Semi-Annual Water Quality Monitoring Report

Prepared for

Iredell County Closed C&D Landfill - Phases 1, 2, 3
Statesville, North Carolina

January 2014

Permit Number: 49-03
MESCO Project Number: G13014.0

Submitted: April 1, 2014

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

Municipal Services Garner, NC
Engineering Company, P.A. Boone, NC

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

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

NC DENR
Division of Waste Management - Solid Waste

Environmental Monitoring Reporting Form

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

Instructions:

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

Solid Waste Monitoring Data Submittal Information

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

Municipal Engineering Services Co., PA

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

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

E-mail: jpfohl@mesco.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Iredell County Closed C&D Landfill Phases 1, 2, 3	354 Twin Oaks Road Statesville, NC 28625	49-03	.0500	January 21 & 23, 2014

Environmental Status: (Check all that apply)

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

Type of data submitted: (Check all that apply)

☒ Groundwater monitoring data from monitoring wells
☐ Groundwater monitoring data from private water supply wells
☐ Leachate monitoring data
☒ Surface water monitoring data
☐ Methane gas monitoring data
☐ Corrective action data (specify) _____
☐ Other(specify) _____

Notification attached?

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

Certification

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

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

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

Signature: Steven R. Gandy PhD PE Date: 4/1/14

Affix NC Licensed/ Professional Geologist Seal

NORTH CAROLINA PROFESSIONAL SEAL 031020 ENGINEER STEVEN RAY GANDY

P.O. Box 97, Garner, NC 27529

Facility Representative Address

C-0281

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

Revised 6/2009

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License No. C-0281

CIVIL/SANITARY/ENVIRONMENTAL ENGINEERS

SOLID WASTE MANAGEMENT

Municipal Services Engineering Company, P.A.

SITE PLANNING/SUBDIVISIONS

SUBSURFACE UTILITY ENGINEERING (SUE)

April 1, 2014

Mr. Ervin Lane
Solid Waste Section
NC DENR Division of Waste Management
1646 Mail Service Center
Raleigh, NC 27699-1646

Re: Semi-Annual Water Quality Monitoring Report
Iredell County Closed C&D Landfill - Phases 1, 2, 3
Permit #49-03
MESCO #G13014.0
Event Date(s): January 21 & 23, 2014

Introduction

On behalf of Iredell County, Municipal Engineering Services Company, P.A. (MESCO) is pleased to present this *Semi-Annual Water Quality Report* for the summer 2013 event performed at the Iredell County Closed Construction and Demolition (C&D) Landfill. NCDENR Solid Waste Rules 15A NCAC 13B.0601 requires that Iredell County provide this report to the SWS on a semi-annual basis. This report documents the quality of the ground and surface waters during this monitoring event performed on January 21 & 23, 2014. The only detection above an applicable regulatory compliance standards attributed to an anthropogenic source was benzene in a sample collected from MW-16.

Background

The Iredell County Closed C&D Landfill, permit #49-03, is located at 354 Twin Oaks Road, Statesville, North Carolina. The closed unlined C&D landfill consisted of three contiguous phases (Phases 1, 2 & 3) which are treated as a single unit in this report. The site location topographic map is depicted in the attached **Figure 1**.

Water quality monitoring at this portion of the facility has been continuously monitored at least on a semi-annual frequency since 1993. The unlined C&D landfill (CDLF) ceased accepting waste on June 27, 2008 and received closure certification on November 30, 2011. Current water quality data was compared to all historical data compiled since 1993.

As specified within 15A NCAC 13B.1632(j) and the SWS Environmental Monitoring Report Form, this report contains sampling procedures, field and laboratory results, groundwater and surface water characterization. Detections compared to standards tables, a field observations table, a field data results table, potentiometric map, quality assurance/quality control data, and laboratory analytical data results are also enclosed.

Sampling Procedure

MESCO performed the sampling in general accordance with the NCDENR SWS guidance document *Solid Waste Section Guidelines for Groundwater, Soil, and Surface Water Sampling* revised April 2008 and the current site specific Sampling and Analysis Plan (SAP) dated October 10, 2006. Water samples were collected from eleven downgradient monitoring wells (MW-9R, MW-9RR, MW-10R, MW-16, MW-22, MW-23, MW-24S, MW-24D, MW-25, MW-26S, MW-26D), two upgradient designated background wells (MW-1A, MW-1C) and two surface water points (SW-3, SW-6). Quality control measures implemented during this event included submittal and subsequent quantification of an equipment blank (EB), field blank (FB), and travel blank (TB). Analytical results from surface water samples collected from the unnamed perennial tributary to Fourth Creek (SW-South of Confluence, SW-NEof MW-16 and SW-2) are also presented. MW-1B, the shallowest of the three upgradient background wells has been chronically dry. Monitoring locations are shown on **Figure 2.**

The function and integrity of all monitoring locations were visually evaluated and no deficiencies identified as documented on **Table 4.** The depth to water in each well was electronically gaged prior to purging to quantify the static water level elevation. Low-flow pumping methodology or bailing was utilized to purge the wells to a minimum of three times the volume of standing water in the well or until dry. Surface water samples were collected from previously designated locations. During well purging and surface water sample collection the required field parameters were recorded. The samples were then placed into laboratory-prepared, pre-preserved containers via a new disposable polyethylene bailer. Samples were collected, kept on ice, and transported to a NC-certified laboratory under proper C-O-C protocols within the specified hold times for each analysis.

Field Parameter Data

Stabilized field parameters were recorded during purging which included depth to water, pH, specific conductivity, temperature, oxidation reduction potential (ORP), total dissolved solids (TDS) and visual turbidity. A summary of the field parameter data is presented in **Table 5** and the field sampling data sheet is enclosed in **Appendix B.**

Laboratory Results

Pace Analytical Laboratories (PACE) of Huntersville and Asheville, NC performed the laboratory analysis. All groundwater and surface water samples listed in the SAP were analyzed for the constituents listed in 40CFR 258 Appendix I plus tetrahydrofuran. A summary of the locations, targeted parameters and analytical methods are shown in **Table 1**. Laboratory results and C-O-Cs are contained in **Appendix A**.

Water samples were analyzed to the laboratory-established Method Detection Limits (MDL), which are at or below the current Solid Waste Section Limit (SWSL). **Table 2** summarizes constituents detected in groundwater and surface water samples that attain or were above the current SWSL, Groundwater Protection Standards (GWP), North Carolina Groundwater Standards (2L) or the North Carolina Surface Water Standards (2B) for a class C water body.

Quality Control Samples

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

Groundwater Samples

Total cadmium was detected in downgradient wells MW-10R (5.8 ug/L) and MW-26D (21.8 ug/L) in levels above the 2L Standard (2.0 ug/L). Benzene was detected in MW-16 (1.4 ug/L) in concentrations exceeding the 2L Standard (1.0 ug/L).

Surface Water Samples

The unnamed tributary of Fourth Creek, which serves as the local discharge feature south of the closed C&D landfill, was monitored at six locations. On-site surface water point SW-3 contained total zinc in concentrations above the applicable 2B Standard. However, a supplemental sample (SW-SofConfluence) collected at the confluence of a separate drainage upstream of SW-3, which originates off-site, contained total zinc concentrations almost four times higher than SW-3. Constituents were not detected in concentrations above the SWSL or 2B Standard from surface water points SW-NEofMW-16 and SW-2, located progressively further downstream from the suspected off-site zinc source.

Groundwater and Surface Water Characterization

A potentiometric map for the surficial aquifer created from groundwater elevation data collected during this event is included as **Figure 2**. Groundwater flow directions and rates were calculated using modified Darcy's equation and presented as **Table 3**. Groundwater flow at the C&D landfill is to the east toward the unnamed tributary to Fourth Creek. Groundwater flow rates have been calculated to range from approximately 7 ft/yr (MW-22) to 249 ft/yr (MW-16), averaging approximately 123 ft/yr. Flow directions and gradients are generally consistent with reported historical observations. Streams located within the facility boundaries were visually observed to have moderate seasonal volume and flow with low turbidity.

Findings

Total cadmium was detected in samples MW-10R and MW-26D above the 2L Standard. The preliminary source assigned to the detections of total cadmium is erosion of natural deposits. Total cadmium has been consistently detected in samples collected from upgradient background well MW-1A and in levels much higher (48 ug/L on October 26, 1998) than those detected during this event.

Benzene continues to be detected slightly above the 2L Standard and within historically identified range in a sample collected from MW-16. Although not applicable for regulatory compliance comparison purposes, benzene has never been detected in any samples collected at this CDLF above current EPA established primary "Drinking Water Standards" (5.0 ug/L). The currently identified horizontal extent of low levels of benzene appear to encompass an area less than one acre between the waste boundary and the Fourth Creek tributary discharge feature. VOCs were not detected from surface water samples SW-3 or SW-NEofMW-16 collected directly downgradient from the area impacted with benzene.

Levels of VOCs in samples MW-9R and MW-9RR were detected below their respective 2L Standard in the last two consecutive semi-annual events after several years of exceedances.

Zinc currently and historically has been detected in concentrations above the 2B Standard in samples collected from SW-3. The zinc source as reported in sample SW-3 originates off site and is diluted to permissible levels further downstream at SW-2.

Tetrahydrofuran, a VOC required to be targeted at CDLFs with no regulatory standard established, was detected in MW-16 (12.8 ug/L) and upgradient background well MW-1A (5.1 ug/L).

Closing

Post-closure semi-annual water quality monitoring is tentatively scheduled to be performed again in July 2014. If you have any questions regarding this report, please contact us at (919) 772-5393 or by email at jpfohl@mesco.com or sgandy@mesco.com if you have any questions or comments.

Sincerely,

MUNICIPAL ENGINEERING SERVICES CO., P.A.

