lot # (if purchased):		

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

Person Contacted: _____ Date/Time: _____

mments/ Resolution: _____

IRF Review:	[signature]	**Date:**	11/25/15
RF Review:	[signature]	**Date:**	11/30/15

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

Place label here

92277499 OR

Handwrite project number (if no label available)

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www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: of 1942193

Section A Required Client Information:

Company:	SCS
Address:	Greensboro A-1 Sandback
Email To:	
Phone:	Fax:
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	
Copy To:	
Purchase Order No.:	
Project Name:	
Project Number:	

Section C Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: _____

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	COLLECTED Composite Start TIME	COLLECTED Composite End/Grab DATE	COLLECTED Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): App I 8260 + THF	App 2 6010 + Fe	Alkalinity	Chloride	Sulfate	TDS	Conductivity (Field)	pH (Field)	Temp (Field)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92277499
1	SW-1					11-25-15	0945	4.9	7	3		1	3					1	1	1	1	1	1	1	1	1		005
2	SW-2					11-25-15	0925	7.0	7	3		1	3					1	1	1	1	1	1	1	1	1		006
3	SW-3					11-25-15	0940	7.4	7	3		1	3					1	1	1	1	1	1	1	1	1		007
4	SW-4					11-25-15	0907	6.8	7	3		1	3					1	1	1	1	1	1	1	1	1		008
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	[signature]	11-25-15	1040	[signature]	11/25	1327				
	[signature]	11-25	1645	[signature]	11/25	1645	28	4	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Michael R McCracken

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 11-25-15

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

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Pace Analytical	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: November 17, 2015 Page 1 of 2*
	Document Number: **F-CHR-CS-003-rev.16.1**	Issuing Authority: Pace Huntersville Quality Office

lient Name: SCS

* Page 2 of 2 is for Internal Use Only

urier: ☐ Fed Ex ☐ UPS ☐ USP ☐ Client ☐ Commercial ☑ Pace Other_____

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

Optional
Proj. Due Date:
Proj. Name:

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

ermometer Used: IR Gun T1505 Type of Ice: (Wet) Blue None ☑ Samples on ice, cooling process has begun

mp Correction Factor No Correction

rected Cooler Temp.: 4.6 °C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: TM 11/25

mp should be above freezing to 6°C

		Comments:
ain of Custody Present:	☑Yes ☐No ☐N/A	1.
ain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
ain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
mpler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
mples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
rt Hold Time Analysis (<72hr):	☐Yes ☐No ☐N/A	6.
h Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
icient Volume:	☑Yes ☐No ☐N/A	8.
rect Containers Used:	☑Yes ☐No ☐N/A	9.
Pace Containers Used:	☑Yes ☐No ☐N/A	
tainers Intact:	☑Yes ☐No ☐N/A	10.
red volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
mple Labels match COC:	☑Yes ☐No ☐N/A	12.
ncludes date/time/ID/Analysis Matrix: WT		
ntainers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
ontainers needing preservation are found to be in pliance with EPA recommendation.	☑Yes ☐No ☐N/A	
tions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	
ples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
dspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Blank Present:	☐Yes ☐No ☑N/A	16.
Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Trip Blank Lot # (if purchased):		

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

Person Contacted: _____ Date/Time: _____

mments/ Resolution: _____

IRF Review:	DR	**Date:**	11/24/15
RF Review:	DR	**Date:**	11/30/15

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

Place label here

92277499 OR

Handwrite project number (if no label available)

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: of

2041894

Section A
Required Client Information:

Company: SCS
Address:
A-1 Sandpoint
Email To:
Phone: Fax:
Requested Due Date/TAT:

Section B
Required Project Information:

Report To:
Copy To:
Purchase Order No.:
Project Name:
Project Number:

Section C
Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location
STATE: _____

Section D
Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes
MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COLLECTED: COMPOSITE START TIME	COLLECTED: COMPOSITE END/GRAB DATE	COLLECTED: COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): App 1 8260 + THF	App 2 6010/7470 + Fe Mn	Alkalinity	Chloride	Sulfate	TDS	Conductivity (Field)	pH (Field)	Temp (Field)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. (92277499)
1	MW-3					11-24-15	1045	10.5	7	3		1	3					1	1	1	1	1	1	1	1	1		009
2	MW-4					11-24-15	1330	19.8	7	3		1	3					1	1	1	1	1	1	1	1	1		010
3	MW-6					11-24-15	1620	15.1	7	3		1	3					1	1	1	1	1	1	1	1	1		011
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	[signature]	11-24-15	1800	[signature]	11/25	1327				
	[signature]	11/25	1645	[signature] Pace	11/25/15	1645	4.6	4	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Michael R. McCracken

