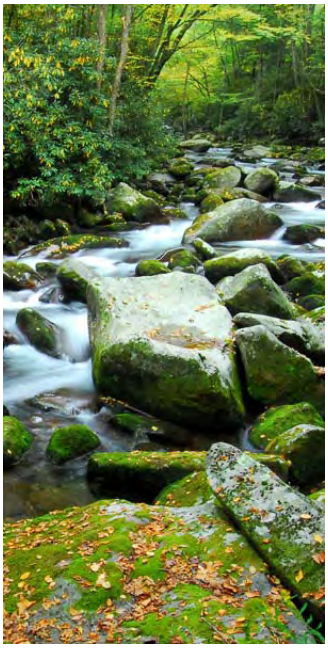

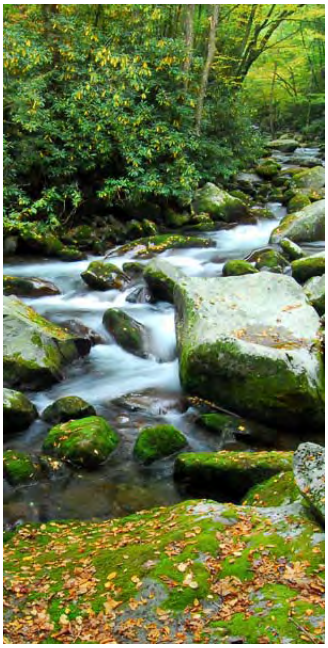

ALTAMONT ENVIRONMENTAL, INC.

ENGINEERING & HYDROGEOLOGY

November 2012
Water Quality Monitoring Report

Clay County Closed
Municipal Solid Waste Landfill

Clay County, North Carolina
Permit #22-01

February 6, 2013

Prepared for
Clay County, North Carolina
Project Number 2367.01

Prepared by
Altamont Environmental, Inc.
231 Haywood Street
Asheville, NC 28801
(828) 281-3350

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):

Altamont Environmental, Inc.

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

Name: Marta A. VanDussen Phone: (828) 281-3350

E-mail: mvandussen@altamontenvironmental.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Clay County Closed Municipal Solid Waste Facility	1160 Hinton Center Road (S.R. 1148), Hayesville, North Carolina 28904	22-01	.1600	November 15, 2012

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.

Robert Hastings, P.G. Project Geologist (828) 281-3350

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

Affix NC Licensed/ Professional Geologist Seal

NORTH CAROLINA LICENSED SEAL 1906 GEOLOGIST Robert W. Hastings

Signature Date

231 Haywood Street, Asheville, NC 28801

Facility Representative Address

C-2185

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

Revised 6/2009

November 2012
Water Quality Monitoring Report

Clay County Closed
Municipal Solid Waste Landfill

Clay County, North Carolina
Permit #22-01

February 6, 2013

NORTH CAROLINA LICENSED SEAL 1906 GEOLOGIST Robert W. Hastings

Robert Hastings, P.G.
Project Geologist

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C. Environmental Monitoring Reporting Form and Electronic Submittal of Environmental Monitoring Data 2201Nov2012 (CD Only)

1.0 Introduction

The Clay County Solid Waste Department maintains a solid waste facility located at 1160 Hinton Center Road (State Road 1148) in Hayesville, Clay County, North Carolina (Figure 1). The facility accepts solid waste from Clay County, and includes the following permitted components:

- A closed municipal solid waste (MSW) Landfill (closed landfill; Permit 22-01)
- An active transfer station (Permit 22-02T)

According to the *Landfill Gas Monitoring Plan* prepared by McGill Associates dated November 2010, the landfill was officially closed per the letter to the North Carolina Department of Environment and Natural Resources (DENR) dated December 21, 1995. The permit for the landfill requires annual monitoring of groundwater and surface water quality. This report describes a groundwater and surface water quality sampling event conducted in November 2012.

This report is being submitted in accordance with (1) monitoring requirements for closed landfills as stipulated in the DENR Division of Waste Management (DWM) Permit No. 22-01 and amendments dated April 19, 1990 issued to the Clay County Solid Waste Department as well as (2) requirements stipulated in the DENR Solid Waste Management Rules Title 15A, Subchapter 13B, Section .1600, of the North Carolina Administrative Code (15A NCAC 13B.1600).

This report presents analytical results and provides an evaluation of groundwater and surface water quality for the closed landfill.

2.0 Methods

2.1 Groundwater and Surface Water Sampling

The groundwater monitoring network consists of an upgradient, background monitoring well (MW#1) and five downgradient monitoring wells (MW#2, MW#3, MW#4, MW#5, and MW#6). MW#1 is located in the northern portion of the landfill, north of an existing closed MSW disposal cell and Clay County's wood waste collection and processing area. MW#2 is located in the southeast corner of the facility property on the north side of S.R. 1148, south of an existing closed MSW landfill cell. MW#3 and MW#4 are located along or near the southernmost property line of the landfill downgradient of an existing closed MSW landfill cell. MW#5 and MW#6 are located along the southwestern property line of the facility downgradient of an existing closed MSW landfill cell. A map depicting the location of the monitoring wells is included as Figure 2.

In October 2011, Samuel L. Sprinkle & Associates, P.A., a professional surveying firm certified in the state of North Carolina, surveyed the horizontal and vertical locations of the monitoring wells associated with Clay County Landfill. The certified survey data were presented in the previous monitoring report (Altamont 2012).

Prior to collecting groundwater samples from the monitoring wells, the static water level and total depth at each of the wells was measured and recorded. These data are presented in Table 1 and shown on Figure 3. Groundwater flow direction is interpreted to be generally to the southwest toward the Hiawassee River.

Closed landfill monitoring wells (MW#1, MW#2, MW#3, MW#4, MW#5, and MW#6) and surface water sample locations (UPSTREAM and DOWNSTREAM) were sampled by Environmental, Inc. of Sylva, North Carolina personnel on November 15, 2012 (Table 2). Monitoring well MW#1 was not sampled due to casing damage in years 2009 and 2010. In March 2011, Clay County personnel repaired MW#1 and groundwater samples were collected during the November 2011 and 2012 sampling events. Altamont instructed Environmental, Inc. regarding sampling procedures before the sampling events. Approximate sample locations are depicted on Figure 2.

2.1.1 Groundwater Purging and Sampling Methods

Prior to sample collection at each monitoring well, field parameters consisting of pH, specific conductivity, turbidity, and temperature were measured and recorded. A field data sheet and certificate of analysis are presented in Appendix A. Groundwater monitoring wells were purged with a new disposable polyethylene bailer and a sample was collected.

2.1.2 Surface Water Sampling Methods

Surface water samples UPSTREAM and DOWNSTREAM were collected at designated locations along a minor unnamed tributary and the Hiawassee River, which flows adjacent to the western and southern site boundary in a south-to-north direction (Figure 2). The surface water sample collected at the upstream location is assumed to represent surface water quality upstream of the closed landfill, while the surface water sample collected at the downstream location is assumed to represent surface water quality downstream of the closed landfill. One set of field parameters, including temperature, pH, specific conductivity, and turbidity, was measured and recorded at each surface water sampling location prior to sample collection (Appendix A).

2.2 Sample Handling, Documentation, and Analysis

Field parameters and additional observations pertaining to the closed landfill sampling locations are recorded on the certificate of analysis provided by Environmental, Inc. included in Appendix A. Following sample collection, groundwater and surface water samples were transported to Pace Analytical Services, Inc.

(Pace), a laboratory certified in North Carolina, located in Asheville. Environmental, Inc. submitted the water samples collected from the monitoring wells and the surface water sampling locations to Pace for analysis as follows:

- Appendix I volatile organic compounds (VOCs) using US Environmental Protection Agency (EPA) Method 8260
- Appendix I metals using EPA Methods 6010 and 7470

An equipment blank and trip blank, provided by the laboratory, were placed in the sample coolers and analyzed for Appendix I VOCs and/or metals. Proper chain-of-custody documentation procedures were followed during collection and transport of each sample. The laboratory analytical reports and chain-of-custody documentation are included in Appendix B. Laboratory analyses performed on the samples are summarized in Table 2.

3.0 Analytical Results

The laboratory analytical results for groundwater, surface water, equipment blank, and trip blank samples collected at the closed landfill are provided in the laboratory report of analysis issued by Pace (Appendix B). In addition, all the laboratory analytical results and measured field parameters are summarized in the Electronic Data Deliverable (EDD) format (Appendix C) specified by the Solid Waste Section (SWS) in a DENR DWM memorandum dated October 27, 2006 and its addendum dated February 23, 2007.

As stipulated in the October 27, 2006 memorandum, non-detections were reported at their method detection limits (MDL), and all concentrations exceeding the laboratory-specific MDLs were reported and appropriately qualified (Tables 3, 4, and 5). The MDL is the minimum concentration of a substance that can be measured and reported by a laboratory with 99 percent confidence that the analyte concentration is greater than zero. The method reporting limit (MRL) is the minimum concentration of a target analyte that can be accurately determined by the referenced method. All detections were compared to analyte-specific Solid Waste Section Limits (SWSLs) established by the SWS. The SWSL is the lowest concentration, determined by the SWS, of an analyte in a sample that can be quantitatively determined with suitable precision and accuracy. A "J" qualifier is used by the laboratory for a parameter that is detected at an estimated concentration greater than the MDL but less than the laboratory's MRL. If the reported concentration is greater than the laboratory's MRL and less than the SWSL, the analytical result is qualified as estimated by Altamont per SWS requirements, and is flagged with a "J" qualifier (italicized J-flag). Detected concentrations of constituents below the applicable SWSLs are summarized in Table 3, but are not reported in the text of this report, unless they exceed their applicable North Carolina water quality standards.

Detected concentrations of analytes in groundwater samples were compared to current groundwater quality standards specified in 15A North Carolina Administrative Code (NCAC) 2L.0202, which are referred to as 2L standards. Detected concentrations of analytes in groundwater with no established 2L standards were compared either to the interim maximum allowable concentrations (IMACs) for Class GA and GSA groundwater (in accordance with 15A NCAC 02L .0202 [c]) or Groundwater Protection Standards (GWPSs), pursuant to 15A NCAC 13B.1634. Detections of analytes in surface-water samples were compared to 15A NCAC 2B surface-water quality standards (2B standards).

Table 3 presents the summary of laboratory analytical results for detected constituents only. Table 4 presents all analytical results that were above the applicable SWSLs. Table 5 presents only the concentrations of analytes detected in groundwater and/or surface water samples that exceeded their respective 2L standards (including IMACs, if applicable), GWPSs, or 2B standards.

In the EDD (Appendix C), the identification of a well ("WELL ID" on the table) consists of the name of the well prefaced by the un-hyphenated permit number for the facility. For example, the groundwater sample from monitoring well "MW#2" is identified on the tables as 2201-MW#2. However, in the tables and figures of this report, the identification of a well consists of the name of the well without the permit number associated with the facility.

3.1 Groundwater

Analytical results for groundwater samples collected from monitoring wells are discussed below and are summarized in Tables 3, 4, and 5 and in the EDD of Appendix C. The laboratory analytical reports are included in Appendix B.

3.1.1 Appendix I Metals (EPA Methods 6010 and 7470)

Nine metals were detected in one or more of the groundwater samples collected from the monitoring wells at the landfill (Table 3). Six of the detected metals (barium, cobalt, copper, lead, mercury, and zinc) were found at concentrations above their respective SWSLs in one or more groundwater samples collected from

the monitoring wells (Table 4). In addition, concentrations of cobalt, mercury, and vanadium exceeded either their respective 2L standard or IMAC standard (Table 5) in one or more of the groundwater samples collected from the monitoring wells.

3.1.2 Appendix I VOCs (EPA Method 8260)

Nine VOCs were detected in one or more of the groundwater samples collected from the monitoring wells (Table 3). Four of the detected VOCs (methylene chloride, 1,4-dichlorobenzene, naphthalene, and xylene) were found at concentrations above their SWSL in one or more groundwater samples (Table 4). One VOC, naphthalene, was found at concentration that exceeded its respective 2L standard in monitoring well MW#6 (Table 5).

3.1.3 Field Parameters

The pH readings obtained from monitoring wells MW#2, MW#4, MW#5, and MW#6 were outside the acceptable range of 6.5 to 8.5 SU specified in 15A NCAC 02L .0202[c] (Table 3). Although the results were outside the acceptable range, they generally appear to be consistent with the naturally occurring range of pH in the region.

Turbidity values of the groundwater samples ranged from 1.5 nephelometric turbidity units (NTUs) to 54.4 NTUs (Tables 3 and 5).

3.2 Surface Water

Analytical results for surface water samples collected from the Hiawassee River and its tributary are discussed below and are summarized in Tables 3 and 4, and in the EDD of Appendix C. The laboratory reports are included in Appendix B.

3.2.1 Appendix I Metals (EPA Methods 6010 and 7470)

Three metals were detected in either one or both surface water samples (Table 3). Zinc was detected above its associated SWSL in both UPSTREAM and DOWNSTREAM samples (Table 4). No metals were detected above their respective surface water quality standards (Table 5).

3.2.2 Appendix I VOCs (EPA Method 8260)

There were no VOCs detected in surface water samples (Table 3).

3.2.3 Field Parameters

The pH and turbidity readings were obtained on November 15, 2012 for surface water samples. The pH readings measured in both samples were within the 2B standard range established at 6.0 SU to 9.0 SU. The turbidity was measured within the water quality standard established for turbidity.

4.0 Summary and Discussion

The following discussion summarizes the results of the November 2012 water quality monitoring event.

4.1 Groundwater Quality

Analysis of data collected during the annual groundwater quality monitoring event conducted on November 15, 2012 at the Clay County closed landfill indicates that six metals were detected in the groundwater samples at concentrations above their respective SWSLs. The concentrations of three of these metals (cobalt, mercury, and vanadium) exceeded their respective 2L Standards or IMACs in one or more of the groundwater samples.

The turbidity values collected from several of the monitoring well samples indicate that the samples contained solid particles from the surrounding formation in which the wells are screened. Naturally occurring metals tend to adsorb to the surfaces of these solid particles. The concentrations of metals detected in these groundwater samples may represent both the dissolved metals in the groundwater and the metals that were adsorbed to the solid particles, potentially resulting in false positive results.

Four VOCs were detected at concentrations above their SWSL in one or more groundwater samples. One VOC, naphthalene in MW#6, exceeded the applicable groundwater quality standard. No other VOCs were detected at concentrations above established groundwater quality standards at the closed landfill.

The pH readings obtained for the majority of the wells were outside the 2L standard acceptable pH range. However, as discussed in section 3.1.3, the pH readings appear to be generally consistent with the naturally occurring range of pH in the region.

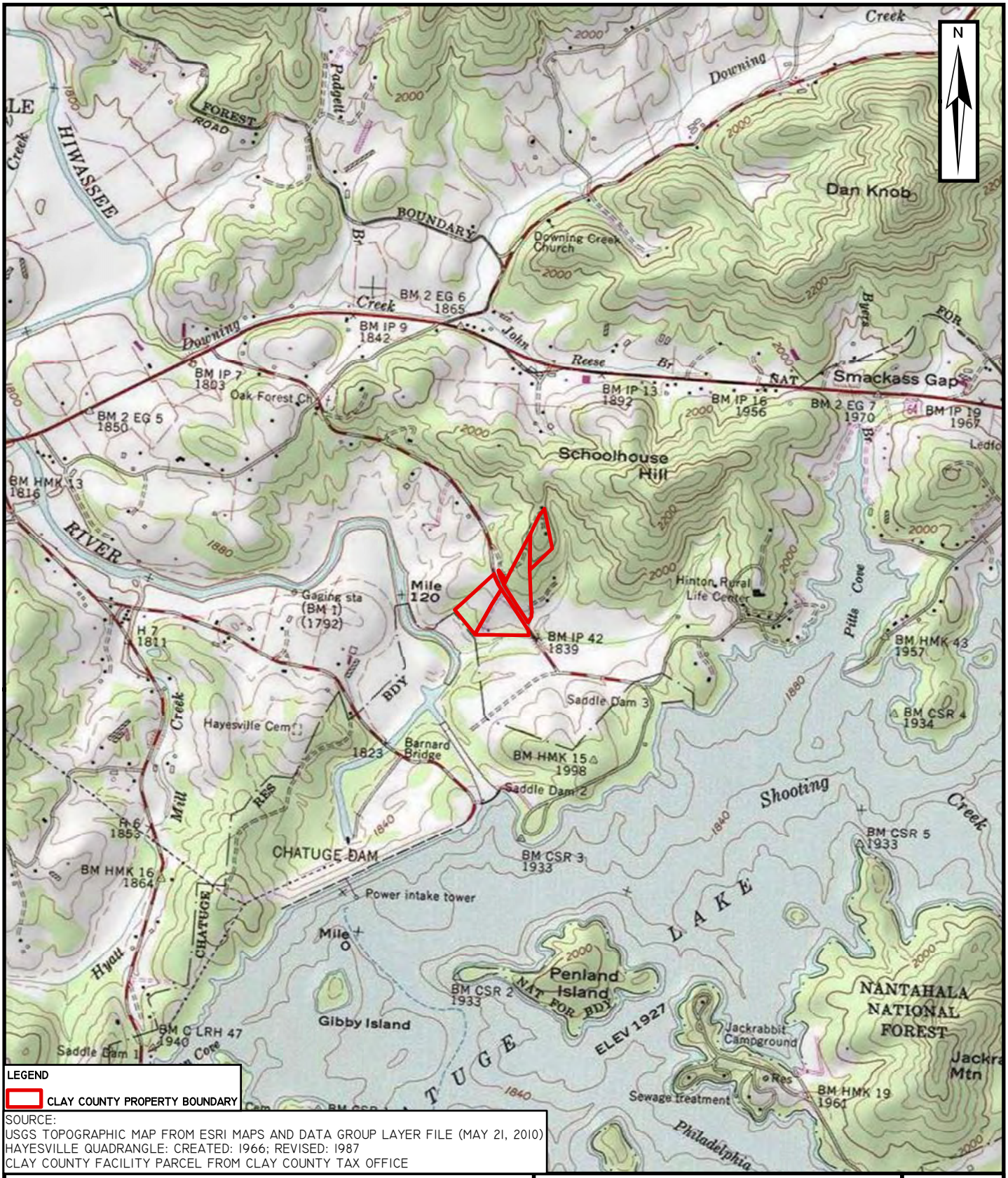
4.2 Surface Water Quality

One metal, zinc, was detected above its SWSL in both surface water samples. Zinc was not detected above its 2B Standard in either surface water sample.

4.3 Future Activities

Environmental, Inc. will continue to collect groundwater and surface water samples on an annual basis at the Clay County Closed Municipal Solid Waste Landfill. Altamont will continue to report the analytical results. The next sampling event is scheduled for the month of November in 2013.

FIGURES



LEGEND

CLAY COUNTY PROPERTY BOUNDARY

SOURCE:
USGS TOPOGRAPHIC MAP FROM ESRI MAPS AND DATA GROUP LAYER FILE (MAY 21, 2010)
HAYESVILLE QUADRANGLE: CREATED: 1966; REVISED: 1987
CLAY COUNTY FACILITY PARCEL FROM CLAY COUNTY TAX OFFICE

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WWW.ALTAMONTENVIRONMENTAL.COM

DRAWN BY: MARTA VANDUSSEN
PROJECT MANAGER: CHRIS GILBERT
CLIENT: ENVIRONMENTAL, INC.
DATE: 01/21/2013

SCALE
0 500 1,000 2,000 FEET

SITE LOCATION MAP

CLAY COUNTY CLOSED MUNICIPAL
SOLID WASTE LANDFILL
PERMIT NUMBER 22-01
1160 HINTON CENTER ROAD (S.R. 1148)
HAYESVILLE, NORTH CAROLINA 28904

FIGURE
1

P:\ENVIRONMENTAL INC\CLAY COUNTY\FIGURES\FIGURE 1 SITE LOCATION MAP REVISED.MXD

NOTES:
1. AERIAL IMAGERY FROM NC ONE MAP GIS WEBSITE (DATED 2010).
2. WELL LOCATION BASED ON SURVEY BY SAMUEL L. SPRINKLE & ASSOCIATES, P.A. COMPLETED ON OCTOBER 18, 2011.
3. SURFACE WATER LOCATIONS ARE APPROXIMATE AND PROVIDED BY ENVIRONMENTAL, INC. FIELD PERSONNEL.
4. CLAY COUNTY PROPERTY BOUNDARY OBTAINED FROM CLAY COUNTY.
5. TOPOGRAPHIC CONTOURS FROM NC DEPARTMENT OF TRANSPORTATION (DOT) GIS WEBSITE.

LEGEND:
- MONITORING WELL
- SURFACE WATER LOCATION
- 4-FOOT INTERVAL TOPOGRAPHIC CONTOURS
- CLAY COUNTY PROPERTY BOUNDARY

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DRAWN BY: ANDREW MOORE
PROJECT MANAGER: CHRIS GILBERT
CLIENT: CLAY COUNTY
DATE: 01/21/2013

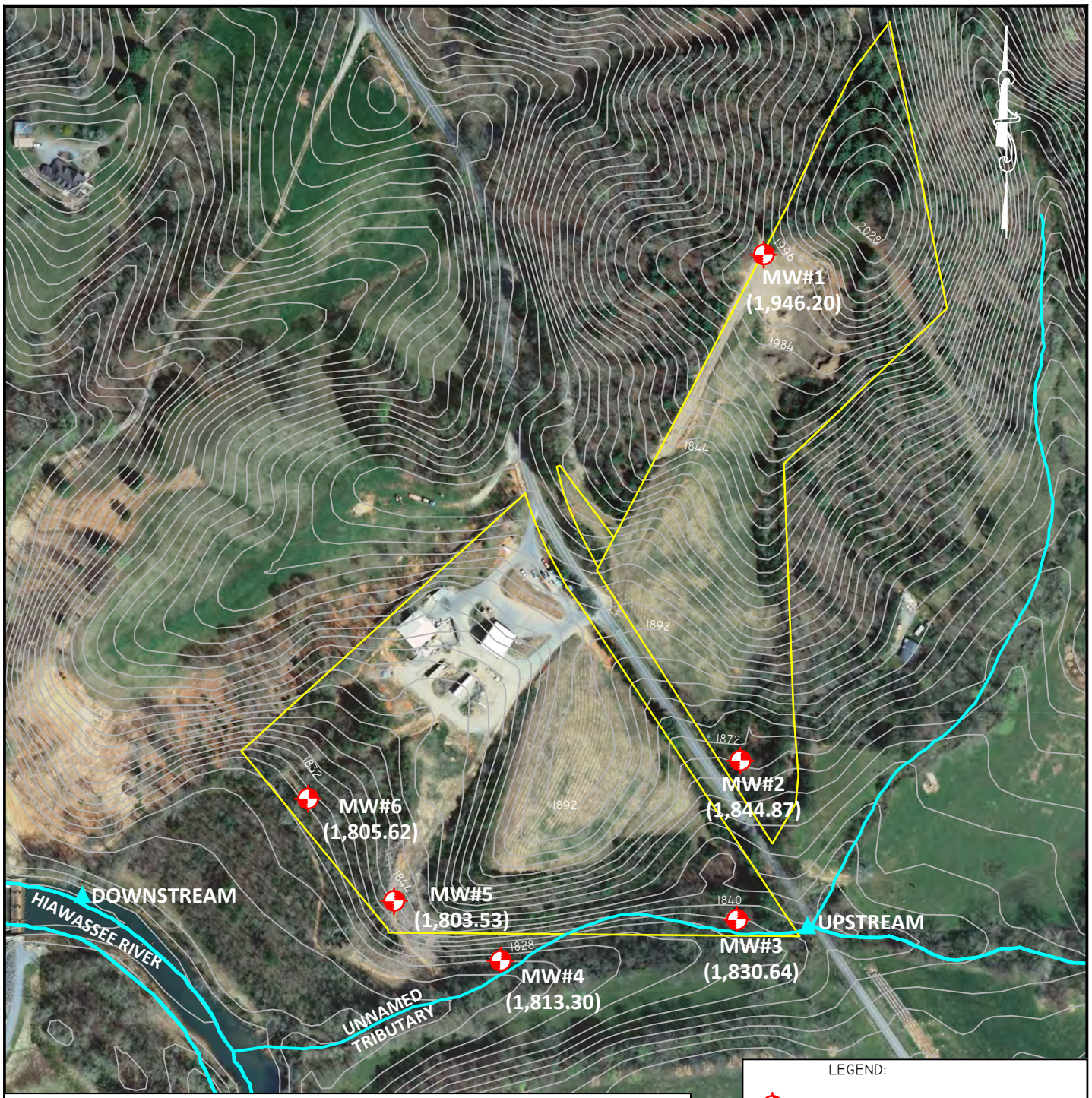
SCALE (FEET)
150' 0 150' 300'
1" = 300'

SITE LAYOUT MAP

CLAY COUNTY CLOSED MUNICIPAL
SOLID WASTE LANDFILL
PERMIT NUMBER 22-01
1160 HINTON CENTER ROAD (S.R. 1148)
HAYESVILLE, NORTH CAROLINA 28904

FIGURE
2

FILE PATH: P:\ENVIRONMENTAL INC\CLAY COUNTY\FIGURES\FIGURE 2-SITE LAYOUT MAP.DWG



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3. SURFACE WATER LOCATIONS ARE APPROXIMATE AND PROVIDED BY ENVIRONMENTAL, INC. FIELD PERSONNEL.
4. GROUNDWATER ELEVATIONS BASED ON DEPTH-TO-WATER MEASUREMENTS OBTAINED ON NOVEMBER 15, 2012.
5. CLAY COUNTY PROPERTY BOUNDARY OBTAINED FROM CLAY COUNTY.
6. TOPOGRAPHIC CONTOURS FROM NC DEPARTMENT OF TRANSPORTATION (DOT) GIS WEBSITE.

LEGEND:
- MONITORING WELL
- SURFACE WATER LOCATION
- 4-FOOT INTERVAL TOPOGRAPHIC CONTOURS
- CLAY COUNTY PROPERTY BOUNDARY
- (1,944.80) GROUNDWATER ELEVATION

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DRAWN BY: ANDREW MOORE
PROJECT MANAGER: CHRIS GILBERT
CLIENT: CLAY COUNTY
DATE: 01/21/2013

SCALE (FEET)
150' 0 150' 300'
1" = 300'

POSTED GROUNDWATER ELEVATION MAP

CLAY COUNTY CLOSED MUNICIPAL SOLID WASTE LANDFILL
PERMIT NUMBER 22-01
1160 HINTON CENTER ROAD
HAYESVILLE, NORTH CAROLINA

FIGURE 3

FILE PATH: P:\ENVIRONMENTAL INC\CLAY COUNTY\FIGURES\FIGURE 3-POSTED GROUNDWATER ELEVATION MAP.DWG

TABLES

Table 1
Summary of Groundwater Elevation Data
Clay County Municipal Solid Waste Landfill, Hayesville, Clay County, North Carolina

WELL ID	GROUND ELEVATION	TOP OF CASING (TOC) ELEVATION	DEPTH TO WATER	GROUNDWATER ELEVATION
			2012	
	(feet NAVD 1988)	(feet NAVD 1988)	(feet TOC)	(feet NAVD 1988)
MW#1	1992.05	1,993.10	46.9	1,946.20
MW#2	1868.94	1,869.77	24.9	1,844.87
MW#3	1835.67	1,837.75	7.11	1,830.64
MW#4	1819.19	1,821.30	8.0	1,813.30
MW#5	1840.53	1,841.63	38.1	1,803.53
MW#6	1825.64	1,826.52	20.9	1,805.62

Notes:
1. TOC = top of casing.
2. bgs = below ground surface.
3. NAVD = North American Vertical Datum 1988.
4. All monitoring wells were surveyed on October 18, 2011 by Samuel L. Sprinkle & Associates, P.A..
5. Depth to water for all monitoring wells was measured on November 15, 2012.

Table 2
Summary of Laboratory Analyses Performed on Samples
Clay County Municipal Solid Waste Landfill, Hayesville, Clay County, North Carolina

Groundwater Samples			
Sample Name	Date Collected	Metals	VOCs
		EPA 6010 EPA 7470	EPA 8260
MW#1	11/15/2012	X	X
MW#2	11/15/2012	X	X
MW#3	11/15/2012	X	X
MW#4	11/15/2012	X	X
MW#5	11/15/2012	X	X
MW#6	11/15/2012	X	X
EQUIPMENT BLANK	11/15/2012	X	X
TRIP BLANK	11/15/2012		X
Surface Water Samples			
Sample Name	Date Collected	Metals	VOCs
		EPA 6010 EPA 7470	EPA 8260
UPSTREAM	11/15/2012	X	X
DOWNSTREAM	11/15/2012	X	X

Notes:
1. VOCs = volatile organic compounds
2. VOCs and metals analysis include Appendix I constituents per 40 CFR Part 258.