Jonathan Pfohl
Environmental Specialist

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

Enclosures

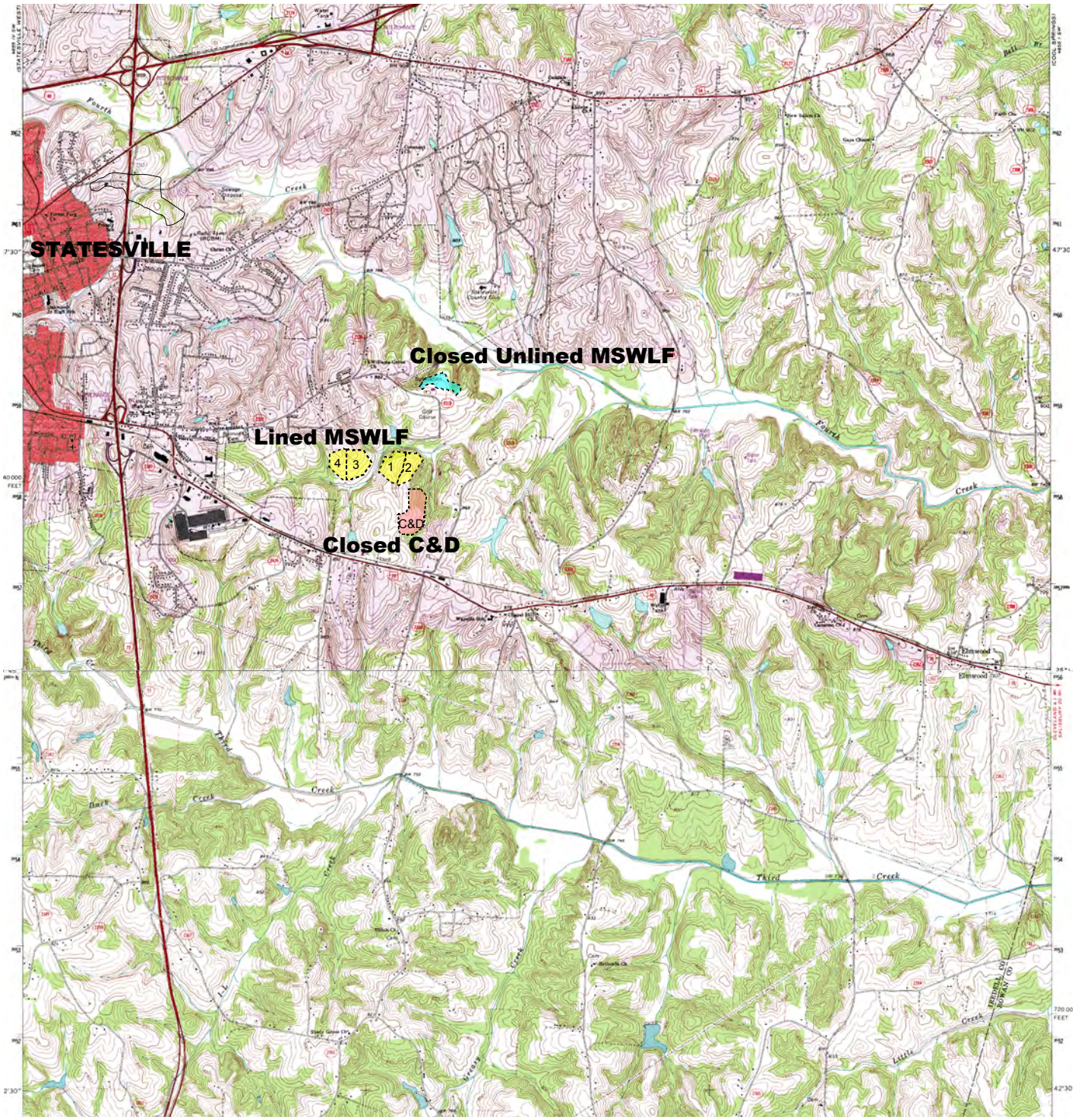
cc: Mr. David Lambert
Iredell County

Figures

Topographic Map with Site Location

Iredell County Landfill

N



354 Twin Oaks Rd
Statesville, NC 28625
Lat:35-46-17.8012
Long:-80-49-22.2973
Northing:740719.35
Easting:1459306.76

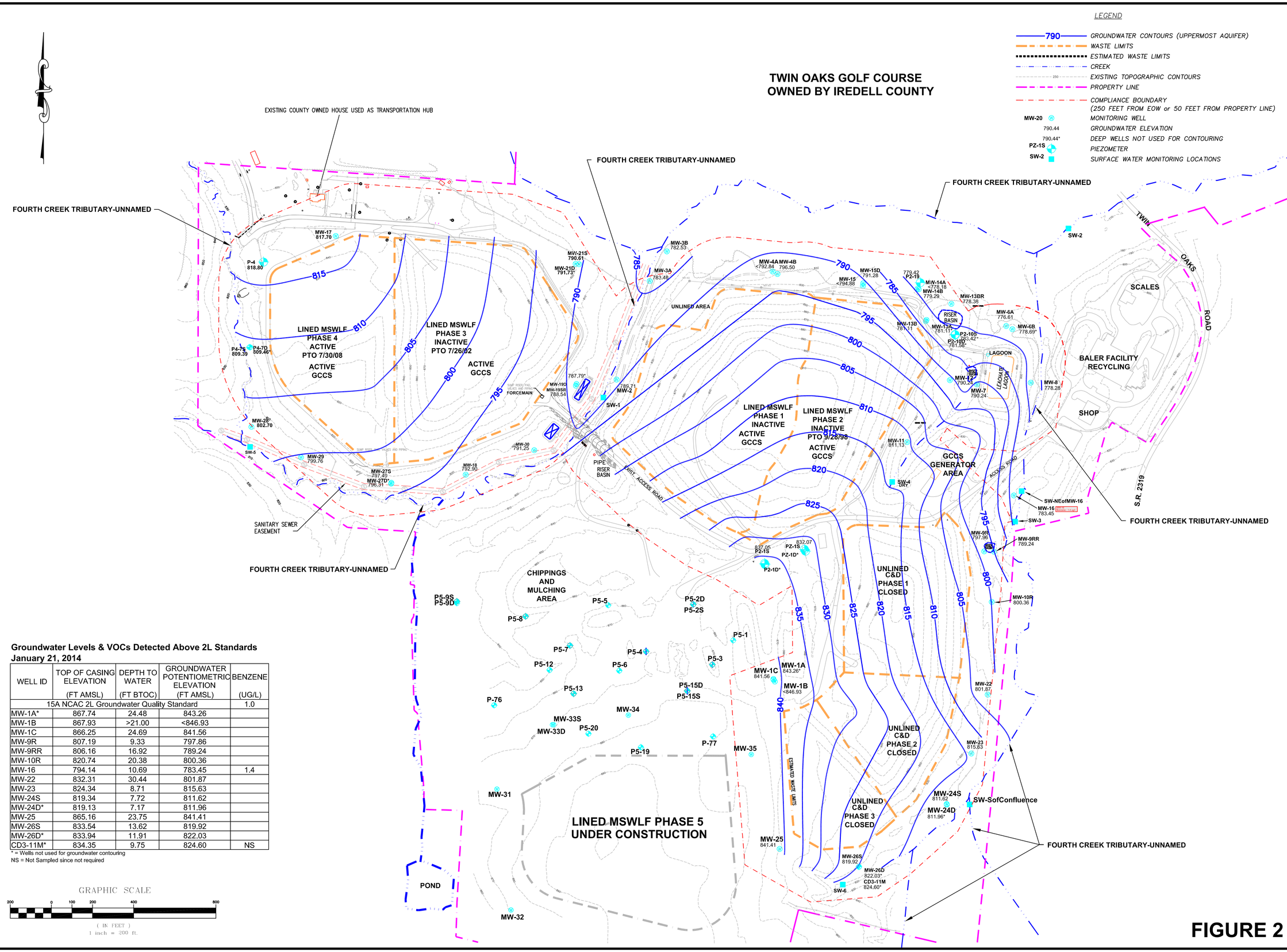
STATESVILLE EAST QUADRANGLE

ROAD CLASSIFICATION

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

2.5 0 2.5 MILES

Figure 1



Groundwater Levels & VOCs Detected Above 2L Standards
January 21, 2014

WELL ID	TOP OF CASING ELEVATION (FT AMSL)	DEPTH TO WATER (FT BTOC)	GROUNDWATER POTENTIOMETRIC ELEVATION (FT AMSL)	BENZENE (UG/L)
15A NCAC 2L Groundwater Quality Standard				1.0
MW-1A*	867.74	24.48	843.26	
MW-1B	867.93	>21.00	<846.93	
MW-1C	866.25	24.69	841.56	
MW-9R	807.19	9.33	797.86	
MW-9RR	806.16	16.92	789.24	
MW-10R	820.74	20.38	800.36	
MW-16	794.14	10.69	783.45	1.4
MW-22	832.31	30.44	801.87	
MW-23	824.34	8.71	815.63	
MW-24S	819.34	7.72	811.62	
MW-24D*	819.13	7.17	811.96	
MW-25	865.16	23.75	841.41	
MW-26S	833.54	13.62	819.92	
MW-26D*	833.94	11.91	822.03	
CD3-11M*	834.35	9.75	824.60	NS

* = Wells not used for groundwater contouring
NS = Not Sampled since not required

FIGURE 2

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

SUBTITLE D LINED MSWLF PHASES 1-4
CLOSED C&D PHASES 1-3
IREDELL COUNTY
NORTH CAROLINA

DATE	BY	REV.	DESCRIPTION

POTENTIOMETRIC MAP OF UPPERMOST AQUIFER w/ VOCs DETECTED ABOVE 2L STANDARDS

SCALE: 1" = 200'
DATE: 3/12/14
DRWN. BY: J. PFOHL
CHKD. BY: S. GANDY
PROJECT NUMBER G13014.0
DRAWING NO. FIGURE 2
SHEET NO. 1 OF 1

Tables

Table 1
Sampling and Analysis Summary
January 21 & 23, 2014

		App. I		Misc.	Field Parameter						
	Reason Not Sampled	VOCs	Total Metals	Tetrahydrofuran	Dissolved Oxygen (DO)	Oxidation Reduction Potential (ORP)	Temperature	Conductivity	Total Dissolved Solids (TDS)	pH	Turbidity
		Lab EPA 8260B	Lab EPA 6000/7000	Lab EPA 8260B	Field Meter	Field Meter	Field Meter	Field Meter	Field Meter	Field Meter	Visual
MW-1A		x	x	x		x	x	x	x	x	x
MW-1B	Dry										
MW-1C		x	x	x		x	x	x	x	x	x
MW-9R		x	x	x		x	x	x	x	x	x
MW-9RR		x	x	x		x	x	x	x	x	x
MW-10R		x	x	x		x	x	x	x	x	x
MW-16		x	x	x		x	x	x	x	x	x
MW-22		x	x	x		x	x	x	x	x	x
MW-23		x	x	x		x	x	x	x	x	x
MW-24S		x	x	x		x	x	x	x	x	x
MW-24D		x	x	x		x	x	x	x	x	x
MW-25		x	x	x		x	x	x	x	x	x
MW-26S		x	x	x		x	x	x	x	x	x
MW-26D		x	x	x		x	x	x	x	x	x
SW-2		x	x	x		x	x	x	x	x	x
SW-3		x	x	x		x	x	x	x	x	x
SW-SofConfluence			x			x	x	x	x	x	x
SW-6		x	x	x		x	x	x	x	x	x
SW-NEofMW-16		x				x	x	x	x	x	x
EB		x	x	x							
FB		x	x	x							
TB		x		x							

Appendix I & II Lists taken from current 40 CFR 258

Table 2
Detections Above SWSL, GWP, 2L or 2B
January 21 & 23, 2014

Sample ID	Parameter Name [1]	Sample Date	Result	Unit	MDL [2]	SWSL [3]	2L [4]	2B [5]	GWP [6]	Exceedance	Preliminary Cause [7]
MW-1A	Barium, total	1/21/14	110	ug/L	5	100	700				
MW-1A	Cadmium, total	1/21/14	1.2	ug/L	1	1	2				
MW-1A	Copper, total	1/21/14	21.3	ug/L	5	10	1000				
MW-1A	Zinc, total	1/21/14	30.9	ug/L	10	10	1000				
MW-1A	Tetrahydrofuran	1/21/14	5.1 j	ug/L	3.1	NE	NE		NE		
MW-1A	Cobalt, total	1/21/14	14.7	ug/L	5	10	NE		70		
MW-1C	Vanadium, total	1/21/14	28.4	ug/L	5	25	NE		3.5	24.9	
MW-1C	Cobalt, total	1/21/14	18.7	ug/L	5	10	NE		70		
MW-1C	Beryllium, total	1/21/14	1.3	ug/L	1	1	NE		4		
MW-1C	Copper, total	1/21/14	15.4	ug/L	5	10	1000				
MW-1C	Barium, total	1/21/14	169	ug/L	5	100	700				
MW-1C	Zinc, total	1/21/14	44.9	ug/L	10	10	1000				
MW-9R	Zinc, total	1/21/14	19.8	ug/L	10	10	1000				
MW-9R	Barium, total	1/21/14	325	ug/L	5	100	700				
MW-9R	Cobalt, total	1/21/14	35.4	ug/L	5	10	NE		70		
MW-9R	Cadmium, total	1/21/14	1.5	ug/L	1	1	2				
MW-9RR	Zinc, total	1/21/14	13.4	ug/L	10	10	1000				
MW-9RR	Barium, total	1/21/14	122	ug/L	5	100	700				
MW-10R	**Cadmium, total**	**1/21/14**	**5.8**	**ug/L**	**1**	**1**	**2**			**3.8**	**N**
MW-10R	Vanadium, total	1/21/14	12.2 J	ug/L	5	25	NE		3.5	8.7	
MW-10R	Zinc, total	1/21/14	26.4	ug/L	10	10	1000				
MW-16	**Benzene**	**1/21/14**	**1.4**	**ug/L**	**0.25**	**1**	**1**			**0.4**	**L &/or LFG**
MW-16	Zinc, total	1/21/14	12.8	ug/L	10	10	1000				
MW-16	Tetrahydrofuran	1/21/14	12.8	ug/L	3.1	NE	NE	NE			
MW-16	Barium, total	1/21/14	139	ug/L	5	100	700				
MW-22	Vanadium, total	1/21/14	5.1 j	ug/L	5	25	NE		3.5	1.6	
MW-22	Zinc, total	1/21/14	21	ug/L	10	10	1000				
MW-23	Zinc, total	1/21/14	10.3	ug/L	10	10	1000				
MW-24S	Barium, total	1/21/14	164	ug/L	5	100	700				
MW-24S	Zinc, total	1/21/14	16.9	ug/L	10	10	1000				
MW-24S	Beryllium, total	1/21/14	1.1	ug/L	1	1	NE		4		
MW-25	Vanadium, total	1/21/14	9.8 j	ug/L	5	25	NE		3.5	6.3	
MW-25	Zinc, total	1/21/14	20.3	ug/L	10	10	1000				

Sample ID	Parameter Name [1]	Sample Date	Result	Unit	MDL [2]	SWSL [3]	2L [4]	2B [5]	GWP [6]	Exceedance	Preliminary Cause [7]
MW-26D	Vanadium, total	1/21/14	12.3 j	ug/L	5	25	NE		3.5	8.8	
MW-26D	**Cadmium, total**	**1/21/14**	**21.8**	**ug/L**	**1**	**1**	**2**			**19.8**	**N**
MW-26D	Zinc, total	1/21/14	28.8	ug/L	10	10	1000				
MW-26S	Zinc, total	1/21/14	17	ug/L	10	10	1000				
SW-1	Zinc, total	1/21/14	11.8	ug/L	10	10	50				
SW-2	Zinc, total	1/21/14	30.8	ug/L	10	10	50				
SW-3	**Zinc, total**	**1/21/14**	**269**	**ug/L**	**10**	10	**50**			**219**	**Offsite**
SW-5	Zinc, total	1/21/14	13	ug/L	10	10	50				
SW-6	Zinc, total	1/21/14	12.9	ug/L	10	10	50				
SW-SofConfluence	**Zinc, total**	**1/21/14**	**1020**	**ug/L**	**10**	**10**	**1000**	**50**		**970**	**Offsite**
SW-SofConfluence	Barium, total	1/21/14	105	ug/L	5	100	700	200000			
EB	Methylene Chloride	1/23/14	1.2	ug/L	0.97	1	4.6				
FB	Methylene Chloride	1/23/14	1.1	ug/L	0.97	1	4.6				