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 11-24-15

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

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Pace Analytical®	Document Name: Field Data Sheet	Document Issued: April 6, 2015 Page 1 of ____
	Document Number: F-CAR-FLD-001-rev.00	Issuing Authority: Pace Huntersville Quality Office

Field Data Sheet

Client: SCS Location: Greensboro NC, Al-Sandrock Project Name/#: NAV Sampling

Name and Afiliation (Sampler(s)): MRM, PP

Name and Afiliation (Inspector): ____

Well Information

Well ID: MW-1 Well Locked: (YES) NO

Well Diameter: 2" Construction: (PVC) Steel Stainless Steel

Total Well Depth: 46.65 ft Multi Factor*: 1.630 [*(Radius/12)2 x 3.14 x 7.48]

Static Water Level: 29.40 ft Casing Volume: 2.81 gallons

Height of Water Column: 17.25 ft Cal. 3 Volumes: 8.43 gallons

Purge Information

Date Purged: 11 / 23 / 15 Start Time: 1105 Finish: 1330 Purge Rate: 100mL/min

Purging Method: Monsoon Total Volume Purged: 14500 ~~gallons~~ mL

Sampling Information

Date Collected: 11-23-15 Time Collected: 1330 am (pm)

Sampling Equipment Used: Monsoon

Bottle Type	Preservation	Analysis Required

Field Measurements/Observations

Sample Temp (°C): 11.5 Time: 1330 Turbidity (ntu): 20.27 Time: 1330

Sample pH (s.u.): 6.4 Time: 1330 Diss Oxy (mg/L): 4.43 Time: 1330

Specific Cond. (uS): 186.6 Time: 1330 Res. Cl (mg/L): — Time: —

ReDox (mV): 104.1 Time: 1330 Other: — Time: —

Odor: None Time: 1330 Appearance: Haze

General/Weather Observations

40° sunny

Sampler Signature/Date: [signature] 11-23-15

Stabilization Test

Time Purged	pH (s.u.)	Spec. Cond. (uS)	ReDox (mV)	Turbidity (ntu)	Diss Oxy. (mg/L)	Temp. (°C)	Volume Removed	Other
1110	6.6	203.6	30.2	131.0	4.37	12.4	500	
1115	6.6	211.6	42.5	162.5	3.86	12.5	1000	
1120	6.6	213.2	47.4	136.6	3.78	12.9	1500	
1130	6.6	210.3	58.5	116.5	3.73	12.0	2500	
1140	6.5	207.8	64.5	84.43	3.70	11.8	3500	

Pace Analytical	Document Name: Field Data Sheet	Document Issued: April 6, 2015 Page 2 of _____
	Document Number: F-CAR-FLD-001.rev.011	Issueing Authority: Pace Huntersville Quality Office

Client: SCS

Location: A-1 Sand Rock Brunsboro

Project: Nov. Sampling

Well ID: MW-1

Well Diameter	Multiplication Factor*
1	0.0408
1.2	0.0918
1.625	0.1080
2	0.1630
3	0.3670
4	0.6530
6	1.4680
8	2.6100

Stabilization Test

Time Purged	pH (s.u.)	Spec. Cond. (uS)	ReDox (mV)	Turbidity (ntu)	Diss Oxy. (mg/L)	Temp. (°C)	Volume Removed	Other
1150	6.5	206.0	69.4	70.26	3.74	11.6	4500	
1200	6.5	204.7	73.8	59.77	3.70	12.0	5500	
1210	6.5	200.3	78.8	47.23	4.14	13.0	6500	
1220	6.5	194.3	84.5	36.49	4.34	12.9	7500	
1230	6.5	194.3	84.0	33.68	4.33	12.9	8500	
1240	6.4	189.7	89.5	29.35	4.52	13.0	9500	
1250	6.4	189.4	94.3	28.61	4.61	12.8	10500	
1300	6.4	188.1	96.0	25.29	4.58	12.8	11500	
1310	6.4	187.4	99.7	24.44	4.31	11.9	12500	
1320	6.4	186.4	102.9	21.66	4.72	11.6	13500	
1330	6.4	186.6	104.1	20.27	4.43	11.5	14500	