Table 3
Summary of Detected Compounds
Clay County Municipal Solid Waste Landfill, Hayesville, Clay County, North Carolina

		Metals								
	Lab Certification	40								
	Lab Method	EPA 6010 and EPA 7470								
	Parameter	Barium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Vanadium	Zinc
	CAS Number	7440-39-3	7440-47-3	7440-48-4	7440-50-8	7439-92-1	7439-97-6	7440-02-0	7440-62-2	7440-66-6
	SWS ID	15	51	53	54	131	132	152	209	213
	Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Sample ID	Collect Date	Result	Result	Result	Result	Result	Result	Result	Result	Result
MW#1	11/15/2012	71.5 J	7.2 J	6.1 J	15.1	10.7	0.10 U	10.3 J	12.9 J	25.9
MW#2	11/15/2012	75.5 J	5.0 U	5.0 U	5.0 U	5.0 U	0.57	5.0 U	5.0 U	17.3
MW#3	11/15/2012	108	5.0 U	5.0 U	6.8 J	5.0 U	0.10 U	5.0 U	8.2 J	18.8
MW#4	11/15/2012	182	5.0 U	9.3 J	5.0 U	5.0 U	3.1	5.0 U	5.0 U	19.3
MW#5	11/15/2012	145	5.0 U	23.1	60.1	5.0 U	1.2	5.0 U	5.0 U	23.3
MW#6	11/15/2012	250	5.0 U	5.0 U	5.0 U	5.0 U	0.20 U	5.0 J	5.2 J	10.0 U
UPSTREAM	11/15/2012	42.8 J	5.0 U	5.0 U	5.0 U	5.0 U	0.10 U	5.0 U	5.0 U	17.2
DOWNSTREAM	11/15/2012	20.1 J	5.0 U	5.0 U	5.0 U	5.0 U	0.10 U	5.0 U	5.2 J	16.4
EQUIPMENT BLANK	11/15/2012	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	0.10 U	5.0 U	5.0 U	10.0 U
TRIP BLANK	11/15/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA
	MDL	5.0	5.0	5.0	5.0	5.0	0.10	5.0	5.0	10.0
	MRL	5.0	5.0	5.0	5.0	5.0	0.20	5.0	5.0	10.0
	SWSL	100	10	10	10	10	0.2	50	25	10
	2L	700	10	NE	1,000	15	1	100	NE	1,000
	IMAC	NE	NE	1	NE	NE	NE	NE	0.3	NE
	GWP	NE	NE	1	NE	NE	NE	NE	0.3	NE
	2B	200,000	50	4	7	25	0.012	88	NE	50

		Appendix I VOCs									Field Parameters	
	Lab Certification	12										
	Lab Method	EPA 8260									5090 (pH only)	
	Parameter	1,1-Dichloro-ethane	1,4-Dichloro-benzene	Chloro-benzene	Chloroethane	cis-1,2-Dichlor-ethene	Methylene Chloride	Naphthalene	o-Xylene	Xylene (total)	pH	Turbidity
	CAS Number	75-34-3	106-46-7	108-90-7	75-00-3	156-59-2	75-09-2	91-20-3	96-47-6	1330-20-7	SW320	SW330
	SWS ID	75	71	39	41	78	140	148	408	346	320	330
	Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	SU	NTU
Sample ID	Collect Date	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
MW#1	11/15/2012	0.32 U	0.33 U	0.23 U	0.54 U	0.19 U	0.97 U	0.24 U	0.23 U	0.66 U	6.5	54.4
MW#2	11/15/2012	1.6 J	0.33 U	0.23 U	0.54 U	0.19 U	3.5	0.24 U	0.23 U	0.66 U	5.9	3.2
MW#3	11/15/2012	0.32 U	0.33 U	0.23 U	0.54 U	0.19 U	0.97 U	0.24 U	0.23 U	0.66 U	7.4	23.6
MW#4	11/15/2012	0.32 U	1.0	0.23 U	0.54 U	1.5 J	0.97 U	0.24 U	0.23 U	0.66 U	5.4	1.5
MW#5	11/15/2012	1.2 J	2.8	1.0 J	1.1 J	4.7 J	0.97 U	0.24 U	0.23 U	0.66 U	5.0	5.7
MW#6	11/15/2012	1.1 J	0.33 U	0.23 U	0.54 U	3.1 J	0.97 U	22.5	4.0	5.1	5.9	14.3
UPSTREAM	11/15/2012	0.32 U	0.33 U	0.23 U	0.54 U	0.19 U	0.97 U	0.24 U	0.23 U	0.66 U	7.1	4.1
DOWNSTREAM	11/15/2012	0.32 U	0.33 U	0.23 U	0.54 U	0.19 U	0.97 U	0.24 U	0.23 U	0.66 U	7.3	1.3
EQUIPMENT BLANK	11/15/2012	0.32 U	0.33 U	0.23 U	0.54 U	0.19 U	0.97 U	0.24 U	0.23 U	0.66 U	NA	NA
TRIP BLANK	11/15/2012	0.32 U	0.33 U	0.23 U	0.54 U	0.19 U	0.97 U	0.24 U	0.23 U	0.66 U	NA	NA
	MDL	0.32	0.33	0.23	0.54	0.19	0.97	0.24	0.23	0.66	NA	NA
	MRL	1.0	1.0	1.0	1.0	1.0	2.0	1.0	1.0	2.0	NA	NA
	SWSL	5	1	3	10	5	1	10	NE	5	NE	NE
	2L	6	6	50	3,000	70	5	6	500	500	6.5-8.5	NE
	IMAC	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
	GWP	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
	2B	100	100	140	NE	720	590	12	600.0	670	6.0-9.0	50/25

Table 3
Summary of Detected Compounds
Clay County Municipal Solid Waste Landfill, Hayesville, Clay County, North Carolina

Notes:

1. Only detected constituents are listed on this table. Please refer to Pace Laboratory Reports of Analysis (Appendix B) for further details.
2. "Lab Method" is the analytical method used to analyze the constituents.
3. "CAS Number" is a unique number assigned by the Chemical Abstracts Service (CAS) to all identified parameters.
4. "SWS ID" is the Solid Waste Section Identification Number.
5. "Units" are micrograms per liter (µg/L) for analytical results, Standard Units (SU) for pH, and nephelometric turbidity units (NTU) for turbidity.
6. "Collect Date" is the date on which the sample was collected in the field.
7. "Result" is analytical data reported by the laboratory or field data collected by Altamont.
8. "MDL" is the method detection limit, which is the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.
9. "MRL" is the method reporting limit, which is the minimum concentration of a target analyte that can be accurately determined by the referenced method. MRL equals Report Limit values in the Pace Analytical Reports.
10. "SWSL" is the Solid Waste Section Limit. This limit (identified by DENR) is the lowest amount of analyte in a sample that can be quantitatively determined with suitable precision and accuracy.
11. "U" is a laboratory data qualifier used for parameters not detected at concentrations above MDL.
12. "J" is a laboratory data qualifier used for parameters detected at estimated concentrations above MDL but below MRL and SWSL.
    An italicized "J" qualifier is assigned by Altamont to reflect a detected concentration that is greater than MRL and MDL but less than the SWSL.
13. "2L" and "IMAC" (Interim Maximum Allowable Concentration) are groundwater standards from "North Carolina Administrative Code, Title 15A: Department of Environment and Natural Resources, Subchapter 2L - Groundwater Classifications and Standards," DENR (Amended Eff January 1, 2010).
14. "GWP" is the Groundwater Protection Standard pursuant to "15A NCAC 13B .1634," DENR. Current standards were obtained from http://portal.ncdenr.org/web/sw/envmonitoringlist (last updated June 13, 2011).
    GWP standard is used only if 2L or IMAC standards are not established for specific constituent.
15. "2B" indicates surface water standard per "North Carolina Administrative Code, Title 15A: Department of Environment and Natural Resources, Subchapter 2B - Surface Water and Wetland Standards," (last amended on May 1, 2007) or standard obtained from National Criteria per EPA table (current as of August 16, 2012).
16. "NE" means Not Established. "NA" means Not Applicable.
17. **Bold** numbers indicate a detection. Grayed cells indicate result in exceedance of the 2L, IMAC, GWP, or 2B standard.

Table 4
Solid Waste Section Limits Exceedances Notification
Clay County Municipal Solid Waste Landfill, Hayesville, Clay County, North Carolina

FACILITY PERMIT	WELL ID	CAS NUMBER	SWS ID	PARAMETER	RESULT	UNITS	METHOD	MDL	MRL	SWSL	COLLECT DATE
22-01	MW#1	7440-50-8	54	Copper	15.1	µg/L	EPA 6010	5.0	5.0	10	11/15/2012
22-01	MW#1	7439-92-1	131	Lead	10.7	µg/L	EPA 6010	5.0	5.0	10	11/15/2012
22-01	MW#1	7440-66-6	213	Zinc	25.9	µg/L	EPA 6010	10.0	10.0	10	11/15/2012
22-01	MW#2	7439-97-6	132	Mercury	0.57	µg/L	EPA 7470	0.10	0.20	0.2	11/15/2012
22-01	MW#2	7440-66-6	213	Zinc	17.3	µg/L	EPA 6010	10.0	10.0	10	11/15/2012
22-01	MW#2	75-09-2	140	Methylene Chloride	3.5	µg/L	EPA 8260	0.97	2.0	1	11/15/2012
22-01	MW#3	7440-39-3	15	Barium	108	µg/L	EPA 6010	5.0	5.0	100	11/15/2012
22-01	MW#3	7440-66-6	213	Zinc	18.8	µg/L	EPA 6010	10.0	10.0	10	11/15/2012
22-01	MW#4	7440-39-3	15	Barium	182	µg/L	EPA 6010	5.0	5.0	100	11/15/2012
22-01	MW#4	7439-97-6	132	Mercury	**3.1**	µg/L	EPA 7470	0.10	0.20	0.2	11/15/2012
22-01	MW#4	7440-66-6	213	Zinc	19.3	µg/L	EPA 6010	10.0	10.0	10	11/15/2012
22-01	MW#4	106-46-7	71	1,4-Dichlorobenzene	1.0	µg/L	EPA 8260	0.33	1.0	1	11/15/2012
22-01	MW#5	7440-39-3	15	Barium	145	µg/L	EPA 6010	5.0	5.0	100	11/15/2012
22-01	MW#5	7440-48-4	53	Cobalt	**23.1**	µg/L	EPA 6010	5.0	5.0	10	11/15/2012
22-01	MW#5	7440-50-8	54	Copper	60.1	µg/L	EPA 6010	5.0	5.0	10	11/15/2012
22-01	MW#5	7439-97-6	132	Mercury	**1.2**	µg/L	EPA 7470	0.10	0.20	0.2	11/15/2012
22-01	MW#5	7440-66-6	213	Zinc	23.3	µg/L	EPA 6010	10.0	10.0	10	11/15/2012
22-01	MW#5	106-46-7	71	1,4-Dichlorobenzene	2.8	µg/L	EPA 8260	0.33	1.0	1	11/15/2012
22-01	MW#6	7440-39-3	15	Barium	250	µg/L	EPA 6010	5.0	5.0	100	11/15/2012
22-01	MW#6	91-20-3	148	Naphthalene	**22.5**	µg/L	EPA 8260	0.24	1.0	10	11/15/2012
22-01	MW#6	1330-20-7	346	Xylene (Total)	5.1	µg/L	EPA 8260	0.66	2.0	5	11/15/2012
22-01	UPSTREAM	7440-66-6	213	Zinc	17.2	µg/L	EPA 6010	10.0	10.0	10	11/15/2012
22-01	DOWNSTREAM	7440-66-6	213	Zinc	16.4	µg/L	EPA 6010	10.0	10.0	10	11/15/2012

Table 4
Solid Waste Section Limits Exceedances Notification
Clay County Municipal Solid Waste Landfill, Hayesville, Clay County, North Carolina

Notes:

1. "CAS NUMBER" is a unique number assigned by the Chemical Abstracts Service (CAS) to all identified parameters.
2. "SWS ID" is the Solid Waste Section Identification Number.
3. "RESULT" is the analytical data reported by the laboratory.
4. "µg/L" indicates unit of micrograms per liter for analytical results.
5. "QUALIFIER" is a data qualifier or "flag". A blank cell indicates that there is no qualifier associated with the reported result.
6. "METHOD" is the analytical method used to analyze the constituents.
7. "MDL" is the method detection limit, which is the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.
8. "MRL" is the method reporting limit, which is the minimum concentration of a target analyte that can be accurately determined by the referenced method.
9. "SWSL" is the Solid Waste Section Limit. This limit (identified by DENR) is the lowest amount of analyte in a sample that can be quantitatively determined with suitable precision and accuracy.
10. "COLLECT DATE" is the date on which the sample was collected in the field.
11. **Bold** numbers indicate a result equal to or in exceedance of the 2L standard or GWPS (if no 2L standard exists).

Table 5
Water Quality Standards Exceedances Notification
Clay County Municipal Solid Waste Landfill, Hayesville, Clay County, North Carolina

FACILITY PERMIT	WELL ID	CAS NUMBER	SWS ID	PARAMETER	RESULT	UNITS	QUALIFIER	METHOD	MDL	MRL	SWSL	GROUNDWATER QUALITY STANDARD	COLLECT DATE	CAUSE AND SIGNIFICANCE
22-01	MW#1	7440-48-4	53	Cobalt	6.1	ug/L	J	EPA 6010	5.0	5.0	10	1	11/15/2012	Possibly naturally occurring.
22-01	MW#1	7440-62-2	209	Vanadium	12.9	ug/L	J	EPA 6010	5.0	5.0	25	0.3	11/15/2012	
22-01	MW#2	SW320	320	pH	5.9	SU						6.5 - 8.5	11/15/2012	Consistent with historic readings.
22-01	MW#3	7440-62-2	209	Vanadium	8.2	ug/L	J	EPA 6010	5.0	5.0	25	0.3	11/15/2012	Possibly naturally occurring.
22-01	MW#4	7440-48-4	53	Cobalt	9.3	ug/L	J	EPA 6010	5.0	5.0	10	1	11/15/2012	Possibly naturally occurring.
22-01	MW#4	7439-97-6	132	Mercury	3.1	ug/L		EPA 7470	0.10	0.20	0.2	1	11/15/2012	
22-01	MW#4	SW320	320	pH	5.4	SU						6.5 - 8.5	11/15/2012	Consistent with historic readings.
22-01	MW#5	7440-48-4	53	Cobalt	23.1	ug/L		EPA 6010	5.0	5.0	10	1	11/15/2012	Possibly naturally occurring.
22-01	MW#5	7439-97-6	132	Mercury	1.2	ug/L		EPA 7470	0.10	0.20	0.2	1	11/15/2012	
22-01	MW#5	SW320	320	pH	5.0	SU						6.5 - 8.5	11/15/2012	Consistent with naturally occurring pH range in the region.
22-01	MW#6	7440-62-2	209	Vanadium	5.2	ug/L	J	EPA 6010	5.0	5.0	25	0.3	11/15/2012	Possibly naturally occurring.
22-01	MW#6	91-20-3	148	Naphthalene	22.5	ug/L		EPA 8260	0.24	1.0	10	6	11/15/2012	Unknown
22-01	MW#6	SW320	320	pH	5.9	SU						6.5 - 8.5	11/15/2012	Consistent with naturally occurring pH range in the region.

Notes:

1. "CAS NUMBER" is a unique number assigned by the Chemical Abstracts Service (CAS) to all identified parameters.
2. "SWS ID" is the Solid Waste Section Identification Number.
3. "RESULT" is analytical data reported by the laboratory or field data collected by Altamont.
4. "UNITS" are micrograms per liter (µg/L) for analytical results and Standard Units (SU) for pH.
5. "QUALIFIER" is a data qualifier or "flag". A blank cell indicates that there is no qualifier associated with the reported result.
6. "METHOD" is the analytical method used to analyze the constituents.
7. "MDL" is the method detection limit, which is the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.
8. "MRL" is the method reporting limit, which is the minimum concentration of a target analyte that can be accurately determined by the referenced method.
9. "SWSL" is the Solid Waste Section Limit. This limit (identified by DENR) is the lowest amount of analyte in a sample that can be quantitatively determined with suitable precision and accuracy.
10. "GROUNDWATER QUALITY STANDARD" refers to the 2L standard, Interim Maximum Allowable Concentration (IMAC), or Groundwater Protection Standard (GWP) for groundwater.
11. "COLLECT DATE" is the date on which the sample was collected in the field.
12. 2L standard and IMAC are from "North Carolina Administrative Code, Title 15A: Department of Environment and Natural Resources, Subchapter 2L - Groundwater Classifications and Standards," DENR (Amended Eff January 1, 2010).
13. GWP standard is pursuant to "15A NCAC 13B .1634," DENR. Current standards were obtained from http://portal.ncdenr.org/web/sw/envmonitoringlist (last updated June 13, 2011).

APPENDICES

APPENDIX A

Field Sheet and Certificate of Analysis

ENVIRONMENTAL Inc. Water & Wastewater Services Cullowhee, NC

P.O. Box 954 Cullowhee, NC 28723
50 West Sylva Shopping Center Sylva, NC 28779
Phone (828) 586-5588 (800) 213-4035
FAX (828) 586-0800
E-mail environmentalinc@aol.com

Certificate of Analysis

Client Name: Clay County Landfill
Address: c/o 50 West Sylva Shopping Center
Sylva, NC 28779

Collection Date: 11/15/2012
Date Received: 11/15/2012

RESULTS

Sample Identification: Upstream (grab)

Parameters	Result	MDL	Units	Date Analyzed	Method	Foot-notes
Temperature	12.7	-----	° C	11/15/2012	SM 2250 B	1
pH	7.1	-----	Std Units	11/15/2012	SM 4500 HB	1
Specific Conductance	32.0	1.0	µmhos	11/16/2012	SM 2510B	
Turbidity	4.1	1.0	NTU	11/16/2012	SM 2130B	

Sample Identification: Downstream (grab)

Parameters	Result	MDL	Units	Date Analyzed	Method	Foot-notes
Temperature	13.2	-----	° C	11/15/2012	SM 2250 B	1
pH	7.3	-----	Std Units	11/15/2012	SM 4500 HB	1
Specific Conductance	19.6	1.0	µmhos	11/16/2012	SM 2510B	
Turbidity	1.3	1.0	NTU	11/16/2012	SM 2130B	

Anthony Tirona

Anthony Tirona, Laboratory Supervisor

12/19/12
Date

Report prepared: 12/19/2012 1:08 PM

Client Name: Clay County Landfill

Collection Date: 11/15/2012
Date Received: 11/15/2012

Sample Identification: MW#1 (grab)

Parameters	Result	MDL	Units	Date Analyzed	Method	Foot-notes
Temperature	13.8	-----	° C	11/15/2012	SM 2250 B	1
pH	6.5	-----	Std Units	11/15/2012	SM 4500 HB	1
Specific Conductance	118	1.0	µmhos	11/16/2012	SM 2510B	
Turbidity	54.4	1.0	NTU	11/16/2012	SM 2130B	

Sample Identification: MW#2 (grab)

Parameters	Result	MDL	Units	Date Analyzed	Method	Foot-notes
Temperature	13.1	-----	° C	11/15/2012	SM 2250 B	1
pH	5.9	-----	Std Units	11/15/2012	SM 4500 HB	1
Specific Conductance	61.5	1.0	µmhos	11/16/2012	SM 2510B	
Turbidity	3.2	1.0	NTU	11/16/2012	SM 2130B	

Sample Identification: MW#3 (grab)

Parameters	Result	MDL	Units	Date Analyzed	Method	Foot-notes
Temperature	13.6	-----	° C	11/15/2012	SM 2250 B	1
pH	7.4	-----	Std Units	11/15/2012	SM 4500 HB	1
Specific Conductance	52.2	1.0	µmhos	11/16/2012	SM 2510B	
Turbidity	23.6	1.0	NTU	11/16/2012	SM 2130B	

Client Name: Clay County Landfill

Collection Date: 11/15/2012
Date Received: 11/15/2012

Sample Identification: MW#4 (grab)

Parameters	Result	MDL	Units	Date Analyzed	Method	Foot-notes
Temperature	15.9	-----	° C	11/15/2012	SM 2250 B	1
pH	5.4	-----	Std Units	11/15/2012	SM 4500 HB	1
Specific Conductance	226	1.0	µmhos	11/16/2012	SM 2510B	
Turbidity	1.5	1.0	NTU	11/16/2012	SM 2130B	

Sample Identification: MW#5 (grab)

Parameters	Result	MDL	Units	Date Analyzed	Method	Foot-notes
Temperature	17.2	-----	° C	11/15/2012	SM 2250 B	1
pH	5.0	-----	Std Units	11/15/2012	SM 4500 HB	1
Specific Conductance	248	1.0	µmhos	11/16/2012	SM 2510B	
Turbidity	5.7	1.0	NTU	11/16/2012	SM 2130B	

Sample Identification: MW#6 (grab)

Parameters	Result	MDL	Units	Date Analyzed	Method	Foot-notes
Temperature	16.7	-----	° C	11/15/2012	SM 2250 B	1
pH	5.9	-----	Std Units	11/15/2012	SM 4500 HB	1
Specific Conductance	355	1.0	µmhos	11/16/2012	SM 2510B	
Turbidity	14.3	1.0	NTU	11/16/2012	SM 2130B	

1. pH and temperature taken in the field on 11/15/12 at the time of collection.

ENVIRONMENTAL Inc.
Water & Wastewater Services
Cullowhee, NC

Mailing Address: PO Box 954, Cullowhee, NC 28723
Physical Address: 50 West Sylva Shopping Area, Sylva, NC 28779 (828) 586-5588
Physical Address: 240-D Swannanoa River Road, Asheville, NC 28805 (828) 350-8704
Toll Free: (800) 213-4035, Fax: (828) 586-0800, Email: environmentalinc@aol.com

Field Certification #5090
Wastewater Laboratory Certification #57
Water Laboratory Certification # 37754 and #37797

Clay County Water and Sewer
PO Box 838
Hayesville, NC 28904

Re: Clay County Landfills

Field Sheet Collection Date: 11/15/12

Wells	1	2	3	4	5	6 1500	Upstream	Downstream
Time	1270	1135	1100	1400	1320	~~1930~~	1000	1340
Water Level	46.9	24.9"	7.11"	8.0"	38.1	20.9"	—	—
Bottom of the Well	64.2	47.9	18.2"	20.4"	68.9	63.8	—	—
Temp	13.8	13.1	13.6	15.9	17.2	16.7	12.7	13.2
pH	6.5	5.9	7.4	5.4	5.0	5.9	7.1	7.3
Pipe	2"	2"	2"	2"	2"	2"	—	—

well # 5 has a broken pipe. Needs to be repaired. Was able to obtain samples but was difficult. Repair is approx. 4ft down from grade.

APPENDIX B

Laboratory Analytical Reports and Chain-of-Custody Documentation

Pace Analytical Services, Inc.
205 East Meadow Road - Suite A
Eden, NC 27288
(336)623-8921

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

December 07, 2012

Mr. Mark Teague
Environmental, Inc.
PO Box 954
Cullowhee, NC 28723

RE: Project: Clay Co. LF MWs # 1 11/15
Pace Project No.: 92139117

Dear Mr. Teague:
Enclosed are the analytical results for sample(s) received by the laboratory on November 19, 2012. 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,

Tom Williams

tom.williams@pacelabs.com
Project Manager

Enclosures

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Pace Analytical Services, Inc.
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(828)254-7176

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

CERTIFICATIONS

Project: Clay Co. LF MWs # 1 11/15
Pace Project No.: 92139117

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 Dr., 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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(704)875-9092

SAMPLE ANALYTE COUNT

Project: Clay Co. LF MWs # 1 11/15
Pace Project No.: 92139117

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92139117001	**MW # 1**	EPA 6010	JDA	15	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8260	MCK	64	PASI-C

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Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Clay Co. LF MWs # 1 11/15
Pace Project No.: 92139117

Sample: MW # 1 **Lab ID: 92139117001** Collected: 11/15/12 12:20 Received: 11/19/12 10:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:16	7440-36-0	
Arsenic	ND	ug/L	10.0	1	11/28/12 11:30	12/01/12 19:16	7440-38-2	
Barium	**71.5**	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:16	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/28/12 11:30	12/01/12 19:16	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/28/12 11:30	12/01/12 19:16	7440-43-9	
Chromium	**7.2**	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:16	7440-47-3	
Cobalt	**6.1**	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:16	7440-48-4	
Copper	**15.1**	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:16	7440-50-8	
Lead	**10.7**	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:16	7439-92-1	
Nickel	**10.3**	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:16	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/28/12 11:30	12/01/12 19:16	7782-49-2	
Silver	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:16	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/28/12 11:30	12/01/12 19:16	7440-28-0	
Vanadium	**12.9**	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:16	7440-62-2	
Zinc	**25.9**	ug/L	10.0	1	11/28/12 11:30	12/01/12 19:16	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	1	11/30/12 17:50	12/05/12 11:17	7439-97-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/22/12 15:42	67-64-1	
Benzene	ND	ug/L	1.0	1		11/22/12 15:42	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/22/12 15:42	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/22/12 15:42	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/22/12 15:42	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/22/12 15:42	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/22/12 15:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/22/12 15:42	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/22/12 15:42	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/22/12 15:42	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/22/12 15:42	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/22/12 15:42	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/22/12 15:42	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/22/12 15:42	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/22/12 15:42	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/22/12 15:42	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/22/12 15:42	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/22/12 15:42	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/22/12 15:42	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/22/12 15:42	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/22/12 15:42	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/22/12 15:42	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/22/12 15:42	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/22/12 15:42	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/22/12 15:42	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/22/12 15:42	75-35-4	

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ANALYTICAL RESULTS

Project: Clay Co. LF MWs # 1 11/15
Pace Project No.: 92139117

Sample: MW # 1 **Lab ID: 92139117001** Collected: 11/15/12 12:20 Received: 11/19/12 10:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/22/12 15:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/22/12 15:42	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/22/12 15:42	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/22/12 15:42	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/22/12 15:42	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/22/12 15:42	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/22/12 15:42	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/22/12 15:42	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/22/12 15:42	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/22/12 15:42	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/22/12 15:42	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/22/12 15:42	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/22/12 15:42	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		11/22/12 15:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/22/12 15:42	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/22/12 15:42	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/22/12 15:42	91-20-3	
Styrene	ND	ug/L	1.0	1		11/22/12 15:42	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/22/12 15:42	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/22/12 15:42	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/22/12 15:42	127-18-4	
Toluene	ND	ug/L	1.0	1		11/22/12 15:42	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/22/12 15:42	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/22/12 15:42	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/22/12 15:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/22/12 15:42	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/22/12 15:42	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/22/12 15:42	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/22/12 15:42	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/22/12 15:42	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/22/12 15:42	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/22/12 15:42	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/22/12 15:42	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/22/12 15:42	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	103	%	70-130	1		11/22/12 15:42	460-00-4	
Dibromofluoromethane (S)	99	%	70-130	1		11/22/12 15:42	1868-53-7	
1,2-Dichloroethane-d4 (S)	87	%	70-130	1		11/22/12 15:42	17060-07-0	
Toluene-d8 (S)	92	%	70-130	1		11/22/12 15:42	2037-26-5	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 1 11/15
Pace Project No.: 92139117

QC Batch: MERP/4713
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Associated Lab Samples: 92139117001

METHOD BLANK: 880739
Matrix: Water
Associated Lab Samples: 92139117001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	12/05/12 11:12	

LABORATORY CONTROL SAMPLE: 880740

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.5	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 880741 880742

Parameter	Units	92139117001 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	2.5	2.5	99	99	75-125	1	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 1 11/15
Pace Project No.: 92139117

QC Batch: MPRP/12055
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92139117001

METHOD BLANK: 879409
Matrix: Water
Associated Lab Samples: 92139117001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	12/01/12 19:10	
Arsenic	ug/L	ND	10.0	12/01/12 19:10	
Barium	ug/L	ND	5.0	12/01/12 19:10	
Beryllium	ug/L	ND	1.0	12/01/12 19:10	
Cadmium	ug/L	ND	1.0	12/01/12 19:10	
Chromium	ug/L	ND	5.0	12/01/12 19:10	
Cobalt	ug/L	ND	5.0	12/01/12 19:10	
Copper	ug/L	ND	5.0	12/01/12 19:10	
Lead	ug/L	ND	5.0	12/01/12 19:10	
Nickel	ug/L	ND	5.0	12/01/12 19:10	
Selenium	ug/L	ND	10.0	12/01/12 19:10	
Silver	ug/L	ND	5.0	12/01/12 19:10	
Thallium	ug/L	ND	5.4	12/01/12 19:10	
Vanadium	ug/L	ND	5.0	12/01/12 19:10	
Zinc	ug/L	ND	10.0	12/01/12 19:10	

LABORATORY CONTROL SAMPLE: 879410

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	483	97	80-120	
Arsenic	ug/L	500	479	96	80-120	
Barium	ug/L	500	471	94	80-120	
Beryllium	ug/L	500	506	101	80-120	
Cadmium	ug/L	500	486	97	80-120	
Chromium	ug/L	500	514	103	80-120	
Cobalt	ug/L	500	485	97	80-120	
Copper	ug/L	500	486	97	80-120	
Lead	ug/L	500	484	97	80-120	
Nickel	ug/L	500	487	97	80-120	
Selenium	ug/L	500	484	97	80-120	
Silver	ug/L	250	240	96	80-120	
Thallium	ug/L	500	470	94	80-120	
Vanadium	ug/L	500	489	98	80-120	
Zinc	ug/L	500	488	98	80-120	

MATRIX SPIKE SAMPLE: 879411

Parameter	Units	92139117001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	500	475	95	75-125	
Arsenic	ug/L	ND	500	482	96	75-125	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 1 11/15
Pace Project No.: 92139117