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

[2] MDL = Method Detection Limit

[3] SWSL = Solid Waste Section Reporting Limit

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

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

[6] GWP = Groundwater Protection Standard

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

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

N = Natural from erosion of natural deposits

Offsite = Confirmed originating from off the property

BOLD = Concentration > 2L, or 2B Standard

Table 3
Hydrologic Properties at Monitoring Well Locations
January 21, 2014

Monitoring Location	Hydraulic Conductivity (cm/second)	Effective Porosity (%)	Hydraulic Gradient (feet/feet)	Average Linear Velocity Rate (feet/year)	Flow Direction	Depth to Groundwater (feet btoc)	Groundwater Potentiometric Elevation (feet amsl)	Screened Interval Lithology
MW-1A	2.00E-04	20.00	0.09	na	na	24.48	843.26	Silty Clayey Sand
MW-1C	na	20.00	0.04	na	N87E	24.69	841.56	Silty Clayey Sand
MW-9R	2.00E-04	15.00	0.07	102	N70E	9.33	797.86	Sandy Silt
MW-9RR	1.53E-04	15.00	0.16	174	N70E	16.92	789.24	Sandy Silt
MW-10R	9.00E-05	15.00	0.07	45	N83E	20.38	800.36	Sandy Silt
MW-16	4.65E-04	15.00	0.08	249	N88E	10.69	783.45	Sandy Silt
MW-22	3.35E-05	16.08	0.03	7	N52E	30.44	801.87	Sandy Silt
MW-23	1.18E-04	16.08	0.28	214	N80E	8.71	815.63	Silty Sand
MW-24S	2.63E-04	16.08	0.02	29	S58E	7.72	811.62	Silty Sand
MW-25	3.72E-04	9.70	0.06	233	S82E	23.75	841.41	Silty Sand
MW-26S	1.81E-04	4.50	0.01	54	S55E	13.62	819.92	Clayey Sand/Sandy Clay
Minimum	3.35E-05	4.50	0.01	7	-	7.72	783.45	-
Average	2.08E-04	14.77	0.08	123	-	17.34	813.29	-
Maximum	4.65E-04	20.00	0.28	249	-	30.44	843.26	-

NOTE: Values for hydraulic conductivity determined via slug test by MESCO.
MW-9R and MW-10R replaced MW-9 and MW-10 but use the same hydraulic conductivity and effective porosity values.
Hydrologic Gradient from groundwater elevations recorded January 21, 2014
na = not available
Groundwater average linear velocity rate calculated from modified Darcy's equation:

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

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

Table 4
Field Observations of Monitoring Locations
January 21, 2014

Sample Location	Viable Monitoring Location	Lack of Any Evidence of Tampering	Locked	Hinge/Hasp Operational	Tagged or Labeled	Concrete Surface Pad Effective	Comments
MW-1A	Yes	Yes	Yes	Yes	Yes	Yes	
MW-1B	No	Yes	Yes	Yes	Yes	Yes	Dry which is typical
MW-1C	Yes	Yes	Yes	Yes	Yes	Yes	
MW-9R	Yes	Yes	Yes	Yes	Yes	Yes	Purge water foamy
MW-9RR	Yes	Yes	Yes	Yes	Yes	Yes	Purge water foamy
MW-10R	Yes	Yes	Yes	Yes	Yes	Yes	
MW-16	Yes	Yes	Yes	Yes	Yes	Yes	
MW-22	Yes	Yes	Yes	Yes	Yes	Yes	
MW-23	Yes	Yes	Yes	Yes	Yes	Yes	Slight constriction
MW-24S	Yes	Yes	Yes	Yes	Yes	Yes	
MW-24D	Yes	Yes	Yes	Yes	Yes	Yes	
MW-25	Yes	Yes	Yes	Yes	Yes	Yes	
MW-26S	Yes	Yes	Yes	Yes	Yes	Yes	
MW-26D	Yes	Yes	Yes	Yes	Yes	Yes	Water white w/ elevated pH
SW-2	Yes	-	-	-	-	-	Moderate gage height, moderate flow & low turbidity
SW-3	Yes	-	-	-	-	-	Moderate gage height, moderate flow & low turbidity
SW-6	Yes	-	-	-	-	-	Moderate gage height, moderate flow & low turbidity
SW-SofConfluence	Yes	-	-	-	-	-	Moderate gage height, moderate flow & low turbidity
SW-NEofMW-16	Yes	-	-	-	-	-	Moderate gage height, moderate flow & low turbidity

Lined Phase 5 currently under construction upgradient/upstream of C&D landfill

SW-SofConfluence is a supplemental sample collected from Fourth Creek tributary originating from offsite.

SW-NEofMW-16 is a supplemental sample collected from discharge feature immediately downgradient of MW-16.

Table 5
Field Parameter Data Summary
January 21, 2014

Location	Depth to Water	Water Elevation	TOC Elevation	Temp.	ORP	DO	pH	Specific Conductivity	TDS	Turbidity of Metal Sample
Units	**ft (btoc)**	**ft (amsl)**	**ft (amsl)**	**C**	**mV**	**mg/L**	**SU**	**umhos/cm**	**mg/L**	**Visual**
MW-1A	24.48	843.26	867.74	15.5	90	NR	6.58	100	50	Clear
MW-1B	Dry >21.00	<846.93	867.93	NR	NR	NR	NR	NR	NR	NR
MW-1C	24.69	841.56	866.25	15.5	207	NR	6.63	90	40	Slight
Minimum	24.48	841.56	866.25	15.5	90	NR	7.23	90	40	Clear
Average	24.59	842.41	867.31	15.5	149	NR	6.83	95	45	Slight
Maximum	24.69	843.26	867.93	15.5	207	NR	5.92	100	50	Slight
MW-9R	29.33	777.86	807.19	16.8	96	NR	6.46	820	410	Clear
MW-9RR	16.92	789.24	806.16	17.8	46	NR	7.15	1340	670	Clear
MW-10R	20.38	800.36	820.74	16.5	212	NR	5.33	60	30	Slight
MW-16	10.69	783.45	794.14	15.1	73	NR	6.39	330	160	Clear
MW-22	30.44	801.87	832.31	15.0	303	NR	5.74	20	10	Clear
MW-23	8.71	815.63	824.34	15.1	223	NR	6.89	20	10	Clear
MW-24S	7.72	811.62	819.34	13.5	351	NR	5.66	220	110	Clear
MW-24D	7.17	811.96	819.13	14.0	314	NR	7.12	100	50	Clear
MW-25	23.75	841.41	865.16	15.8	258	NR	6.61	70	40	Moderate
MW-26S	13.62	819.92	833.54	13.8	332	NR	5.76	60	30	Clear
MW-26D	11.91	822.03	833.94	14.2	283	NR	8.75	150	70	Moderate
Minimum	7.17	777.86	794.14	13.5	46	NR	5.33	20	10	Clear
Average	16.42	806.85	823.27	15.2	226	NR	6.53	290	145	Slight
Maximum	30.44	841.41	865.16	17.8	351	NR	8.75	1340	670	Moderate
SW-2	-	-	-	6.3	171	NR	7.32	120	60	Clear
SW-3	-	-	-	9.3	244	NR	7.49	250	120	Clear
SW-6	-	-	-	10.8	328	NR	6.83	60	30	Clear
SW-NEofMW-16	-	-	-	9.3	181	NR	7.25	120	60	Clear
SW-SofConfluence	-	-	-	9.1	191	NR	7.3	120	60	Clear
Minimum	-	-	-	6.3	171	NR	6.83	60	30	Clear
Average				9.0	223	NR	7.24	134	66	Clear
Maximum	-	-	-	10.8	328	NR	7.49	250	120	Clear

Appendix A
Laboratory Analysis Reports
Chains of Custody

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February 04, 2014

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

RE: Project: Iredell C&D
Pace Project No.: 92187386

Dear Mr. Pfohl:
Enclosed are the analytical results for sample(s) received by the laboratory on January 22, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: Iredell C&D
Pace Project No.: 92187386

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 SUMMARY

Project: Iredell C&D
Pace Project No.: 92187386

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92187386001	**MW-9R**	Water	01/21/14 16:05	01/22/14 17:10
92187386002	**MW-9RR**	Water	01/21/14 15:40	01/22/14 17:10
92187386003	**MW-10R**	Water	01/21/14 15:00	01/22/14 17:10
92187386004	**MW-16**	Water	01/21/14 16:35	01/22/14 17:10
92187386005	**MW-22**	Water	01/21/14 14:25	01/22/14 17:10
92187386006	**MW-23**	Water	01/21/14 13:35	01/22/14 17:10
92187386007	**MW-24S**	Water	01/21/14 13:00	01/22/14 17:10
92187386008	**MW-24D**	Water	01/21/14 12:40	01/22/14 17:10
92187386009	**MW-25**	Water	01/21/14 10:55	01/22/14 17:10
92187386010	**MW-26S**	Water	01/21/14 11:55	01/22/14 17:10
92187386011	**MW-26D**	Water	01/21/14 11:30	01/22/14 17:10
92187386012	**SW-6**	Water	01/21/14 10:25	01/22/14 17:10

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SAMPLE ANALYTE COUNT

Project: Iredell C&D
Pace Project No.: 92187386

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92187386001	**MW-9R**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92187386002	**MW-9RR**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92187386003	**MW-10R**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92187386004	**MW-16**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92187386005	**MW-22**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92187386006	**MW-23**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92187386007	**MW-24S**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92187386008	**MW-24D**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92187386009	**MW-25**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92187386010	**MW-26S**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92187386011	**MW-26D**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92187386012	**SW-6**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: MW-9R **Lab ID: 92187386001** Collected: 01/21/14 16:05 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	5.0	1	01/23/14 10:45	01/24/14 00:15	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:15	7440-38-2	
Barium	**325**	ug/L	100	5.0	1	01/23/14 10:45	01/24/14 00:15	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	01/23/14 10:45	01/24/14 00:15	7440-41-7	
Cadmium	**1.5**	ug/L	1.0	1.0	1	01/23/14 10:45	01/24/14 00:15	7440-43-9	
Chromium	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:15	7440-47-3	
Cobalt	**35.4**	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:15	7440-48-4	
Copper	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:15	7440-50-8	
Lead	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:15	7439-92-1	
Nickel	ND	ug/L	50.0	5.0	1	01/23/14 10:45	01/24/14 00:15	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	01/23/14 10:45	01/24/14 00:15	7782-49-2	
Silver	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:15	7440-22-4	
Thallium	ND	ug/L	5.5	5.4	1	01/23/14 10:45	01/24/14 00:15	7440-28-0	
Vanadium	ND	ug/L	25.0	5.0	1	01/23/14 10:45	01/24/14 00:15	7440-62-2	
Zinc	**19.8**	ug/L	10.0	10.0	1	01/23/14 10:45	01/24/14 00:15	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		01/25/14 01:01	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		01/25/14 01:01	107-13-1	
Benzene	**0.59J**	ug/L	1.0	0.25	1		01/25/14 01:01	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		01/25/14 01:01	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/25/14 01:01	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		01/25/14 01:01	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		01/25/14 01:01	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		01/25/14 01:01	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		01/25/14 01:01	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/25/14 01:01	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		01/25/14 01:01	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		01/25/14 01:01	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		01/25/14 01:01	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/25/14 01:01	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		01/25/14 01:01	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		01/25/14 01:01	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/25/14 01:01	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		01/25/14 01:01	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		01/25/14 01:01	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/25/14 01:01	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		01/25/14 01:01	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		01/25/14 01:01	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/25/14 01:01	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		01/25/14 01:01	75-35-4	
cis-1,2-Dichloroethene	**0.54J**	ug/L	5.0	0.19	1		01/25/14 01:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		01/25/14 01:01	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/25/14 01:01	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		01/25/14 01:01	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/25/14 01:01	10061-01-5	

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: MW-9R **Lab ID: 92187386001** Collected: 01/21/14 16:05 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/25/14 01:01	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/25/14 01:01	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		01/25/14 01:01	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		01/25/14 01:01	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		01/25/14 01:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		01/25/14 01:01	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		01/25/14 01:01	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		01/25/14 01:01	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		01/25/14 01:01	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/25/14 01:01	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	3.1	1		01/25/14 01:01	109-99-9	
Toluene	ND	ug/L	1.0	0.26	1		01/25/14 01:01	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/25/14 01:01	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/25/14 01:01	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/25/14 01:01	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/25/14 01:01	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		01/25/14 01:01	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		01/25/14 01:01	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/25/14 01:01	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		01/25/14 01:01	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/25/14 01:01	460-00-4	
1,2-Dichloroethane-d4 (S)	86	%	70-130		1		01/25/14 01:01	17060-07-0	
Toluene-d8 (S)	93	%	70-130		1		01/25/14 01:01	2037-26-5	

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: MW-9RR **Lab ID: 92187386002** Collected: 01/21/14 15:40 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	5.0	1	01/23/14 10:45	01/24/14 00:18	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:18	7440-38-2	
Barium	**122**	ug/L	100	5.0	1	01/23/14 10:45	01/24/14 00:18	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	01/23/14 10:45	01/24/14 00:18	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	01/23/14 10:45	01/24/14 00:18	7440-43-9	
Chromium	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:18	7440-47-3	
Cobalt	**5.5J**	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:18	7440-48-4	
Copper	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:18	7440-50-8	
Lead	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:18	7439-92-1	
Nickel	ND	ug/L	50.0	5.0	1	01/23/14 10:45	01/24/14 00:18	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	01/23/14 10:45	01/24/14 00:18	7782-49-2	
Silver	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:18	7440-22-4	
Thallium	ND	ug/L	5.5	5.4	1	01/23/14 10:45	01/24/14 00:18	7440-28-0	
Vanadium	ND	ug/L	25.0	5.0	1	01/23/14 10:45	01/24/14 00:18	7440-62-2	
Zinc	**13.4**	ug/L	10.0	10.0	1	01/23/14 10:45	01/24/14 00:18	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		01/25/14 01:17	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		01/25/14 01:17	107-13-1	
Benzene	**0.39J**	ug/L	1.0	0.25	1		01/25/14 01:17	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		01/25/14 01:17	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/25/14 01:17	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		01/25/14 01:17	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		01/25/14 01:17	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		01/25/14 01:17	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		01/25/14 01:17	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/25/14 01:17	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		01/25/14 01:17	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		01/25/14 01:17	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		01/25/14 01:17	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/25/14 01:17	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		01/25/14 01:17	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		01/25/14 01:17	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/25/14 01:17	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		01/25/14 01:17	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		01/25/14 01:17	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/25/14 01:17	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		01/25/14 01:17	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		01/25/14 01:17	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/25/14 01:17	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		01/25/14 01:17	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		01/25/14 01:17	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		01/25/14 01:17	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/25/14 01:17	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		01/25/14 01:17	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/25/14 01:17	10061-01-5	