Pace Analytical	Document Name: Field Data Sheet	Document Issued: April 6, 2015 Page 1 of ___
	Document Number: F-CAR-FLD-001-rev.00	Issuing Authority: Pace Huntersville Quality Office

Field Data Sheet

Client: SCS Location: Alsand Road Greensboro Project Name/#: Nov Sampling

Name and Afiliation (Sampler(s): MEM PP

Name and Afiliation (Inspector): ___

Well Information

Well ID: MW-2 Well Locked: YES NO

Well Diameter: 2" Construction: PVC Steel Stainless Steel

Total Well Depth: 32.80 ft Multi Factor*: .1630 [*(Radius/12)2 x 3.14 x 7.48]

Static Water Level: 8.10 ft Casing Volume: 4.02 gallons

Height of Water Column: 24.7 ft Cal. 3 Volumes: 12.07 gallons

Purge Information

Date Purged: 11 / 23 / 15 Start Time: 1420 Finish: 1615 Purge Rate: 100 mL/min

Purging Method: Monsoon Total Volume Purged: 1.500 ~~gallons~~ mL

Sampling Information

Date Collected: 11-23-15 Time Collected: 1615 am pm

Sampling Equipment Used: Monsoon

Bottle Type	Preservation	Analysis Required

Field Measurements/Observations

Sample Temp (°C): 7.0 Time: 1615 Turbidity (ntu): 9.62 Time: 1615

Sample pH (s.u.): 6.1 Time: 1615 Diss Oxy (mg/L): .21 Time: 1615

Specific Cond. (uS): 363.5 Time: 1615 Res. Cl (mg/L): — Time: —

ReDox (mV): 40.2 Time: 1615 Other: — Time: —

Odor: None Time: 1615 Appearance: Clear

General/Weather Observations

55° sunny wind * Dup 1635

Sampler Signature/Date: [signature] 11-23-15

Stabilization Test

Time Purged	pH (s.u.)	Spec. Cond. (uS)	ReDox (mV)	Turbidity (ntu)	Diss Oxy. (mg/L)	Temp. (°C)	Volume Removed	Other
1425	6.1	210.8	72.9	1072	1.12	13.0	500	
1435	6.1	214.3	62.2	942.1	.47	12.7	1500	
1445	6.1	219.4	55.0	668.9	.41	11.9	2500	
1455	6.1	291.7	44.7	338.0	.56	10.9	3500	
1505	6.1	323.6	41.5	192.5	.29	10.1	4500	

Client: SCS

Location: A1 Sandlock Greensboro NC

Project: NOV Sample

Well ID: MW-2

Well Diameter	Multiplication Factor*
1	0.0408
1.2	0.0918
1.625	0.1080
2	0.1630
3	0.3670
4	0.6530
6	1.4680
8	2.6100

Stabilization Test

Time Purged	pH (s.u.)	Spec. Cond. (uS)	ReDox (mV)	Turbidity (ntu)	Diss Oxy. (mg/L)	Temp. (°C)	Volume Removed	Other
1575	6.1	343.1	40.0	113.2	.26	8.9	5500	
1525	6.1	355.1	38.0	76.56	.24	9.1	6500	
1535	6.2	355.3	38.1	58.01	.25	9.0	7500	
1545	6.1	358.0	37.7	31.11	.22	8.8	8500	
1555	6.1	359.0	38.8	19.55	.22	8.2	9500	
1605	6.1	361.2	39.9	12.82	.21	7.0	10500	
1615	6.1	363.5	40.2	9.62	.21	7.0	11500	

Pace Analytical	Document Name: Field Data Sheet	Document Issued: April 6, 2015 Page 1 of ___
	Document Number: F-CAR-FLD-001-rev.00	Issuing Authority: Pace Huntersville Quality Office

Field Data Sheet

Client: SCS Location: A.I. Sandrock Creek Project Name/#: New Sampling

Name and Afiliation (Sampler(s): MARM PP

Name and Afiliation (Inspector): —

Well Information

Well ID: MW-3 Well Locked: (YES) NO

Well Diameter: 2" Construction: (PVC) Steel Stainless Steel

Total Well Depth: 33.80 ft Multi Factor*: 1.630 [*(Radius/12)2 x 3.14 x 7.48]