MATRIX SPIKE SAMPLE: 879411

Parameter	Units	92139117001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	71.5	500	536	93	75-125	
Beryllium	ug/L	ND	500	505	101	75-125	
Cadmium	ug/L	ND	500	479	96	75-125	
Chromium	ug/L	7.2	500	522	103	75-125	
Cobalt	ug/L	6.1	500	493	97	75-125	
Copper	ug/L	15.1	500	505	98	75-125	
Lead	ug/L	10.7	500	480	94	75-125	
Nickel	ug/L	10.3	500	492	96	75-125	
Selenium	ug/L	ND	500	481	96	75-125	
Silver	ug/L	ND	250	240	96	75-125	
Thallium	ug/L	ND	500	456	91	75-125	
Vanadium	ug/L	12.9	500	503	98	75-125	
Zinc	ug/L	25.9	500	516	98	75-125	

SAMPLE DUPLICATE: 879412

Parameter	Units	92139118001 Result	Dup Result	RPD	Qualifiers
Antimony	ug/L	ND	ND		
Arsenic	ug/L	ND	ND		
Barium	ug/L	20.1	19.3	4	
Beryllium	ug/L	ND	ND		
Cadmium	ug/L	ND	ND		
Chromium	ug/L	ND	ND		
Cobalt	ug/L	ND	ND		
Copper	ug/L	ND	ND		
Lead	ug/L	ND	ND		
Nickel	ug/L	ND	ND		
Selenium	ug/L	ND	ND		
Silver	ug/L	ND	ND		
Thallium	ug/L	ND	ND		
Vanadium	ug/L	5.2	ND		
Zinc	ug/L	16.4	ND		

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 1 11/15
Pace Project No.: 92139117

QC Batch: MSV/21177
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92139117001

METHOD BLANK: 877743
Matrix: Water
Associated Lab Samples: 92139117001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,1,1-Trichloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,1-Dichloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,1-Dichloroethene	ug/L	ND	1.0	11/22/12 11:59	
1,1-Dichloropropene	ug/L	ND	1.0	11/22/12 11:59	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
1,2,3-Trichloropropane	ug/L	ND	1.0	11/22/12 11:59	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	11/22/12 11:59	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	11/22/12 11:59	
1,2-Dichlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
1,2-Dichloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,2-Dichloropropane	ug/L	ND	1.0	11/22/12 11:59	
1,3-Dichlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
1,3-Dichloropropane	ug/L	ND	1.0	11/22/12 11:59	
1,4-Dichlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
2,2-Dichloropropane	ug/L	ND	1.0	11/22/12 11:59	
2-Butanone (MEK)	ug/L	ND	5.0	11/22/12 11:59	
2-Chlorotoluene	ug/L	ND	1.0	11/22/12 11:59	
2-Hexanone	ug/L	ND	5.0	11/22/12 11:59	
4-Chlorotoluene	ug/L	ND	1.0	11/22/12 11:59	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	11/22/12 11:59	
Acetone	ug/L	ND	25.0	11/22/12 11:59	
Benzene	ug/L	ND	1.0	11/22/12 11:59	
Bromobenzene	ug/L	ND	1.0	11/22/12 11:59	
Bromochloromethane	ug/L	ND	1.0	11/22/12 11:59	
Bromodichloromethane	ug/L	ND	1.0	11/22/12 11:59	
Bromoform	ug/L	ND	1.0	11/22/12 11:59	
Bromomethane	ug/L	ND	2.0	11/22/12 11:59	
Carbon tetrachloride	ug/L	ND	1.0	11/22/12 11:59	
Chlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
Chloroethane	ug/L	ND	1.0	11/22/12 11:59	
Chloroform	ug/L	ND	1.0	11/22/12 11:59	
Chloromethane	ug/L	ND	1.0	11/22/12 11:59	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/22/12 11:59	
cis-1,3-Dichloropropene	ug/L	ND	1.0	11/22/12 11:59	
Dibromochloromethane	ug/L	ND	1.0	11/22/12 11:59	
Dibromomethane	ug/L	ND	1.0	11/22/12 11:59	
Dichlorodifluoromethane	ug/L	ND	1.0	11/22/12 11:59	
Diisopropyl ether	ug/L	ND	1.0	11/22/12 11:59	
Ethylbenzene	ug/L	ND	1.0	11/22/12 11:59	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 1 11/15
Pace Project No.: 92139117

METHOD BLANK: 877743 Matrix: Water

Associated Lab Samples: 92139117001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	ND	1.0	11/22/12 11:59	
m&p-Xylene	ug/L	ND	2.0	11/22/12 11:59	
Methyl-tert-butyl ether	ug/L	ND	1.0	11/22/12 11:59	
Methylene Chloride	ug/L	ND	2.0	11/22/12 11:59	
Naphthalene	ug/L	ND	1.0	11/22/12 11:59	
o-Xylene	ug/L	ND	1.0	11/22/12 11:59	
p-Isopropyltoluene	ug/L	ND	1.0	11/22/12 11:59	
Styrene	ug/L	ND	1.0	11/22/12 11:59	
Tetrachloroethene	ug/L	ND	1.0	11/22/12 11:59	
Toluene	ug/L	ND	1.0	11/22/12 11:59	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/22/12 11:59	
trans-1,3-Dichloropropene	ug/L	ND	1.0	11/22/12 11:59	
Trichloroethene	ug/L	ND	1.0	11/22/12 11:59	
Trichlorofluoromethane	ug/L	ND	1.0	11/22/12 11:59	
Vinyl acetate	ug/L	ND	2.0	11/22/12 11:59	
Vinyl chloride	ug/L	ND	1.0	11/22/12 11:59	
Xylene (Total)	ug/L	ND	2.0	11/22/12 11:59	
1,2-Dichloroethane-d4 (S)	%	94	70-130	11/22/12 11:59	
4-Bromofluorobenzene (S)	%	107	70-130	11/22/12 11:59	
Dibromofluoromethane (S)	%	99	70-130	11/22/12 11:59	
Toluene-d8 (S)	%	92	70-130	11/22/12 11:59	

LABORATORY CONTROL SAMPLE: 877744

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	43.4	87	70-130	
1,1,1-Trichloroethane	ug/L	50	43.6	87	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	45.2	90	70-130	
1,1,2-Trichloroethane	ug/L	50	48.7	97	70-130	
1,1-Dichloroethane	ug/L	50	46.5	93	70-130	
1,1-Dichloroethene	ug/L	50	45.7	91	70-132	
1,1-Dichloropropene	ug/L	50	44.8	90	70-130	
1,2,3-Trichlorobenzene	ug/L	50	41.4	83	70-135	
1,2,3-Trichloropropane	ug/L	50	44.5	89	70-130	
1,2,4-Trichlorobenzene	ug/L	50	43.1	86	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	41.5	83	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	46.9	94	70-130	
1,2-Dichlorobenzene	ug/L	50	45.1	90	70-130	
1,2-Dichloroethane	ug/L	50	38.5	77	70-130	
1,2-Dichloropropane	ug/L	50	47.5	95	70-130	
1,3-Dichlorobenzene	ug/L	50	45.5	91	70-130	
1,3-Dichloropropane	ug/L	50	46.1	92	70-130	
1,4-Dichlorobenzene	ug/L	50	45.2	90	70-130	
2,2-Dichloropropane	ug/L	50	42.5	85	58-145	
2-Butanone (MEK)	ug/L	100	103	103	70-145	

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(828)254-7176

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

QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 1 11/15
Pace Project No.: 92139117

LABORATORY CONTROL SAMPLE: 877744

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Chlorotoluene	ug/L	50	44.0	88	70-130	
2-Hexanone	ug/L	100	107	107	70-144	
4-Chlorotoluene	ug/L	50	44.1	88	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	106	106	70-140	
Acetone	ug/L	100	82.2	82	50-175	
Benzene	ug/L	50	49.0	98	70-130	
Bromobenzene	ug/L	50	43.7	87	70-130	
Bromochloromethane	ug/L	50	45.2	90	70-130	
Bromodichloromethane	ug/L	50	44.7	89	70-130	
Bromoform	ug/L	50	46.8	94	70-130	
Bromomethane	ug/L	50	40.2	80	54-130	
Carbon tetrachloride	ug/L	50	43.4	87	70-132	
Chlorobenzene	ug/L	50	47.4	95	70-130	
Chloroethane	ug/L	50	43.8	88	64-134	
Chloroform	ug/L	50	42.6	85	70-130	
Chloromethane	ug/L	50	54.8	110	64-130	
cis-1,2-Dichloroethene	ug/L	50	44.7	89	70-131	
cis-1,3-Dichloropropene	ug/L	50	46.4	93	70-130	
Dibromochloromethane	ug/L	50	46.0	92	70-130	
Dibromomethane	ug/L	50	48.3	97	70-131	
Dichlorodifluoromethane	ug/L	50	46.8	94	56-130	
Diisopropyl ether	ug/L	50	46.5	93	70-130	
Ethylbenzene	ug/L	50	47.0	94	70-130	
Hexachloro-1,3-butadiene	ug/L	50	46.2	92	70-130	
m&p-Xylene	ug/L	100	94.6	95	70-130	
Methyl-tert-butyl ether	ug/L	50	41.4	83	70-130	
Methylene Chloride	ug/L	50	46.7	93	63-130	
Naphthalene	ug/L	50	43.6	87	70-138	
o-Xylene	ug/L	50	45.1	90	70-130	
p-Isopropyltoluene	ug/L	50	42.9	86	70-130	
Styrene	ug/L	50	47.1	94	70-130	
Tetrachloroethene	ug/L	50	49.1	98	70-130	
Toluene	ug/L	50	47.4	95	70-130	
trans-1,2-Dichloroethene	ug/L	50	44.3	89	70-130	
trans-1,3-Dichloropropene	ug/L	50	45.4	91	70-132	
Trichloroethene	ug/L	50	46.5	93	70-130	
Trichlorofluoromethane	ug/L	50	46.3	93	62-133	
Vinyl acetate	ug/L	100	87.4	87	66-157	
Vinyl chloride	ug/L	50	46.8	94	69-130	
Xylene (Total)	ug/L	150	140	93	70-130	
1,2-Dichloroethane-d4 (S)	%			82	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Dibromofluoromethane (S)	%			93	70-130	
Toluene-d8 (S)	%			100	70-130	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 1 11/15
Pace Project No.: 92139117

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 877745 877746

Parameter	Units	92139117001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	42.5	38.8	85	78	70-166	9	
Benzene	ug/L	ND	50	50	42.3	45.7	85	91	70-148	8	
Chlorobenzene	ug/L	ND	50	50	48.3	50.7	97	101	70-146	5	
Toluene	ug/L	ND	50	50	47.6	49.5	95	99	70-155	4	
Trichloroethene	ug/L	ND	50	50	49.0	50.6	98	101	69-151	3	
1,2-Dichloroethane-d4 (S)	%						80	84	70-130		
4-Bromofluorobenzene (S)	%						103	106	70-130		
Dibromofluoromethane (S)	%						97	94	70-130		
Toluene-d8 (S)	%						94	94	70-130		

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QUALIFIERS

Project: Clay Co. LF MWs # 1 11/15
Pace Project No.: 92139117

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Clay Co. LF MWs # 1 11/15
Pace Project No.: 92139117

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92139117001	**MW # 1**	EPA 3010	MPRP/12055	EPA 6010	ICP/11030
92139117001	**MW # 1**	EPA 7470	MERP/4713	EPA 7470	MERC/4611
92139117001	**MW # 1**	EPA 8260	MSV/21177		

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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

1555442

Section A Required Client Information:

Company: ENVIRONMENTAL INC
Address: PO BOX 954
CULLOWHEE, NC 28723
Email To:
Phone: (828)586-5588 Fax: (828)586-0500
Requested Due Date/TAT:

Section B Required Project Information:

Report To:
Copy To:
Purchase Order No.:
Project Name: CLAY CO MW#1
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

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

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

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): APPX I metals	APPX I VOC 526	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92139117
1	MW #1	WW	G			11/15/12	1225P					✓						✓			921391170001
2													✓						✓		
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Nathan Chase	11/19/12	1002A	Jane Meehan	11/19/12	10:02	23.8

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER:
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

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.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical® www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: May 30, 2012 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.08	Issuing Authorities: Pace Asheville Quality Office

Client Name: Env Inc Project # 92139117

Where Received: ☐ Huntersville ☑ Asheville ☐ Eden ☐ Raleigh

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

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

Optional Proj. Due Date:

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

Circle Thermometer Used: IR Gun#2 -80344039 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

IR Gun Back Up- 111565135

Temp Correction Factor: Add / Subtract 0.1 C

Corrected Cooler Temp.: 3.8 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 11/19/12

Comments:

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: [signature] **Date:** 11/28 **SRF Review:** [signature] **Date:** 11/28

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

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December 07, 2012

Mr. Mark Teague
Environmental, Inc.
PO Box 954
Cullowhee, NC 28723

RE: Project: Clay Co. LF MWs # 2 11/15
Pace Project No.: 92139115

Dear Mr. Teague:
Enclosed are the analytical results for sample(s) received by the laboratory on November 19, 2012. 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,

Tom Williams

tom.williams@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: Clay Co. LF MWs # 2 11/15
Pace Project No.: 92139115

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

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SAMPLE ANALYTE COUNT

Project: Clay Co. LF MWs # 2 11/15
Pace Project No.: 92139115

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92139115001	**MW # 2**	EPA 6010	JDA	15	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8260	MCK	64	PASI-C

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ANALYTICAL RESULTS

Project: Clay Co. LF MWs # 2 11/15
Pace Project No.: 92139115

Sample: MW # 2 **Lab ID: 92139115001** Collected: 11/15/12 11:35 Received: 11/19/12 10:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:04	7440-36-0	
Arsenic	ND	ug/L	10.0	1	11/28/12 11:30	12/01/12 19:04	7440-38-2	
Barium	**75.5**	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:04	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/28/12 11:30	12/01/12 19:04	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/28/12 11:30	12/01/12 19:04	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:04	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:04	7440-48-4	
Copper	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:04	7440-50-8	
Lead	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:04	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:04	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/28/12 11:30	12/01/12 19:04	7782-49-2	
Silver	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:04	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/28/12 11:30	12/01/12 19:04	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:04	7440-62-2	
Zinc	**17.3**	ug/L	10.0	1	11/28/12 11:30	12/01/12 19:04	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	**0.57**	ug/L	0.20	1	11/27/12 17:25	11/30/12 14:22	7439-97-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/22/12 15:26	67-64-1	
Benzene	ND	ug/L	1.0	1		11/22/12 15:26	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/22/12 15:26	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/22/12 15:26	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/22/12 15:26	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/22/12 15:26	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/22/12 15:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/22/12 15:26	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/22/12 15:26	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/22/12 15:26	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/22/12 15:26	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/22/12 15:26	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/22/12 15:26	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/22/12 15:26	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/22/12 15:26	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/22/12 15:26	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/22/12 15:26	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/22/12 15:26	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/22/12 15:26	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/22/12 15:26	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/22/12 15:26	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/22/12 15:26	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/22/12 15:26	75-71-8	
1,1-Dichloroethane	**1.6**	ug/L	1.0	1		11/22/12 15:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/22/12 15:26	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/22/12 15:26	75-35-4	

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ANALYTICAL RESULTS

Project: Clay Co. LF MWs # 2 11/15
Pace Project No.: 92139115

Sample: MW # 2 **Lab ID: 92139115001** Collected: 11/15/12 11:35 Received: 11/19/12 10:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/22/12 15:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/22/12 15:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/22/12 15:26	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/22/12 15:26	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/22/12 15:26	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/22/12 15:26	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/22/12 15:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/22/12 15:26	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/22/12 15:26	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/22/12 15:26	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/22/12 15:26	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/22/12 15:26	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/22/12 15:26	99-87-6	
Methylene Chloride	**3.5**	ug/L	2.0	1		11/22/12 15:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/22/12 15:26	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/22/12 15:26	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/22/12 15:26	91-20-3	
Styrene	ND	ug/L	1.0	1		11/22/12 15:26	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/22/12 15:26	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/22/12 15:26	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/22/12 15:26	127-18-4	
Toluene	ND	ug/L	1.0	1		11/22/12 15:26	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/22/12 15:26	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/22/12 15:26	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/22/12 15:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/22/12 15:26	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/22/12 15:26	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/22/12 15:26	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/22/12 15:26	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/22/12 15:26	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/22/12 15:26	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/22/12 15:26	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/22/12 15:26	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/22/12 15:26	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	104	%	70-130	1		11/22/12 15:26	460-00-4	
Dibromofluoromethane (S)	97	%	70-130	1		11/22/12 15:26	1868-53-7	
1,2-Dichloroethane-d4 (S)	85	%	70-130	1		11/22/12 15:26	17060-07-0	
Toluene-d8 (S)	96	%	70-130	1		11/22/12 15:26	2037-26-5	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 2 11/15
Pace Project No.: 92139115

QC Batch: MERP/4706
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Associated Lab Samples: 92139115001

METHOD BLANK: 878904
Matrix: Water
Associated Lab Samples: 92139115001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	11/30/12 13:58	

LABORATORY CONTROL SAMPLE: 878905

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.6	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 878906 878907

Parameter	Units	92139077001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Mercury	ug/L				2.6	2.6				2	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 2 11/15
Pace Project No.: 92139115

QC Batch: MPRP/12054
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92139115001

METHOD BLANK: 879405
Matrix: Water
Associated Lab Samples: 92139115001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	12/01/12 17:24	
Arsenic	ug/L	ND	10.0	12/01/12 17:24	
Barium	ug/L	ND	5.0	12/01/12 17:24	
Beryllium	ug/L	ND	1.0	12/01/12 17:24	
Cadmium	ug/L	ND	1.0	12/01/12 17:24	
Chromium	ug/L	ND	5.0	12/01/12 17:24	
Cobalt	ug/L	ND	5.0	12/01/12 17:24	
Copper	ug/L	ND	5.0	12/01/12 17:24	
Lead	ug/L	ND	5.0	12/01/12 17:24	
Nickel	ug/L	ND	5.0	12/01/12 17:24	
Selenium	ug/L	ND	10.0	12/01/12 17:24	
Silver	ug/L	ND	5.0	12/01/12 17:24	
Thallium	ug/L	ND	5.4	12/01/12 17:24	
Vanadium	ug/L	ND	5.0	12/01/12 17:24	
Zinc	ug/L	ND	10.0	12/01/12 17:24	

LABORATORY CONTROL SAMPLE: 879406

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	506	101	80-120	
Arsenic	ug/L	500	514	103	80-120	
Barium	ug/L	500	485	97	80-120	
Beryllium	ug/L	500	535	107	80-120	
Cadmium	ug/L	500	519	104	80-120	
Chromium	ug/L	500	546	109	80-120	
Cobalt	ug/L	500	512	102	80-120	
Copper	ug/L	500	501	100	80-120	
Lead	ug/L	500	512	102	80-120	
Nickel	ug/L	500	519	104	80-120	
Selenium	ug/L	500	514	103	80-120	
Silver	ug/L	250	250	100	80-120	
Thallium	ug/L	500	495	99	80-120	
Vanadium	ug/L	500	512	102	80-120	
Zinc	ug/L	500	522	104	80-120	

MATRIX SPIKE SAMPLE: 879407

Parameter	Units	92139077001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	500	503	101	75-125	
Arsenic	ug/L	ND	500	510	102	75-125	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 2 11/15
Pace Project No.: 92139115

MATRIX SPIKE SAMPLE: 879407

Parameter	Units	92139077001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	48.3	500	523	95	75-125	
Beryllium	ug/L	ND	500	530	106	75-125	
Cadmium	ug/L	ND	500	511	102	75-125	
Chromium	ug/L	ND	500	542	108	75-125	
Cobalt	ug/L	ND	500	505	101	75-125	
Copper	ug/L	179	500	674	99	75-125	
Lead	ug/L	ND	500	499	99	75-125	
Nickel	ug/L	ND	500	510	102	75-125	
Selenium	ug/L	ND	500	509	102	75-125	
Silver	ug/L	ND	250	247	99	75-125	
Thallium	ug/L	ND	500	483	97	75-125	
Vanadium	ug/L	ND	500	510	102	75-125	
Zinc	ug/L	79.1	500	593	103	75-125	

SAMPLE DUPLICATE: 879408

Parameter	Units	92139077002 Result	Dup Result	RPD	Qualifiers
Antimony	ug/L	ND	ND		
Arsenic	ug/L	ND	ND		
Barium	ug/L	41.0	41.3	1	
Beryllium	ug/L	ND	ND		
Cadmium	ug/L	ND	ND		
Chromium	ug/L	ND	ND		
Cobalt	ug/L	ND	ND		
Copper	ug/L	20.3	20.4	0	
Lead	ug/L	ND	ND		
Nickel	ug/L	ND	ND		
Selenium	ug/L	ND	ND		
Silver	ug/L	ND	ND		
Thallium	ug/L	ND	ND		
Vanadium	ug/L	ND	ND		
Zinc	ug/L	64.4	62.5	3	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 2 11/15
Pace Project No.: 92139115

QC Batch: MSV/21177
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92139115001

METHOD BLANK: 877743
Matrix: Water
Associated Lab Samples: 92139115001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,1,1-Trichloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,1-Dichloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,1-Dichloroethene	ug/L	ND	1.0	11/22/12 11:59	
1,1-Dichloropropene	ug/L	ND	1.0	11/22/12 11:59	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
1,2,3-Trichloropropane	ug/L	ND	1.0	11/22/12 11:59	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	11/22/12 11:59	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	11/22/12 11:59	
1,2-Dichlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
1,2-Dichloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,2-Dichloropropane	ug/L	ND	1.0	11/22/12 11:59	
1,3-Dichlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
1,3-Dichloropropane	ug/L	ND	1.0	11/22/12 11:59	
1,4-Dichlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
2,2-Dichloropropane	ug/L	ND	1.0	11/22/12 11:59	
2-Butanone (MEK)	ug/L	ND	5.0	11/22/12 11:59	
2-Chlorotoluene	ug/L	ND	1.0	11/22/12 11:59	
2-Hexanone	ug/L	ND	5.0	11/22/12 11:59	
4-Chlorotoluene	ug/L	ND	1.0	11/22/12 11:59	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	11/22/12 11:59	
Acetone	ug/L	ND	25.0	11/22/12 11:59	
Benzene	ug/L	ND	1.0	11/22/12 11:59	
Bromobenzene	ug/L	ND	1.0	11/22/12 11:59	
Bromochloromethane	ug/L	ND	1.0	11/22/12 11:59	
Bromodichloromethane	ug/L	ND	1.0	11/22/12 11:59	
Bromoform	ug/L	ND	1.0	11/22/12 11:59	
Bromomethane	ug/L	ND	2.0	11/22/12 11:59	
Carbon tetrachloride	ug/L	ND	1.0	11/22/12 11:59	
Chlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
Chloroethane	ug/L	ND	1.0	11/22/12 11:59	
Chloroform	ug/L	ND	1.0	11/22/12 11:59	
Chloromethane	ug/L	ND	1.0	11/22/12 11:59	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/22/12 11:59	
cis-1,3-Dichloropropene	ug/L	ND	1.0	11/22/12 11:59	
Dibromochloromethane	ug/L	ND	1.0	11/22/12 11:59	
Dibromomethane	ug/L	ND	1.0	11/22/12 11:59	
Dichlorodifluoromethane	ug/L	ND	1.0	11/22/12 11:59	
Diisopropyl ether	ug/L	ND	1.0	11/22/12 11:59	
Ethylbenzene	ug/L	ND	1.0	11/22/12 11:59	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 2 11/15
Pace Project No.: 92139115

METHOD BLANK: 877743 Matrix: Water

Associated Lab Samples: 92139115001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	ND	1.0	11/22/12 11:59	
m&p-Xylene	ug/L	ND	2.0	11/22/12 11:59	
Methyl-tert-butyl ether	ug/L	ND	1.0	11/22/12 11:59	
Methylene Chloride	ug/L	ND	2.0	11/22/12 11:59	
Naphthalene	ug/L	ND	1.0	11/22/12 11:59	
o-Xylene	ug/L	ND	1.0	11/22/12 11:59	
p-Isopropyltoluene	ug/L	ND	1.0	11/22/12 11:59	
Styrene	ug/L	ND	1.0	11/22/12 11:59	
Tetrachloroethene	ug/L	ND	1.0	11/22/12 11:59	
Toluene	ug/L	ND	1.0	11/22/12 11:59	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/22/12 11:59	
trans-1,3-Dichloropropene	ug/L	ND	1.0	11/22/12 11:59	
Trichloroethene	ug/L	ND	1.0	11/22/12 11:59	
Trichlorofluoromethane	ug/L	ND	1.0	11/22/12 11:59	
Vinyl acetate	ug/L	ND	2.0	11/22/12 11:59	
Vinyl chloride	ug/L	ND	1.0	11/22/12 11:59	
Xylene (Total)	ug/L	ND	2.0	11/22/12 11:59	
1,2-Dichloroethane-d4 (S)	%	94	70-130	11/22/12 11:59	
4-Bromofluorobenzene (S)	%	107	70-130	11/22/12 11:59	
Dibromofluoromethane (S)	%	99	70-130	11/22/12 11:59	
Toluene-d8 (S)	%	92	70-130	11/22/12 11:59	

LABORATORY CONTROL SAMPLE: 877744

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	43.4	87	70-130	
1,1,1-Trichloroethane	ug/L	50	43.6	87	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	45.2	90	70-130	
1,1,2-Trichloroethane	ug/L	50	48.7	97	70-130	
1,1-Dichloroethane	ug/L	50	46.5	93	70-130	
1,1-Dichloroethene	ug/L	50	45.7	91	70-132	
1,1-Dichloropropene	ug/L	50	44.8	90	70-130	
1,2,3-Trichlorobenzene	ug/L	50	41.4	83	70-135	
1,2,3-Trichloropropane	ug/L	50	44.5	89	70-130	
1,2,4-Trichlorobenzene	ug/L	50	43.1	86	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	41.5	83	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	46.9	94	70-130	
1,2-Dichlorobenzene	ug/L	50	45.1	90	70-130	
1,2-Dichloroethane	ug/L	50	38.5	77	70-130	
1,2-Dichloropropane	ug/L	50	47.5	95	70-130	
1,3-Dichlorobenzene	ug/L	50	45.5	91	70-130	
1,3-Dichloropropane	ug/L	50	46.1	92	70-130	
1,4-Dichlorobenzene	ug/L	50	45.2	90	70-130	
2,2-Dichloropropane	ug/L	50	42.5	85	58-145	
2-Butanone (MEK)	ug/L	100	103	103	70-145	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 2 11/15
Pace Project No.: 92139115

LABORATORY CONTROL SAMPLE: 877744

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Chlorotoluene	ug/L	50	44.0	88	70-130	
2-Hexanone	ug/L	100	107	107	70-144	
4-Chlorotoluene	ug/L	50	44.1	88	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	106	106	70-140	
Acetone	ug/L	100	82.2	82	50-175	
Benzene	ug/L	50	49.0	98	70-130	
Bromobenzene	ug/L	50	43.7	87	70-130	
Bromochloromethane	ug/L	50	45.2	90	70-130	
Bromodichloromethane	ug/L	50	44.7	89	70-130	
Bromoform	ug/L	50	46.8	94	70-130	
Bromomethane	ug/L	50	40.2	80	54-130	
Carbon tetrachloride	ug/L	50	43.4	87	70-132	
Chlorobenzene	ug/L	50	47.4	95	70-130	
Chloroethane	ug/L	50	43.8	88	64-134	
Chloroform	ug/L	50	42.6	85	70-130	
Chloromethane	ug/L	50	54.8	110	64-130	
cis-1,2-Dichloroethene	ug/L	50	44.7	89	70-131	
cis-1,3-Dichloropropene	ug/L	50	46.4	93	70-130	
Dibromochloromethane	ug/L	50	46.0	92	70-130	
Dibromomethane	ug/L	50	48.3	97	70-131	
Dichlorodifluoromethane	ug/L	50	46.8	94	56-130	
Diisopropyl ether	ug/L	50	46.5	93	70-130	
Ethylbenzene	ug/L	50	47.0	94	70-130	
Hexachloro-1,3-butadiene	ug/L	50	46.2	92	70-130	
m&p-Xylene	ug/L	100	94.6	95	70-130	
Methyl-tert-butyl ether	ug/L	50	41.4	83	70-130	
Methylene Chloride	ug/L	50	46.7	93	63-130	
Naphthalene	ug/L	50	43.6	87	70-138	
o-Xylene	ug/L	50	45.1	90	70-130	
p-Isopropyltoluene	ug/L	50	42.9	86	70-130	
Styrene	ug/L	50	47.1	94	70-130	
Tetrachloroethene	ug/L	50	49.1	98	70-130	
Toluene	ug/L	50	47.4	95	70-130	
trans-1,2-Dichloroethene	ug/L	50	44.3	89	70-130	
trans-1,3-Dichloropropene	ug/L	50	45.4	91	70-132	
Trichloroethene	ug/L	50	46.5	93	70-130	
Trichlorofluoromethane	ug/L	50	46.3	93	62-133	
Vinyl acetate	ug/L	100	87.4	87	66-157	
Vinyl chloride	ug/L	50	46.8	94	69-130	
Xylene (Total)	ug/L	150	140	93	70-130	
1,2-Dichloroethane-d4 (S)	%			82	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Dibromofluoromethane (S)	%			93	70-130	
Toluene-d8 (S)	%			100	70-130	