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: MW-9RR **Lab ID: 92187386002** Collected: 01/21/14 15:40 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/25/14 01:17	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/25/14 01:17	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		01/25/14 01:17	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		01/25/14 01:17	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		01/25/14 01:17	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		01/25/14 01:17	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		01/25/14 01:17	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		01/25/14 01:17	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		01/25/14 01:17	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/25/14 01:17	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	3.1	1		01/25/14 01:17	109-99-9	
Toluene	ND	ug/L	1.0	0.26	1		01/25/14 01:17	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/25/14 01:17	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/25/14 01:17	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/25/14 01:17	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/25/14 01:17	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		01/25/14 01:17	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		01/25/14 01:17	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/25/14 01:17	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		01/25/14 01:17	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/25/14 01:17	460-00-4	
1,2-Dichloroethane-d4 (S)	86	%	70-130		1		01/25/14 01:17	17060-07-0	
Toluene-d8 (S)	94	%	70-130		1		01/25/14 01:17	2037-26-5	

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: MW-10R **Lab ID: 92187386003** Collected: 01/21/14 15:00 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	5.0	1	01/23/14 10:45	01/24/14 00:22	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:22	7440-38-2	
Barium	**86.9J**	ug/L	100	5.0	1	01/23/14 10:45	01/24/14 00:22	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	01/23/14 10:45	01/24/14 00:22	7440-41-7	
Cadmium	**5.8**	ug/L	1.0	1.0	1	01/23/14 10:45	01/24/14 00:22	7440-43-9	
Chromium	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:22	7440-47-3	
Cobalt	**8.6J**	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:22	7440-48-4	
Copper	**6.1J**	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:22	7440-50-8	
Lead	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:22	7439-92-1	
Nickel	ND	ug/L	50.0	5.0	1	01/23/14 10:45	01/24/14 00:22	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	01/23/14 10:45	01/24/14 00:22	7782-49-2	
Silver	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:22	7440-22-4	
Thallium	ND	ug/L	5.5	5.4	1	01/23/14 10:45	01/24/14 00:22	7440-28-0	
Vanadium	**12.2J**	ug/L	25.0	5.0	1	01/23/14 10:45	01/24/14 00:22	7440-62-2	
Zinc	**26.4**	ug/L	10.0	10.0	1	01/23/14 10:45	01/24/14 00:22	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		01/25/14 01:33	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		01/25/14 01:33	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		01/25/14 01:33	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		01/25/14 01:33	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/25/14 01:33	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		01/25/14 01:33	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		01/25/14 01:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		01/25/14 01:33	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		01/25/14 01:33	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/25/14 01:33	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		01/25/14 01:33	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		01/25/14 01:33	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		01/25/14 01:33	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/25/14 01:33	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		01/25/14 01:33	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		01/25/14 01:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/25/14 01:33	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		01/25/14 01:33	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		01/25/14 01:33	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/25/14 01:33	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		01/25/14 01:33	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		01/25/14 01:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/25/14 01:33	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		01/25/14 01:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		01/25/14 01:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		01/25/14 01:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/25/14 01:33	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		01/25/14 01:33	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/25/14 01:33	10061-01-5	

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: MW-10R **Lab ID: 92187386003** Collected: 01/21/14 15:00 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/25/14 01:33	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/25/14 01:33	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		01/25/14 01:33	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		01/25/14 01:33	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		01/25/14 01:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		01/25/14 01:33	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		01/25/14 01:33	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		01/25/14 01:33	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		01/25/14 01:33	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/25/14 01:33	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	3.1	1		01/25/14 01:33	109-99-9	
Toluene	ND	ug/L	1.0	0.26	1		01/25/14 01:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/25/14 01:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/25/14 01:33	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/25/14 01:33	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/25/14 01:33	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		01/25/14 01:33	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		01/25/14 01:33	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/25/14 01:33	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		01/25/14 01:33	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		01/25/14 01:33	460-00-4	
1,2-Dichloroethane-d4 (S)	86	%	70-130		1		01/25/14 01:33	17060-07-0	
Toluene-d8 (S)	93	%	70-130		1		01/25/14 01:33	2037-26-5	

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: MW-16 **Lab ID: 92187386004** Collected: 01/21/14 16:35 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	5.0	1	01/23/14 10:45	01/24/14 00:35	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:35	7440-38-2	
Barium	**139**	ug/L	100	5.0	1	01/23/14 10:45	01/24/14 00:35	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	01/23/14 10:45	01/24/14 00:35	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	01/23/14 10:45	01/24/14 00:35	7440-43-9	
Chromium	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:35	7440-47-3	
Cobalt	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:35	7440-48-4	
Copper	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:35	7440-50-8	
Lead	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:35	7439-92-1	
Nickel	ND	ug/L	50.0	5.0	1	01/23/14 10:45	01/24/14 00:35	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	01/23/14 10:45	01/24/14 00:35	7782-49-2	
Silver	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:35	7440-22-4	
Thallium	ND	ug/L	5.5	5.4	1	01/23/14 10:45	01/24/14 00:35	7440-28-0	
Vanadium	ND	ug/L	25.0	5.0	1	01/23/14 10:45	01/24/14 00:35	7440-62-2	
Zinc	**12.8**	ug/L	10.0	10.0	1	01/23/14 10:45	01/24/14 00:35	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		01/25/14 01:49	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		01/25/14 01:49	107-13-1	
Benzene	**1.4**	ug/L	1.0	0.25	1		01/25/14 01:49	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		01/25/14 01:49	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/25/14 01:49	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		01/25/14 01:49	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		01/25/14 01:49	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		01/25/14 01:49	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		01/25/14 01:49	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/25/14 01:49	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		01/25/14 01:49	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		01/25/14 01:49	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		01/25/14 01:49	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/25/14 01:49	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		01/25/14 01:49	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		01/25/14 01:49	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/25/14 01:49	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		01/25/14 01:49	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		01/25/14 01:49	95-50-1	
1,4-Dichlorobenzene	**0.68J**	ug/L	1.0	0.33	1		01/25/14 01:49	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		01/25/14 01:49	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		01/25/14 01:49	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/25/14 01:49	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		01/25/14 01:49	75-35-4	
cis-1,2-Dichloroethene	**2.0J**	ug/L	5.0	0.19	1		01/25/14 01:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		01/25/14 01:49	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/25/14 01:49	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		01/25/14 01:49	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/25/14 01:49	10061-01-5	

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: MW-16 **Lab ID: 92187386004** Collected: 01/21/14 16:35 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/25/14 01:49	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/25/14 01:49	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		01/25/14 01:49	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		01/25/14 01:49	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		01/25/14 01:49	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		01/25/14 01:49	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		01/25/14 01:49	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		01/25/14 01:49	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		01/25/14 01:49	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/25/14 01:49	127-18-4	
Tetrahydrofuran	**12.8**	ug/L	10.0	3.1	1		01/25/14 01:49	109-99-9	
Toluene	ND	ug/L	1.0	0.26	1		01/25/14 01:49	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/25/14 01:49	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/25/14 01:49	79-00-5	
Trichloroethene	**0.59J**	ug/L	1.0	0.47	1		01/25/14 01:49	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/25/14 01:49	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		01/25/14 01:49	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		01/25/14 01:49	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/25/14 01:49	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		01/25/14 01:49	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		01/25/14 01:49	460-00-4	
1,2-Dichloroethane-d4 (S)	86	%	70-130		1		01/25/14 01:49	17060-07-0	
Toluene-d8 (S)	93	%	70-130		1		01/25/14 01:49	2037-26-5	

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: MW-22 **Lab ID: 92187386005** Collected: 01/21/14 14:25 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	5.0	1	01/23/14 10:45	01/24/14 00:38	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:38	7440-38-2	
Barium	**81.4J**	ug/L	100	5.0	1	01/23/14 10:45	01/24/14 00:38	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	01/23/14 10:45	01/24/14 00:38	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	01/23/14 10:45	01/24/14 00:38	7440-43-9	
Chromium	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:38	7440-47-3	
Cobalt	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:38	7440-48-4	
Copper	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:38	7440-50-8	
Lead	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:38	7439-92-1	
Nickel	ND	ug/L	50.0	5.0	1	01/23/14 10:45	01/24/14 00:38	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	01/23/14 10:45	01/24/14 00:38	7782-49-2	
Silver	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:38	7440-22-4	
Thallium	ND	ug/L	5.5	5.4	1	01/23/14 10:45	01/24/14 00:38	7440-28-0	
Vanadium	**5.1J**	ug/L	25.0	5.0	1	01/23/14 10:45	01/24/14 00:38	7440-62-2	
Zinc	**21.0**	ug/L	10.0	10.0	1	01/23/14 10:45	01/24/14 00:38	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		01/25/14 02:04	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		01/25/14 02:04	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		01/25/14 02:04	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		01/25/14 02:04	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/25/14 02:04	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		01/25/14 02:04	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		01/25/14 02:04	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		01/25/14 02:04	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		01/25/14 02:04	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/25/14 02:04	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		01/25/14 02:04	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		01/25/14 02:04	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		01/25/14 02:04	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/25/14 02:04	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		01/25/14 02:04	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		01/25/14 02:04	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/25/14 02:04	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		01/25/14 02:04	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		01/25/14 02:04	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/25/14 02:04	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		01/25/14 02:04	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		01/25/14 02:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/25/14 02:04	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		01/25/14 02:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		01/25/14 02:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		01/25/14 02:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/25/14 02:04	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		01/25/14 02:04	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/25/14 02:04	10061-01-5	

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: MW-22 **Lab ID: 92187386005** Collected: 01/21/14 14:25 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/25/14 02:04	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/25/14 02:04	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		01/25/14 02:04	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		01/25/14 02:04	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		01/25/14 02:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		01/25/14 02:04	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		01/25/14 02:04	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		01/25/14 02:04	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		01/25/14 02:04	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/25/14 02:04	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	3.1	1		01/25/14 02:04	109-99-9	
Toluene	ND	ug/L	1.0	0.26	1		01/25/14 02:04	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/25/14 02:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/25/14 02:04	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/25/14 02:04	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/25/14 02:04	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		01/25/14 02:04	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		01/25/14 02:04	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/25/14 02:04	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		01/25/14 02:04	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/25/14 02:04	460-00-4	
1,2-Dichloroethane-d4 (S)	86	%	70-130		1		01/25/14 02:04	17060-07-0	
Toluene-d8 (S)	94	%	70-130		1		01/25/14 02:04	2037-26-5	

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: MW-23 **Lab ID: 92187386006** Collected: 01/21/14 13:35 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	5.0	1	01/23/14 10:45	01/24/14 00:41	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:41	7440-38-2	
Barium	**38.1J**	ug/L	100	5.0	1	01/23/14 10:45	01/24/14 00:41	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	01/23/14 10:45	01/24/14 00:41	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	01/23/14 10:45	01/24/14 00:41	7440-43-9	
Chromium	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:41	7440-47-3	
Cobalt	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:41	7440-48-4	
Copper	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:41	7440-50-8	
Lead	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:41	7439-92-1	
Nickel	ND	ug/L	50.0	5.0	1	01/23/14 10:45	01/24/14 00:41	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	01/23/14 10:45	01/24/14 00:41	7782-49-2	
Silver	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:41	7440-22-4	
Thallium	ND	ug/L	5.5	5.4	1	01/23/14 10:45	01/24/14 00:41	7440-28-0	
Vanadium	ND	ug/L	25.0	5.0	1	01/23/14 10:45	01/24/14 00:41	7440-62-2	
Zinc	**10.3**	ug/L	10.0	10.0	1	01/23/14 10:45	01/24/14 00:41	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		01/25/14 02:20	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		01/25/14 02:20	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		01/25/14 02:20	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		01/25/14 02:20	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/25/14 02:20	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		01/25/14 02:20	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		01/25/14 02:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		01/25/14 02:20	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		01/25/14 02:20	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/25/14 02:20	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		01/25/14 02:20	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		01/25/14 02:20	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		01/25/14 02:20	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/25/14 02:20	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		01/25/14 02:20	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		01/25/14 02:20	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/25/14 02:20	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		01/25/14 02:20	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		01/25/14 02:20	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/25/14 02:20	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		01/25/14 02:20	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		01/25/14 02:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/25/14 02:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		01/25/14 02:20	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		01/25/14 02:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		01/25/14 02:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/25/14 02:20	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		01/25/14 02:20	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/25/14 02:20	10061-01-5	