Static Water Level: 2.94 ft Casing Volume: 5.03 gallons

Height of Water Column: 30.86 ft Cal. 3 Volumes: 15.09 gallons

Purge Information

Date Purged: 11 / 24 / 15 Start Time: 0840 Finish: 1045 Purge Rate: 100 mL/min

Purging Method: Monsoon Total Volume Purged: 12500 ~~gallons~~ mL

Sampling Information

Date Collected: 11-24-15 Time Collected: 1045 (am) pm

Sampling Equipment Used: Monsoon

Bottle Type	Preservation	Analysis Required

Field Measurements/Observations

Sample Temp (°C): 10.5 Time: 1045 Turbidity (ntu): 1000+ Time: 1045

Sample pH (s.u.): 6.1 Time: 1045 Diss Oxy (mg/L): 3.04 Time: 1045

Specific Cond. (uS): 163.5 Time: 1045 Res. Cl (mg/L): — Time: —

ReDox (mV): 159.6 Time: 1045 Other: — Time: —

Odor: None Time: 1045 Appearance: Muddy

General/Weather Observations The Bottom was very ~~stiff~~ soft when we stuck the indicator in. 28° sunny, we adjusted pump height, we speed up, and slow Down flow could not clear up

Sampler Signature/Date: [signature] 11-24-15

Stabilization Test

Time Purged	pH (s.u.)	Spec. Cond. (uS)	ReDox (mV)	Turbidity (ntu)	Diss Oxy. (mg/L)	Temp. (°C)	Volume Removed	Other
0845	6.0	167.4	111.5	496.1	3.31	9.4	500	muddy
0855	6.0	168.5	135.0	484.3	3.47	4.2	1500	"
0910	6.0	167.3	144.0	695.2	3.61	1.9	3000	"
0920	6.0	166.3	148	1013	3.66	1.3	4000	
0930	6.1	164.7	150.3	1000+	3.54	2.4	5000	

Pace Analytical	Document Name: Field Data Sheet	Document Issued: April 6, 2015 Page 2 of _____
	Document Number: F-CAR-FLD-001.rev.011	Issueing Authority: Pace Huntersville Quality Office

Client: SCS

Location: Al Sandlock Greensboro NC

Project: NOV sampling

Well ID: MW-3

Well Diameter	Multiplication Factor*
1	0.0408
1.2	0.0918
1.625	0.1080
2	0.1630
3	0.3670
4	0.6530
6	1.4680
8	2.6100

Stabilization Test

Time Purged	pH (s.u.)	Spec. Cond. (uS)	ReDox (mV)	Turbidity (ntu)	Diss Oxy. (mg/L)	Temp. (°C)	Volume Removed	Other
0940	6.1	164.8	157.4	1000+	3.45	3.3	6000	
0950	6.1	164.4	150.8	637.5	3.28	5.8	7000	
1000	6.1	164.4	153.1	1100	3.17	7.9	8000	
1010	6.1	163.8	152.2	1000+	3.30	8.2	9000	
1020	6.1	163.6	158.7	1000+	3.10	9.	10000	
1030	6.1	163.6	159.4	1000+	3.06	10.1	11000	
1040	6.1	163.5	159.2	1000+	3.01	10.6	12000	
1045	6.1	163.5	159.6	1000+	3.04	10.5	12500	

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Field Data Sheet

Client: SCS Location: A-1 Sand Rock Creek Project Name/#: NOV Sampling

Name and Afiliation (Sampler(s): MRM PP

Name and Afiliation (Inspector): —

Well Information

Well ID: MW-4 Well Locked: (YES) NO

Well Diameter: 2" Construction: (PVC) Steel Stainless Steel

Total Well Depth: 25.78 ft Multi Factor*: .1630 [*(Radius/12)2 x 3.14 x 7.48]

Static Water Level: 4.28 ft Casing Volume: 3.50 gallons

Height of Water Column: 21.50 ft Cal. 3 Volumes: 10.51 gallons

Purge Information

Date Purged: 11 / 24 / 15 Start Time: 1125 Finish: 1330 Purge Rate: 100 mL/min

Purging Method: Monsoon Total Volume Purged: 12000 ~~gallons~~ mL

Sampling Information

Date Collected: 11-24-15 Time Collected: 1330 am (pm)