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

QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 2 11/15
Pace Project No.: 92139115

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 877745 877746

Parameter	Units	92139117001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	42.5	38.8	85	78	70-166	9	
Benzene	ug/L	ND	50	50	42.3	45.7	85	91	70-148	8	
Chlorobenzene	ug/L	ND	50	50	48.3	50.7	97	101	70-146	5	
Toluene	ug/L	ND	50	50	47.6	49.5	95	99	70-155	4	
Trichloroethene	ug/L	ND	50	50	49.0	50.6	98	101	69-151	3	
1,2-Dichloroethane-d4 (S)	%						80	84	70-130		
4-Bromofluorobenzene (S)	%						103	106	70-130		
Dibromofluoromethane (S)	%						97	94	70-130		
Toluene-d8 (S)	%						94	94	70-130		

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QUALIFIERS

Project: Clay Co. LF MWs # 2 11/15
Pace Project No.: 92139115

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Clay Co. LF MWs # 2 11/15
Pace Project No.: 92139115

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92139115001	**MW # 2**	EPA 3010	MPRP/12054	EPA 6010	ICP/11029
92139115001	**MW # 2**	EPA 7470	MERP/4706	EPA 7470	MERC/4601
92139115001	**MW # 2**	EPA 8260	MSV/21177		

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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

1555443

Section A Required Client Information:

Company: ENVIRONMENTAL INC
Address: PO BOX 954
CURRITUCK, NC 28723
Email To:
Phone: (252) 556-5558 Fax: (252) 556-0850
Requested Due Date/TAT:

Section B Required Project Information:

Report To:
Copy To:
Purchase Order No.:
Project Name: CHAY CO MW #2
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

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)	APPX I METALS	APPX I VOC 8260	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. (92139115)
1	MW #2	WW	G			11/15/12	1135A					✓							✓			921391150001
2													✓							✓		
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Matthew Chance	11/19/12	1002	Jane Meehan	11/19/12	10:02	38

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER:
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

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.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical® www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: May 30, 2012 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.08	Issuing Authorities: Pace Asheville Quality Office

Client Name: Env Inc Project # 92139115

Where Received: ☐ Huntersville ☑ Asheville ☐ Eden ☐ Raleigh

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

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

Optional Proj. Due Date:

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

Circle Thermometer Used: IR Gun#2 -80344039 **Type of Ice:** (Wet) Blue None ☑ Samples on ice, cooling process has begun

IR Gun Back Up- 111565135

Temp Correction Factor: Add / Subtract 0.1 C

Corrected Cooler Temp.: 3.8 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C **Comments:**

Date and Initials of person examining contents: 11/28/12

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: TM **Date:** 11/28 **SRF Review:** TM **Date:** 11/28

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

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December 05, 2012

Mr. Mark Teague
Environmental, Inc.
PO Box 954
Cullowhee, NC 28723

RE: Project: Clay Co. LF MWs # 3 11/15
Pace Project No.: 92139113

Dear Mr. Teague:
Enclosed are the analytical results for sample(s) received by the laboratory on November 19, 2012. 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,

Tom Williams

tom.williams@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: Clay Co. LF MWs # 3 11/15
Pace Project No.: 92139113

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

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SAMPLE ANALYTE COUNT

Project: Clay Co. LF MWs # 3 11/15
Pace Project No.: 92139113

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92139113001	**MW # 3**	EPA 6010	JDA	15	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8260	MCK	64	PASI-C

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ANALYTICAL RESULTS

Project: Clay Co. LF MWs # 3 11/15
Pace Project No.: 92139113

Sample: MW # 3 **Lab ID: 92139113001** Collected: 11/15/12 11:00 Received: 11/19/12 10:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:01	7440-36-0	
Arsenic	ND	ug/L	10.0	1	11/28/12 11:30	12/01/12 19:01	7440-38-2	
Barium	**108**	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:01	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/28/12 11:30	12/01/12 19:01	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/28/12 11:30	12/01/12 19:01	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:01	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:01	7440-48-4	
Copper	**6.8**	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:01	7440-50-8	
Lead	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:01	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:01	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/28/12 11:30	12/01/12 19:01	7782-49-2	
Silver	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:01	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/28/12 11:30	12/01/12 19:01	7440-28-0	
Vanadium	**8.2**	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:01	7440-62-2	
Zinc	**18.8**	ug/L	10.0	1	11/28/12 11:30	12/01/12 19:01	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	1	11/27/12 17:25	11/30/12 14:19	7439-97-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/22/12 15:10	67-64-1	
Benzene	ND	ug/L	1.0	1		11/22/12 15:10	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/22/12 15:10	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/22/12 15:10	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/22/12 15:10	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/22/12 15:10	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/22/12 15:10	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/22/12 15:10	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/22/12 15:10	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/22/12 15:10	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/22/12 15:10	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/22/12 15:10	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/22/12 15:10	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/22/12 15:10	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/22/12 15:10	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/22/12 15:10	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/22/12 15:10	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/22/12 15:10	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/22/12 15:10	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/22/12 15:10	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/22/12 15:10	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/22/12 15:10	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/22/12 15:10	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/22/12 15:10	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/22/12 15:10	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/22/12 15:10	75-35-4	

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ANALYTICAL RESULTS

Project: Clay Co. LF MWs # 3 11/15
Pace Project No.: 92139113

Sample: MW # 3 **Lab ID: 92139113001** Collected: 11/15/12 11:00 Received: 11/19/12 10:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/22/12 15:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/22/12 15:10	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/22/12 15:10	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/22/12 15:10	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/22/12 15:10	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/22/12 15:10	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/22/12 15:10	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/22/12 15:10	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/22/12 15:10	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/22/12 15:10	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/22/12 15:10	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/22/12 15:10	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/22/12 15:10	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		11/22/12 15:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/22/12 15:10	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/22/12 15:10	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/22/12 15:10	91-20-3	
Styrene	ND	ug/L	1.0	1		11/22/12 15:10	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/22/12 15:10	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/22/12 15:10	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/22/12 15:10	127-18-4	
Toluene	ND	ug/L	1.0	1		11/22/12 15:10	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/22/12 15:10	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/22/12 15:10	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/22/12 15:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/22/12 15:10	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/22/12 15:10	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/22/12 15:10	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/22/12 15:10	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/22/12 15:10	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/22/12 15:10	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/22/12 15:10	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/22/12 15:10	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/22/12 15:10	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	103	%	70-130	1		11/22/12 15:10	460-00-4	
Dibromofluoromethane (S)	102	%	70-130	1		11/22/12 15:10	1868-53-7	
1,2-Dichloroethane-d4 (S)	89	%	70-130	1		11/22/12 15:10	17060-07-0	
Toluene-d8 (S)	97	%	70-130	1		11/22/12 15:10	2037-26-5	

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(704)875-9092

QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 3 11/15
Pace Project No.: 92139113

QC Batch: MERP/4706
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Associated Lab Samples: 92139113001

METHOD BLANK: 878904
Matrix: Water
Associated Lab Samples: 92139113001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	11/30/12 13:58	

LABORATORY CONTROL SAMPLE: 878905

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.6	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 878906 878907

Parameter	Units	92139077001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Mercury	ug/L				2.6	2.6				2	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 3 11/15
Pace Project No.: 92139113

QC Batch: MPRP/12054
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92139113001

METHOD BLANK: 879405
Matrix: Water
Associated Lab Samples: 92139113001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	12/01/12 17:24	
Arsenic	ug/L	ND	10.0	12/01/12 17:24	
Barium	ug/L	ND	5.0	12/01/12 17:24	
Beryllium	ug/L	ND	1.0	12/01/12 17:24	
Cadmium	ug/L	ND	1.0	12/01/12 17:24	
Chromium	ug/L	ND	5.0	12/01/12 17:24	
Cobalt	ug/L	ND	5.0	12/01/12 17:24	
Copper	ug/L	ND	5.0	12/01/12 17:24	
Lead	ug/L	ND	5.0	12/01/12 17:24	
Nickel	ug/L	ND	5.0	12/01/12 17:24	
Selenium	ug/L	ND	10.0	12/01/12 17:24	
Silver	ug/L	ND	5.0	12/01/12 17:24	
Thallium	ug/L	ND	5.4	12/01/12 17:24	
Vanadium	ug/L	ND	5.0	12/01/12 17:24	
Zinc	ug/L	ND	10.0	12/01/12 17:24	

LABORATORY CONTROL SAMPLE: 879406

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	506	101	80-120	
Arsenic	ug/L	500	514	103	80-120	
Barium	ug/L	500	485	97	80-120	
Beryllium	ug/L	500	535	107	80-120	
Cadmium	ug/L	500	519	104	80-120	
Chromium	ug/L	500	546	109	80-120	
Cobalt	ug/L	500	512	102	80-120	
Copper	ug/L	500	501	100	80-120	
Lead	ug/L	500	512	102	80-120	
Nickel	ug/L	500	519	104	80-120	
Selenium	ug/L	500	514	103	80-120	
Silver	ug/L	250	250	100	80-120	
Thallium	ug/L	500	495	99	80-120	
Vanadium	ug/L	500	512	102	80-120	
Zinc	ug/L	500	522	104	80-120	

MATRIX SPIKE SAMPLE: 879407

Parameter	Units	92139077001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	500	503	101	75-125	
Arsenic	ug/L	ND	500	510	102	75-125	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 3 11/15
Pace Project No.: 92139113

MATRIX SPIKE SAMPLE: 879407

Parameter	Units	92139077001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	48.3	500	523	95	75-125	
Beryllium	ug/L	ND	500	530	106	75-125	
Cadmium	ug/L	ND	500	511	102	75-125	
Chromium	ug/L	ND	500	542	108	75-125	
Cobalt	ug/L	ND	500	505	101	75-125	
Copper	ug/L	179	500	674	99	75-125	
Lead	ug/L	ND	500	499	99	75-125	
Nickel	ug/L	ND	500	510	102	75-125	
Selenium	ug/L	ND	500	509	102	75-125	
Silver	ug/L	ND	250	247	99	75-125	
Thallium	ug/L	ND	500	483	97	75-125	
Vanadium	ug/L	ND	500	510	102	75-125	
Zinc	ug/L	79.1	500	593	103	75-125	

SAMPLE DUPLICATE: 879408

Parameter	Units	92139077002 Result	Dup Result	RPD	Qualifiers
Antimony	ug/L	ND	ND		
Arsenic	ug/L	ND	ND		
Barium	ug/L	41.0	41.3	1	
Beryllium	ug/L	ND	ND		
Cadmium	ug/L	ND	ND		
Chromium	ug/L	ND	ND		
Cobalt	ug/L	ND	ND		
Copper	ug/L	20.3	20.4	0	
Lead	ug/L	ND	ND		
Nickel	ug/L	ND	ND		
Selenium	ug/L	ND	ND		
Silver	ug/L	ND	ND		
Thallium	ug/L	ND	ND		
Vanadium	ug/L	ND	ND		
Zinc	ug/L	64.4	62.5	3	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 3 11/15
Pace Project No.: 92139113

QC Batch: MSV/21177
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92139113001

METHOD BLANK: 877743
Matrix: Water
Associated Lab Samples: 92139113001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,1,1-Trichloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,1-Dichloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,1-Dichloroethene	ug/L	ND	1.0	11/22/12 11:59	
1,1-Dichloropropene	ug/L	ND	1.0	11/22/12 11:59	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
1,2,3-Trichloropropane	ug/L	ND	1.0	11/22/12 11:59	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	11/22/12 11:59	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	11/22/12 11:59	
1,2-Dichlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
1,2-Dichloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,2-Dichloropropane	ug/L	ND	1.0	11/22/12 11:59	
1,3-Dichlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
1,3-Dichloropropane	ug/L	ND	1.0	11/22/12 11:59	
1,4-Dichlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
2,2-Dichloropropane	ug/L	ND	1.0	11/22/12 11:59	
2-Butanone (MEK)	ug/L	ND	5.0	11/22/12 11:59	
2-Chlorotoluene	ug/L	ND	1.0	11/22/12 11:59	
2-Hexanone	ug/L	ND	5.0	11/22/12 11:59	
4-Chlorotoluene	ug/L	ND	1.0	11/22/12 11:59	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	11/22/12 11:59	
Acetone	ug/L	ND	25.0	11/22/12 11:59	
Benzene	ug/L	ND	1.0	11/22/12 11:59	
Bromobenzene	ug/L	ND	1.0	11/22/12 11:59	
Bromochloromethane	ug/L	ND	1.0	11/22/12 11:59	
Bromodichloromethane	ug/L	ND	1.0	11/22/12 11:59	
Bromoform	ug/L	ND	1.0	11/22/12 11:59	
Bromomethane	ug/L	ND	2.0	11/22/12 11:59	
Carbon tetrachloride	ug/L	ND	1.0	11/22/12 11:59	
Chlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
Chloroethane	ug/L	ND	1.0	11/22/12 11:59	
Chloroform	ug/L	ND	1.0	11/22/12 11:59	
Chloromethane	ug/L	ND	1.0	11/22/12 11:59	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/22/12 11:59	
cis-1,3-Dichloropropene	ug/L	ND	1.0	11/22/12 11:59	
Dibromochloromethane	ug/L	ND	1.0	11/22/12 11:59	
Dibromomethane	ug/L	ND	1.0	11/22/12 11:59	
Dichlorodifluoromethane	ug/L	ND	1.0	11/22/12 11:59	
Diisopropyl ether	ug/L	ND	1.0	11/22/12 11:59	
Ethylbenzene	ug/L	ND	1.0	11/22/12 11:59	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 3 11/15
Pace Project No.: 92139113

METHOD BLANK: 877743 Matrix: Water

Associated Lab Samples: 92139113001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	ND	1.0	11/22/12 11:59	
m&p-Xylene	ug/L	ND	2.0	11/22/12 11:59	
Methyl-tert-butyl ether	ug/L	ND	1.0	11/22/12 11:59	
Methylene Chloride	ug/L	ND	2.0	11/22/12 11:59	
Naphthalene	ug/L	ND	1.0	11/22/12 11:59	
o-Xylene	ug/L	ND	1.0	11/22/12 11:59	
p-Isopropyltoluene	ug/L	ND	1.0	11/22/12 11:59	
Styrene	ug/L	ND	1.0	11/22/12 11:59	
Tetrachloroethene	ug/L	ND	1.0	11/22/12 11:59	
Toluene	ug/L	ND	1.0	11/22/12 11:59	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/22/12 11:59	
trans-1,3-Dichloropropene	ug/L	ND	1.0	11/22/12 11:59	
Trichloroethene	ug/L	ND	1.0	11/22/12 11:59	
Trichlorofluoromethane	ug/L	ND	1.0	11/22/12 11:59	
Vinyl acetate	ug/L	ND	2.0	11/22/12 11:59	
Vinyl chloride	ug/L	ND	1.0	11/22/12 11:59	
Xylene (Total)	ug/L	ND	2.0	11/22/12 11:59	
1,2-Dichloroethane-d4 (S)	%	94	70-130	11/22/12 11:59	
4-Bromofluorobenzene (S)	%	107	70-130	11/22/12 11:59	
Dibromofluoromethane (S)	%	99	70-130	11/22/12 11:59	
Toluene-d8 (S)	%	92	70-130	11/22/12 11:59	

LABORATORY CONTROL SAMPLE: 877744

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	43.4	87	70-130	
1,1,1-Trichloroethane	ug/L	50	43.6	87	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	45.2	90	70-130	
1,1,2-Trichloroethane	ug/L	50	48.7	97	70-130	
1,1-Dichloroethane	ug/L	50	46.5	93	70-130	
1,1-Dichloroethene	ug/L	50	45.7	91	70-132	
1,1-Dichloropropene	ug/L	50	44.8	90	70-130	
1,2,3-Trichlorobenzene	ug/L	50	41.4	83	70-135	
1,2,3-Trichloropropane	ug/L	50	44.5	89	70-130	
1,2,4-Trichlorobenzene	ug/L	50	43.1	86	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	41.5	83	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	46.9	94	70-130	
1,2-Dichlorobenzene	ug/L	50	45.1	90	70-130	
1,2-Dichloroethane	ug/L	50	38.5	77	70-130	
1,2-Dichloropropane	ug/L	50	47.5	95	70-130	
1,3-Dichlorobenzene	ug/L	50	45.5	91	70-130	
1,3-Dichloropropane	ug/L	50	46.1	92	70-130	
1,4-Dichlorobenzene	ug/L	50	45.2	90	70-130	
2,2-Dichloropropane	ug/L	50	42.5	85	58-145	
2-Butanone (MEK)	ug/L	100	103	103	70-145	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 3 11/15
Pace Project No.: 92139113

LABORATORY CONTROL SAMPLE: 877744

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Chlorotoluene	ug/L	50	44.0	88	70-130	
2-Hexanone	ug/L	100	107	107	70-144	
4-Chlorotoluene	ug/L	50	44.1	88	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	106	106	70-140	
Acetone	ug/L	100	82.2	82	50-175	
Benzene	ug/L	50	49.0	98	70-130	
Bromobenzene	ug/L	50	43.7	87	70-130	
Bromochloromethane	ug/L	50	45.2	90	70-130	
Bromodichloromethane	ug/L	50	44.7	89	70-130	
Bromoform	ug/L	50	46.8	94	70-130	
Bromomethane	ug/L	50	40.2	80	54-130	
Carbon tetrachloride	ug/L	50	43.4	87	70-132	
Chlorobenzene	ug/L	50	47.4	95	70-130	
Chloroethane	ug/L	50	43.8	88	64-134	
Chloroform	ug/L	50	42.6	85	70-130	
Chloromethane	ug/L	50	54.8	110	64-130	
cis-1,2-Dichloroethene	ug/L	50	44.7	89	70-131	
cis-1,3-Dichloropropene	ug/L	50	46.4	93	70-130	
Dibromochloromethane	ug/L	50	46.0	92	70-130	
Dibromomethane	ug/L	50	48.3	97	70-131	
Dichlorodifluoromethane	ug/L	50	46.8	94	56-130	
Diisopropyl ether	ug/L	50	46.5	93	70-130	
Ethylbenzene	ug/L	50	47.0	94	70-130	
Hexachloro-1,3-butadiene	ug/L	50	46.2	92	70-130	
m&p-Xylene	ug/L	100	94.6	95	70-130	
Methyl-tert-butyl ether	ug/L	50	41.4	83	70-130	
Methylene Chloride	ug/L	50	46.7	93	63-130	
Naphthalene	ug/L	50	43.6	87	70-138	
o-Xylene	ug/L	50	45.1	90	70-130	
p-Isopropyltoluene	ug/L	50	42.9	86	70-130	
Styrene	ug/L	50	47.1	94	70-130	
Tetrachloroethene	ug/L	50	49.1	98	70-130	
Toluene	ug/L	50	47.4	95	70-130	
trans-1,2-Dichloroethene	ug/L	50	44.3	89	70-130	
trans-1,3-Dichloropropene	ug/L	50	45.4	91	70-132	
Trichloroethene	ug/L	50	46.5	93	70-130	
Trichlorofluoromethane	ug/L	50	46.3	93	62-133	
Vinyl acetate	ug/L	100	87.4	87	66-157	
Vinyl chloride	ug/L	50	46.8	94	69-130	
Xylene (Total)	ug/L	150	140	93	70-130	
1,2-Dichloroethane-d4 (S)	%			82	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Dibromofluoromethane (S)	%			93	70-130	
Toluene-d8 (S)	%			100	70-130	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 3 11/15
Pace Project No.: 92139113

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 877745 877746

Parameter	Units	92139117001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	42.5	38.8	85	78	70-166	9	
Benzene	ug/L	ND	50	50	42.3	45.7	85	91	70-148	8	
Chlorobenzene	ug/L	ND	50	50	48.3	50.7	97	101	70-146	5	
Toluene	ug/L	ND	50	50	47.6	49.5	95	99	70-155	4	
Trichloroethene	ug/L	ND	50	50	49.0	50.6	98	101	69-151	3	
1,2-Dichloroethane-d4 (S)	%						80	84	70-130		
4-Bromofluorobenzene (S)	%						103	106	70-130		
Dibromofluoromethane (S)	%						97	94	70-130		
Toluene-d8 (S)	%						94	94	70-130		

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QUALIFIERS

Project: Clay Co. LF MWs # 3 11/15
Pace Project No.: 92139113

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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TNI - The NELAC Institute.

LABORATORIES

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Clay Co. LF MWs # 3 11/15
Pace Project No.: 92139113

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92139113001	**MW # 3**	EPA 3010	MPRP/12054	EPA 6010	ICP/11029
92139113001	**MW # 3**	EPA 7470	MERP/4706	EPA 7470	MERC/4601
92139113001	**MW # 3**	EPA 8260	MSV/21177		

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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.

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Section A Required Client Information:

Company: ENVIRONMENTAL INC
Address: PO BOX 954
COLLOMHEE, NC 28723
Email To:
Phone: (828) 586-5558 Fax: (828) 586-0500
Requested Due Date/TAT:

Section B Required Project Information:

Report To:
Copy To:
Purchase Order No.:
Project Name: CLAY CO MW #3
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

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

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

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): APPX I METALS	APPX I VOC GRCU	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW #3	WW	G			11/15/12	1100					✓						✓			92139113
2													✓						✓		92139113001
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Matthew Hance	11/19/12	1002A	Jane Meehan	11/19/12	10:02	3.8

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER:
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

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.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical® www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: May 30, 2012 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.08	Issuing Authorities: Pace Asheville Quality Office

Client Name: Env Inc Project # 92139113

Where Received: ☐ Huntersville ☑ Asheville ☐ Eden ☐ Raleigh

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

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

Optional Proj. Due Date:

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

Circle Thermometer Used: IR Gun#2 -80344039 **Type of Ice:** (Wet) Blue None ☑ Samples on ice, cooling process has begun

IR Gun Back Up- 111565135

Temp Correction Factor: Add / Subtract 0.1 C

Corrected Cooler Temp.: 3.8 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C **Comments:**

Date and Initials of person examining contents: 11/19/12

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: TM **Date:** 11/28 **SRF Review:** TM **Date:** 11/28

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

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December 07, 2012

Mr. Mark Teague
Environmental, Inc.
PO Box 954
Cullowhee, NC 28723

RE: Project: Clay Co. LF MWs # 4 11/15
Pace Project No.: 92139108

Dear Mr. Teague:
Enclosed are the analytical results for sample(s) received by the laboratory on November 19, 2012. 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,

Tom Williams

tom.williams@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: Clay Co. LF MWs # 4 11/15
Pace Project No.: 92139108

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

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SAMPLE ANALYTE COUNT

Project: Clay Co. LF MWs # 4 11/15
Pace Project No.: 92139108

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92139108001	**MW # 4**	EPA 6010	JDA	15	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8260	MCK	64	PASI-C

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ANALYTICAL RESULTS

Project: Clay Co. LF MWs # 4 11/15
Pace Project No.: 92139108

Sample: MW # 4 **Lab ID: 92139108001** Collected: 11/15/12 14:00 Received: 11/19/12 10:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:50	7440-36-0	
Arsenic	ND	ug/L	10.0	1	11/28/12 11:30	12/01/12 18:50	7440-38-2	
Barium	**182**	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:50	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/28/12 11:30	12/01/12 18:50	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/28/12 11:30	12/01/12 18:50	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:50	7440-47-3	
Cobalt	**9.3**	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:50	7440-48-4	
Copper	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:50	7440-50-8	
Lead	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:50	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:50	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/28/12 11:30	12/01/12 18:50	7782-49-2	
Silver	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:50	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/28/12 11:30	12/01/12 18:50	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:50	7440-62-2	
Zinc	**19.3**	ug/L	10.0	1	11/28/12 11:30	12/01/12 18:50	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	**3.1**	ug/L	0.20	1	11/27/12 17:25	11/30/12 14:11	7439-97-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/22/12 21:47	67-64-1	
Benzene	ND	ug/L	1.0	1		11/22/12 21:47	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/22/12 21:47	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/22/12 21:47	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/22/12 21:47	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/22/12 21:47	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/22/12 21:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/22/12 21:47	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/22/12 21:47	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/22/12 21:47	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/22/12 21:47	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/22/12 21:47	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/22/12 21:47	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/22/12 21:47	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/22/12 21:47	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/22/12 21:47	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/22/12 21:47	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/22/12 21:47	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/22/12 21:47	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/22/12 21:47	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/22/12 21:47	541-73-1	
1,4-Dichlorobenzene	**1.0**	ug/L	1.0	1		11/22/12 21:47	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/22/12 21:47	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/22/12 21:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/22/12 21:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/22/12 21:47	75-35-4	

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ANALYTICAL RESULTS

Project: Clay Co. LF MWs # 4 11/15
Pace Project No.: 92139108

Sample: MW # 4 **Lab ID: 92139108001** Collected: 11/15/12 14:00 Received: 11/19/12 10:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
cis-1,2-Dichloroethene	**1.5**	ug/L	1.0	1		11/22/12 21:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/22/12 21:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/22/12 21:47	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/22/12 21:47	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/22/12 21:47	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/22/12 21:47	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/22/12 21:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/22/12 21:47	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/22/12 21:47	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/22/12 21:47	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/22/12 21:47	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/22/12 21:47	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/22/12 21:47	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		11/22/12 21:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/22/12 21:47	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/22/12 21:47	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/22/12 21:47	91-20-3	
Styrene	ND	ug/L	1.0	1		11/22/12 21:47	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/22/12 21:47	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/22/12 21:47	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/22/12 21:47	127-18-4	
Toluene	ND	ug/L	1.0	1		11/22/12 21:47	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/22/12 21:47	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/22/12 21:47	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/22/12 21:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/22/12 21:47	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/22/12 21:47	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/22/12 21:47	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/22/12 21:47	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/22/12 21:47	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/22/12 21:47	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/22/12 21:47	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/22/12 21:47	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/22/12 21:47	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	107	%	70-130	1		11/22/12 21:47	460-00-4	
Dibromofluoromethane (S)	97	%	70-130	1		11/22/12 21:47	1868-53-7	
1,2-Dichloroethane-d4 (S)	85	%	70-130	1		11/22/12 21:47	17060-07-0	
Toluene-d8 (S)	97	%	70-130	1		11/22/12 21:47	2037-26-5	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 4 11/15
Pace Project No.: 92139108

QC Batch: MERP/4706
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Associated Lab Samples: 92139108001

METHOD BLANK: 878904
Matrix: Water
Associated Lab Samples: 92139108001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	11/30/12 13:58	

LABORATORY CONTROL SAMPLE: 878905

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.6	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 878906 878907

Parameter	Units	92139077001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Mercury	ug/L				2.6	2.6				2	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 4 11/15
Pace Project No.: 92139108

QC Batch: MPRP/12054
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92139108001

METHOD BLANK: 879405
Matrix: Water
Associated Lab Samples: 92139108001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	12/01/12 17:24	
Arsenic	ug/L	ND	10.0	12/01/12 17:24	
Barium	ug/L	ND	5.0	12/01/12 17:24	
Beryllium	ug/L	ND	1.0	12/01/12 17:24	
Cadmium	ug/L	ND	1.0	12/01/12 17:24	
Chromium	ug/L	ND	5.0	12/01/12 17:24	
Cobalt	ug/L	ND	5.0	12/01/12 17:24	
Copper	ug/L	ND	5.0	12/01/12 17:24	
Lead	ug/L	ND	5.0	12/01/12 17:24	
Nickel	ug/L	ND	5.0	12/01/12 17:24	
Selenium	ug/L	ND	10.0	12/01/12 17:24	
Silver	ug/L	ND	5.0	12/01/12 17:24	
Thallium	ug/L	ND	5.4	12/01/12 17:24	
Vanadium	ug/L	ND	5.0	12/01/12 17:24	
Zinc	ug/L	ND	10.0	12/01/12 17:24	

LABORATORY CONTROL SAMPLE: 879406

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	506	101	80-120	
Arsenic	ug/L	500	514	103	80-120	
Barium	ug/L	500	485	97	80-120	
Beryllium	ug/L	500	535	107	80-120	
Cadmium	ug/L	500	519	104	80-120	
Chromium	ug/L	500	546	109	80-120	
Cobalt	ug/L	500	512	102	80-120	
Copper	ug/L	500	501	100	80-120	
Lead	ug/L	500	512	102	80-120	
Nickel	ug/L	500	519	104	80-120	
Selenium	ug/L	500	514	103	80-120	
Silver	ug/L	250	250	100	80-120	
Thallium	ug/L	500	495	99	80-120	
Vanadium	ug/L	500	512	102	80-120	
Zinc	ug/L	500	522	104	80-120	

MATRIX SPIKE SAMPLE: 879407

Parameter	Units	92139077001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	500	503	101	75-125	
Arsenic	ug/L	ND	500	510	102	75-125	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 4 11/15
Pace Project No.: 92139108

MATRIX SPIKE SAMPLE: 879407

Parameter	Units	92139077001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	48.3	500	523	95	75-125	
Beryllium	ug/L	ND	500	530	106	75-125	
Cadmium	ug/L	ND	500	511	102	75-125	
Chromium	ug/L	ND	500	542	108	75-125	
Cobalt	ug/L	ND	500	505	101	75-125	
Copper	ug/L	179	500	674	99	75-125	
Lead	ug/L	ND	500	499	99	75-125	
Nickel	ug/L	ND	500	510	102	75-125	
Selenium	ug/L	ND	500	509	102	75-125	
Silver	ug/L	ND	250	247	99	75-125	
Thallium	ug/L	ND	500	483	97	75-125	
Vanadium	ug/L	ND	500	510	102	75-125	
Zinc	ug/L	79.1	500	593	103	75-125	