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: MW-23 **Lab ID: 92187386006** Collected: 01/21/14 13:35 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/25/14 02:20	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/25/14 02:20	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		01/25/14 02:20	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		01/25/14 02:20	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		01/25/14 02:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		01/25/14 02:20	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		01/25/14 02:20	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		01/25/14 02:20	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		01/25/14 02:20	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/25/14 02:20	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	3.1	1		01/25/14 02:20	109-99-9	
Toluene	ND	ug/L	1.0	0.26	1		01/25/14 02:20	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/25/14 02:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/25/14 02:20	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/25/14 02:20	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/25/14 02:20	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		01/25/14 02:20	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		01/25/14 02:20	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/25/14 02:20	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		01/25/14 02:20	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/25/14 02:20	460-00-4	
1,2-Dichloroethane-d4 (S)	86	%	70-130		1		01/25/14 02:20	17060-07-0	
Toluene-d8 (S)	94	%	70-130		1		01/25/14 02:20	2037-26-5	

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: MW-24S **Lab ID: 92187386007** Collected: 01/21/14 13:00 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	5.0	1	01/23/14 10:45	01/24/14 00:44	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:44	7440-38-2	
Barium	**164**	ug/L	100	5.0	1	01/23/14 10:45	01/24/14 00:44	7440-39-3	
Beryllium	**1.1**	ug/L	1.0	1.0	1	01/23/14 10:45	01/24/14 00:44	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	01/23/14 10:45	01/24/14 00:44	7440-43-9	
Chromium	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:44	7440-47-3	
Cobalt	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:44	7440-48-4	
Copper	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:44	7440-50-8	
Lead	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:44	7439-92-1	
Nickel	ND	ug/L	50.0	5.0	1	01/23/14 10:45	01/24/14 00:44	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	01/23/14 10:45	01/24/14 00:44	7782-49-2	
Silver	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:44	7440-22-4	
Thallium	ND	ug/L	5.5	5.4	1	01/23/14 10:45	01/24/14 00:44	7440-28-0	
Vanadium	ND	ug/L	25.0	5.0	1	01/23/14 10:45	01/24/14 00:44	7440-62-2	
Zinc	**16.9**	ug/L	10.0	10.0	1	01/23/14 10:45	01/24/14 00:44	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		01/25/14 02:36	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		01/25/14 02:36	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		01/25/14 02:36	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		01/25/14 02:36	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/25/14 02:36	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		01/25/14 02:36	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		01/25/14 02:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		01/25/14 02:36	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		01/25/14 02:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/25/14 02:36	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		01/25/14 02:36	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		01/25/14 02:36	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		01/25/14 02:36	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/25/14 02:36	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		01/25/14 02:36	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		01/25/14 02:36	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/25/14 02:36	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		01/25/14 02:36	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		01/25/14 02:36	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/25/14 02:36	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		01/25/14 02:36	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		01/25/14 02:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/25/14 02:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		01/25/14 02:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		01/25/14 02:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		01/25/14 02:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/25/14 02:36	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		01/25/14 02:36	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/25/14 02:36	10061-01-5	

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: MW-24S **Lab ID: 92187386007** Collected: 01/21/14 13:00 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/25/14 02:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/25/14 02:36	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		01/25/14 02:36	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		01/25/14 02:36	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		01/25/14 02:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		01/25/14 02:36	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		01/25/14 02:36	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		01/25/14 02:36	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		01/25/14 02:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/25/14 02:36	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	3.1	1		01/25/14 02:36	109-99-9	
Toluene	ND	ug/L	1.0	0.26	1		01/25/14 02:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/25/14 02:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/25/14 02:36	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/25/14 02:36	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/25/14 02:36	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		01/25/14 02:36	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		01/25/14 02:36	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/25/14 02:36	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		01/25/14 02:36	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		01/25/14 02:36	460-00-4	
1,2-Dichloroethane-d4 (S)	85	%	70-130		1		01/25/14 02:36	17060-07-0	
Toluene-d8 (S)	93	%	70-130		1		01/25/14 02:36	2037-26-5	

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: MW-24D **Lab ID: 92187386008** Collected: 01/21/14 12:40 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	5.0	1	01/24/14 10:40	01/28/14 21:02	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:02	7440-38-2	
Barium	**6.5J**	ug/L	100	5.0	1	01/24/14 10:40	01/28/14 21:02	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	01/24/14 10:40	01/28/14 21:02	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	01/24/14 10:40	01/28/14 21:02	7440-43-9	
Chromium	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:02	7440-47-3	
Cobalt	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:02	7440-48-4	
Copper	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:02	7440-50-8	
Lead	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:02	7439-92-1	
Nickel	ND	ug/L	50.0	5.0	1	01/24/14 10:40	01/28/14 21:02	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	01/24/14 10:40	01/28/14 21:02	7782-49-2	
Silver	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:02	7440-22-4	
Thallium	ND	ug/L	5.5	5.4	1	01/24/14 10:40	01/28/14 21:02	7440-28-0	
Vanadium	ND	ug/L	25.0	5.0	1	01/24/14 10:40	01/28/14 21:02	7440-62-2	
Zinc	ND	ug/L	10.0	10.0	1	01/24/14 10:40	01/28/14 21:02	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		01/25/14 02:52	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		01/25/14 02:52	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		01/25/14 02:52	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		01/25/14 02:52	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/25/14 02:52	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		01/25/14 02:52	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		01/25/14 02:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		01/25/14 02:52	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		01/25/14 02:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/25/14 02:52	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		01/25/14 02:52	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		01/25/14 02:52	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		01/25/14 02:52	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/25/14 02:52	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		01/25/14 02:52	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		01/25/14 02:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/25/14 02:52	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		01/25/14 02:52	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		01/25/14 02:52	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/25/14 02:52	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		01/25/14 02:52	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		01/25/14 02:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/25/14 02:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		01/25/14 02:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		01/25/14 02:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		01/25/14 02:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/25/14 02:52	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		01/25/14 02:52	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/25/14 02:52	10061-01-5	

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: MW-24D **Lab ID: 92187386008** Collected: 01/21/14 12:40 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/25/14 02:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/25/14 02:52	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		01/25/14 02:52	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		01/25/14 02:52	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		01/25/14 02:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		01/25/14 02:52	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		01/25/14 02:52	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		01/25/14 02:52	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		01/25/14 02:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/25/14 02:52	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	3.1	1		01/25/14 02:52	109-99-9	
Toluene	ND	ug/L	1.0	0.26	1		01/25/14 02:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/25/14 02:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/25/14 02:52	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/25/14 02:52	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/25/14 02:52	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		01/25/14 02:52	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		01/25/14 02:52	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/25/14 02:52	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		01/25/14 02:52	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/25/14 02:52	460-00-4	
1,2-Dichloroethane-d4 (S)	86	%	70-130		1		01/25/14 02:52	17060-07-0	
Toluene-d8 (S)	92	%	70-130		1		01/25/14 02:52	2037-26-5	

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: MW-25 **Lab ID: 92187386009** Collected: 01/21/14 10:55 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	5.0	1	01/24/14 10:40	01/28/14 21:11	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:11	7440-38-2	
Barium	**65.0J**	ug/L	100	5.0	1	01/24/14 10:40	01/28/14 21:11	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	01/24/14 10:40	01/28/14 21:11	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	01/24/14 10:40	01/28/14 21:11	7440-43-9	
Chromium	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:11	7440-47-3	
Cobalt	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:11	7440-48-4	
Copper	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:11	7440-50-8	
Lead	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:11	7439-92-1	
Nickel	ND	ug/L	50.0	5.0	1	01/24/14 10:40	01/28/14 21:11	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	01/24/14 10:40	01/28/14 21:11	7782-49-2	
Silver	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:11	7440-22-4	
Thallium	ND	ug/L	5.5	5.4	1	01/24/14 10:40	01/28/14 21:11	7440-28-0	
Vanadium	**9.8J**	ug/L	25.0	5.0	1	01/24/14 10:40	01/28/14 21:11	7440-62-2	
Zinc	**20.3**	ug/L	10.0	10.0	1	01/24/14 10:40	01/28/14 21:11	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		01/25/14 03:08	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		01/25/14 03:08	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		01/25/14 03:08	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		01/25/14 03:08	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/25/14 03:08	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		01/25/14 03:08	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		01/25/14 03:08	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		01/25/14 03:08	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		01/25/14 03:08	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/25/14 03:08	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		01/25/14 03:08	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		01/25/14 03:08	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		01/25/14 03:08	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/25/14 03:08	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		01/25/14 03:08	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		01/25/14 03:08	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/25/14 03:08	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		01/25/14 03:08	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		01/25/14 03:08	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/25/14 03:08	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		01/25/14 03:08	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		01/25/14 03:08	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/25/14 03:08	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		01/25/14 03:08	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		01/25/14 03:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		01/25/14 03:08	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/25/14 03:08	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		01/25/14 03:08	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/25/14 03:08	10061-01-5	

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: MW-25 **Lab ID: 92187386009** Collected: 01/21/14 10:55 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/25/14 03:08	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/25/14 03:08	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		01/25/14 03:08	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		01/25/14 03:08	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		01/25/14 03:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		01/25/14 03:08	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		01/25/14 03:08	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		01/25/14 03:08	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		01/25/14 03:08	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/25/14 03:08	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	3.1	1		01/25/14 03:08	109-99-9	
Toluene	ND	ug/L	1.0	0.26	1		01/25/14 03:08	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/25/14 03:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/25/14 03:08	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/25/14 03:08	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/25/14 03:08	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		01/25/14 03:08	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		01/25/14 03:08	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/25/14 03:08	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		01/25/14 03:08	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		01/25/14 03:08	460-00-4	
1,2-Dichloroethane-d4 (S)	85	%	70-130		1		01/25/14 03:08	17060-07-0	
Toluene-d8 (S)	93	%	70-130		1		01/25/14 03:08	2037-26-5	

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: MW-26S **Lab ID: 92187386010** Collected: 01/21/14 11:55 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	5.0	1	01/24/14 10:40	01/28/14 21:14	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:14	7440-38-2	
Barium	**25.5J**	ug/L	100	5.0	1	01/24/14 10:40	01/28/14 21:14	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	01/24/14 10:40	01/28/14 21:14	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	01/24/14 10:40	01/28/14 21:14	7440-43-9	
Chromium	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:14	7440-47-3	
Cobalt	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:14	7440-48-4	
Copper	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:14	7440-50-8	
Lead	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:14	7439-92-1	
Nickel	ND	ug/L	50.0	5.0	1	01/24/14 10:40	01/28/14 21:14	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	01/24/14 10:40	01/28/14 21:14	7782-49-2	
Silver	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:14	7440-22-4	
Thallium	ND	ug/L	5.5	5.4	1	01/24/14 10:40	01/28/14 21:14	7440-28-0	
Vanadium	ND	ug/L	25.0	5.0	1	01/24/14 10:40	01/28/14 21:14	7440-62-2	
Zinc	**17.0**	ug/L	10.0	10.0	1	01/24/14 10:40	01/28/14 21:14	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		01/25/14 03:24	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		01/25/14 03:24	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		01/25/14 03:24	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		01/25/14 03:24	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/25/14 03:24	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		01/25/14 03:24	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		01/25/14 03:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		01/25/14 03:24	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		01/25/14 03:24	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/25/14 03:24	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		01/25/14 03:24	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		01/25/14 03:24	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		01/25/14 03:24	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/25/14 03:24	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		01/25/14 03:24	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		01/25/14 03:24	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/25/14 03:24	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		01/25/14 03:24	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		01/25/14 03:24	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/25/14 03:24	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		01/25/14 03:24	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		01/25/14 03:24	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/25/14 03:24	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		01/25/14 03:24	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		01/25/14 03:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		01/25/14 03:24	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/25/14 03:24	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		01/25/14 03:24	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/25/14 03:24	10061-01-5	

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: MW-26S **Lab ID: 92187386010** Collected: 01/21/14 11:55 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/25/14 03:24	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/25/14 03:24	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		01/25/14 03:24	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		01/25/14 03:24	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		01/25/14 03:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		01/25/14 03:24	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		01/25/14 03:24	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		01/25/14 03:24	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		01/25/14 03:24	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/25/14 03:24	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	3.1	1		01/25/14 03:24	109-99-9	
Toluene	ND	ug/L	1.0	0.26	1		01/25/14 03:24	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/25/14 03:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/25/14 03:24	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/25/14 03:24	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/25/14 03:24	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		01/25/14 03:24	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		01/25/14 03:24	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/25/14 03:24	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		01/25/14 03:24	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		01/25/14 03:24	460-00-4	
1,2-Dichloroethane-d4 (S)	86	%	70-130		1		01/25/14 03:24	17060-07-0	
Toluene-d8 (S)	95	%	70-130		1		01/25/14 03:24	2037-26-5	

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: MW-26D **Lab ID: 92187386011** Collected: 01/21/14 11:30 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	5.0	1	01/24/14 10:40	01/28/14 21:17	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:17	7440-38-2	
Barium	**13.2J**	ug/L	100	5.0	1	01/24/14 10:40	01/28/14 21:17	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	01/24/14 10:40	01/28/14 21:17	7440-41-7	
Cadmium	**21.8**	ug/L	1.0	1.0	1	01/24/14 10:40	01/28/14 21:17	7440-43-9	
Chromium	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:17	7440-47-3	
Cobalt	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:17	7440-48-4	
Copper	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:17	7440-50-8	
Lead	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:17	7439-92-1	
Nickel	ND	ug/L	50.0	5.0	1	01/24/14 10:40	01/28/14 21:17	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	01/24/14 10:40	01/28/14 21:17	7782-49-2	
Silver	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:17	7440-22-4	
Thallium	ND	ug/L	5.5	5.4	1	01/24/14 10:40	01/28/14 21:17	7440-28-0	
Vanadium	**12.3J**	ug/L	25.0	5.0	1	01/24/14 10:40	01/28/14 21:17	7440-62-2	
Zinc	**28.8**	ug/L	10.0	10.0	1	01/24/14 10:40	01/28/14 21:17	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		01/25/14 03:40	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		01/25/14 03:40	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		01/25/14 03:40	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		01/25/14 03:40	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/25/14 03:40	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		01/25/14 03:40	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		01/25/14 03:40	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		01/25/14 03:40	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		01/25/14 03:40	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/25/14 03:40	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		01/25/14 03:40	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		01/25/14 03:40	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		01/25/14 03:40	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/25/14 03:40	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		01/25/14 03:40	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		01/25/14 03:40	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/25/14 03:40	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		01/25/14 03:40	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		01/25/14 03:40	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/25/14 03:40	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		01/25/14 03:40	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		01/25/14 03:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/25/14 03:40	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		01/25/14 03:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		01/25/14 03:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		01/25/14 03:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/25/14 03:40	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		01/25/14 03:40	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/25/14 03:40	10061-01-5	