Sampling Equipment Used: Monsoon

Bottle Type	Preservation	Analysis Required

Field Measurements/Observations

Sample Temp (°C): 19.8 Time: 1330 Turbidity (ntu): 125.1 Time: 1330

Sample pH (s.u.): 6.0 Time: 1330 Diss Oxy (mg/L): .96 Time: 1330

Specific Cond. (uS): 273.7 Time: 1330 Res. Cl (mg/L): — Time: —

ReDox (mV): 168.2 Time: 1330 Other: — Time: —

Odor: None Time: 1330 Appearance: murky

General/Weather Observations

38° sunny

Sampler Signature/Date: [signature] 11-24-15

Stabilization Test

Time Purged	pH (s.u.)	Spec. Cond. (uS)	ReDox (mV)	Turbidity (ntu)	Diss Oxy. (mg/L)	Temp. (°C)	Volume Removed	Other
1130	6.0	283.1	179.7	285.1	1.71	16.3	500	
1135	6.0	282.7	178.1	171.3	1.47	16.3	1000	
1145	6.0	280.5	174.8	202.8	1.42	16.9	2000	
1155	6.0	275.6	171.7	273.1	1.23	18.0	3000	
1205	6.0	274.5	170.6	257.1	1.16	18.6	4000	

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Client: SCS

Location: Al Sandrock

Project: NOV Sampling

Well ID: MW-4

Well Diameter	Multiplication Factor*
1	0.0408
1.2	0.0918
1.625	0.1080
2	0.1630
3	0.3670
4	0.6530
6	1.4680
8	2.6100

Stabilization Test

Time Purged	pH (s.u.)	Spec. Cond. (uS)	ReDox (mV)	Turbidity (ntu)	Diss Oxy. (mg/L)	Temp. (°C)	Volume Removed	Other
1215	6.0	273.8	170.0	286.2	1.11	18.7	5000	
1225	6.0	273.1	169.4	253.3	1.06	19.1	6000	
1235	6.0	273.7	169.1	215.6	.99	19.2	7000	
1245	6.0	273.9	168.9	192.3	.99	19.6	8000	
1255	6.0	273.6	168.4	165.9	.98	20.0	9000	
1305	6.0	273.1	168.4	150.8	.96	20.2	10000	
1315	6.0	273.3	168.7	141.8	1.11	19.9	11000	
1330	6.0	273.7	168.2	125.1	.96	19.8	12000	

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Field Data Sheet

Client: SCS Location: A-1 Greensboro NC Project Name/#: Mon. Sample

Name and Afiliation (Sampler(s): MRM - PP

Name and Afiliation (Inspector): —

Well Information

Well ID: MW-5 Well Locked: YES NO

Well Diameter: 2" Construction: PVC Steel Stainless Steel

Total Well Depth: 31.20 ft Multi Factor*: .1630 [*(Radius/12)2 x 3.14 x 7.48]

Static Water Level: 14.68 ft Casing Volume: 2.69 gallons

Height of Water Column: 16.52 ft Cal. 3 Volumes: 8.07 gallons

Purge Information

Date Purged: 11 / 23 / 15 Start Time: 0910 Finish: 1030 Purge Rate: 100 mL/min

Purging Method: monsoon Total Volume Purged: 8000 mL gallons

Sampling Information

Date Collected: 11-23-15 Time Collected: 1030 am pm

Sampling Equipment Used: monsoon

Bottle Type	Preservation	Analysis Required

Field Measurements/Observations

Sample Temp (°C): 10.5 Time: 1030 Turbidity (ntu): 8.47 Time: 1030

Sample pH (s.u.): 6.3 Time: 1030 Diss Oxy (mg/L): .33 Time: 1030

Specific Cond. (uS): 466.6 Time: 1030 Res. Cl (mg/L): — Time: —

ReDox (mV): -12.4 Time: 1030 Other: — Time: /

Odor: stink Time: 1030 Appearance: clear

General/Weather Observations

30°C windy. sunshine

Sampler Signature/Date: M. Oren 11-23-15

Stabilization Test

Time Purged	pH (s.u.)	Spec. Cond. (uS)	ReDox (mV)	Turbidity (ntu)	Diss Oxy. (mg/L)	Temp. (°C)	Volume Removed	Other
0915	6.2	582.3	-10.9	32.63	.57	11.7	500	
0920	6.2	552.2	-19.7	44.77	.75	10.6	1000	
0925	6.2	534.3	-27.8	53.31	.45	10.7	1500	
0930	6.2	527.2	-28.2	51.44	.65	1.011	2000	
0940	6.3	500.2	-28.2	32.62	.32	10.3	3000	