SAMPLE DUPLICATE: 879408

Parameter	Units	92139077002 Result	Dup Result	RPD	Qualifiers
Antimony	ug/L	ND	ND		
Arsenic	ug/L	ND	ND		
Barium	ug/L	41.0	41.3	1	
Beryllium	ug/L	ND	ND		
Cadmium	ug/L	ND	ND		
Chromium	ug/L	ND	ND		
Cobalt	ug/L	ND	ND		
Copper	ug/L	20.3	20.4	0	
Lead	ug/L	ND	ND		
Nickel	ug/L	ND	ND		
Selenium	ug/L	ND	ND		
Silver	ug/L	ND	ND		
Thallium	ug/L	ND	ND		
Vanadium	ug/L	ND	ND		
Zinc	ug/L	64.4	62.5	3	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 4 11/15
Pace Project No.: 92139108

QC Batch: MSV/21178
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92139108001

METHOD BLANK: 877747
Matrix: Water
Associated Lab Samples: 92139108001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	11/22/12 11:43	
1,1,1-Trichloroethane	ug/L	ND	1.0	11/22/12 11:43	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/22/12 11:43	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/22/12 11:43	
1,1-Dichloroethane	ug/L	ND	1.0	11/22/12 11:43	
1,1-Dichloroethene	ug/L	ND	1.0	11/22/12 11:43	
1,1-Dichloropropene	ug/L	ND	1.0	11/22/12 11:43	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	11/22/12 11:43	
1,2,3-Trichloropropane	ug/L	ND	1.0	11/22/12 11:43	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	11/22/12 11:43	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	11/22/12 11:43	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	11/22/12 11:43	
1,2-Dichlorobenzene	ug/L	ND	1.0	11/22/12 11:43	
1,2-Dichloroethane	ug/L	ND	1.0	11/22/12 11:43	
1,2-Dichloropropane	ug/L	ND	1.0	11/22/12 11:43	
1,3-Dichlorobenzene	ug/L	ND	1.0	11/22/12 11:43	
1,3-Dichloropropane	ug/L	ND	1.0	11/22/12 11:43	
1,4-Dichlorobenzene	ug/L	ND	1.0	11/22/12 11:43	
2,2-Dichloropropane	ug/L	ND	1.0	11/22/12 11:43	
2-Butanone (MEK)	ug/L	ND	5.0	11/22/12 11:43	
2-Chlorotoluene	ug/L	ND	1.0	11/22/12 11:43	
2-Hexanone	ug/L	ND	5.0	11/22/12 11:43	
4-Chlorotoluene	ug/L	ND	1.0	11/22/12 11:43	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	11/22/12 11:43	
Acetone	ug/L	ND	25.0	11/22/12 11:43	
Benzene	ug/L	ND	1.0	11/22/12 11:43	
Bromobenzene	ug/L	ND	1.0	11/22/12 11:43	
Bromochloromethane	ug/L	ND	1.0	11/22/12 11:43	
Bromodichloromethane	ug/L	ND	1.0	11/22/12 11:43	
Bromoform	ug/L	ND	1.0	11/22/12 11:43	
Bromomethane	ug/L	ND	2.0	11/22/12 11:43	
Carbon tetrachloride	ug/L	ND	1.0	11/22/12 11:43	
Chlorobenzene	ug/L	ND	1.0	11/22/12 11:43	
Chloroethane	ug/L	ND	1.0	11/22/12 11:43	
Chloroform	ug/L	ND	1.0	11/22/12 11:43	
Chloromethane	ug/L	ND	1.0	11/22/12 11:43	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/22/12 11:43	
cis-1,3-Dichloropropene	ug/L	ND	1.0	11/22/12 11:43	
Dibromochloromethane	ug/L	ND	1.0	11/22/12 11:43	
Dibromomethane	ug/L	ND	1.0	11/22/12 11:43	
Dichlorodifluoromethane	ug/L	ND	1.0	11/22/12 11:43	
Diisopropyl ether	ug/L	ND	1.0	11/22/12 11:43	
Ethylbenzene	ug/L	ND	1.0	11/22/12 11:43	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 4 11/15
Pace Project No.: 92139108

METHOD BLANK: 877747 Matrix: Water

Associated Lab Samples: 92139108001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	ND	1.0	11/22/12 11:43	
m&p-Xylene	ug/L	ND	2.0	11/22/12 11:43	
Methyl-tert-butyl ether	ug/L	ND	1.0	11/22/12 11:43	
Methylene Chloride	ug/L	ND	2.0	11/22/12 11:43	
Naphthalene	ug/L	ND	1.0	11/22/12 11:43	
o-Xylene	ug/L	ND	1.0	11/22/12 11:43	
p-Isopropyltoluene	ug/L	ND	1.0	11/22/12 11:43	
Styrene	ug/L	ND	1.0	11/22/12 11:43	
Tetrachloroethene	ug/L	ND	1.0	11/22/12 11:43	
Toluene	ug/L	ND	1.0	11/22/12 11:43	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/22/12 11:43	
trans-1,3-Dichloropropene	ug/L	ND	1.0	11/22/12 11:43	
Trichloroethene	ug/L	ND	1.0	11/22/12 11:43	
Trichlorofluoromethane	ug/L	ND	1.0	11/22/12 11:43	
Vinyl acetate	ug/L	ND	2.0	11/22/12 11:43	
Vinyl chloride	ug/L	ND	1.0	11/22/12 11:43	
Xylene (Total)	ug/L	ND	2.0	11/22/12 11:43	
1,2-Dichloroethane-d4 (S)	%	90	70-130	11/22/12 11:43	
4-Bromofluorobenzene (S)	%	105	70-130	11/22/12 11:43	
Dibromofluoromethane (S)	%	99	70-130	11/22/12 11:43	
Toluene-d8 (S)	%	95	70-130	11/22/12 11:43	

LABORATORY CONTROL SAMPLE: 877748

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	43.5	87	70-130	
1,1,1-Trichloroethane	ug/L	50	40.3	81	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	46.9	94	70-130	
1,1,2-Trichloroethane	ug/L	50	46.4	93	70-130	
1,1-Dichloroethane	ug/L	50	44.5	89	70-130	
1,1-Dichloroethene	ug/L	50	40.6	81	70-132	
1,1-Dichloropropene	ug/L	50	43.7	87	70-130	
1,2,3-Trichlorobenzene	ug/L	50	41.1	82	70-135	
1,2,3-Trichloropropane	ug/L	50	47.0	94	70-130	
1,2,4-Trichlorobenzene	ug/L	50	41.4	83	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	42.4	85	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	46.8	94	70-130	
1,2-Dichlorobenzene	ug/L	50	44.2	88	70-130	
1,2-Dichloroethane	ug/L	50	37.2	74	70-130	
1,2-Dichloropropane	ug/L	50	45.8	92	70-130	
1,3-Dichlorobenzene	ug/L	50	44.6	89	70-130	
1,3-Dichloropropane	ug/L	50	44.5	89	70-130	
1,4-Dichlorobenzene	ug/L	50	45.1	90	70-130	
2,2-Dichloropropane	ug/L	50	31.8	64	58-145	
2-Butanone (MEK)	ug/L	100	102	102	70-145	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 4 11/15
Pace Project No.: 92139108

LABORATORY CONTROL SAMPLE: 877748

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Chlorotoluene	ug/L	50	43.8	88	70-130	
2-Hexanone	ug/L	100	112	112	70-144	
4-Chlorotoluene	ug/L	50	44.3	89	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	107	107	70-140	
Acetone	ug/L	100	84.5	84	50-175	
Benzene	ug/L	50	45.6	91	70-130	
Bromobenzene	ug/L	50	44.7	89	70-130	
Bromochloromethane	ug/L	50	43.0	86	70-130	
Bromodichloromethane	ug/L	50	42.4	85	70-130	
Bromoform	ug/L	50	47.4	95	70-130	
Bromomethane	ug/L	50	36.0	72	54-130	
Carbon tetrachloride	ug/L	50	38.3	77	70-132	
Chlorobenzene	ug/L	50	46.8	94	70-130	
Chloroethane	ug/L	50	41.0	82	64-134	
Chloroform	ug/L	50	40.6	81	70-130	
Chloromethane	ug/L	50	46.1	92	64-130	
cis-1,2-Dichloroethene	ug/L	50	41.9	84	70-131	
cis-1,3-Dichloropropene	ug/L	50	43.0	86	70-130	
Dibromochloromethane	ug/L	50	45.8	92	70-130	
Dibromomethane	ug/L	50	47.2	94	70-131	
Dichlorodifluoromethane	ug/L	50	31.0	62	56-130	
Diisopropyl ether	ug/L	50	44.9	90	70-130	
Ethylbenzene	ug/L	50	47.4	95	70-130	
Hexachloro-1,3-butadiene	ug/L	50	46.2	92	70-130	
m&p-Xylene	ug/L	100	94.2	94	70-130	
Methyl-tert-butyl ether	ug/L	50	39.9	80	70-130	
Methylene Chloride	ug/L	50	45.0	90	63-130	
Naphthalene	ug/L	50	44.5	89	70-138	
o-Xylene	ug/L	50	44.4	89	70-130	
p-Isopropyltoluene	ug/L	50	41.1	82	70-130	
Styrene	ug/L	50	46.9	94	70-130	
Tetrachloroethene	ug/L	50	47.4	95	70-130	
Toluene	ug/L	50	44.2	88	70-130	
trans-1,2-Dichloroethene	ug/L	50	41.7	83	70-130	
trans-1,3-Dichloropropene	ug/L	50	41.5	83	70-132	
Trichloroethene	ug/L	50	44.1	88	70-130	
Trichlorofluoromethane	ug/L	50	40.8	82	62-133	
Vinyl acetate	ug/L	100	82.3	82	66-157	
Vinyl chloride	ug/L	50	40.0	80	69-130	
Xylene (Total)	ug/L	150	139	92	70-130	
1,2-Dichloroethane-d4 (S)	%			91	70-130	
4-Bromofluorobenzene (S)	%			105	70-130	
Dibromofluoromethane (S)	%			91	70-130	
Toluene-d8 (S)	%			96	70-130	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 4 11/15
Pace Project No.: 92139108

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 877749 877750

Parameter	Units	92138553016 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	47.4	48.8	95	98	70-166	3	
Benzene	ug/L	ND	50	50	47.7	50.9	95	102	70-148	7	
Chlorobenzene	ug/L	ND	50	50	52.9	57.2	106	114	70-146	8	
Toluene	ug/L	ND	50	50	55.2	56.1	110	112	70-155	2	
Trichloroethene	ug/L	ND	50	50	54.7	58.5	109	117	69-151	7	
1,2-Dichloroethane-d4 (S)	%						91	89	70-130		
4-Bromofluorobenzene (S)	%						103	104	70-130		
Dibromofluoromethane (S)	%						98	97	70-130		
Toluene-d8 (S)	%						99	98	70-130		

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QUALIFIERS

Project: Clay Co. LF MWs # 4 11/15
Pace Project No.: 92139108

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Clay Co. LF MWs # 4 11/15
Pace Project No.: 92139108

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92139108001	**MW # 4**	EPA 3010	MPRP/12054	EPA 6010	ICP/11029
92139108001	**MW # 4**	EPA 7470	MERP/4706	EPA 7470	MERC/4601
92139108001	**MW # 4**	EPA 8260	MSV/21178		

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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

1555445

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: ENVIRONMENTAL INC	Report To:	Attention:
Address: PO BOX 954	Copy To:	Company Name:
CULLOWHEE, NC 28723		Address:
Email To:	Purchase Order No.:	Pace Quote Reference:
Phone: (828) 586-5588 Fax: (828) 586-0502	Project Name: CLAY CO MW #4	Pace Project Manager:
Requested Due Date/TAT:	Project Number:	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): APPX I METALS	APPX I VOC 8260	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW #4	GW	G			11/15/12	2000					✓						✓			92139105001
2													✓						✓		
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Matthew Lunn	11/19/12	1002A	Jane Meehan	11/19/12	10:02	3.8

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

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® www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: May 30, 2012 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.08	Issuing Authorities: Pace Asheville Quality Office

Client Name: Env Inc Project # 92139108

Where Received: ☐ Huntersville ☑ Asheville ☐ Eden ☐ Raleigh

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

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

Optional Proj. Due Date:

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

Circle Thermometer Used: IR Gun#2 -80344039 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

IR Gun Back Up- 111565135

Temp Correction Factor: Add / Subtract 0.1 C

Corrected Cooler Temp.: 3.8 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 11/19/12

Comments:

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: TM **Date:** 11/28 **SRF Review:** TM **Date:** 11/28

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

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(704)875-9092

December 07, 2012

Mr. Mark Teague
Environmental, Inc.
PO Box 954
Cullowhee, NC 28723

RE: Project: Clay Co. LF MWs # 5 11/15
Pace Project No.: 92139111

Dear Mr. Teague:
Enclosed are the analytical results for sample(s) received by the laboratory on November 19, 2012. 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,

Tom Williams

tom.williams@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: Clay Co. LF MWs # 5 11/15
Pace Project No.: 92139111

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

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SAMPLE ANALYTE COUNT

Project: Clay Co. LF MWs # 5 11/15
Pace Project No.: 92139111

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92139111001	**MW # 5**	EPA 6010	JDA	15	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8260	KJM	64	PASI-C

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ANALYTICAL RESULTS

Project: Clay Co. LF MWs # 5 11/15
Pace Project No.: 92139111

Sample: MW # 5 **Lab ID: 92139111001** Collected: 11/15/12 13:20 Received: 11/19/12 10:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:54	7440-36-0	
Arsenic	ND	ug/L	10.0	1	11/28/12 11:30	12/01/12 18:54	7440-38-2	
Barium	**145**	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:54	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/28/12 11:30	12/01/12 18:54	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/28/12 11:30	12/01/12 18:54	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:54	7440-47-3	
Cobalt	**23.1**	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:54	7440-48-4	
Copper	**60.1**	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:54	7440-50-8	
Lead	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:54	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:54	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/28/12 11:30	12/01/12 18:54	7782-49-2	
Silver	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:54	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/28/12 11:30	12/01/12 18:54	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:54	7440-62-2	
Zinc	**23.3**	ug/L	10.0	1	11/28/12 11:30	12/01/12 18:54	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	**1.2**	ug/L	0.20	1	11/27/12 17:25	11/30/12 14:14	7439-97-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/27/12 21:15	67-64-1	
Benzene	ND	ug/L	1.0	1		11/27/12 21:15	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/27/12 21:15	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/27/12 21:15	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/27/12 21:15	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/27/12 21:15	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/27/12 21:15	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/27/12 21:15	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/27/12 21:15	56-23-5	
Chlorobenzene	**1.0**	ug/L	1.0	1		11/27/12 21:15	108-90-7	
Chloroethane	**1.1**	ug/L	1.0	1		11/27/12 21:15	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/27/12 21:15	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/27/12 21:15	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/27/12 21:15	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/27/12 21:15	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/27/12 21:15	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/27/12 21:15	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/27/12 21:15	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/27/12 21:15	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/27/12 21:15	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/27/12 21:15	541-73-1	
1,4-Dichlorobenzene	**2.8**	ug/L	1.0	1		11/27/12 21:15	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/27/12 21:15	75-71-8	
1,1-Dichloroethane	**1.2**	ug/L	1.0	1		11/27/12 21:15	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/27/12 21:15	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/27/12 21:15	75-35-4	

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ANALYTICAL RESULTS

Project: Clay Co. LF MWs # 5 11/15
Pace Project No.: 92139111

Sample: MW # 5 **Lab ID: 92139111001** Collected: 11/15/12 13:20 Received: 11/19/12 10:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
cis-1,2-Dichloroethene	**4.7**	ug/L	1.0	1		11/27/12 21:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/12 21:15	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/27/12 21:15	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/27/12 21:15	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/27/12 21:15	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/27/12 21:15	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/12 21:15	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/12 21:15	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/27/12 21:15	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/27/12 21:15	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/27/12 21:15	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/27/12 21:15	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/27/12 21:15	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		11/27/12 21:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/27/12 21:15	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/27/12 21:15	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/27/12 21:15	91-20-3	
Styrene	ND	ug/L	1.0	1		11/27/12 21:15	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/12 21:15	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/12 21:15	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/27/12 21:15	127-18-4	
Toluene	ND	ug/L	1.0	1		11/27/12 21:15	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/27/12 21:15	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/27/12 21:15	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/27/12 21:15	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/27/12 21:15	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/27/12 21:15	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/27/12 21:15	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/27/12 21:15	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/27/12 21:15	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/27/12 21:15	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/27/12 21:15	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/27/12 21:15	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/27/12 21:15	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	90	%	70-130	1		11/27/12 21:15	460-00-4	
Dibromofluoromethane (S)	103	%	70-130	1		11/27/12 21:15	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	70-130	1		11/27/12 21:15	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		11/27/12 21:15	2037-26-5	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 5 11/15
Pace Project No.: 92139111

QC Batch: MERP/4706
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Associated Lab Samples: 92139111001

METHOD BLANK: 878904
Matrix: Water
Associated Lab Samples: 92139111001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	11/30/12 13:58	

LABORATORY CONTROL SAMPLE: 878905

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.6	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 878906 878907

Parameter	Units	92139077001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Mercury	ug/L				2.6	2.6				2	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 5 11/15
Pace Project No.: 92139111

QC Batch: MPRP/12054
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92139111001

METHOD BLANK: 879405
Matrix: Water
Associated Lab Samples: 92139111001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	12/01/12 17:24	
Arsenic	ug/L	ND	10.0	12/01/12 17:24	
Barium	ug/L	ND	5.0	12/01/12 17:24	
Beryllium	ug/L	ND	1.0	12/01/12 17:24	
Cadmium	ug/L	ND	1.0	12/01/12 17:24	
Chromium	ug/L	ND	5.0	12/01/12 17:24	
Cobalt	ug/L	ND	5.0	12/01/12 17:24	
Copper	ug/L	ND	5.0	12/01/12 17:24	
Lead	ug/L	ND	5.0	12/01/12 17:24	
Nickel	ug/L	ND	5.0	12/01/12 17:24	
Selenium	ug/L	ND	10.0	12/01/12 17:24	
Silver	ug/L	ND	5.0	12/01/12 17:24	
Thallium	ug/L	ND	5.4	12/01/12 17:24	
Vanadium	ug/L	ND	5.0	12/01/12 17:24	
Zinc	ug/L	ND	10.0	12/01/12 17:24	

LABORATORY CONTROL SAMPLE: 879406

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	506	101	80-120	
Arsenic	ug/L	500	514	103	80-120	
Barium	ug/L	500	485	97	80-120	
Beryllium	ug/L	500	535	107	80-120	
Cadmium	ug/L	500	519	104	80-120	
Chromium	ug/L	500	546	109	80-120	
Cobalt	ug/L	500	512	102	80-120	
Copper	ug/L	500	501	100	80-120	
Lead	ug/L	500	512	102	80-120	
Nickel	ug/L	500	519	104	80-120	
Selenium	ug/L	500	514	103	80-120	
Silver	ug/L	250	250	100	80-120	
Thallium	ug/L	500	495	99	80-120	
Vanadium	ug/L	500	512	102	80-120	
Zinc	ug/L	500	522	104	80-120	

MATRIX SPIKE SAMPLE: 879407

Parameter	Units	92139077001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	500	503	101	75-125	
Arsenic	ug/L	ND	500	510	102	75-125	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 5 11/15
Pace Project No.: 92139111

MATRIX SPIKE SAMPLE: 879407

Parameter	Units	92139077001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	48.3	500	523	95	75-125	
Beryllium	ug/L	ND	500	530	106	75-125	
Cadmium	ug/L	ND	500	511	102	75-125	
Chromium	ug/L	ND	500	542	108	75-125	
Cobalt	ug/L	ND	500	505	101	75-125	
Copper	ug/L	179	500	674	99	75-125	
Lead	ug/L	ND	500	499	99	75-125	
Nickel	ug/L	ND	500	510	102	75-125	
Selenium	ug/L	ND	500	509	102	75-125	
Silver	ug/L	ND	250	247	99	75-125	
Thallium	ug/L	ND	500	483	97	75-125	
Vanadium	ug/L	ND	500	510	102	75-125	
Zinc	ug/L	79.1	500	593	103	75-125	

SAMPLE DUPLICATE: 879408

Parameter	Units	92139077002 Result	Dup Result	RPD	Qualifiers
Antimony	ug/L	ND	ND		
Arsenic	ug/L	ND	ND		
Barium	ug/L	41.0	41.3	1	
Beryllium	ug/L	ND	ND		
Cadmium	ug/L	ND	ND		
Chromium	ug/L	ND	ND		
Cobalt	ug/L	ND	ND		
Copper	ug/L	20.3	20.4	0	
Lead	ug/L	ND	ND		
Nickel	ug/L	ND	ND		
Selenium	ug/L	ND	ND		
Silver	ug/L	ND	ND		
Thallium	ug/L	ND	ND		
Vanadium	ug/L	ND	ND		
Zinc	ug/L	64.4	62.5	3	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 5 11/15
Pace Project No.: 92139111

QC Batch: MSV/21192
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92139111001

METHOD BLANK: 877812
Matrix: Water
Associated Lab Samples: 92139111001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	11/27/12 16:22	
1,1,1-Trichloroethane	ug/L	ND	1.0	11/27/12 16:22	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/27/12 16:22	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/27/12 16:22	
1,1-Dichloroethane	ug/L	ND	1.0	11/27/12 16:22	
1,1-Dichloroethene	ug/L	ND	1.0	11/27/12 16:22	
1,1-Dichloropropene	ug/L	ND	1.0	11/27/12 16:22	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	11/27/12 16:22	
1,2,3-Trichloropropane	ug/L	ND	1.0	11/27/12 16:22	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	11/27/12 16:22	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	11/27/12 16:22	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	11/27/12 16:22	
1,2-Dichlorobenzene	ug/L	ND	1.0	11/27/12 16:22	
1,2-Dichloroethane	ug/L	ND	1.0	11/27/12 16:22	
1,2-Dichloropropane	ug/L	ND	1.0	11/27/12 16:22	
1,3-Dichlorobenzene	ug/L	ND	1.0	11/27/12 16:22	
1,3-Dichloropropane	ug/L	ND	1.0	11/27/12 16:22	
1,4-Dichlorobenzene	ug/L	ND	1.0	11/27/12 16:22	
2,2-Dichloropropane	ug/L	ND	1.0	11/27/12 16:22	
2-Butanone (MEK)	ug/L	ND	5.0	11/27/12 16:22	
2-Chlorotoluene	ug/L	ND	1.0	11/27/12 16:22	
2-Hexanone	ug/L	ND	5.0	11/27/12 16:22	
4-Chlorotoluene	ug/L	ND	1.0	11/27/12 16:22	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	11/27/12 16:22	
Acetone	ug/L	ND	25.0	11/27/12 16:22	
Benzene	ug/L	ND	1.0	11/27/12 16:22	
Bromobenzene	ug/L	ND	1.0	11/27/12 16:22	
Bromochloromethane	ug/L	ND	1.0	11/27/12 16:22	
Bromodichloromethane	ug/L	ND	1.0	11/27/12 16:22	
Bromoform	ug/L	ND	1.0	11/27/12 16:22	
Bromomethane	ug/L	ND	2.0	11/27/12 16:22	
Carbon tetrachloride	ug/L	ND	1.0	11/27/12 16:22	
Chlorobenzene	ug/L	ND	1.0	11/27/12 16:22	
Chloroethane	ug/L	ND	1.0	11/27/12 16:22	
Chloroform	ug/L	ND	1.0	11/27/12 16:22	
Chloromethane	ug/L	ND	1.0	11/27/12 16:22	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/27/12 16:22	
cis-1,3-Dichloropropene	ug/L	ND	1.0	11/27/12 16:22	
Dibromochloromethane	ug/L	ND	1.0	11/27/12 16:22	
Dibromomethane	ug/L	ND	1.0	11/27/12 16:22	
Dichlorodifluoromethane	ug/L	ND	1.0	11/27/12 16:22	
Diisopropyl ether	ug/L	ND	1.0	11/27/12 16:22	
Ethylbenzene	ug/L	ND	1.0	11/27/12 16:22	

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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 5 11/15
Pace Project No.: 92139111

METHOD BLANK: 877812 Matrix: Water

Associated Lab Samples: 92139111001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	ND	1.0	11/27/12 16:22	
m&p-Xylene	ug/L	ND	2.0	11/27/12 16:22	
Methyl-tert-butyl ether	ug/L	ND	1.0	11/27/12 16:22	
Methylene Chloride	ug/L	ND	2.0	11/27/12 16:22	
Naphthalene	ug/L	ND	1.0	11/27/12 16:22	
o-Xylene	ug/L	ND	1.0	11/27/12 16:22	
p-Isopropyltoluene	ug/L	ND	1.0	11/27/12 16:22	
Styrene	ug/L	ND	1.0	11/27/12 16:22	
Tetrachloroethene	ug/L	ND	1.0	11/27/12 16:22	
Toluene	ug/L	ND	1.0	11/27/12 16:22	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/27/12 16:22	
trans-1,3-Dichloropropene	ug/L	ND	1.0	11/27/12 16:22	
Trichloroethene	ug/L	ND	1.0	11/27/12 16:22	
Trichlorofluoromethane	ug/L	ND	1.0	11/27/12 16:22	
Vinyl acetate	ug/L	ND	2.0	11/27/12 16:22	
Vinyl chloride	ug/L	ND	1.0	11/27/12 16:22	
Xylene (Total)	ug/L	ND	2.0	11/27/12 16:22	
1,2-Dichloroethane-d4 (S)	%	100	70-130	11/27/12 16:22	
4-Bromofluorobenzene (S)	%	90	70-130	11/27/12 16:22	
Dibromofluoromethane (S)	%	97	70-130	11/27/12 16:22	
Toluene-d8 (S)	%	99	70-130	11/27/12 16:22	

LABORATORY CONTROL SAMPLE: 877813

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	48.3	97	70-130	
1,1,1-Trichloroethane	ug/L	50	49.6	99	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	46.3	93	70-130	
1,1,2-Trichloroethane	ug/L	50	47.3	95	70-130	
1,1-Dichloroethane	ug/L	50	48.7	97	70-130	
1,1-Dichloroethene	ug/L	50	48.8	98	70-132	
1,1-Dichloropropene	ug/L	50	49.5	99	70-130	
1,2,3-Trichlorobenzene	ug/L	50	53.1	106	70-135	
1,2,3-Trichloropropane	ug/L	50	45.2	90	70-130	
1,2,4-Trichlorobenzene	ug/L	50	47.2	94	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	47.5	95	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	48.2	96	70-130	
1,2-Dichlorobenzene	ug/L	50	46.4	93	70-130	
1,2-Dichloroethane	ug/L	50	44.7	89	70-130	
1,2-Dichloropropane	ug/L	50	46.2	92	70-130	
1,3-Dichlorobenzene	ug/L	50	47.7	95	70-130	
1,3-Dichloropropane	ug/L	50	47.1	94	70-130	
1,4-Dichlorobenzene	ug/L	50	46.8	94	70-130	
2,2-Dichloropropane	ug/L	50	46.6	93	58-145	
2-Butanone (MEK)	ug/L	100	91.1	91	70-145	

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(704)875-9092

QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 5 11/15
Pace Project No.: 92139111

LABORATORY CONTROL SAMPLE: 877813

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Chlorotoluene	ug/L	50	47.0	94	70-130	
2-Hexanone	ug/L	100	98.6	99	70-144	
4-Chlorotoluene	ug/L	50	48.0	96	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	95.0	95	70-140	
Acetone	ug/L	100	94.7	95	50-175	
Benzene	ug/L	50	48.6	97	70-130	
Bromobenzene	ug/L	50	45.2	90	70-130	
Bromochloromethane	ug/L	50	46.5	93	70-130	
Bromodichloromethane	ug/L	50	50.2	100	70-130	
Bromoform	ug/L	50	44.8	90	70-130	
Bromomethane	ug/L	50	52.7	105	54-130	
Carbon tetrachloride	ug/L	50	49.0	98	70-132	
Chlorobenzene	ug/L	50	48.2	96	70-130	
Chloroethane	ug/L	50	51.4	103	64-134	
Chloroform	ug/L	50	49.6	99	70-130	
Chloromethane	ug/L	50	58.4	117	64-130	
cis-1,2-Dichloroethene	ug/L	50	47.7	95	70-131	
cis-1,3-Dichloropropene	ug/L	50	49.9	100	70-130	
Dibromochloromethane	ug/L	50	51.9	104	70-130	
Dibromomethane	ug/L	50	46.0	92	70-131	
Dichlorodifluoromethane	ug/L	50	56.0	112	56-130	
Diisopropyl ether	ug/L	50	43.8	88	70-130	
Ethylbenzene	ug/L	50	48.6	97	70-130	
Hexachloro-1,3-butadiene	ug/L	50	49.7	99	70-130	
m&p-Xylene	ug/L	100	99.1	99	70-130	
Methyl-tert-butyl ether	ug/L	50	45.2	90	70-130	
Methylene Chloride	ug/L	50	47.0	94	63-130	
Naphthalene	ug/L	50	47.4	95	70-138	
o-Xylene	ug/L	50	47.2	94	70-130	
p-Isopropyltoluene	ug/L	50	51.8	104	70-130	
Styrene	ug/L	50	50.6	101	70-130	
Tetrachloroethene	ug/L	50	49.3	99	70-130	
Toluene	ug/L	50	47.5	95	70-130	
trans-1,2-Dichloroethene	ug/L	50	47.8	96	70-130	
trans-1,3-Dichloropropene	ug/L	50	49.6	99	70-132	
Trichloroethene	ug/L	50	47.4	95	70-130	
Trichlorofluoromethane	ug/L	50	55.3	111	62-133	
Vinyl acetate	ug/L	100	90.4	90	66-157	
Vinyl chloride	ug/L	50	50.8	102	69-130	
Xylene (Total)	ug/L	150	146	98	70-130	
1,2-Dichloroethane-d4 (S)	%			97	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Dibromofluoromethane (S)	%			100	70-130	
Toluene-d8 (S)	%			99	70-130	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 5 11/15
Pace Project No.: 92139111