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: MW-26D **Lab ID: 92187386011** Collected: 01/21/14 11:30 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/25/14 03:40	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/25/14 03:40	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		01/25/14 03:40	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		01/25/14 03:40	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		01/25/14 03:40	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		01/25/14 03:40	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		01/25/14 03:40	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		01/25/14 03:40	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		01/25/14 03:40	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/25/14 03:40	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	3.1	1		01/25/14 03:40	109-99-9	
Toluene	ND	ug/L	1.0	0.26	1		01/25/14 03:40	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/25/14 03:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/25/14 03:40	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/25/14 03:40	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/25/14 03:40	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		01/25/14 03:40	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		01/25/14 03:40	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/25/14 03:40	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		01/25/14 03:40	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/25/14 03:40	460-00-4	
1,2-Dichloroethane-d4 (S)	85	%	70-130		1		01/25/14 03:40	17060-07-0	
Toluene-d8 (S)	94	%	70-130		1		01/25/14 03:40	2037-26-5	

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: SW-6 **Lab ID: 92187386012** Collected: 01/21/14 10:25 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	5.0	1	01/24/14 10:40	01/28/14 21:21	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:21	7440-38-2	
Barium	**61.3J**	ug/L	100	5.0	1	01/24/14 10:40	01/28/14 21:21	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	01/24/14 10:40	01/28/14 21:21	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	01/24/14 10:40	01/28/14 21:21	7440-43-9	
Chromium	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:21	7440-47-3	
Cobalt	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:21	7440-48-4	
Copper	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:21	7440-50-8	
Lead	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:21	7439-92-1	
Nickel	ND	ug/L	50.0	5.0	1	01/24/14 10:40	01/28/14 21:21	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	01/24/14 10:40	01/28/14 21:21	7782-49-2	
Silver	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:21	7440-22-4	
Thallium	ND	ug/L	5.5	5.4	1	01/24/14 10:40	01/28/14 21:21	7440-28-0	
Vanadium	ND	ug/L	25.0	5.0	1	01/24/14 10:40	01/28/14 21:21	7440-62-2	
Zinc	**12.9**	ug/L	10.0	10.0	1	01/24/14 10:40	01/28/14 21:21	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		01/25/14 03:56	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		01/25/14 03:56	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		01/25/14 03:56	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		01/25/14 03:56	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/25/14 03:56	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		01/25/14 03:56	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		01/25/14 03:56	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		01/25/14 03:56	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		01/25/14 03:56	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/25/14 03:56	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		01/25/14 03:56	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		01/25/14 03:56	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		01/25/14 03:56	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/25/14 03:56	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		01/25/14 03:56	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		01/25/14 03:56	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/25/14 03:56	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		01/25/14 03:56	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		01/25/14 03:56	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/25/14 03:56	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		01/25/14 03:56	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		01/25/14 03:56	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/25/14 03:56	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		01/25/14 03:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		01/25/14 03:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		01/25/14 03:56	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/25/14 03:56	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		01/25/14 03:56	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/25/14 03:56	10061-01-5	

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ANALYTICAL RESULTS

Project: Iredell C&D
Pace Project No.: 92187386

Sample: SW-6 **Lab ID: 92187386012** Collected: 01/21/14 10:25 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/25/14 03:56	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/25/14 03:56	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		01/25/14 03:56	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		01/25/14 03:56	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		01/25/14 03:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		01/25/14 03:56	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		01/25/14 03:56	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		01/25/14 03:56	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		01/25/14 03:56	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/25/14 03:56	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	3.1	1		01/25/14 03:56	109-99-9	
Toluene	ND	ug/L	1.0	0.26	1		01/25/14 03:56	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/25/14 03:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/25/14 03:56	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/25/14 03:56	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/25/14 03:56	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		01/25/14 03:56	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		01/25/14 03:56	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/25/14 03:56	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		01/25/14 03:56	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/25/14 03:56	460-00-4	
1,2-Dichloroethane-d4 (S)	85	%	70-130		1		01/25/14 03:56	17060-07-0	
Toluene-d8 (S)	93	%	70-130		1		01/25/14 03:56	2037-26-5	

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QUALITY CONTROL DATA

Project: Iredell C&D
Pace Project No.: 92187386

QC Batch: MPRP/15112 — Analysis Method: EPA 6010
QC Batch Method: EPA 3010 — Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92187386001, 92187386002, 92187386003, 92187386004, 92187386005, 92187386006, 92187386007

METHOD BLANK: 1126318 — Matrix: Water
Associated Lab Samples: 92187386001, 92187386002, 92187386003, 92187386004, 92187386005, 92187386006, 92187386007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	6.0	01/23/14 23:06	
Arsenic	ug/L	ND	10.0	01/23/14 23:06	
Barium	ug/L	ND	100	01/23/14 23:06	
Beryllium	ug/L	ND	1.0	01/23/14 23:06	
Cadmium	ug/L	ND	1.0	01/23/14 23:06	
Chromium	ug/L	ND	10.0	01/23/14 23:06	
Cobalt	ug/L	ND	10.0	01/23/14 23:06	
Copper	ug/L	ND	10.0	01/23/14 23:06	
Lead	ug/L	ND	10.0	01/23/14 23:06	
Nickel	ug/L	ND	50.0	01/23/14 23:06	
Selenium	ug/L	ND	10.0	01/23/14 23:06	
Silver	ug/L	ND	10.0	01/23/14 23:06	
Thallium	ug/L	ND	5.5	01/23/14 23:06	
Vanadium	ug/L	ND	25.0	01/23/14 23:06	
Zinc	ug/L	ND	10.0	01/23/14 23:06	

LABORATORY CONTROL SAMPLE: 1126319

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	489	98	80-120	
Arsenic	ug/L	500	472	94	80-120	
Barium	ug/L	500	484	97	80-120	
Beryllium	ug/L	500	482	96	80-120	
Cadmium	ug/L	500	488	98	80-120	
Chromium	ug/L	500	491	98	80-120	
Cobalt	ug/L	500	487	97	80-120	
Copper	ug/L	500	488	98	80-120	
Lead	ug/L	500	482	96	80-120	
Nickel	ug/L	500	490	98	80-120	
Selenium	ug/L	500	492	98	80-120	
Silver	ug/L	250	246	98	80-120	
Thallium	ug/L	500	464	93	80-120	
Vanadium	ug/L	500	495	99	80-120	
Zinc	ug/L	500	479	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1126320 — 1126321

Parameter	Units	92186756001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	500	500	484	491	96	98	75-125	1	25	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Iredell C&D
Pace Project No.: 92187386

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1126320 1126321

Parameter	Units	92186756001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	500	500	464	476	93	95	75-125	3	25	
Barium	ug/L	37.4	500	500	517	525	96	98	75-125	2	25	
Beryllium	ug/L	ND	500	500	480	487	96	97	75-125	1	25	
Cadmium	ug/L	ND	500	500	484	491	97	98	75-125	1	25	
Chromium	ug/L	16.7	500	500	506	513	98	99	75-125	1	25	
Cobalt	ug/L	ND	500	500	486	494	97	98	75-125	2	25	
Copper	ug/L	ND	500	500	490	498	98	99	75-125	2	25	
Lead	ug/L	ND	500	500	472	481	94	96	75-125	2	25	
Nickel	ug/L	12.4J	500	500	495	501	97	98	75-125	1	25	
Selenium	ug/L	ND	500	500	483	488	96	97	75-125	1	25	
Silver	ug/L	ND	250	250	244	248	97	99	75-125	2	25	
Thallium	ug/L	ND	500	500	458	467	91	92	75-125	2	25	
Vanadium	ug/L	ND	500	500	493	499	98	99	75-125	1	25	
Zinc	ug/L	11.6	500	500	479	485	93	95	75-125	1	25	

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QUALITY CONTROL DATA

Project: Iredell C&D
Pace Project No.: 92187386

QC Batch: MPRP/15123 — Analysis Method: EPA 6010
QC Batch Method: EPA 3010 — Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92187386008, 92187386009, 92187386010, 92187386011, 92187386012

METHOD BLANK: 1127328 — Matrix: Water
Associated Lab Samples: 92187386008, 92187386009, 92187386010, 92187386011, 92187386012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	6.0	01/28/14 20:47	
Arsenic	ug/L	ND	10.0	01/28/14 20:47	
Barium	ug/L	ND	100	01/28/14 20:47	
Beryllium	ug/L	ND	1.0	01/28/14 20:47	
Cadmium	ug/L	ND	1.0	01/28/14 20:47	
Chromium	ug/L	ND	10.0	01/28/14 20:47	
Cobalt	ug/L	ND	10.0	01/28/14 20:47	
Copper	ug/L	ND	10.0	01/28/14 20:47	
Lead	ug/L	ND	10.0	01/28/14 20:47	
Nickel	ug/L	ND	50.0	01/28/14 20:47	
Selenium	ug/L	ND	10.0	01/28/14 20:47	
Silver	ug/L	ND	10.0	01/28/14 20:47	
Thallium	ug/L	ND	5.5	01/28/14 20:47	
Vanadium	ug/L	ND	25.0	01/28/14 20:47	
Zinc	ug/L	ND	10.0	01/28/14 20:47	

LABORATORY CONTROL SAMPLE: 1127329

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	492	98	80-120	
Arsenic	ug/L	500	467	93	80-120	
Barium	ug/L	500	489	98	80-120	
Beryllium	ug/L	500	490	98	80-120	
Cadmium	ug/L	500	495	99	80-120	
Chromium	ug/L	500	505	101	80-120	
Cobalt	ug/L	500	484	97	80-120	
Copper	ug/L	500	502	100	80-120	
Lead	ug/L	500	484	97	80-120	
Nickel	ug/L	500	495	99	80-120	
Selenium	ug/L	500	487	97	80-120	
Silver	ug/L	250	250	100	80-120	
Thallium	ug/L	500	479	96	80-120	
Vanadium	ug/L	500	494	99	80-120	
Zinc	ug/L	500	475	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1127330 — 1127331

Parameter	Units	92187386008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	500	500	476	478	95	95	75-125	0	25	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Iredell C&D
Pace Project No.: 92187386

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1127330 1127331

Parameter	Units	92187386008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	500	500	458	458	92	92	75-125	0	25	
Barium	ug/L	6.5J	500	500	483	486	95	96	75-125	1	25	
Beryllium	ug/L	ND	500	500	482	486	96	97	75-125	1	25	
Cadmium	ug/L	ND	500	500	485	481	97	96	75-125	1	25	
Chromium	ug/L	ND	500	500	496	496	99	99	75-125	0	25	
Cobalt	ug/L	ND	500	500	470	469	94	94	75-125	0	25	
Copper	ug/L	ND	500	500	493	495	99	99	75-125	0	25	
Lead	ug/L	ND	500	500	468	469	94	94	75-125	0	25	
Nickel	ug/L	ND	500	500	483	481	96	96	75-125	0	25	
Selenium	ug/L	ND	500	500	468	465	94	93	75-125	1	25	
Silver	ug/L	ND	250	250	243	243	97	97	75-125	0	25	
Thallium	ug/L	ND	500	500	457	460	91	92	75-125	1	25	
Vanadium	ug/L	ND	500	500	491	491	97	97	75-125	0	25	
Zinc	ug/L	ND	500	500	467	467	92	92	75-125	0	25	

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

QUALITY CONTROL DATA

Project: Iredell C&D
Pace Project No.: 92187386

QC Batch: MSV/25596 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92187386001, 92187386002, 92187386003, 92187386004, 92187386005, 92187386006, 92187386007, 92187386008, 92187386009, 92187386010, 92187386011, 92187386012