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Client: SCS

Location: Greenshoro Al. sandrock

Project: Nov. Sample

Well ID: MW-5

Well Diameter	Multiplication Factor*
1	0.0408
1.2	0.0918
1.625	0.1080
2	0.1630
3	0.3670
4	0.6530
6	1.4680
8	2.6100

Stabilization Test

Time Purged 0950	pH (s.u.)	Spec. Cond. (uS)	ReDox (mV)	Turbidity (ntu)	Diss Oxy. (mg/L)	Temp. (°C)	Volume Removed	Other
~~105~~	6.3	478.1	-24.6	21.96	.40	9.8	4000	
1000	6.3	477.3	-24.4	19.06	.36	9.9	5200	
1010	6.3	42.2	-19.6	13.57	.30	10.5	6000	
1020	6.3	467.2	-15.6	9.37	.28	10.6	7000	
1025	6.3	468.6	-14.5	9.08	.28	10.6	7500	
1030	6.3	466.6	-12.4	8.47	.33	10.5	8000	

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Field Data Sheet

Client: SCS Location: Alsandrock Greensboro Project Name/#: NOV Sampling

Name and Afiliation (Sampler(s): MRM PD

Name and Afiliation (Inspector): —

Well Information

Well ID: MW-6 Well Locked: (YES) NO

Well Diameter: 2' Construction: (PVC) Steel Stainless Steel

Total Well Depth: 42.8 ft Multi Factor*: .1630 [*(Radius/12)2 x 3.14 x 7.48]

Static Water Level: 24.27 ft Casing Volume: 3.02 gallons

Height of Water Column: 18.53 ft Cal. 3 Volumes: 9.06 gallons

Purge Information

Date Purged: 11 / 24 / 15 Start Time: 1415 Finish: 1620 Purge Rate: 100mL/min

Purging Method: monsoon Total Volume Purged: 12000 ~~gallons~~ mL

Sampling Information

Date Collected: 11-24-15 Time Collected: 1620 am (pm)

Sampling Equipment Used: monsoon

Bottle Type	Preservation	Analysis Required

Field Measurements/Observations

Sample Temp (°C): 15.1 Time: 1620 Turbidity (ntu): 148.5 Time: 1620

Sample pH (s.u.): 6.3 Time: 1620 Diss Oxy (mg/L): .15 Time: 1620

Specific Cond. (uS): 213.3 Time: 1620 Res. Cl (mg/L): — Time: —

ReDox (mV): 29.3 Time: 1620 Other: — Time: —

Odor: none Time: 1620 Appearance: murky

General/Weather Observations

50° sunny, could not find the key, probe came out covered

Sampler Signature/Date: [signature] 11-24-15

Stabilization Test

Time Purged	pH (s.u.)	Spec. Cond. (uS)	ReDox (mV)	Turbidity (ntu)	Diss Oxy. (mg/L)	Temp. (°C)	Volume Removed	Other
1420	6.2	224.7	81.6	1000+	.42	15.9	500	
1430	6.2	221.1	76.0	768.2	.93	16.0	1500	
1440	6.2	217.3	59.2	425.2	.26	16.0	2500	
1450	6.2	217.0	58.8	399.5	.27	15.9	3500	
1500	6.2	215.0	46.0	290.2	.17	15.8	4500	

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Client: ~~X~~ SCS

Location: AI Sandlock Greensboro NC

Project: NOV. Sampling

Well ID: MW-6

Well Diameter	Multiplication Factor*
1	0.0408
1.2	0.0918
1.625	0.1080
2	0.1630
3	0.3670
4	0.6530
6	1.4680
8	2.6100

Stabilization Test

Time Purged	pH (s.u.)	Spec. Cond. (uS)	ReDox (mV)	Turbidity (ntu)	Diss Oxy. (mg/L)	Temp. (°C)	Volume Removed	Other
1510	6.2	214.9	45.4	260.4	.18	15.8	5500	
1520	6.2	214.0	41.0	239.9	.15	15.8	6500	
1530	6.3	213.9	37.8	239.8	.18	15.6	7500	
1540	6.3	214.3	31.9	228.9	.15	15.6	8500	
1550	6.3	214.2	31.8	212.6	.14	15.5	9500	
1600	6.3	214.0	30.7	185.2	.14	15.7	10000	
1610	6.3	213.3	30.6	166.0	.14	15.6	11000	
1620	6.3	213.3	29.3		.15	15.1	12000	