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 877814 877815

Parameter	Units	92139361003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	45.9	44.2	91	88	70-166	4	
Benzene	ug/L	ND	50	50	42.6	41.3	85	83	70-148	3	
Chlorobenzene	ug/L	ND	50	50	49.8	48.6	100	97	70-146	2	
Toluene	ug/L	ND	50	50	48.4	48.0	97	96	70-155	1	
Trichloroethene	ug/L	ND	50	50	49.5	48.1	98	96	69-151	3	
1,2-Dichloroethane-d4 (S)	%						98	99	70-130		
4-Bromofluorobenzene (S)	%						93	91	70-130		
Dibromofluoromethane (S)	%						99	95	70-130		
Toluene-d8 (S)	%						99	98	70-130		

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QUALIFIERS

Project: Clay Co. LF MWs # 5 11/15
Pace Project No.: 92139111

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Clay Co. LF MWs # 5 11/15
Pace Project No.: 92139111

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92139111001	**MW # 5**	EPA 3010	MPRP/12054	EPA 6010	ICP/11029
92139111001	**MW # 5**	EPA 7470	MERP/4706	EPA 7470	MERC/4601
92139111001	**MW # 5**	EPA 8260	MSV/21192		

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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

1555756

Section A Required Client Information:

Company: ENVIROFMENTAL INC
Address: PO BOX 954
COLLOWHEE, NC 28723
Email To:
Phone: (828) 586-5588 Fax: (828) 586-0800
Requested Due Date/TAT:

Section B Required Project Information:

Report To:
Copy To:
Purchase Order No.:
Project Name: CLAY CO MW #5
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

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

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

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	APPX I METALS	APPX I VOC 8260	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW #5	WW	G			11/15/12	1205					✓							✓			92139111001
2													✓							✓		
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Matthew Tinsley	11/19/12	1002A	Jane Meehan	11/19/12	10:02	3.8			

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER:
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

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.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical® www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: May 30, 2012 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.08	Issuing Authorities: Pace Asheville Quality Office

Client Name: Env Inc Project # 92139111

Where Received: ☐ Huntersville ☑ Asheville ☐ Eden ☐ Raleigh

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

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

Optional Proj. Due Date

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

Circle Thermometer Used: IR Gun#2 -80344039 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

IR Gun Back Up- 111565135

Temp Correction Factor: Add / Subtract 0.1 C

Corrected Cooler Temp.: 3.8 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C **Comments:**

Date and Initials of person examining contents: 11/19/12

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: TM **Date:** 11/28 **SRF Review:** TM **Date:** 11/28

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

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December 07, 2012

Mr. Mark Teague
Environmental, Inc.
PO Box 954
Cullowhee, NC 28723

RE: Project: Clay Co. LF MWs # 6 11/15
Pace Project No.: 92139112

Dear Mr. Teague:
Enclosed are the analytical results for sample(s) received by the laboratory on November 19, 2012. 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,

Tom Williams

tom.williams@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: Clay Co. LF MWs # 6 11/15
Pace Project No.: 92139112

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

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SAMPLE ANALYTE COUNT

Project: Clay Co. LF MWs # 6 11/15
Pace Project No.: 92139112

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92139112001	**MW # 6**	EPA 6010	JDA	15	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8260	MCK	64	PASI-C

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ANALYTICAL RESULTS

Project: Clay Co. LF MWs # 6 11/15
Pace Project No.: 92139112

Sample: MW # 6 **Lab ID: 92139112001** Collected: 11/15/12 15:00 Received: 11/19/12 10:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:57	7440-36-0	
Arsenic	ND	ug/L	10.0	1	11/28/12 11:30	12/01/12 18:57	7440-38-2	
Barium	**250**	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:57	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/28/12 11:30	12/01/12 18:57	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/28/12 11:30	12/01/12 18:57	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:57	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:57	7440-48-4	
Copper	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:57	7440-50-8	
Lead	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:57	7439-92-1	
Nickel	**5.0**	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:57	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/28/12 11:30	12/01/12 18:57	7782-49-2	
Silver	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:57	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/28/12 11:30	12/01/12 18:57	7440-28-0	
Vanadium	**5.2**	ug/L	5.0	1	11/28/12 11:30	12/01/12 18:57	7440-62-2	
Zinc	ND	ug/L	10.0	1	11/28/12 11:30	12/01/12 18:57	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	1	11/27/12 17:25	11/30/12 14:16	7439-97-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/22/12 14:54	67-64-1	
Benzene	ND	ug/L	1.0	1		11/22/12 14:54	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/22/12 14:54	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/22/12 14:54	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/22/12 14:54	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/22/12 14:54	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/22/12 14:54	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/22/12 14:54	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/22/12 14:54	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/22/12 14:54	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/22/12 14:54	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/22/12 14:54	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/22/12 14:54	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/22/12 14:54	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/22/12 14:54	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/22/12 14:54	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/22/12 14:54	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/22/12 14:54	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/22/12 14:54	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/22/12 14:54	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/22/12 14:54	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/22/12 14:54	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/22/12 14:54	75-71-8	
1,1-Dichloroethane	**1.1**	ug/L	1.0	1		11/22/12 14:54	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/22/12 14:54	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/22/12 14:54	75-35-4	

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ANALYTICAL RESULTS

Project: Clay Co. LF MWs # 6 11/15
Pace Project No.: 92139112

Sample: MW # 6 **Lab ID: 92139112001** Collected: 11/15/12 15:00 Received: 11/19/12 10:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
cis-1,2-Dichloroethene	**3.1**	ug/L	1.0	1		11/22/12 14:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/22/12 14:54	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/22/12 14:54	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/22/12 14:54	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/22/12 14:54	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/22/12 14:54	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/22/12 14:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/22/12 14:54	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/22/12 14:54	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/22/12 14:54	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/22/12 14:54	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/22/12 14:54	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/22/12 14:54	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		11/22/12 14:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/22/12 14:54	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/22/12 14:54	1634-04-4	
Naphthalene	**22.5**	ug/L	1.0	1		11/22/12 14:54	91-20-3	
Styrene	ND	ug/L	1.0	1		11/22/12 14:54	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/22/12 14:54	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/22/12 14:54	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/22/12 14:54	127-18-4	
Toluene	ND	ug/L	1.0	1		11/22/12 14:54	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/22/12 14:54	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/22/12 14:54	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/22/12 14:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/22/12 14:54	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/22/12 14:54	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/22/12 14:54	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/22/12 14:54	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/22/12 14:54	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/22/12 14:54	75-01-4	
Xylene (Total)	**5.1**	ug/L	2.0	1		11/22/12 14:54	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/22/12 14:54	179601-23-1	
o-Xylene	**4.0**	ug/L	1.0	1		11/22/12 14:54	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	102	%	70-130	1		11/22/12 14:54	460-00-4	
Dibromofluoromethane (S)	98	%	70-130	1		11/22/12 14:54	1868-53-7	
1,2-Dichloroethane-d4 (S)	89	%	70-130	1		11/22/12 14:54	17060-07-0	
Toluene-d8 (S)	94	%	70-130	1		11/22/12 14:54	2037-26-5	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 6 11/15
Pace Project No.: 92139112

QC Batch: MERP/4706
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Associated Lab Samples: 92139112001

METHOD BLANK: 878904
Matrix: Water
Associated Lab Samples: 92139112001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	11/30/12 13:58	

LABORATORY CONTROL SAMPLE: 878905

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.6	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 878906 878907

Parameter	Units	92139077001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Mercury	ug/L				2.6	2.6				2	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 6 11/15
Pace Project No.: 92139112

QC Batch: MPRP/12054
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92139112001

METHOD BLANK: 879405
Matrix: Water
Associated Lab Samples: 92139112001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	12/01/12 17:24	
Arsenic	ug/L	ND	10.0	12/01/12 17:24	
Barium	ug/L	ND	5.0	12/01/12 17:24	
Beryllium	ug/L	ND	1.0	12/01/12 17:24	
Cadmium	ug/L	ND	1.0	12/01/12 17:24	
Chromium	ug/L	ND	5.0	12/01/12 17:24	
Cobalt	ug/L	ND	5.0	12/01/12 17:24	
Copper	ug/L	ND	5.0	12/01/12 17:24	
Lead	ug/L	ND	5.0	12/01/12 17:24	
Nickel	ug/L	ND	5.0	12/01/12 17:24	
Selenium	ug/L	ND	10.0	12/01/12 17:24	
Silver	ug/L	ND	5.0	12/01/12 17:24	
Thallium	ug/L	ND	5.4	12/01/12 17:24	
Vanadium	ug/L	ND	5.0	12/01/12 17:24	
Zinc	ug/L	ND	10.0	12/01/12 17:24	

LABORATORY CONTROL SAMPLE: 879406

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	506	101	80-120	
Arsenic	ug/L	500	514	103	80-120	
Barium	ug/L	500	485	97	80-120	
Beryllium	ug/L	500	535	107	80-120	
Cadmium	ug/L	500	519	104	80-120	
Chromium	ug/L	500	546	109	80-120	
Cobalt	ug/L	500	512	102	80-120	
Copper	ug/L	500	501	100	80-120	
Lead	ug/L	500	512	102	80-120	
Nickel	ug/L	500	519	104	80-120	
Selenium	ug/L	500	514	103	80-120	
Silver	ug/L	250	250	100	80-120	
Thallium	ug/L	500	495	99	80-120	
Vanadium	ug/L	500	512	102	80-120	
Zinc	ug/L	500	522	104	80-120	

MATRIX SPIKE SAMPLE: 879407

Parameter	Units	92139077001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	500	503	101	75-125	
Arsenic	ug/L	ND	500	510	102	75-125	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 6 11/15
Pace Project No.: 92139112

MATRIX SPIKE SAMPLE: 879407

Parameter	Units	92139077001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	48.3	500	523	95	75-125	
Beryllium	ug/L	ND	500	530	106	75-125	
Cadmium	ug/L	ND	500	511	102	75-125	
Chromium	ug/L	ND	500	542	108	75-125	
Cobalt	ug/L	ND	500	505	101	75-125	
Copper	ug/L	179	500	674	99	75-125	
Lead	ug/L	ND	500	499	99	75-125	
Nickel	ug/L	ND	500	510	102	75-125	
Selenium	ug/L	ND	500	509	102	75-125	
Silver	ug/L	ND	250	247	99	75-125	
Thallium	ug/L	ND	500	483	97	75-125	
Vanadium	ug/L	ND	500	510	102	75-125	
Zinc	ug/L	79.1	500	593	103	75-125	

SAMPLE DUPLICATE: 879408

Parameter	Units	92139077002 Result	Dup Result	RPD	Qualifiers
Antimony	ug/L	ND	ND		
Arsenic	ug/L	ND	ND		
Barium	ug/L	41.0	41.3	1	
Beryllium	ug/L	ND	ND		
Cadmium	ug/L	ND	ND		
Chromium	ug/L	ND	ND		
Cobalt	ug/L	ND	ND		
Copper	ug/L	20.3	20.4	0	
Lead	ug/L	ND	ND		
Nickel	ug/L	ND	ND		
Selenium	ug/L	ND	ND		
Silver	ug/L	ND	ND		
Thallium	ug/L	ND	ND		
Vanadium	ug/L	ND	ND		
Zinc	ug/L	64.4	62.5	3	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 6 11/15
Pace Project No.: 92139112

QC Batch: MSV/21177
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92139112001

METHOD BLANK: 877743
Matrix: Water
Associated Lab Samples: 92139112001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,1,1-Trichloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,1-Dichloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,1-Dichloroethene	ug/L	ND	1.0	11/22/12 11:59	
1,1-Dichloropropene	ug/L	ND	1.0	11/22/12 11:59	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
1,2,3-Trichloropropane	ug/L	ND	1.0	11/22/12 11:59	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	11/22/12 11:59	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	11/22/12 11:59	
1,2-Dichlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
1,2-Dichloroethane	ug/L	ND	1.0	11/22/12 11:59	
1,2-Dichloropropane	ug/L	ND	1.0	11/22/12 11:59	
1,3-Dichlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
1,3-Dichloropropane	ug/L	ND	1.0	11/22/12 11:59	
1,4-Dichlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
2,2-Dichloropropane	ug/L	ND	1.0	11/22/12 11:59	
2-Butanone (MEK)	ug/L	ND	5.0	11/22/12 11:59	
2-Chlorotoluene	ug/L	ND	1.0	11/22/12 11:59	
2-Hexanone	ug/L	ND	5.0	11/22/12 11:59	
4-Chlorotoluene	ug/L	ND	1.0	11/22/12 11:59	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	11/22/12 11:59	
Acetone	ug/L	ND	25.0	11/22/12 11:59	
Benzene	ug/L	ND	1.0	11/22/12 11:59	
Bromobenzene	ug/L	ND	1.0	11/22/12 11:59	
Bromochloromethane	ug/L	ND	1.0	11/22/12 11:59	
Bromodichloromethane	ug/L	ND	1.0	11/22/12 11:59	
Bromoform	ug/L	ND	1.0	11/22/12 11:59	
Bromomethane	ug/L	ND	2.0	11/22/12 11:59	
Carbon tetrachloride	ug/L	ND	1.0	11/22/12 11:59	
Chlorobenzene	ug/L	ND	1.0	11/22/12 11:59	
Chloroethane	ug/L	ND	1.0	11/22/12 11:59	
Chloroform	ug/L	ND	1.0	11/22/12 11:59	
Chloromethane	ug/L	ND	1.0	11/22/12 11:59	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/22/12 11:59	
cis-1,3-Dichloropropene	ug/L	ND	1.0	11/22/12 11:59	
Dibromochloromethane	ug/L	ND	1.0	11/22/12 11:59	
Dibromomethane	ug/L	ND	1.0	11/22/12 11:59	
Dichlorodifluoromethane	ug/L	ND	1.0	11/22/12 11:59	
Diisopropyl ether	ug/L	ND	1.0	11/22/12 11:59	
Ethylbenzene	ug/L	ND	1.0	11/22/12 11:59	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 6 11/15
Pace Project No.: 92139112

METHOD BLANK: 877743 Matrix: Water

Associated Lab Samples: 92139112001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	ND	1.0	11/22/12 11:59	
m&p-Xylene	ug/L	ND	2.0	11/22/12 11:59	
Methyl-tert-butyl ether	ug/L	ND	1.0	11/22/12 11:59	
Methylene Chloride	ug/L	ND	2.0	11/22/12 11:59	
Naphthalene	ug/L	ND	1.0	11/22/12 11:59	
o-Xylene	ug/L	ND	1.0	11/22/12 11:59	
p-Isopropyltoluene	ug/L	ND	1.0	11/22/12 11:59	
Styrene	ug/L	ND	1.0	11/22/12 11:59	
Tetrachloroethene	ug/L	ND	1.0	11/22/12 11:59	
Toluene	ug/L	ND	1.0	11/22/12 11:59	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/22/12 11:59	
trans-1,3-Dichloropropene	ug/L	ND	1.0	11/22/12 11:59	
Trichloroethene	ug/L	ND	1.0	11/22/12 11:59	
Trichlorofluoromethane	ug/L	ND	1.0	11/22/12 11:59	
Vinyl acetate	ug/L	ND	2.0	11/22/12 11:59	
Vinyl chloride	ug/L	ND	1.0	11/22/12 11:59	
Xylene (Total)	ug/L	ND	2.0	11/22/12 11:59	
1,2-Dichloroethane-d4 (S)	%	94	70-130	11/22/12 11:59	
4-Bromofluorobenzene (S)	%	107	70-130	11/22/12 11:59	
Dibromofluoromethane (S)	%	99	70-130	11/22/12 11:59	
Toluene-d8 (S)	%	92	70-130	11/22/12 11:59	

LABORATORY CONTROL SAMPLE: 877744

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	43.4	87	70-130	
1,1,1-Trichloroethane	ug/L	50	43.6	87	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	45.2	90	70-130	
1,1,2-Trichloroethane	ug/L	50	48.7	97	70-130	
1,1-Dichloroethane	ug/L	50	46.5	93	70-130	
1,1-Dichloroethene	ug/L	50	45.7	91	70-132	
1,1-Dichloropropene	ug/L	50	44.8	90	70-130	
1,2,3-Trichlorobenzene	ug/L	50	41.4	83	70-135	
1,2,3-Trichloropropane	ug/L	50	44.5	89	70-130	
1,2,4-Trichlorobenzene	ug/L	50	43.1	86	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	41.5	83	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	46.9	94	70-130	
1,2-Dichlorobenzene	ug/L	50	45.1	90	70-130	
1,2-Dichloroethane	ug/L	50	38.5	77	70-130	
1,2-Dichloropropane	ug/L	50	47.5	95	70-130	
1,3-Dichlorobenzene	ug/L	50	45.5	91	70-130	
1,3-Dichloropropane	ug/L	50	46.1	92	70-130	
1,4-Dichlorobenzene	ug/L	50	45.2	90	70-130	
2,2-Dichloropropane	ug/L	50	42.5	85	58-145	
2-Butanone (MEK)	ug/L	100	103	103	70-145	

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Pace Analytical Services, Inc.
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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 6 11/15
Pace Project No.: 92139112

LABORATORY CONTROL SAMPLE: 877744

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Chlorotoluene	ug/L	50	44.0	88	70-130	
2-Hexanone	ug/L	100	107	107	70-144	
4-Chlorotoluene	ug/L	50	44.1	88	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	106	106	70-140	
Acetone	ug/L	100	82.2	82	50-175	
Benzene	ug/L	50	49.0	98	70-130	
Bromobenzene	ug/L	50	43.7	87	70-130	
Bromochloromethane	ug/L	50	45.2	90	70-130	
Bromodichloromethane	ug/L	50	44.7	89	70-130	
Bromoform	ug/L	50	46.8	94	70-130	
Bromomethane	ug/L	50	40.2	80	54-130	
Carbon tetrachloride	ug/L	50	43.4	87	70-132	
Chlorobenzene	ug/L	50	47.4	95	70-130	
Chloroethane	ug/L	50	43.8	88	64-134	
Chloroform	ug/L	50	42.6	85	70-130	
Chloromethane	ug/L	50	54.8	110	64-130	
cis-1,2-Dichloroethene	ug/L	50	44.7	89	70-131	
cis-1,3-Dichloropropene	ug/L	50	46.4	93	70-130	
Dibromochloromethane	ug/L	50	46.0	92	70-130	
Dibromomethane	ug/L	50	48.3	97	70-131	
Dichlorodifluoromethane	ug/L	50	46.8	94	56-130	
Diisopropyl ether	ug/L	50	46.5	93	70-130	
Ethylbenzene	ug/L	50	47.0	94	70-130	
Hexachloro-1,3-butadiene	ug/L	50	46.2	92	70-130	
m&p-Xylene	ug/L	100	94.6	95	70-130	
Methyl-tert-butyl ether	ug/L	50	41.4	83	70-130	
Methylene Chloride	ug/L	50	46.7	93	63-130	
Naphthalene	ug/L	50	43.6	87	70-138	
o-Xylene	ug/L	50	45.1	90	70-130	
p-Isopropyltoluene	ug/L	50	42.9	86	70-130	
Styrene	ug/L	50	47.1	94	70-130	
Tetrachloroethene	ug/L	50	49.1	98	70-130	
Toluene	ug/L	50	47.4	95	70-130	
trans-1,2-Dichloroethene	ug/L	50	44.3	89	70-130	
trans-1,3-Dichloropropene	ug/L	50	45.4	91	70-132	
Trichloroethene	ug/L	50	46.5	93	70-130	
Trichlorofluoromethane	ug/L	50	46.3	93	62-133	
Vinyl acetate	ug/L	100	87.4	87	66-157	
Vinyl chloride	ug/L	50	46.8	94	69-130	
Xylene (Total)	ug/L	150	140	93	70-130	
1,2-Dichloroethane-d4 (S)	%			82	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Dibromofluoromethane (S)	%			93	70-130	
Toluene-d8 (S)	%			100	70-130	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs # 6 11/15
Pace Project No.: 92139112

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 877745 877746

Parameter	Units	92139117001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	42.5	38.8	85	78	70-166	9	
Benzene	ug/L	ND	50	50	42.3	45.7	85	91	70-148	8	
Chlorobenzene	ug/L	ND	50	50	48.3	50.7	97	101	70-146	5	
Toluene	ug/L	ND	50	50	47.6	49.5	95	99	70-155	4	
Trichloroethene	ug/L	ND	50	50	49.0	50.6	98	101	69-151	3	
1,2-Dichloroethane-d4 (S)	%						80	84	70-130		
4-Bromofluorobenzene (S)	%						103	106	70-130		
Dibromofluoromethane (S)	%						97	94	70-130		
Toluene-d8 (S)	%						94	94	70-130		

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QUALIFIERS

Project: Clay Co. LF MWs # 6 11/15
Pace Project No.: 92139112

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Clay Co. LF MWs # 6 11/15
Pace Project No.: 92139112

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92139112001	**MW # 6**	EPA 3010	MPRP/12054	EPA 6010	ICP/11029
92139112001	**MW # 6**	EPA 7470	MERP/4706	EPA 7470	MERC/4601
92139112001	**MW # 6**	EPA 8260	MSV/21177		

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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

1555757

Section A Required Client Information:

Company: ENVIRONMENTAL INC
Address: PO BOX 954
CULLOWHEE, NC 28723
Email To:
Phone: (828) 586-5588 Fax: (828) 586-0300
Requested Due Date/TAT:

Section B Required Project Information:

Report To:
Copy To:
Purchase Order No.:
Project Name: CLAY CO MW#6
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): APPX I METALS	APPX I VOC 5260	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92139112
1	MW #6	GW	G			11/15/12	3:00P						✓					✓			92139112001
2														✓					✓		
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Matthew Lunca	11/19/12	10:02A	Jane Meehan	11/19/12	10:02	3.8

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER:
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

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.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical® www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: May 30, 2012 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.08	Issuing Authorities: Pace Asheville Quality Office

Client Name: Env Inc Project # 92139112

Where Received: ☐ Huntersville ☑ Asheville ☐ Eden ☐ Raleigh

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

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

Optional Proj. Due Date

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

Circle Thermometer Used: IR Gun#2 -80344039 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

IR Gun Back Up- 111565135

Temp Correction Factor: Add / Subtract 0.1 C

Corrected Cooler Temp.: 3.8 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C **Comments:**

Date and Initials of person examining contents: 11/19/12

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: TM **Date:** 11/28 **SRF Review:** TM **Date:** 11/28

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

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December 07, 2012

Mr. Mark Teague
Environmental, Inc.
PO Box 954
Cullowhee, NC 28723

RE: Project: Clay Co. LF MWs DS 11/15
Pace Project No.: 92139118

Dear Mr. Teague:
Enclosed are the analytical results for sample(s) received by the laboratory on November 19, 2012. 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,

Tom Williams

tom.williams@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: Clay Co. LF MWs DS 11/15
Pace Project No.: 92139118

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

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SAMPLE ANALYTE COUNT

Project: Clay Co. LF MWs DS 11/15
Pace Project No.: 92139118

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92139118001	**CLAY Co DOWNSTREAM**	EPA 6010	JDA	15	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8260	MCK	64	PASI-C

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ANALYTICAL RESULTS

Project: Clay Co. LF MWs DS 11/15
Pace Project No.: 92139118

Sample: CLAY Co DOWNSTREAM **Lab ID: 92139118001** Collected: 11/15/12 13:40 Received: 11/19/12 10:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:35	7440-36-0	
Arsenic	ND	ug/L	10.0	1	11/28/12 11:30	12/01/12 19:35	7440-38-2	
Barium	**20.1**	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:35	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/28/12 11:30	12/01/12 19:35	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/28/12 11:30	12/01/12 19:35	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:35	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:35	7440-48-4	
Copper	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:35	7440-50-8	
Lead	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:35	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:35	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/28/12 11:30	12/01/12 19:35	7782-49-2	
Silver	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:35	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/28/12 11:30	12/01/12 19:35	7440-28-0	
Vanadium	**5.2**	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:35	7440-62-2	
Zinc	**16.4**	ug/L	10.0	1	11/28/12 11:30	12/01/12 19:35	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	1	11/30/12 17:50	12/05/12 11:25	7439-97-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/26/12 05:20	67-64-1	
Benzene	ND	ug/L	1.0	1		11/26/12 05:20	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/26/12 05:20	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/26/12 05:20	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/26/12 05:20	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/26/12 05:20	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/26/12 05:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/26/12 05:20	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/26/12 05:20	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/26/12 05:20	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/26/12 05:20	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/26/12 05:20	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/26/12 05:20	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/26/12 05:20	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/26/12 05:20	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/26/12 05:20	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/26/12 05:20	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/26/12 05:20	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/26/12 05:20	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/26/12 05:20	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/26/12 05:20	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/26/12 05:20	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/26/12 05:20	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/26/12 05:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/26/12 05:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/26/12 05:20	75-35-4	

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ANALYTICAL RESULTS

Project: Clay Co. LF MWs DS 11/15
Pace Project No.: 92139118

Sample: CLAY Co DOWNSTREAM **Lab ID: 92139118001** Collected: 11/15/12 13:40 Received: 11/19/12 10:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/26/12 05:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/26/12 05:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/26/12 05:20	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/26/12 05:20	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/26/12 05:20	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/26/12 05:20	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/26/12 05:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/26/12 05:20	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/26/12 05:20	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/26/12 05:20	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/26/12 05:20	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/26/12 05:20	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/26/12 05:20	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		11/26/12 05:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/26/12 05:20	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/26/12 05:20	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/26/12 05:20	91-20-3	
Styrene	ND	ug/L	1.0	1		11/26/12 05:20	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/26/12 05:20	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/26/12 05:20	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/26/12 05:20	127-18-4	
Toluene	ND	ug/L	1.0	1		11/26/12 05:20	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/26/12 05:20	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/26/12 05:20	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/26/12 05:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/26/12 05:20	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/26/12 05:20	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/26/12 05:20	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/26/12 05:20	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/26/12 05:20	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/26/12 05:20	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/26/12 05:20	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/26/12 05:20	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/26/12 05:20	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	91	%	70-130	1		11/26/12 05:20	460-00-4	
Dibromofluoromethane (S)	100	%	70-130	1		11/26/12 05:20	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	70-130	1		11/26/12 05:20	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		11/26/12 05:20	2037-26-5	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs DS 11/15
Pace Project No.: 92139118

QC Batch: MERP/4713
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Associated Lab Samples: 92139118001

METHOD BLANK: 880739
Matrix: Water
Associated Lab Samples: 92139118001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	12/05/12 11:12	

LABORATORY CONTROL SAMPLE: 880740

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.5	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 880741 880742

Parameter	Units	92139117001 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	2.5	2.5	99	99	75-125	1	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs DS 11/15
Pace Project No.: 92139118

QC Batch: MPRP/12055
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92139118001

METHOD BLANK: 879409
Matrix: Water
Associated Lab Samples: 92139118001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	12/01/12 19:10	
Arsenic	ug/L	ND	10.0	12/01/12 19:10	
Barium	ug/L	ND	5.0	12/01/12 19:10	
Beryllium	ug/L	ND	1.0	12/01/12 19:10	
Cadmium	ug/L	ND	1.0	12/01/12 19:10	
Chromium	ug/L	ND	5.0	12/01/12 19:10	
Cobalt	ug/L	ND	5.0	12/01/12 19:10	
Copper	ug/L	ND	5.0	12/01/12 19:10	
Lead	ug/L	ND	5.0	12/01/12 19:10	
Nickel	ug/L	ND	5.0	12/01/12 19:10	
Selenium	ug/L	ND	10.0	12/01/12 19:10	
Silver	ug/L	ND	5.0	12/01/12 19:10	
Thallium	ug/L	ND	5.4	12/01/12 19:10	
Vanadium	ug/L	ND	5.0	12/01/12 19:10	
Zinc	ug/L	ND	10.0	12/01/12 19:10	

LABORATORY CONTROL SAMPLE: 879410

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	483	97	80-120	
Arsenic	ug/L	500	479	96	80-120	
Barium	ug/L	500	471	94	80-120	
Beryllium	ug/L	500	506	101	80-120	
Cadmium	ug/L	500	486	97	80-120	
Chromium	ug/L	500	514	103	80-120	
Cobalt	ug/L	500	485	97	80-120	
Copper	ug/L	500	486	97	80-120	
Lead	ug/L	500	484	97	80-120	
Nickel	ug/L	500	487	97	80-120	
Selenium	ug/L	500	484	97	80-120	
Silver	ug/L	250	240	96	80-120	
Thallium	ug/L	500	470	94	80-120	
Vanadium	ug/L	500	489	98	80-120	
Zinc	ug/L	500	488	98	80-120	