METHOD BLANK: 1126881 Matrix: Water
Associated Lab Samples: 92187386001, 92187386002, 92187386003, 92187386004, 92187386005, 92187386006, 92187386007, 92187386008, 92187386009, 92187386010, 92187386011, 92187386012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	01/24/14 20:15	
1,1,1-Trichloroethane	ug/L	ND	1.0	01/24/14 20:15	
1,1,2,2-Tetrachloroethane	ug/L	ND	3.0	01/24/14 20:15	
1,1,2-Trichloroethane	ug/L	ND	1.0	01/24/14 20:15	
1,1-Dichloroethane	ug/L	ND	5.0	01/24/14 20:15	
1,1-Dichloroethene	ug/L	ND	5.0	01/24/14 20:15	
1,2,3-Trichloropropane	ug/L	ND	1.0	01/24/14 20:15	
1,2-Dibromo-3-chloropropane	ug/L	ND	13.0	01/24/14 20:15	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	01/24/14 20:15	
1,2-Dichlorobenzene	ug/L	ND	5.0	01/24/14 20:15	
1,2-Dichloroethane	ug/L	ND	1.0	01/24/14 20:15	
1,2-Dichloropropane	ug/L	ND	1.0	01/24/14 20:15	
1,3-Dichloropropane	ug/L	ND	1.0	01/24/14 20:15	
1,4-Dichlorobenzene	ug/L	ND	1.0	01/24/14 20:15	
2-Butanone (MEK)	ug/L	ND	100	01/24/14 20:15	
2-Hexanone	ug/L	ND	50.0	01/24/14 20:15	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	01/24/14 20:15	
Acetone	ug/L	ND	100	01/24/14 20:15	
Acrylonitrile	ug/L	ND	200	01/24/14 20:15	
Benzene	ug/L	ND	1.0	01/24/14 20:15	
Bromochloromethane	ug/L	ND	3.0	01/24/14 20:15	
Bromodichloromethane	ug/L	ND	1.0	01/24/14 20:15	
Bromoform	ug/L	ND	3.0	01/24/14 20:15	
Bromomethane	ug/L	ND	10.0	01/24/14 20:15	
Carbon disulfide	ug/L	ND	100	01/24/14 20:15	
Carbon tetrachloride	ug/L	ND	1.0	01/24/14 20:15	
Chlorobenzene	ug/L	ND	3.0	01/24/14 20:15	
Chloroethane	ug/L	ND	10.0	01/24/14 20:15	
Chloroform	ug/L	ND	5.0	01/24/14 20:15	
Chloromethane	ug/L	ND	1.0	01/24/14 20:15	
cis-1,2-Dichloroethene	ug/L	ND	5.0	01/24/14 20:15	
cis-1,3-Dichloropropene	ug/L	ND	1.0	01/24/14 20:15	
Dibromochloromethane	ug/L	ND	3.0	01/24/14 20:15	
Dibromomethane	ug/L	ND	10.0	01/24/14 20:15	
Ethylbenzene	ug/L	ND	1.0	01/24/14 20:15	
Iodomethane	ug/L	ND	10.0	01/24/14 20:15	
Methylene Chloride	ug/L	ND	1.0	01/24/14 20:15	
Styrene	ug/L	ND	1.0	01/24/14 20:15	
Tetrachloroethene	ug/L	ND	1.0	01/24/14 20:15	
Tetrahydrofuran	ug/L	ND	10.0	01/24/14 20:15	
Toluene	ug/L	ND	1.0	01/24/14 20:15	

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QUALITY CONTROL DATA

Project: Iredell C&D
Pace Project No.: 92187386

METHOD BLANK: 1126881 Matrix: Water

Associated Lab Samples: 92187386001, 92187386002, 92187386003, 92187386004, 92187386005, 92187386006, 92187386007, 92187386008, 92187386009, 92187386010, 92187386011, 92187386012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	5.0	01/24/14 20:15	
trans-1,3-Dichloropropene	ug/L	ND	1.0	01/24/14 20:15	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	01/24/14 20:15	
Trichloroethene	ug/L	ND	1.0	01/24/14 20:15	
Trichlorofluoromethane	ug/L	ND	1.0	01/24/14 20:15	
Vinyl acetate	ug/L	ND	50.0	01/24/14 20:15	
Vinyl chloride	ug/L	ND	1.0	01/24/14 20:15	
Xylene (Total)	ug/L	ND	5.0	01/24/14 20:15	
1,2-Dichloroethane-d4 (S)	%	91	70-130	01/24/14 20:15	
4-Bromofluorobenzene (S)	%	98	70-130	01/24/14 20:15	
Toluene-d8 (S)	%	95	70-130	01/24/14 20:15	

LABORATORY CONTROL SAMPLE: 1126882

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	48.4	97	70-130	
1,1,1-Trichloroethane	ug/L	50	43.0	86	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	48.5	97	70-130	
1,1,2-Trichloroethane	ug/L	50	45.7	91	70-130	
1,1-Dichloroethane	ug/L	50	43.1	86	70-130	
1,1-Dichloroethene	ug/L	50	43.5	87	70-132	
1,2,3-Trichloropropane	ug/L	50	47.7	95	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	48.2	96	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	48.8	98	70-130	
1,2-Dichlorobenzene	ug/L	50	48.5	97	70-130	
1,2-Dichloroethane	ug/L	50	42.3	85	70-130	
1,2-Dichloropropane	ug/L	50	45.9	92	70-130	
1,3-Dichloropropane	ug/L	50	48.6	97	70-130	
1,4-Dichlorobenzene	ug/L	50	48.7	97	70-130	
2-Butanone (MEK)	ug/L	100	85.8J	86	70-145	
2-Hexanone	ug/L	100	94.6	95	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	92.1J	92	70-140	
Acetone	ug/L	100	83.9J	84	50-175	
Acrylonitrile	ug/L	250	224	90	70-143	
Benzene	ug/L	50	47.5	95	70-130	
Bromochloromethane	ug/L	50	38.4	77	70-130	
Bromodichloromethane	ug/L	50	45.3	91	70-130	
Bromoform	ug/L	50	50.1	100	70-130	
Bromomethane	ug/L	50	46.0	92	54-130	
Carbon disulfide	ug/L	50	46.4J	93	70-131	
Carbon tetrachloride	ug/L	50	48.8	98	70-132	
Chlorobenzene	ug/L	50	47.7	95	70-130	
Chloroethane	ug/L	50	32.1	64	64-134	
Chloroform	ug/L	50	41.8	84	70-130	

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QUALITY CONTROL DATA

Project: Iredell C&D
Pace Project No.: 92187386

LABORATORY CONTROL SAMPLE: 1126882

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloromethane	ug/L	50	41.6	83	64-130	
cis-1,2-Dichloroethene	ug/L	50	41.8	84	70-131	
cis-1,3-Dichloropropene	ug/L	50	44.9	90	70-130	
Dibromochloromethane	ug/L	50	49.3	99	70-130	
Dibromomethane	ug/L	50	46.8	94	70-131	
Ethylbenzene	ug/L	50	46.5	93	70-130	
Iodomethane	ug/L	100	89.0	89	49-180	
Methylene Chloride	ug/L	50	43.7	87	63-130	
Styrene	ug/L	50	49.3	99	70-130	
Tetrachloroethene	ug/L	50	49.8	100	70-130	
Tetrahydrofuran	ug/L	500	442	88	70-130	
Toluene	ug/L	50	45.2	90	70-130	
trans-1,2-Dichloroethene	ug/L	50	41.3	83	70-130	
trans-1,3-Dichloropropene	ug/L	50	46.1	92	70-132	
trans-1,4-Dichloro-2-butene	ug/L	50	49.3J	99	70-141	
Trichloroethene	ug/L	50	43.1	86	70-130	
Trichlorofluoromethane	ug/L	50	37.8	76	62-133	
Vinyl acetate	ug/L	100	143	143	66-157	
Vinyl chloride	ug/L	50	39.3	79	69-130	
Xylene (Total)	ug/L	150	144	96	70-130	
1,2-Dichloroethane-d4 (S)	%			91	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1126883 1126884

Parameter	Units	92187386012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	45.4	40.3	91	81	70-166	12	30	
Benzene	ug/L	ND	50	50	53.1	46.3	106	93	70-148	14	30	
Chlorobenzene	ug/L	ND	50	50	52.4	47.9	105	96	70-146	9	30	
Toluene	ug/L	ND	50	50	48.8	42.8	98	86	70-155	13	30	
Trichloroethene	ug/L	ND	50	50	51.0	44.3	102	89	69-151	14	30	
1,2-Dichloroethane-d4 (S)	%						91	90	70-130			
4-Bromofluorobenzene (S)	%						97	99	70-130			
Toluene-d8 (S)	%						96	95	70-130			

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QUALIFIERS

Project: Iredell C&D
Pace Project No.: 92187386

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: Iredell C&D
Pace Project No.: 92187386

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92187386001	**MW-9R**	EPA 3010	MPRP/15112	EPA 6010	ICP/13715
92187386002	**MW-9RR**	EPA 3010	MPRP/15112	EPA 6010	ICP/13715
92187386003	**MW-10R**	EPA 3010	MPRP/15112	EPA 6010	ICP/13715
92187386004	**MW-16**	EPA 3010	MPRP/15112	EPA 6010	ICP/13715
92187386005	**MW-22**	EPA 3010	MPRP/15112	EPA 6010	ICP/13715
92187386006	**MW-23**	EPA 3010	MPRP/15112	EPA 6010	ICP/13715
92187386007	**MW-24S**	EPA 3010	MPRP/15112	EPA 6010	ICP/13715
92187386008	**MW-24D**	EPA 3010	MPRP/15123	EPA 6010	ICP/13727
92187386009	**MW-25**	EPA 3010	MPRP/15123	EPA 6010	ICP/13727
92187386010	**MW-26S**	EPA 3010	MPRP/15123	EPA 6010	ICP/13727
92187386011	**MW-26D**	EPA 3010	MPRP/15123	EPA 6010	ICP/13727
92187386012	**SW-6**	EPA 3010	MPRP/15123	EPA 6010	ICP/13727
92187386001	**MW-9R**	EPA 8260	MSV/25596		
92187386002	**MW-9RR**	EPA 8260	MSV/25596		
92187386003	**MW-10R**	EPA 8260	MSV/25596		
92187386004	**MW-16**	EPA 8260	MSV/25596		
92187386005	**MW-22**	EPA 8260	MSV/25596		
92187386006	**MW-23**	EPA 8260	MSV/25596		
92187386007	**MW-24S**	EPA 8260	MSV/25596		
92187386008	**MW-24D**	EPA 8260	MSV/25596		
92187386009	**MW-25**	EPA 8260	MSV/25596		
92187386010	**MW-26S**	EPA 8260	MSV/25596		
92187386011	**MW-26D**	EPA 8260	MSV/25596		
92187386012	**SW-6**	EPA 8260	MSV/25596		

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Pace Analytical	Sample Condition Upon Receipt (SCUR)	Page 1 of 2
	Document Number: F-CHR-CS-03-rev.13	Issuing Authority: Pace Huntersville Quality Office

Client Name: Mun.

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

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

Optional
Proj. Due Date:
Proj. Name:

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

Thermometer Used: IR Gun T1102 T1301 Type of Ice: Wet Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor T1102: No Correction T1301: No Correction

Corrected Cooler Temp.: 2.6 °C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: 1/22

Temp should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: [signature] Date: 1/22/14

SRF Review: [signature] Date: 1/23/14

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

WO#: 92187386

92187386

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 1 Of 1

Section A Required Client Information:

Company:	Municipal Engineering Services
Address:	P.O. Box 97
	Garner, NC 27529
Email To:	jpfohl@mesco.com
Phone:	919-772-5393 Fax
Requested Due Date/TAT:	10 Day (Default)

Section B Required Project Information:

Report To:	Jonathan Pfohl
Copy To:	
Purchase Order No.	
Client Project ID:	Iredell C&D
Container Order Number:	

Section C Invoice Information:

Attention:	Municipal Engineering Services
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Godwin
Pace Profile #:	

Regulatory Agency
State / Location
North Carolina

Requested Analysis Filtered (Y/N)

ITEM#	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N)	VOCs- App I	Metals-App I	Tetrahydrofuran										92187386
1	MW-9R	WT	G			1/21/14	4:05		4			1	3						X	X	x										001
2	MW-9RR	WT	G				3:40		4			1	3						X	X	x										002
3	MW-10R	WT	G				3:00		4			1	3						X	X	x										003
4	MW-16	WT	G				4:35		4			1	3						X	X	x										004
5	MW-22	WT	G				2:25		4			1	3						X	X	x										005
6	MW-23	WT	G				1:35		4			1	3						X	X	x										006
7	MW-24S	WT	G				1:00		4			1	3						X	X	x										007
8	MW-24D	WT	G				12:40		4			1	3						X	X	x										008
9	MW-25	WT	G				10:55		4			1	3						X	X	x										009
10	MW-26S	WT	G				11:55		4			1	3						X	X	x										010
11	MW-26D	WT	G				11:30		4			1	3						X	X	x										011
12	SW-6	WT	G				10:25		4			1	3						X	X	x										012

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	MESCO	1/22/14	7:15	Moody / Pace	01-22-14	07:15				
	Moody	01-22-14	17:10	Pace	1-22-14	1710	2.6	y	N	y

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER:	Jonathan Pfohl
SIGNATURE of SAMPLER:	DATE Signed: 1/22/14

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

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February 04, 2014

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

RE: Project: Iredell Background
Pace Project No.: 92187385

Dear Mr. Pfohl:
Enclosed are the analytical results for sample(s) received by the laboratory on January 22, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

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

CERTIFICATIONS

Project: Iredell Background
Pace Project No.: 92187385

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 SUMMARY

Project: Iredell Background
Pace Project No.: 92187385

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92187385001	**MW-1A**	Water	01/21/14 17:10	01/22/14 17:10
92187385002	**MW-1C**	Water	01/21/14 17:30	01/22/14 17:10

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SAMPLE ANALYTE COUNT

Project: Iredell Background
Pace Project No.: 92187385

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92187385001	**MW-1A**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92187385002	**MW-1C**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C