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Field Data Sheet

Client: SCS Location: A1 - Greensboro NC Project Name/#: NOV Sampling

Name and Afiliation (Sampler(s): MRM PP

Name and Afiliation (Inspector): —

Well Information

Well ID: SW-1 Well Locked: YES NO

Well Diameter: _____ Construction: PVC Steel Stainless Steel

Total Well Depth: _____ft Multi Factor*: _____ [*(Radius/12)2 x 3.14 x 7.48]

Static Water Level: _____ft Casing Volume: _____ gallons

Height of Water Column: _____ft Cal. 3 Volumes: _____ gallons

Purge Information

Date Purged: ____/____/____ Start Time: _____ Finish: _____ Purge Rate: _____

Purging Method: _____ Total Volume Purged: _____ gallons

Sampling Information

Date Collected: 11-25-15 Time Collected: 0945 (am) pm

Sampling Equipment Used: Grab

Bottle Type	Preservation	Analysis Required

Field Measurements/Observations

Sample Temp (°C): 6.9 Time: 0945 Turbidity (ntu): 10.54 Time: 0945

Sample pH (s.u.): 7.0 Time: 0945 Diss Oxy (mg/L): 11.29 Time: 0945

Specific Cond. (uS): 373.4 Time: 0945 Res. Cl (mg/L): — Time: —

ReDox (mV): 112 Time: 0945 Other: — Time: —

Odor: none Time: 0945 Appearance: clear

General/Weather Observations

38° sunny

Sampler Signature/Date: [signature] 11-25-15

Stabilization Test

Time Purged	pH (s.u.)	Spec. Cond. (uS)	ReDox (mV)	Turbidity (ntu)	Diss Oxy. (mg/L)	Temp. (°C)	Volume Removed	Other

Pace Analytical	Document Name: Field Data Sheet	Document Issued: April 6, 2015 Page 1 of ____
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Field Data Sheet

Client: SCS Location: Alsandrank Project Name/#: Nov Sampling

Name and Afiliation (Sampler(s): MAM PP

Name and Afiliation (Inspector): —

Well Information

Well ID: SW-2 Well Locked: YES NO

Well Diameter: _____ Construction: PVC Steel Stainless Steel

Total Well Depth: _____ft Multi Factor*: _____ [*(Radius/12)2 x 3.14 x 7.48]

Static Water Level: _____ft Casing Volume: _____ gallons

Height of Water Column: _____ft Cal. 3 Volumes: _____ gallons

Purge Information

Date Purged: ____/____/____ Start Time: _____ Finish: _____ Purge Rate: _____

Purging Method: _____ Total Volume Purged: _____ gallons

Sampling Information

Date Collected: 11-25-15 Time Collected: 0925 (am) pm

Sampling Equipment Used: Grab

Bottle Type	Preservation	Analysis Required

Field Measurements/Observations

Sample Temp (°C): 7.0 Time: 0925 Turbidity (ntu): 12.28 Time: 0925

Sample pH (s.u.): 7.0 Time: 0925 Diss Oxy (mg/L): 10.08 Time: 0925

Specific Cond. (uS): 181.7 Time: 0925 Res. Cl (mg/L): — Time: —

ReDox (mV): 102.0 Time: 0925 Other: — Time: —

Odor: None Time: 0925 Appearance: Clear

General/Weather Observations

35° sunny

Sampler Signature/Date: [signature] 11-25-15

Stabilization Test

Time Purged	pH (s.u.)	Spec. Cond. (uS)	ReDox (mV)	Turbidity (ntu)	Diss Oxy. (mg/L)	Temp. (°C)	Volume Removed	Other

Pace Analytical	Document Name: Field Data Sheet	Document Issued: April 6, 2015 Page 1 of ___
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Field Data Sheet

Client: SCS Location: A1 Greensboro NC Project Name/#: NOV. Sampling

Name and Afiliation (Sampler(s): MAM PP

Name and Afiliation (Inspector): —

Well Information

Well ID: SW-3 Well Locked: YES NO

Well Diameter: _____ Construction: PVC Steel Stainless Steel

Total Well Depth: _____ ft Multi Factor*: _____ [*(Radius/12)2 x 3.14 x 7.48]