MATRIX SPIKE SAMPLE: 879411

Parameter	Units	92139117001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	500	475	95	75-125	
Arsenic	ug/L	ND	500	482	96	75-125	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs DS 11/15
Pace Project No.: 92139118

MATRIX SPIKE SAMPLE: 879411

Parameter	Units	92139117001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	71.5	500	536	93	75-125	
Beryllium	ug/L	ND	500	505	101	75-125	
Cadmium	ug/L	ND	500	479	96	75-125	
Chromium	ug/L	7.2	500	522	103	75-125	
Cobalt	ug/L	6.1	500	493	97	75-125	
Copper	ug/L	15.1	500	505	98	75-125	
Lead	ug/L	10.7	500	480	94	75-125	
Nickel	ug/L	10.3	500	492	96	75-125	
Selenium	ug/L	ND	500	481	96	75-125	
Silver	ug/L	ND	250	240	96	75-125	
Thallium	ug/L	ND	500	456	91	75-125	
Vanadium	ug/L	12.9	500	503	98	75-125	
Zinc	ug/L	25.9	500	516	98	75-125	

SAMPLE DUPLICATE: 879412

Parameter	Units	92139118001 Result	Dup Result	RPD	Qualifiers
Antimony	ug/L	ND	ND		
Arsenic	ug/L	ND	ND		
Barium	ug/L	20.1	19.3	4	
Beryllium	ug/L	ND	ND		
Cadmium	ug/L	ND	ND		
Chromium	ug/L	ND	ND		
Cobalt	ug/L	ND	ND		
Copper	ug/L	ND	ND		
Lead	ug/L	ND	ND		
Nickel	ug/L	ND	ND		
Selenium	ug/L	ND	ND		
Silver	ug/L	ND	ND		
Thallium	ug/L	ND	ND		
Vanadium	ug/L	5.2	ND		
Zinc	ug/L	16.4	ND		

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs DS 11/15
Pace Project No.: 92139118

QC Batch: MSV/21180
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92139118001

METHOD BLANK: 877755
Matrix: Water
Associated Lab Samples: 92139118001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	11/26/12 00:27	
1,1,1-Trichloroethane	ug/L	ND	1.0	11/26/12 00:27	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/26/12 00:27	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/26/12 00:27	
1,1-Dichloroethane	ug/L	ND	1.0	11/26/12 00:27	
1,1-Dichloroethene	ug/L	ND	1.0	11/26/12 00:27	
1,1-Dichloropropene	ug/L	ND	1.0	11/26/12 00:27	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	11/26/12 00:27	
1,2,3-Trichloropropane	ug/L	ND	1.0	11/26/12 00:27	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	11/26/12 00:27	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	11/26/12 00:27	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	11/26/12 00:27	
1,2-Dichlorobenzene	ug/L	ND	1.0	11/26/12 00:27	
1,2-Dichloroethane	ug/L	ND	1.0	11/26/12 00:27	
1,2-Dichloropropane	ug/L	ND	1.0	11/26/12 00:27	
1,3-Dichlorobenzene	ug/L	ND	1.0	11/26/12 00:27	
1,3-Dichloropropane	ug/L	ND	1.0	11/26/12 00:27	
1,4-Dichlorobenzene	ug/L	ND	1.0	11/26/12 00:27	
2,2-Dichloropropane	ug/L	ND	1.0	11/26/12 00:27	
2-Butanone (MEK)	ug/L	ND	5.0	11/26/12 00:27	
2-Chlorotoluene	ug/L	ND	1.0	11/26/12 00:27	
2-Hexanone	ug/L	ND	5.0	11/26/12 00:27	
4-Chlorotoluene	ug/L	ND	1.0	11/26/12 00:27	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	11/26/12 00:27	
Acetone	ug/L	ND	25.0	11/26/12 00:27	
Benzene	ug/L	ND	1.0	11/26/12 00:27	
Bromobenzene	ug/L	ND	1.0	11/26/12 00:27	
Bromochloromethane	ug/L	ND	1.0	11/26/12 00:27	
Bromodichloromethane	ug/L	ND	1.0	11/26/12 00:27	
Bromoform	ug/L	ND	1.0	11/26/12 00:27	
Bromomethane	ug/L	ND	2.0	11/26/12 00:27	
Carbon tetrachloride	ug/L	ND	1.0	11/26/12 00:27	
Chlorobenzene	ug/L	ND	1.0	11/26/12 00:27	
Chloroethane	ug/L	ND	1.0	11/26/12 00:27	
Chloroform	ug/L	ND	1.0	11/26/12 00:27	
Chloromethane	ug/L	ND	1.0	11/26/12 00:27	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/26/12 00:27	
cis-1,3-Dichloropropene	ug/L	ND	1.0	11/26/12 00:27	
Dibromochloromethane	ug/L	ND	1.0	11/26/12 00:27	
Dibromomethane	ug/L	ND	1.0	11/26/12 00:27	
Dichlorodifluoromethane	ug/L	ND	1.0	11/26/12 00:27	
Diisopropyl ether	ug/L	ND	1.0	11/26/12 00:27	
Ethylbenzene	ug/L	ND	1.0	11/26/12 00:27	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs DS 11/15
Pace Project No.: 92139118

METHOD BLANK: 877755 Matrix: Water

Associated Lab Samples: 92139118001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	ND	1.0	11/26/12 00:27	
m&p-Xylene	ug/L	ND	2.0	11/26/12 00:27	
Methyl-tert-butyl ether	ug/L	ND	1.0	11/26/12 00:27	
Methylene Chloride	ug/L	ND	2.0	11/26/12 00:27	
Naphthalene	ug/L	ND	1.0	11/26/12 00:27	
o-Xylene	ug/L	ND	1.0	11/26/12 00:27	
p-Isopropyltoluene	ug/L	ND	1.0	11/26/12 00:27	
Styrene	ug/L	ND	1.0	11/26/12 00:27	
Tetrachloroethene	ug/L	ND	1.0	11/26/12 00:27	
Toluene	ug/L	ND	1.0	11/26/12 00:27	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/26/12 00:27	
trans-1,3-Dichloropropene	ug/L	ND	1.0	11/26/12 00:27	
Trichloroethene	ug/L	ND	1.0	11/26/12 00:27	
Trichlorofluoromethane	ug/L	ND	1.0	11/26/12 00:27	
Vinyl acetate	ug/L	ND	2.0	11/26/12 00:27	
Vinyl chloride	ug/L	ND	1.0	11/26/12 00:27	
Xylene (Total)	ug/L	ND	2.0	11/26/12 00:27	
1,2-Dichloroethane-d4 (S)	%	100	70-130	11/26/12 00:27	
4-Bromofluorobenzene (S)	%	90	70-130	11/26/12 00:27	
Dibromofluoromethane (S)	%	97	70-130	11/26/12 00:27	
Toluene-d8 (S)	%	100	70-130	11/26/12 00:27	

LABORATORY CONTROL SAMPLE: 877756

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	50.5	101	70-130	
1,1,1-Trichloroethane	ug/L	50	50.7	101	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	50.9	102	70-130	
1,1,2-Trichloroethane	ug/L	50	51.3	103	70-130	
1,1-Dichloroethane	ug/L	50	48.9	98	70-130	
1,1-Dichloroethene	ug/L	50	49.8	100	70-132	
1,1-Dichloropropene	ug/L	50	51.2	102	70-130	
1,2,3-Trichlorobenzene	ug/L	50	50.8	102	70-135	
1,2,3-Trichloropropane	ug/L	50	51.3	103	70-130	
1,2,4-Trichlorobenzene	ug/L	50	51.4	103	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	50.0	100	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	51.7	103	70-130	
1,2-Dichlorobenzene	ug/L	50	48.0	96	70-130	
1,2-Dichloroethane	ug/L	50	48.0	96	70-130	
1,2-Dichloropropane	ug/L	50	48.4	97	70-130	
1,3-Dichlorobenzene	ug/L	50	50.7	101	70-130	
1,3-Dichloropropane	ug/L	50	50.3	101	70-130	
1,4-Dichlorobenzene	ug/L	50	50.5	101	70-130	
2,2-Dichloropropane	ug/L	50	62.5	125	58-145	
2-Butanone (MEK)	ug/L	100	114	114	70-145	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs DS 11/15
Pace Project No.: 92139118

LABORATORY CONTROL SAMPLE: 877756

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Chlorotoluene	ug/L	50	49.4	99	70-130	
2-Hexanone	ug/L	100	104	104	70-144	
4-Chlorotoluene	ug/L	50	51.9	104	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	105	105	70-140	
Acetone	ug/L	100	93.9	94	50-175	
Benzene	ug/L	50	49.6	99	70-130	
Bromobenzene	ug/L	50	47.5	95	70-130	
Bromochloromethane	ug/L	50	50.7	101	70-130	
Bromodichloromethane	ug/L	50	50.5	101	70-130	
Bromoform	ug/L	50	42.3	85	70-130	
Bromomethane	ug/L	50	56.5	113	54-130	
Carbon tetrachloride	ug/L	50	49.3	99	70-132	
Chlorobenzene	ug/L	50	49.9	100	70-130	
Chloroethane	ug/L	50	50.8	102	64-134	
Chloroform	ug/L	50	49.3	99	70-130	
Chloromethane	ug/L	50	55.0	110	64-130	
cis-1,2-Dichloroethene	ug/L	50	49.1	98	70-131	
cis-1,3-Dichloropropene	ug/L	50	53.2	106	70-130	
Dibromochloromethane	ug/L	50	47.8	96	70-130	
Dibromomethane	ug/L	50	49.1	98	70-131	
Dichlorodifluoromethane	ug/L	50	57.3	115	56-130	
Diisopropyl ether	ug/L	50	45.7	91	70-130	
Ethylbenzene	ug/L	50	50.2	100	70-130	
Hexachloro-1,3-butadiene	ug/L	50	54.8	110	70-130	
m&p-Xylene	ug/L	100	102	102	70-130	
Methyl-tert-butyl ether	ug/L	50	48.3	97	70-130	
Methylene Chloride	ug/L	50	44.6	89	63-130	
Naphthalene	ug/L	50	52.9	106	70-138	
o-Xylene	ug/L	50	49.6	99	70-130	
p-Isopropyltoluene	ug/L	50	54.5	109	70-130	
Styrene	ug/L	50	47.3	95	70-130	
Tetrachloroethene	ug/L	50	51.5	103	70-130	
Toluene	ug/L	50	49.2	98	70-130	
trans-1,2-Dichloroethene	ug/L	50	48.5	97	70-130	
trans-1,3-Dichloropropene	ug/L	50	54.7	109	70-132	
Trichloroethene	ug/L	50	48.1	96	70-130	
Trichlorofluoromethane	ug/L	50	57.3	115	62-133	
Vinyl acetate	ug/L	100	104	104	66-157	
Vinyl chloride	ug/L	50	54.9	110	69-130	
Xylene (Total)	ug/L	150	152	101	70-130	
1,2-Dichloroethane-d4 (S)	%			98	70-130	
4-Bromofluorobenzene (S)	%			101	70-130	
Dibromofluoromethane (S)	%			100	70-130	
Toluene-d8 (S)	%			99	70-130	

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(828)254-7176

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

QUALITY CONTROL DATA

Project: Clay Co. LF MWs DS 11/15
Pace Project No.: 92139118

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 877757 877758

Parameter	Units	92139169001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	46.5	42.8	93	86	70-166	8	
Benzene	ug/L	ND	50	50	43.9	42.0	88	84	70-148	4	
Chlorobenzene	ug/L	ND	50	50	53.5	51.8	107	104	70-146	3	
Toluene	ug/L	ND	50	50	52.0	50.7	104	101	70-155	3	
Trichloroethene	ug/L	ND	50	50	51.7	49.7	103	99	69-151	4	
1,2-Dichloroethane-d4 (S)	%						92	93	70-130		
4-Bromofluorobenzene (S)	%						95	94	70-130		
Dibromofluoromethane (S)	%						91	90	70-130		
Toluene-d8 (S)	%						99	100	70-130		

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QUALIFIERS

Project: Clay Co. LF MWs DS 11/15
Pace Project No.: 92139118

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Clay Co. LF MWs DS 11/15
Pace Project No.: 92139118

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92139118001	**CLAY Co DOWNSTREAM**	EPA 3010	MPRP/12055	EPA 6010	ICP/11030
92139118001	**CLAY Co DOWNSTREAM**	EPA 7470	MERP/4713	EPA 7470	MERC/4611
92139118001	**CLAY Co DOWNSTREAM**	EPA 8260	MSV/21180		

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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

1555441

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: ENVIRONMENTAL INC	Report To:	Attention:
Address: P.O. BOX 954	Copy To:	Company Name:
CULLOWHEE, NC 28723		Address:
Email To:	Purchase Order No.:	Pace Quote Reference:
Phone: (828)586-5558 Fax:	Project Name: CLAY CO	Pace Project Manager:
Requested Due Date/TAT:	Project Number:	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

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)	APPX I METALS	APPX IV OC S 8260	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92139118
1	DOWNSTREAM	WW	G			11/15/12	1400						✓						✓			92139118001
2														✓						✓		"
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Nathan Tuma	11/19/12	1002A	Jane Meehan	11/19/12	10:02	3.8

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

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® www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: May 30, 2012 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.08	Issuing Authorities: Pace Asheville Quality Office

Client Name: Env Inc Project # 92139118

Where Received: ☐ Huntersville ☑ Asheville ☐ Eden ☐ Raleigh

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

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

Optional Proj. Due Date:

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

Circle Thermometer Used: IR Gun#2 -80344039 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

IR Gun Back Up- 111565135

Temp Correction Factor: Add / Subtract 0.1 C

Corrected Cooler Temp.: 3.8 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C **Comments:**

Date and Initials of person examining contents: 11/19/12

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: TM **Date:** 11/28 **SRF Review:** TM **Date:** 11/28

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

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December 07, 2012

Mr. Mark Teague
Environmental, Inc.
PO Box 954
Cullowhee, NC 28723

RE: Project: Clay Co. LF MWs UPSTREAM 11/15
Pace Project No.: 92139169

Dear Mr. Teague:
Enclosed are the analytical results for sample(s) received by the laboratory on November 19, 2012. 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,

Tom Williams

tom.williams@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: Clay Co. LF MWs UPSTREAM 11/15
Pace Project No.: 92139169

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

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SAMPLE ANALYTE COUNT

Project: Clay Co. LF MWs UPSTREAM 11/15
Pace Project No.: 92139169

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92139169001	**UPSTREAM**	EPA 6010	JDA	15	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8260	MCK	64	PASI-C

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ANALYTICAL RESULTS

Project: Clay Co. LF MWs UPSTREAM 11/15
Pace Project No.: 92139169

Sample: UPSTREAM **Lab ID: 92139169001** Collected: 11/15/12 10:00 Received: 11/19/12 10:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:44	7440-36-0	
Arsenic	ND	ug/L	10.0	1	11/28/12 11:30	12/01/12 19:44	7440-38-2	
Barium	**42.8**	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:44	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/28/12 11:30	12/01/12 19:44	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/28/12 11:30	12/01/12 19:44	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:44	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:44	7440-48-4	
Copper	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:44	7440-50-8	
Lead	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:44	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:44	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/28/12 11:30	12/01/12 19:44	7782-49-2	
Silver	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:44	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/28/12 11:30	12/01/12 19:44	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:44	7440-62-2	
Zinc	**17.2**	ug/L	10.0	1	11/28/12 11:30	12/01/12 19:44	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	1	11/30/12 17:50	12/05/12 11:33	7439-97-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/26/12 05:38	67-64-1	
Benzene	ND	ug/L	1.0	1		11/26/12 05:38	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/26/12 05:38	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/26/12 05:38	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/26/12 05:38	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/26/12 05:38	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/26/12 05:38	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/26/12 05:38	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/26/12 05:38	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/26/12 05:38	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/26/12 05:38	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/26/12 05:38	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/26/12 05:38	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/26/12 05:38	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/26/12 05:38	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/26/12 05:38	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/26/12 05:38	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/26/12 05:38	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/26/12 05:38	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/26/12 05:38	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/26/12 05:38	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/26/12 05:38	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/26/12 05:38	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/26/12 05:38	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/26/12 05:38	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/26/12 05:38	75-35-4	

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ANALYTICAL RESULTS

Project: Clay Co. LF MWs UPSTREAM 11/15
Pace Project No.: 92139169

Sample: UPSTREAM **Lab ID: 92139169001** Collected: 11/15/12 10:00 Received: 11/19/12 10:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/26/12 05:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/26/12 05:38	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/26/12 05:38	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/26/12 05:38	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/26/12 05:38	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/26/12 05:38	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/26/12 05:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/26/12 05:38	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/26/12 05:38	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/26/12 05:38	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/26/12 05:38	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/26/12 05:38	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/26/12 05:38	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		11/26/12 05:38	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/26/12 05:38	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/26/12 05:38	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/26/12 05:38	91-20-3	
Styrene	ND	ug/L	1.0	1		11/26/12 05:38	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/26/12 05:38	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/26/12 05:38	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/26/12 05:38	127-18-4	
Toluene	ND	ug/L	1.0	1		11/26/12 05:38	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/26/12 05:38	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/26/12 05:38	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/26/12 05:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/26/12 05:38	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/26/12 05:38	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/26/12 05:38	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/26/12 05:38	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/26/12 05:38	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/26/12 05:38	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/26/12 05:38	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/26/12 05:38	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/26/12 05:38	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	89	%	70-130	1		11/26/12 05:38	460-00-4	
Dibromofluoromethane (S)	100	%	70-130	1		11/26/12 05:38	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	70-130	1		11/26/12 05:38	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		11/26/12 05:38	2037-26-5	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs UPSTREAM 11/15
Pace Project No.: 92139169

QC Batch: MERP/4713
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Associated Lab Samples: 92139169001

METHOD BLANK: 880739
Matrix: Water
Associated Lab Samples: 92139169001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	12/05/12 11:12	

LABORATORY CONTROL SAMPLE: 880740

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.5	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 880741 880742

Parameter	Units	92139117001 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	2.5	2.5	99	99	75-125	1	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs UPSTREAM 11/15
Pace Project No.: 92139169

QC Batch: MPRP/12055
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92139169001

METHOD BLANK: 879409
Matrix: Water
Associated Lab Samples: 92139169001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	12/01/12 19:10	
Arsenic	ug/L	ND	10.0	12/01/12 19:10	
Barium	ug/L	ND	5.0	12/01/12 19:10	
Beryllium	ug/L	ND	1.0	12/01/12 19:10	
Cadmium	ug/L	ND	1.0	12/01/12 19:10	
Chromium	ug/L	ND	5.0	12/01/12 19:10	
Cobalt	ug/L	ND	5.0	12/01/12 19:10	
Copper	ug/L	ND	5.0	12/01/12 19:10	
Lead	ug/L	ND	5.0	12/01/12 19:10	
Nickel	ug/L	ND	5.0	12/01/12 19:10	
Selenium	ug/L	ND	10.0	12/01/12 19:10	
Silver	ug/L	ND	5.0	12/01/12 19:10	
Thallium	ug/L	ND	5.4	12/01/12 19:10	
Vanadium	ug/L	ND	5.0	12/01/12 19:10	
Zinc	ug/L	ND	10.0	12/01/12 19:10	

LABORATORY CONTROL SAMPLE: 879410

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	483	97	80-120	
Arsenic	ug/L	500	479	96	80-120	
Barium	ug/L	500	471	94	80-120	
Beryllium	ug/L	500	506	101	80-120	
Cadmium	ug/L	500	486	97	80-120	
Chromium	ug/L	500	514	103	80-120	
Cobalt	ug/L	500	485	97	80-120	
Copper	ug/L	500	486	97	80-120	
Lead	ug/L	500	484	97	80-120	
Nickel	ug/L	500	487	97	80-120	
Selenium	ug/L	500	484	97	80-120	
Silver	ug/L	250	240	96	80-120	
Thallium	ug/L	500	470	94	80-120	
Vanadium	ug/L	500	489	98	80-120	
Zinc	ug/L	500	488	98	80-120	

MATRIX SPIKE SAMPLE: 879411

Parameter	Units	92139117001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	500	475	95	75-125	
Arsenic	ug/L	ND	500	482	96	75-125	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs UPSTREAM 11/15
Pace Project No.: 92139169

MATRIX SPIKE SAMPLE: 879411

Parameter	Units	92139117001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	71.5	500	536	93	75-125	
Beryllium	ug/L	ND	500	505	101	75-125	
Cadmium	ug/L	ND	500	479	96	75-125	
Chromium	ug/L	7.2	500	522	103	75-125	
Cobalt	ug/L	6.1	500	493	97	75-125	
Copper	ug/L	15.1	500	505	98	75-125	
Lead	ug/L	10.7	500	480	94	75-125	
Nickel	ug/L	10.3	500	492	96	75-125	
Selenium	ug/L	ND	500	481	96	75-125	
Silver	ug/L	ND	250	240	96	75-125	
Thallium	ug/L	ND	500	456	91	75-125	
Vanadium	ug/L	12.9	500	503	98	75-125	
Zinc	ug/L	25.9	500	516	98	75-125	

SAMPLE DUPLICATE: 879412

Parameter	Units	92139118001 Result	Dup Result	RPD	Qualifiers
Antimony	ug/L	ND	ND		
Arsenic	ug/L	ND	ND		
Barium	ug/L	20.1	19.3	4	
Beryllium	ug/L	ND	ND		
Cadmium	ug/L	ND	ND		
Chromium	ug/L	ND	ND		
Cobalt	ug/L	ND	ND		
Copper	ug/L	ND	ND		
Lead	ug/L	ND	ND		
Nickel	ug/L	ND	ND		
Selenium	ug/L	ND	ND		
Silver	ug/L	ND	ND		
Thallium	ug/L	ND	ND		
Vanadium	ug/L	5.2	ND		
Zinc	ug/L	16.4	ND		

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs UPSTREAM 11/15
Pace Project No.: 92139169

QC Batch: MSV/21180
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92139169001

METHOD BLANK: 877755
Matrix: Water
Associated Lab Samples: 92139169001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	11/26/12 00:27	
1,1,1-Trichloroethane	ug/L	ND	1.0	11/26/12 00:27	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/26/12 00:27	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/26/12 00:27	
1,1-Dichloroethane	ug/L	ND	1.0	11/26/12 00:27	
1,1-Dichloroethene	ug/L	ND	1.0	11/26/12 00:27	
1,1-Dichloropropene	ug/L	ND	1.0	11/26/12 00:27	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	11/26/12 00:27	
1,2,3-Trichloropropane	ug/L	ND	1.0	11/26/12 00:27	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	11/26/12 00:27	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	11/26/12 00:27	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	11/26/12 00:27	
1,2-Dichlorobenzene	ug/L	ND	1.0	11/26/12 00:27	
1,2-Dichloroethane	ug/L	ND	1.0	11/26/12 00:27	
1,2-Dichloropropane	ug/L	ND	1.0	11/26/12 00:27	
1,3-Dichlorobenzene	ug/L	ND	1.0	11/26/12 00:27	
1,3-Dichloropropane	ug/L	ND	1.0	11/26/12 00:27	
1,4-Dichlorobenzene	ug/L	ND	1.0	11/26/12 00:27	
2,2-Dichloropropane	ug/L	ND	1.0	11/26/12 00:27	
2-Butanone (MEK)	ug/L	ND	5.0	11/26/12 00:27	
2-Chlorotoluene	ug/L	ND	1.0	11/26/12 00:27	
2-Hexanone	ug/L	ND	5.0	11/26/12 00:27	
4-Chlorotoluene	ug/L	ND	1.0	11/26/12 00:27	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	11/26/12 00:27	
Acetone	ug/L	ND	25.0	11/26/12 00:27	
Benzene	ug/L	ND	1.0	11/26/12 00:27	
Bromobenzene	ug/L	ND	1.0	11/26/12 00:27	
Bromochloromethane	ug/L	ND	1.0	11/26/12 00:27	
Bromodichloromethane	ug/L	ND	1.0	11/26/12 00:27	
Bromoform	ug/L	ND	1.0	11/26/12 00:27	
Bromomethane	ug/L	ND	2.0	11/26/12 00:27	
Carbon tetrachloride	ug/L	ND	1.0	11/26/12 00:27	
Chlorobenzene	ug/L	ND	1.0	11/26/12 00:27	
Chloroethane	ug/L	ND	1.0	11/26/12 00:27	
Chloroform	ug/L	ND	1.0	11/26/12 00:27	
Chloromethane	ug/L	ND	1.0	11/26/12 00:27	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/26/12 00:27	
cis-1,3-Dichloropropene	ug/L	ND	1.0	11/26/12 00:27	
Dibromochloromethane	ug/L	ND	1.0	11/26/12 00:27	
Dibromomethane	ug/L	ND	1.0	11/26/12 00:27	
Dichlorodifluoromethane	ug/L	ND	1.0	11/26/12 00:27	
Diisopropyl ether	ug/L	ND	1.0	11/26/12 00:27	
Ethylbenzene	ug/L	ND	1.0	11/26/12 00:27	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs UPSTREAM 11/15
Pace Project No.: 92139169

METHOD BLANK: 877755 Matrix: Water

Associated Lab Samples: 92139169001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	ND	1.0	11/26/12 00:27	
m&p-Xylene	ug/L	ND	2.0	11/26/12 00:27	
Methyl-tert-butyl ether	ug/L	ND	1.0	11/26/12 00:27	
Methylene Chloride	ug/L	ND	2.0	11/26/12 00:27	
Naphthalene	ug/L	ND	1.0	11/26/12 00:27	
o-Xylene	ug/L	ND	1.0	11/26/12 00:27	
p-Isopropyltoluene	ug/L	ND	1.0	11/26/12 00:27	
Styrene	ug/L	ND	1.0	11/26/12 00:27	
Tetrachloroethene	ug/L	ND	1.0	11/26/12 00:27	
Toluene	ug/L	ND	1.0	11/26/12 00:27	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/26/12 00:27	
trans-1,3-Dichloropropene	ug/L	ND	1.0	11/26/12 00:27	
Trichloroethene	ug/L	ND	1.0	11/26/12 00:27	
Trichlorofluoromethane	ug/L	ND	1.0	11/26/12 00:27	
Vinyl acetate	ug/L	ND	2.0	11/26/12 00:27	
Vinyl chloride	ug/L	ND	1.0	11/26/12 00:27	
Xylene (Total)	ug/L	ND	2.0	11/26/12 00:27	
1,2-Dichloroethane-d4 (S)	%	100	70-130	11/26/12 00:27	
4-Bromofluorobenzene (S)	%	90	70-130	11/26/12 00:27	
Dibromofluoromethane (S)	%	97	70-130	11/26/12 00:27	
Toluene-d8 (S)	%	100	70-130	11/26/12 00:27	

LABORATORY CONTROL SAMPLE: 877756

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	50.5	101	70-130	
1,1,1-Trichloroethane	ug/L	50	50.7	101	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	50.9	102	70-130	
1,1,2-Trichloroethane	ug/L	50	51.3	103	70-130	
1,1-Dichloroethane	ug/L	50	48.9	98	70-130	
1,1-Dichloroethene	ug/L	50	49.8	100	70-132	
1,1-Dichloropropene	ug/L	50	51.2	102	70-130	
1,2,3-Trichlorobenzene	ug/L	50	50.8	102	70-135	
1,2,3-Trichloropropane	ug/L	50	51.3	103	70-130	
1,2,4-Trichlorobenzene	ug/L	50	51.4	103	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	50.0	100	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	51.7	103	70-130	
1,2-Dichlorobenzene	ug/L	50	48.0	96	70-130	
1,2-Dichloroethane	ug/L	50	48.0	96	70-130	
1,2-Dichloropropane	ug/L	50	48.4	97	70-130	
1,3-Dichlorobenzene	ug/L	50	50.7	101	70-130	
1,3-Dichloropropane	ug/L	50	50.3	101	70-130	
1,4-Dichlorobenzene	ug/L	50	50.5	101	70-130	
2,2-Dichloropropane	ug/L	50	62.5	125	58-145	
2-Butanone (MEK)	ug/L	100	114	114	70-145	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs UPSTREAM 11/15
Pace Project No.: 92139169

LABORATORY CONTROL SAMPLE: 877756

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Chlorotoluene	ug/L	50	49.4	99	70-130	
2-Hexanone	ug/L	100	104	104	70-144	
4-Chlorotoluene	ug/L	50	51.9	104	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	105	105	70-140	
Acetone	ug/L	100	93.9	94	50-175	
Benzene	ug/L	50	49.6	99	70-130	
Bromobenzene	ug/L	50	47.5	95	70-130	
Bromochloromethane	ug/L	50	50.7	101	70-130	
Bromodichloromethane	ug/L	50	50.5	101	70-130	
Bromoform	ug/L	50	42.3	85	70-130	
Bromomethane	ug/L	50	56.5	113	54-130	
Carbon tetrachloride	ug/L	50	49.3	99	70-132	
Chlorobenzene	ug/L	50	49.9	100	70-130	
Chloroethane	ug/L	50	50.8	102	64-134	
Chloroform	ug/L	50	49.3	99	70-130	
Chloromethane	ug/L	50	55.0	110	64-130	
cis-1,2-Dichloroethene	ug/L	50	49.1	98	70-131	
cis-1,3-Dichloropropene	ug/L	50	53.2	106	70-130	
Dibromochloromethane	ug/L	50	47.8	96	70-130	
Dibromomethane	ug/L	50	49.1	98	70-131	
Dichlorodifluoromethane	ug/L	50	57.3	115	56-130	
Diisopropyl ether	ug/L	50	45.7	91	70-130	
Ethylbenzene	ug/L	50	50.2	100	70-130	
Hexachloro-1,3-butadiene	ug/L	50	54.8	110	70-130	
m&p-Xylene	ug/L	100	102	102	70-130	
Methyl-tert-butyl ether	ug/L	50	48.3	97	70-130	
Methylene Chloride	ug/L	50	44.6	89	63-130	
Naphthalene	ug/L	50	52.9	106	70-138	
o-Xylene	ug/L	50	49.6	99	70-130	
p-Isopropyltoluene	ug/L	50	54.5	109	70-130	
Styrene	ug/L	50	47.3	95	70-130	
Tetrachloroethene	ug/L	50	51.5	103	70-130	
Toluene	ug/L	50	49.2	98	70-130	
trans-1,2-Dichloroethene	ug/L	50	48.5	97	70-130	
trans-1,3-Dichloropropene	ug/L	50	54.7	109	70-132	
Trichloroethene	ug/L	50	48.1	96	70-130	
Trichlorofluoromethane	ug/L	50	57.3	115	62-133	
Vinyl acetate	ug/L	100	104	104	66-157	
Vinyl chloride	ug/L	50	54.9	110	69-130	
Xylene (Total)	ug/L	150	152	101	70-130	
1,2-Dichloroethane-d4 (S)	%			98	70-130	
4-Bromofluorobenzene (S)	%			101	70-130	
Dibromofluoromethane (S)	%			100	70-130	
Toluene-d8 (S)	%			99	70-130	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs UPSTREAM 11/15
Pace Project No.: 92139169

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 877757 877758

Parameter	Units	92139169001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	46.5	42.8	93	86	70-166	8	
Benzene	ug/L	ND	50	50	43.9	42.0	88	84	70-148	4	
Chlorobenzene	ug/L	ND	50	50	53.5	51.8	107	104	70-146	3	
Toluene	ug/L	ND	50	50	52.0	50.7	104	101	70-155	3	
Trichloroethene	ug/L	ND	50	50	51.7	49.7	103	99	69-151	4	
1,2-Dichloroethane-d4 (S)	%						92	93	70-130		
4-Bromofluorobenzene (S)	%						95	94	70-130		
Dibromofluoromethane (S)	%						91	90	70-130		
Toluene-d8 (S)	%						99	100	70-130		

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QUALIFIERS

Project: Clay Co. LF MWs UPSTREAM 11/15
Pace Project No.: 92139169

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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TNI - The NELAC Institute.

LABORATORIES

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Clay Co. LF MWs UPSTREAM 11/15
Pace Project No.: 92139169

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92139169001	**UPSTREAM**	EPA 3010	MPRP/12055	EPA 6010	ICP/11030
92139169001	**UPSTREAM**	EPA 7470	MERP/4713	EPA 7470	MERC/4611
92139169001	**UPSTREAM**	EPA 8260	MSV/21180		

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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

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Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: ENVIRONMENTAL INC	Report To:	Attention:
Address: PO BOX 954	Copy To:	Company Name:
CULLOWHEE, NC 28723		Address:
Email To:	Purchase Order No.:	Pace Quote Reference:
Phone: (828) 556-5558 Fax: (828) 556-0500	Project Name: CLAY CO	Pace Project Manager:
Requested Due Date/TAT:	Project Number:	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

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): APPX I METALS	APPX I VOC 8260	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92139169
1	UPSTREAM	SW	G			11/15/12	1000A					✓						✓			92139169 001
2													✓						✓		
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Matthew Crane	11/19/12	1002A	Jane Meehan	11/19/12	10:023.5	

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

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® www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: May 30, 2012 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.08	Issuing Authorities: Pace Asheville Quality Office

Client Name: Eru Inc Project # 92139.165

Where Received: ☐ Huntersville ☑ Asheville ☐ Eden ☐ Raleigh

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

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

Optional Proj. Due Date:

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

Circle Thermometer Used: IR Gun#2 -80344039 IR Gun Back Up- 111565135 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor: Add / Subtract 0.1 C

Corrected Cooler Temp.: 2.8 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C **Comments:**

Date and Initials of person examining contents: 11/19/12

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: [signature] **Date:** 11/28 **SRF Review:** [signature] **Date:** 11/28

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

Pace Analytical Services, Inc.
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December 07, 2012

Mr. Mark Teague
Environmental, Inc.
PO Box 954
Cullowhee, NC 28723

RE: Project: Clay Co. LF MWs EB/TB 11/15
Pace Project No.: 92139119

Dear Mr. Teague:
Enclosed are the analytical results for sample(s) received by the laboratory on November 19, 2012. 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,

Tom Williams

tom.williams@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: Clay Co. LF MWs EB/TB 11/15
Pace Project No.: 92139119

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

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SAMPLE ANALYTE COUNT

Project: Clay Co. LF MWs EB/TB 11/15
Pace Project No.: 92139119

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92139119001	**CLAY Co EQUIPMENT BLANK**	EPA 6010	JDA	15	PASI-A
		EPA 7470	SH1	1	PASI-A
		EPA 8260	MCK	64	PASI-C
92139119002	**CLAY Co TRIP BLANK**	EPA 8260	MCK	64	PASI-C

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ANALYTICAL RESULTS

Project: Clay Co. LF MWs EB/TB 11/15
Pace Project No.: 92139119

Sample: CLAY Co EQUIPMENT BLANK **Lab ID: 92139119001** Collected: 11/15/12 10:30 Received: 11/19/12 10:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:41	7440-36-0	
Arsenic	ND	ug/L	10.0	1	11/28/12 11:30	12/01/12 19:41	7440-38-2	
Barium	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:41	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/28/12 11:30	12/01/12 19:41	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/28/12 11:30	12/01/12 19:41	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:41	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:41	7440-48-4	
Copper	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:41	7440-50-8	
Lead	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:41	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:41	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/28/12 11:30	12/01/12 19:41	7782-49-2	
Silver	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:41	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/28/12 11:30	12/01/12 19:41	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/28/12 11:30	12/01/12 19:41	7440-62-2	
Zinc	ND	ug/L	10.0	1	11/28/12 11:30	12/01/12 19:41	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	1	11/30/12 17:50	12/05/12 11:28	7439-97-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/24/12 15:27	67-64-1	
Benzene	ND	ug/L	1.0	1		11/24/12 15:27	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/24/12 15:27	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/24/12 15:27	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/24/12 15:27	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/24/12 15:27	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/24/12 15:27	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/24/12 15:27	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/24/12 15:27	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/24/12 15:27	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/24/12 15:27	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/24/12 15:27	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/24/12 15:27	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/24/12 15:27	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/24/12 15:27	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/24/12 15:27	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/24/12 15:27	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/24/12 15:27	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/24/12 15:27	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/24/12 15:27	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/24/12 15:27	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/24/12 15:27	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/24/12 15:27	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/24/12 15:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/24/12 15:27	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/24/12 15:27	75-35-4	

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ANALYTICAL RESULTS

Project: Clay Co. LF MWs EB/TB 11/15
Pace Project No.: 92139119

Sample: CLAY Co EQUIPMENT BLANK **Lab ID: 92139119001** Collected: 11/15/12 10:30 Received: 11/19/12 10:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/24/12 15:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/24/12 15:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/24/12 15:27	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/24/12 15:27	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/24/12 15:27	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/24/12 15:27	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/24/12 15:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/24/12 15:27	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/24/12 15:27	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/24/12 15:27	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/24/12 15:27	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/24/12 15:27	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/24/12 15:27	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		11/24/12 15:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/24/12 15:27	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/24/12 15:27	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/24/12 15:27	91-20-3	
Styrene	ND	ug/L	1.0	1		11/24/12 15:27	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/24/12 15:27	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/24/12 15:27	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/24/12 15:27	127-18-4	
Toluene	ND	ug/L	1.0	1		11/24/12 15:27	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/24/12 15:27	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/24/12 15:27	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/24/12 15:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/24/12 15:27	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/24/12 15:27	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/24/12 15:27	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/24/12 15:27	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/24/12 15:27	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/24/12 15:27	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/24/12 15:27	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/24/12 15:27	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/24/12 15:27	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	92	%	70-130	1		11/24/12 15:27	460-00-4	
Dibromofluoromethane (S)	94	%	70-130	1		11/24/12 15:27	1868-53-7	
1,2-Dichloroethane-d4 (S)	96	%	70-130	1		11/24/12 15:27	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		11/24/12 15:27	2037-26-5	

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ANALYTICAL RESULTS

Project: Clay Co. LF MWs EB/TB 11/15
Pace Project No.: 92139119

Sample: CLAY Co TRIP BLANK **Lab ID: 92139119002** Collected: 11/15/12 10:30 Received: 11/19/12 10:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/24/12 15:45	67-64-1	
Benzene	ND	ug/L	1.0	1		11/24/12 15:45	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/24/12 15:45	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/24/12 15:45	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/24/12 15:45	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/24/12 15:45	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/24/12 15:45	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/24/12 15:45	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/24/12 15:45	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/24/12 15:45	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/24/12 15:45	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/24/12 15:45	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/24/12 15:45	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/24/12 15:45	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/24/12 15:45	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/24/12 15:45	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/24/12 15:45	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/24/12 15:45	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/24/12 15:45	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/24/12 15:45	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/24/12 15:45	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/24/12 15:45	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/24/12 15:45	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/24/12 15:45	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/24/12 15:45	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/24/12 15:45	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/24/12 15:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/24/12 15:45	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/24/12 15:45	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/24/12 15:45	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/24/12 15:45	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/24/12 15:45	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/24/12 15:45	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/24/12 15:45	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/24/12 15:45	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/24/12 15:45	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/24/12 15:45	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/24/12 15:45	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/24/12 15:45	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		11/24/12 15:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/24/12 15:45	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/24/12 15:45	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/24/12 15:45	91-20-3	
Styrene	ND	ug/L	1.0	1		11/24/12 15:45	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/24/12 15:45	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/24/12 15:45	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/24/12 15:45	127-18-4	

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ANALYTICAL RESULTS

Project: Clay Co. LF MWs EB/TB 11/15
Pace Project No.: 92139119

Sample: CLAY Co TRIP BLANK **Lab ID: 92139119002** Collected: 11/15/12 10:30 Received: 11/19/12 10:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Toluene	ND	ug/L	1.0	1		11/24/12 15:45	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/24/12 15:45	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/24/12 15:45	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/24/12 15:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/24/12 15:45	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/24/12 15:45	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/24/12 15:45	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/24/12 15:45	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/24/12 15:45	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/24/12 15:45	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/24/12 15:45	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/24/12 15:45	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/24/12 15:45	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	92	%	70-130	1		11/24/12 15:45	460-00-4	
Dibromofluoromethane (S)	94	%	70-130	1		11/24/12 15:45	1868-53-7	
1,2-Dichloroethane-d4 (S)	95	%	70-130	1		11/24/12 15:45	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		11/24/12 15:45	2037-26-5	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs EB/TB 11/15
Pace Project No.: 92139119

QC Batch: MERP/4713
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Associated Lab Samples: 92139119001

METHOD BLANK: 880739
Matrix: Water
Associated Lab Samples: 92139119001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	12/05/12 11:12	

LABORATORY CONTROL SAMPLE: 880740

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.5	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 880741 880742

Parameter	Units	92139117001 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	2.5	2.5	99	99	75-125	1	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs EB/TB 11/15
Pace Project No.: 92139119

QC Batch: MPRP/12055
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92139119001

METHOD BLANK: 879409
Matrix: Water
Associated Lab Samples: 92139119001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	12/01/12 19:10	
Arsenic	ug/L	ND	10.0	12/01/12 19:10	
Barium	ug/L	ND	5.0	12/01/12 19:10	
Beryllium	ug/L	ND	1.0	12/01/12 19:10	
Cadmium	ug/L	ND	1.0	12/01/12 19:10	
Chromium	ug/L	ND	5.0	12/01/12 19:10	
Cobalt	ug/L	ND	5.0	12/01/12 19:10	
Copper	ug/L	ND	5.0	12/01/12 19:10	
Lead	ug/L	ND	5.0	12/01/12 19:10	
Nickel	ug/L	ND	5.0	12/01/12 19:10	
Selenium	ug/L	ND	10.0	12/01/12 19:10	
Silver	ug/L	ND	5.0	12/01/12 19:10	
Thallium	ug/L	ND	5.4	12/01/12 19:10	
Vanadium	ug/L	ND	5.0	12/01/12 19:10	
Zinc	ug/L	ND	10.0	12/01/12 19:10	

LABORATORY CONTROL SAMPLE: 879410

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	483	97	80-120	
Arsenic	ug/L	500	479	96	80-120	
Barium	ug/L	500	471	94	80-120	
Beryllium	ug/L	500	506	101	80-120	
Cadmium	ug/L	500	486	97	80-120	
Chromium	ug/L	500	514	103	80-120	
Cobalt	ug/L	500	485	97	80-120	
Copper	ug/L	500	486	97	80-120	
Lead	ug/L	500	484	97	80-120	
Nickel	ug/L	500	487	97	80-120	
Selenium	ug/L	500	484	97	80-120	
Silver	ug/L	250	240	96	80-120	
Thallium	ug/L	500	470	94	80-120	
Vanadium	ug/L	500	489	98	80-120	
Zinc	ug/L	500	488	98	80-120	

MATRIX SPIKE SAMPLE: 879411

Parameter	Units	92139117001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	500	475	95	75-125	
Arsenic	ug/L	ND	500	482	96	75-125	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs EB/TB 11/15
Pace Project No.: 92139119

MATRIX SPIKE SAMPLE: 879411

Parameter	Units	92139117001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	71.5	500	536	93	75-125	
Beryllium	ug/L	ND	500	505	101	75-125	
Cadmium	ug/L	ND	500	479	96	75-125	
Chromium	ug/L	7.2	500	522	103	75-125	
Cobalt	ug/L	6.1	500	493	97	75-125	
Copper	ug/L	15.1	500	505	98	75-125	
Lead	ug/L	10.7	500	480	94	75-125	
Nickel	ug/L	10.3	500	492	96	75-125	
Selenium	ug/L	ND	500	481	96	75-125	
Silver	ug/L	ND	250	240	96	75-125	
Thallium	ug/L	ND	500	456	91	75-125	
Vanadium	ug/L	12.9	500	503	98	75-125	
Zinc	ug/L	25.9	500	516	98	75-125	

SAMPLE DUPLICATE: 879412

Parameter	Units	92139118001 Result	Dup Result	RPD	Qualifiers
Antimony	ug/L	ND	ND		
Arsenic	ug/L	ND	ND		
Barium	ug/L	20.1	19.3	4	
Beryllium	ug/L	ND	ND		
Cadmium	ug/L	ND	ND		
Chromium	ug/L	ND	ND		
Cobalt	ug/L	ND	ND		
Copper	ug/L	ND	ND		
Lead	ug/L	ND	ND		
Nickel	ug/L	ND	ND		
Selenium	ug/L	ND	ND		
Silver	ug/L	ND	ND		
Thallium	ug/L	ND	ND		
Vanadium	ug/L	5.2	ND		
Zinc	ug/L	16.4	ND		

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs EB/TB 11/15
Pace Project No.: 92139119

QC Batch: MSV/21195
Analysis Method: EPA 8260
QC Batch Method: EPA 8260
Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92139119001, 92139119002

METHOD BLANK: 877900
Matrix: Water
Associated Lab Samples: 92139119001, 92139119002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	11/24/12 12:04	
1,1,1-Trichloroethane	ug/L	ND	1.0	11/24/12 12:04	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/24/12 12:04	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/24/12 12:04	
1,1-Dichloroethane	ug/L	ND	1.0	11/24/12 12:04	
1,1-Dichloroethene	ug/L	ND	1.0	11/24/12 12:04	
1,1-Dichloropropene	ug/L	ND	1.0	11/24/12 12:04	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	11/24/12 12:04	
1,2,3-Trichloropropane	ug/L	ND	1.0	11/24/12 12:04	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	11/24/12 12:04	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	11/24/12 12:04	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	11/24/12 12:04	
1,2-Dichlorobenzene	ug/L	ND	1.0	11/24/12 12:04	
1,2-Dichloroethane	ug/L	ND	1.0	11/24/12 12:04	
1,2-Dichloropropane	ug/L	ND	1.0	11/24/12 12:04	
1,3-Dichlorobenzene	ug/L	ND	1.0	11/24/12 12:04	
1,3-Dichloropropane	ug/L	ND	1.0	11/24/12 12:04	
1,4-Dichlorobenzene	ug/L	ND	1.0	11/24/12 12:04	
2,2-Dichloropropane	ug/L	ND	1.0	11/24/12 12:04	
2-Butanone (MEK)	ug/L	ND	5.0	11/24/12 12:04	
2-Chlorotoluene	ug/L	ND	1.0	11/24/12 12:04	
2-Hexanone	ug/L	ND	5.0	11/24/12 12:04	
4-Chlorotoluene	ug/L	ND	1.0	11/24/12 12:04	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	11/24/12 12:04	
Acetone	ug/L	ND	25.0	11/24/12 12:04	
Benzene	ug/L	ND	1.0	11/24/12 12:04	
Bromobenzene	ug/L	ND	1.0	11/24/12 12:04	
Bromochloromethane	ug/L	ND	1.0	11/24/12 12:04	
Bromodichloromethane	ug/L	ND	1.0	11/24/12 12:04	
Bromoform	ug/L	ND	1.0	11/24/12 12:04	
Bromomethane	ug/L	ND	2.0	11/24/12 12:04	
Carbon tetrachloride	ug/L	ND	1.0	11/24/12 12:04	
Chlorobenzene	ug/L	ND	1.0	11/24/12 12:04	
Chloroethane	ug/L	ND	1.0	11/24/12 12:04	
Chloroform	ug/L	ND	1.0	11/24/12 12:04	
Chloromethane	ug/L	ND	1.0	11/24/12 12:04	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/24/12 12:04	
cis-1,3-Dichloropropene	ug/L	ND	1.0	11/24/12 12:04	
Dibromochloromethane	ug/L	ND	1.0	11/24/12 12:04	
Dibromomethane	ug/L	ND	1.0	11/24/12 12:04	
Dichlorodifluoromethane	ug/L	ND	1.0	11/24/12 12:04	
Diisopropyl ether	ug/L	ND	1.0	11/24/12 12:04	
Ethylbenzene	ug/L	ND	1.0	11/24/12 12:04	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs EB/TB 11/15
Pace Project No.: 92139119

METHOD BLANK: 877900 Matrix: Water

Associated Lab Samples: 92139119001, 92139119002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	ND	1.0	11/24/12 12:04	
m&p-Xylene	ug/L	ND	2.0	11/24/12 12:04	
Methyl-tert-butyl ether	ug/L	ND	1.0	11/24/12 12:04	
Methylene Chloride	ug/L	ND	2.0	11/24/12 12:04	
Naphthalene	ug/L	ND	1.0	11/24/12 12:04	
o-Xylene	ug/L	ND	1.0	11/24/12 12:04	
p-Isopropyltoluene	ug/L	ND	1.0	11/24/12 12:04	
Styrene	ug/L	ND	1.0	11/24/12 12:04	
Tetrachloroethene	ug/L	ND	1.0	11/24/12 12:04	
Toluene	ug/L	ND	1.0	11/24/12 12:04	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/24/12 12:04	
trans-1,3-Dichloropropene	ug/L	ND	1.0	11/24/12 12:04	
Trichloroethene	ug/L	ND	1.0	11/24/12 12:04	
Trichlorofluoromethane	ug/L	ND	1.0	11/24/12 12:04	
Vinyl acetate	ug/L	ND	2.0	11/24/12 12:04	
Vinyl chloride	ug/L	ND	1.0	11/24/12 12:04	
Xylene (Total)	ug/L	ND	2.0	11/24/12 12:04	
1,2-Dichloroethane-d4 (S)	%	94	70-130	11/24/12 12:04	
4-Bromofluorobenzene (S)	%	93	70-130	11/24/12 12:04	
Dibromofluoromethane (S)	%	92	70-130	11/24/12 12:04	
Toluene-d8 (S)	%	99	70-130	11/24/12 12:04	

LABORATORY CONTROL SAMPLE: 877901

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	49.7	99	70-130	
1,1,1-Trichloroethane	ug/L	50	47.6	95	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	46.2	92	70-130	
1,1,2-Trichloroethane	ug/L	50	48.3	97	70-130	
1,1-Dichloroethane	ug/L	50	44.6	89	70-130	
1,1-Dichloroethene	ug/L	50	47.2	94	70-132	
1,1-Dichloropropene	ug/L	50	48.0	96	70-130	
1,2,3-Trichlorobenzene	ug/L	50	48.1	96	70-135	
1,2,3-Trichloropropane	ug/L	50	47.6	95	70-130	
1,2,4-Trichlorobenzene	ug/L	50	49.4	99	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	41.3	83	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	51.2	102	70-130	
1,2-Dichlorobenzene	ug/L	50	48.2	96	70-130	
1,2-Dichloroethane	ug/L	50	41.8	84	70-130	
1,2-Dichloropropane	ug/L	50	45.9	92	70-130	
1,3-Dichlorobenzene	ug/L	50	48.1	96	70-130	
1,3-Dichloropropane	ug/L	50	48.3	97	70-130	
1,4-Dichlorobenzene	ug/L	50	46.9	94	70-130	
2,2-Dichloropropane	ug/L	50	37.1	74	58-145	
2-Butanone (MEK)	ug/L	100	86.7	87	70-145	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs EB/TB 11/15
Pace Project No.: 92139119

LABORATORY CONTROL SAMPLE: 877901

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Chlorotoluene	ug/L	50	47.1	94	70-130	
2-Hexanone	ug/L	100	97.0	97	70-144	
4-Chlorotoluene	ug/L	50	47.5	95	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	92.4	92	70-140	
Acetone	ug/L	100	73.3	73	50-175	
Benzene	ug/L	50	47.2	94	70-130	
Bromobenzene	ug/L	50	44.3	89	70-130	
Bromochloromethane	ug/L	50	47.9	96	70-130	
Bromodichloromethane	ug/L	50	49.6	99	70-130	
Bromoform	ug/L	50	45.5	91	70-130	
Bromomethane	ug/L	50	43.3	87	54-130	
Carbon tetrachloride	ug/L	50	48.0	96	70-132	
Chlorobenzene	ug/L	50	48.9	98	70-130	
Chloroethane	ug/L	50	46.7	93	64-134	
Chloroform	ug/L	50	47.8	96	70-130	
Chloromethane	ug/L	50	42.4	85	64-130	
cis-1,2-Dichloroethene	ug/L	50	45.1	90	70-131	
cis-1,3-Dichloropropene	ug/L	50	48.5	97	70-130	
Dibromochloromethane	ug/L	50	53.3	107	70-130	
Dibromomethane	ug/L	50	49.5	99	70-131	
Dichlorodifluoromethane	ug/L	50	51.6	103	56-130	
Diisopropyl ether	ug/L	50	40.7	81	70-130	
Ethylbenzene	ug/L	50	49.3	99	70-130	
Hexachloro-1,3-butadiene	ug/L	50	51.1	102	70-130	
m&p-Xylene	ug/L	100	101	101	70-130	
Methyl-tert-butyl ether	ug/L	50	46.8	94	70-130	
Methylene Chloride	ug/L	50	41.5	83	63-130	
Naphthalene	ug/L	50	51.5	103	70-138	
o-Xylene	ug/L	50	49.1	98	70-130	
p-Isopropyltoluene	ug/L	50	52.4	105	70-130	
Styrene	ug/L	50	47.6	95	70-130	
Tetrachloroethene	ug/L	50	51.0	102	70-130	
Toluene	ug/L	50	47.9	96	70-130	
trans-1,2-Dichloroethene	ug/L	50	45.1	90	70-130	
trans-1,3-Dichloropropene	ug/L	50	48.6	97	70-132	
Trichloroethene	ug/L	50	47.2	94	70-130	
Trichlorofluoromethane	ug/L	50	49.4	99	62-133	
Vinyl acetate	ug/L	100	81.1	81	66-157	
Vinyl chloride	ug/L	50	44.9	90	69-130	
Xylene (Total)	ug/L	150	150	100	70-130	
1,2-Dichloroethane-d4 (S)	%			92	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Dibromofluoromethane (S)	%			95	70-130	
Toluene-d8 (S)	%			99	70-130	

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QUALITY CONTROL DATA

Project: Clay Co. LF MWs EB/TB 11/15
Pace Project No.: 92139119

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 877902 877903

Parameter	Units	92139058007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	45.7	48.4	91	97	70-166	6	
Benzene	ug/L	ND	50	50	41.5	44.5	83	89	70-148	7	
Chlorobenzene	ug/L	1.8	50	50	51.8	54.8	100	106	70-146	6	
Toluene	ug/L	ND	50	50	49.0	53.8	98	107	70-155	9	
Trichloroethene	ug/L	ND	50	50	49.7	52.1	99	104	69-151	5	
1,2-Dichloroethane-d4 (S)	%						100	97	70-130		
4-Bromofluorobenzene (S)	%						92	92	70-130		
Dibromofluoromethane (S)	%						96	95	70-130		
Toluene-d8 (S)	%						99	99	70-130		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 877904 877905

Parameter	Units	92139058002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	43.8	47.0	88	94	70-166	7	
Benzene	ug/L	ND	50	50	40.2	44.1	79	87	70-148	9	
Chlorobenzene	ug/L	26.2	50	50	73.2	76.4	94	100	70-146	4	
Toluene	ug/L	ND	50	50	46.6	51.6	91	101	70-155	10	
Trichloroethene	ug/L	ND	50	50	47.0	51.5	94	103	69-151	9	
1,2-Dichloroethane-d4 (S)	%						98	99	70-130		
4-Bromofluorobenzene (S)	%						94	92	70-130		
Dibromofluoromethane (S)	%						98	97	70-130		
Toluene-d8 (S)	%						98	99	70-130		

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Pace Analytical Services, Inc.
205 East Meadow Road - Suite A
Eden, NC 27288
(336)623-8921

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALIFIERS

Project: Clay Co. LF MWs EB/TB 11/15
Pace Project No.: 92139119

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Clay Co. LF MWs EB/TB 11/15
Pace Project No.: 92139119

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92139119001	**CLAY Co EQUIPMENT BLANK**	EPA 3010	MPRP/12055	EPA 6010	ICP/11030
92139119001	**CLAY Co EQUIPMENT BLANK**	EPA 7470	MERP/4713	EPA 7470	MERC/4611
92139119001	**CLAY Co EQUIPMENT BLANK**	EPA 8260	MSV/21195		
92139119002	**CLAY Co TRIP BLANK**	EPA 8260	MSV/21195		

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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

1555439

Section A Required Client Information:

Company: ENVIRONMENTAL INC
Address: PO BOX 954
CULLOWHEE, NC 28723
Email To:
Phone: (828) 586-5588 Fax: (828) 586-0820
Requested Due Date/TAT:

Section B Required Project Information:

Report To:
Copy To:
Purchase Order No.:
Project Name: CLAY CO
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

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)	APPC / METAL	APPC / VOC 8260	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92139119
1	EQUIPMENT BLANK	WT	G			11/15/12	1030A					✓	✓						✓			92139119001
2													✓							✓		
3																						
4	TRIP BLANK	WT	G			11/15/12	1030A						✓							✓		92139119002
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Anthony Cuser	11/19/12	1020A	Jane Meekan	11/19/12	10:07	3.8

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER:
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

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.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical® www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: May 30, 2012 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.08	Issuing Authorities: Pace Asheville Quality Office

Client Name: Fav Inc Project # 92139114

Where Received: ☐ Huntersville ☑ Asheville ☐ Eden ☐ Raleigh

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

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

Optional Proj. Due Date:

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

Circle Thermometer Used: IR Gun#2 -80344039 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

IR Gun Back Up- 111565135

Temp Correction Factor: Add / Subtract 0.1 C

Corrected Cooler Temp.: 3.8 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C **Comments:**

Date and Initials of person examining contents: 11/15/12

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: TM **Date:** 11/28 **SRF Review:** TM **Date:** 11/28

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

APPENDIX C

Environmental Monitoring Reporting Form and Electronic Submittal of Environmental Monitoring Data 2201Nov2012 (CD 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):

Altamont Environmental, Inc.

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

Name: Marta A. VanDussen Phone: (828) 281-3350

E-mail: mvandussen@altamontenvironmental.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Clay County Closed Municipal Solid Waste Facility	1160 Hinton Center Road (S.R. 1148), Hayesville, North Carolina 28904	22-01	.1600	November 15, 2012

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.

Robert Hastings, P.G. Project Geologist (828) 281-3350

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

Affix NC Licensed/ Professional Geologist Seal

NORTH CAROLINA LICENSED SEAL 1906 GEOLOGIST Robert W. Hastings

Signature Date

231 Haywood Street, Asheville, NC 28801

Facility Representative Address

C-2185

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

Revised 6/2009