Static Water Level: _____ ft Casing Volume: _____ gallons

Height of Water Column: _____ ft Cal. 3 Volumes: _____ gallons

Purge Information

Date Purged: ___/___/___ Start Time: _____ Finish: _____ Purge Rate: _____

Purging Method: _____ Total Volume Purged: _____ gallons

Sampling Information

Date Collected: 11-25-15 Time Collected: 0840 (am) pm

Sampling Equipment Used: Grab

Bottle Type	Preservation	Analysis Required

Field Measurements/Observations

Sample Temp (°C): 7.4 Time: 0840 Turbidity (ntu): 27.17 Time: 0840

Sample pH (s.u.): 7.1 Time: 0840 Diss Oxy (mg/L): 9.47 Time: 0840

Specific Cond. (uS): 83.4 Time: 0840 Res. Cl (mg/L): — Time: _____

ReDox (mV): 95.2 Time: 0840 Other: — Time: _____

Odor: none Time: 0840 Appearance: Clear

General/Weather Observations

28° sunny

Sampler Signature/Date: [signature] 11-25-15

Stabilization Test

Time Purged	pH (s.u.)	Spec. Cond. (uS)	ReDox (mV)	Turbidity (ntu)	Diss Oxy. (mg/L)	Temp. (°C)	Volume Removed	Other

Pace Analytical®	Document Name: Field Data Sheet	Document Issued: April 6, 2015 Page 1 of ___
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Field Data Sheet

Client: SCS Location: A-1 Sandrock Ground Project Name/#: NOV. SAMP

Name and Afiliation (Sampler(s): MAM PP

Name and Afiliation (Inspector): —

Well Information

Well ID: SW-4 Well Locked: YES NO

Well Diameter: _____ Construction: PVC Steel Stainless Steel

Total Well Depth: _____ ft Multi Factor*: _____ [*(Radius/12)2 x 3.14 x 7.48]

Static Water Level: _____ ft Casing Volume: _____ gallons

Height of Water Column: _____ ft Cal. 3 Volumes: _____ gallons

Purge Information

Date Purged: ___/___/___ Start Time: _____ Finish: _____ Purge Rate: _____

Purging Method: _____ Total Volume Purged: _____ gallons

Sampling Information

Date Collected: 11-25-15 Time Collected: 0907 (am) pm

Sampling Equipment Used: Grab

Bottle Type	Preservation	Analysis Required

Field Measurements/Observations

Sample Temp (°C): 6.4 Time: 0907 Turbidity (ntu): 14.97 Time: 0907

Sample pH (s.u.): 6.6 Time: 0907 Diss Oxy (mg/L): 9.62 Time: 0907

Specific Cond. (uS): 333.3 Time: 0907 Res. Cl (mg/L): — Time: —

ReDox (mV): 117.1 Time: 0907 Other: — Time: —

Odor: None Time: 0907 Appearance: Clear

General/Weather Observations

32° sunny

Sampler Signature/Date: [signature] 11-25-15

Stabilization Test

Time Purged	pH (s.u.)	Spec. Cond. (uS)	ReDox (mV)	Turbidity (ntu)	Diss Oxy. (mg/L)	Temp. (°C)	Volume Removed	Other

ATTACHMENT 2

Environmental Monitoring Reporting Form and

Electronic Data Deliverable (EDD; Electronic File Only)

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):

SCS Engineers

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

Name: Marta VanDussen Phone: 828-285-8951

E-mail: mvandussen@scsengineers.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
A-1 Sandrock C&D Landfill	2132 Bishop Road, Greensboro Guilford County	41-17	.0500	November 23, 24 and 25, 2015

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) _____
☐ 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.

David Garrett P.G. 919-418-4375

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

Digitally signed by dgarrett@scsengineers.com
DN: cn=dgarrett@scsengineers.com
Reason: Regulatory submittal
Date: 2016.02.17 10:49:16 -05'00'

02/17/2016 Affix NC Licensed/ Professional Geologist Seal

Signature Date

322 Chapanoke Road, Suite 101, Raleigh, North Carolina 27603

Facility Representative Address

C-1837

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

NORTH CAROLINA LICENSED SEAL 983 GEOLOGIST DAVID GARRETT

Revised 6/2009