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ANALYTICAL RESULTS

Project: Iredell Background
Pace Project No.: 92187385

Sample: MW-1A **Lab ID: 92187385001** Collected: 01/21/14 17:10 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	5.0	1	01/23/14 10:45	01/24/14 00:09	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:09	7440-38-2	
Barium	**110**	ug/L	100	5.0	1	01/23/14 10:45	01/24/14 00:09	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	01/23/14 10:45	01/24/14 00:09	7440-41-7	
Cadmium	**1.2**	ug/L	1.0	1.0	1	01/23/14 10:45	01/24/14 00:09	7440-43-9	
Chromium	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:09	7440-47-3	
Cobalt	**14.7**	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:09	7440-48-4	
Copper	**21.3**	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:09	7440-50-8	
Lead	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:09	7439-92-1	
Nickel	ND	ug/L	50.0	5.0	1	01/23/14 10:45	01/24/14 00:09	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	01/23/14 10:45	01/24/14 00:09	7782-49-2	
Silver	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:09	7440-22-4	
Thallium	ND	ug/L	5.5	5.4	1	01/23/14 10:45	01/24/14 00:09	7440-28-0	
Vanadium	**22.2J**	ug/L	25.0	5.0	1	01/23/14 10:45	01/24/14 00:09	7440-62-2	
Zinc	**30.9**	ug/L	10.0	10.0	1	01/23/14 10:45	01/24/14 00:09	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		01/25/14 00:29	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		01/25/14 00:29	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		01/25/14 00:29	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		01/25/14 00:29	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/25/14 00:29	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		01/25/14 00:29	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		01/25/14 00:29	74-83-9	
2-Butanone (MEK)	**4.9J**	ug/L	100	0.96	1		01/25/14 00:29	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		01/25/14 00:29	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/25/14 00:29	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		01/25/14 00:29	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		01/25/14 00:29	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		01/25/14 00:29	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/25/14 00:29	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		01/25/14 00:29	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		01/25/14 00:29	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/25/14 00:29	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		01/25/14 00:29	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		01/25/14 00:29	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/25/14 00:29	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		01/25/14 00:29	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		01/25/14 00:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/25/14 00:29	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		01/25/14 00:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		01/25/14 00:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		01/25/14 00:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/25/14 00:29	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		01/25/14 00:29	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/25/14 00:29	10061-01-5	

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ANALYTICAL RESULTS

Project: Iredell Background
Pace Project No.: 92187385

Sample: MW-1A **Lab ID: 92187385001** Collected: 01/21/14 17:10 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/25/14 00:29	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/25/14 00:29	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		01/25/14 00:29	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		01/25/14 00:29	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		01/25/14 00:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		01/25/14 00:29	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		01/25/14 00:29	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		01/25/14 00:29	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		01/25/14 00:29	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/25/14 00:29	127-18-4	
Tetrahydrofuran	**5.1J**	ug/L	10.0	3.1	1		01/25/14 00:29	109-99-9	
Toluene	**0.28J**	ug/L	1.0	0.26	1		01/25/14 00:29	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/25/14 00:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/25/14 00:29	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/25/14 00:29	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/25/14 00:29	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		01/25/14 00:29	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		01/25/14 00:29	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/25/14 00:29	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		01/25/14 00:29	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		01/25/14 00:29	460-00-4	
1,2-Dichloroethane-d4 (S)	88	%	70-130		1		01/25/14 00:29	17060-07-0	
Toluene-d8 (S)	93	%	70-130		1		01/25/14 00:29	2037-26-5	

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ANALYTICAL RESULTS

Project: Iredell Background
Pace Project No.: 92187385

Sample: MW-1C **Lab ID: 92187385002** Collected: 01/21/14 17:30 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	5.0	1	01/23/14 10:45	01/24/14 00:12	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:12	7440-38-2	
Barium	**169**	ug/L	100	5.0	1	01/23/14 10:45	01/24/14 00:12	7440-39-3	
Beryllium	**1.3**	ug/L	1.0	1.0	1	01/23/14 10:45	01/24/14 00:12	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	01/23/14 10:45	01/24/14 00:12	7440-43-9	
Chromium	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:12	7440-47-3	
Cobalt	**18.7**	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:12	7440-48-4	
Copper	**15.4**	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:12	7440-50-8	
Lead	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:12	7439-92-1	
Nickel	ND	ug/L	50.0	5.0	1	01/23/14 10:45	01/24/14 00:12	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	01/23/14 10:45	01/24/14 00:12	7782-49-2	
Silver	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/24/14 00:12	7440-22-4	
Thallium	ND	ug/L	5.5	5.4	1	01/23/14 10:45	01/24/14 00:12	7440-28-0	
Vanadium	**28.4**	ug/L	25.0	5.0	1	01/23/14 10:45	01/24/14 00:12	7440-62-2	
Zinc	**44.9**	ug/L	10.0	10.0	1	01/23/14 10:45	01/24/14 00:12	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		01/25/14 00:45	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		01/25/14 00:45	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		01/25/14 00:45	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		01/25/14 00:45	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/25/14 00:45	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		01/25/14 00:45	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		01/25/14 00:45	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		01/25/14 00:45	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		01/25/14 00:45	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/25/14 00:45	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		01/25/14 00:45	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		01/25/14 00:45	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		01/25/14 00:45	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/25/14 00:45	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		01/25/14 00:45	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		01/25/14 00:45	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/25/14 00:45	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		01/25/14 00:45	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		01/25/14 00:45	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/25/14 00:45	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		01/25/14 00:45	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		01/25/14 00:45	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/25/14 00:45	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		01/25/14 00:45	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		01/25/14 00:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		01/25/14 00:45	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/25/14 00:45	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		01/25/14 00:45	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/25/14 00:45	10061-01-5	

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ANALYTICAL RESULTS

Project: Iredell Background
Pace Project No.: 92187385

Sample: MW-1C **Lab ID: 92187385002** Collected: 01/21/14 17:30 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/25/14 00:45	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/25/14 00:45	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		01/25/14 00:45	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		01/25/14 00:45	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		01/25/14 00:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		01/25/14 00:45	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		01/25/14 00:45	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		01/25/14 00:45	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		01/25/14 00:45	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/25/14 00:45	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	3.1	1		01/25/14 00:45	109-99-9	
Toluene	ND	ug/L	1.0	0.26	1		01/25/14 00:45	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/25/14 00:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/25/14 00:45	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/25/14 00:45	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/25/14 00:45	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		01/25/14 00:45	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		01/25/14 00:45	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/25/14 00:45	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		01/25/14 00:45	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		01/25/14 00:45	460-00-4	
1,2-Dichloroethane-d4 (S)	86	%	70-130		1		01/25/14 00:45	17060-07-0	
Toluene-d8 (S)	95	%	70-130		1		01/25/14 00:45	2037-26-5	

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QUALITY CONTROL DATA

Project: Iredell Background
Pace Project No.: 92187385

QC Batch: MPRP/15112
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92187385001, 92187385002

METHOD BLANK: 1126318
Matrix: Water
Associated Lab Samples: 92187385001, 92187385002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	6.0	01/23/14 23:06	
Arsenic	ug/L	ND	10.0	01/23/14 23:06	
Barium	ug/L	ND	100	01/23/14 23:06	
Beryllium	ug/L	ND	1.0	01/23/14 23:06	
Cadmium	ug/L	ND	1.0	01/23/14 23:06	
Chromium	ug/L	ND	10.0	01/23/14 23:06	
Cobalt	ug/L	ND	10.0	01/23/14 23:06	
Copper	ug/L	ND	10.0	01/23/14 23:06	
Lead	ug/L	ND	10.0	01/23/14 23:06	
Nickel	ug/L	ND	50.0	01/23/14 23:06	
Selenium	ug/L	ND	10.0	01/23/14 23:06	
Silver	ug/L	ND	10.0	01/23/14 23:06	
Thallium	ug/L	ND	5.5	01/23/14 23:06	
Vanadium	ug/L	ND	25.0	01/23/14 23:06	
Zinc	ug/L	ND	10.0	01/23/14 23:06	

LABORATORY CONTROL SAMPLE: 1126319

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	489	98	80-120	
Arsenic	ug/L	500	472	94	80-120	
Barium	ug/L	500	484	97	80-120	
Beryllium	ug/L	500	482	96	80-120	
Cadmium	ug/L	500	488	98	80-120	
Chromium	ug/L	500	491	98	80-120	
Cobalt	ug/L	500	487	97	80-120	
Copper	ug/L	500	488	98	80-120	
Lead	ug/L	500	482	96	80-120	
Nickel	ug/L	500	490	98	80-120	
Selenium	ug/L	500	492	98	80-120	
Silver	ug/L	250	246	98	80-120	
Thallium	ug/L	500	464	93	80-120	
Vanadium	ug/L	500	495	99	80-120	
Zinc	ug/L	500	479	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1126320 1126321

Parameter	Units	92186756001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	500	500	484	491	96	98	75-125	1	25	

REPORT OF LABORATORY ANALYSIS

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(704)875-9092

QUALITY CONTROL DATA

Project: Iredell Background
Pace Project No.: 92187385

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1126320 1126321

Parameter	Units	92186756001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	500	500	464	476	93	95	75-125	3	25	
Barium	ug/L	37.4	500	500	517	525	96	98	75-125	2	25	
Beryllium	ug/L	ND	500	500	480	487	96	97	75-125	1	25	
Cadmium	ug/L	ND	500	500	484	491	97	98	75-125	1	25	
Chromium	ug/L	16.7	500	500	506	513	98	99	75-125	1	25	
Cobalt	ug/L	ND	500	500	486	494	97	98	75-125	2	25	
Copper	ug/L	ND	500	500	490	498	98	99	75-125	2	25	
Lead	ug/L	ND	500	500	472	481	94	96	75-125	2	25	
Nickel	ug/L	12.4J	500	500	495	501	97	98	75-125	1	25	
Selenium	ug/L	ND	500	500	483	488	96	97	75-125	1	25	
Silver	ug/L	ND	250	250	244	248	97	99	75-125	2	25	
Thallium	ug/L	ND	500	500	458	467	91	92	75-125	2	25	
Vanadium	ug/L	ND	500	500	493	499	98	99	75-125	1	25	
Zinc	ug/L	11.6	500	500	479	485	93	95	75-125	1	25	

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QUALITY CONTROL DATA

Project: Iredell Background
Pace Project No.: 92187385

QC Batch: MSV/25595
Analysis Method: EPA 8260
QC Batch Method: EPA 8260
Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92187385001, 92187385002

METHOD BLANK: 1126877
Matrix: Water
Associated Lab Samples: 92187385001, 92187385002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	01/24/14 19:59	
1,1,1-Trichloroethane	ug/L	ND	1.0	01/24/14 19:59	
1,1,2,2-Tetrachloroethane	ug/L	ND	3.0	01/24/14 19:59	
1,1,2-Trichloroethane	ug/L	ND	1.0	01/24/14 19:59	
1,1-Dichloroethane	ug/L	ND	5.0	01/24/14 19:59	
1,1-Dichloroethene	ug/L	ND	5.0	01/24/14 19:59	
1,2,3-Trichloropropane	ug/L	ND	1.0	01/24/14 19:59	
1,2-Dibromo-3-chloropropane	ug/L	ND	13.0	01/24/14 19:59	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	01/24/14 19:59	
1,2-Dichlorobenzene	ug/L	ND	5.0	01/24/14 19:59	
1,2-Dichloroethane	ug/L	ND	1.0	01/24/14 19:59	
1,2-Dichloropropane	ug/L	ND	1.0	01/24/14 19:59	
1,3-Dichloropropane	ug/L	ND	1.0	01/24/14 19:59	
1,4-Dichlorobenzene	ug/L	ND	1.0	01/24/14 19:59	
2-Butanone (MEK)	ug/L	ND	100	01/24/14 19:59	
2-Hexanone	ug/L	ND	50.0	01/24/14 19:59	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	01/24/14 19:59	
Acetone	ug/L	ND	100	01/24/14 19:59	
Acrylonitrile	ug/L	ND	200	01/24/14 19:59	
Benzene	ug/L	ND	1.0	01/24/14 19:59	
Bromochloromethane	ug/L	ND	3.0	01/24/14 19:59	
Bromodichloromethane	ug/L	ND	1.0	01/24/14 19:59	
Bromoform	ug/L	ND	3.0	01/24/14 19:59	
Bromomethane	ug/L	ND	10.0	01/24/14 19:59	
Carbon disulfide	ug/L	ND	100	01/24/14 19:59	
Carbon tetrachloride	ug/L	ND	1.0	01/24/14 19:59	
Chlorobenzene	ug/L	ND	3.0	01/24/14 19:59	
Chloroethane	ug/L	ND	10.0	01/24/14 19:59	
Chloroform	ug/L	ND	5.0	01/24/14 19:59	
Chloromethane	ug/L	ND	1.0	01/24/14 19:59	
cis-1,2-Dichloroethene	ug/L	ND	5.0	01/24/14 19:59	
cis-1,3-Dichloropropene	ug/L	ND	1.0	01/24/14 19:59	
Dibromochloromethane	ug/L	ND	3.0	01/24/14 19:59	
Dibromomethane	ug/L	ND	10.0	01/24/14 19:59	
Ethylbenzene	ug/L	ND	1.0	01/24/14 19:59	
Iodomethane	ug/L	ND	10.0	01/24/14 19:59	
Methylene Chloride	ug/L	ND	1.0	01/24/14 19:59	
Styrene	ug/L	ND	1.0	01/24/14 19:59	
Tetrachloroethene	ug/L	ND	1.0	01/24/14 19:59	
Tetrahydrofuran	ug/L	ND	10.0	01/24/14 19:59	
Toluene	ug/L	ND	1.0	01/24/14 19:59	
trans-1,2-Dichloroethene	ug/L	ND	5.0	01/24/14 19:59	
trans-1,3-Dichloropropene	ug/L	ND	1.0	01/24/14 19:59	

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QUALITY CONTROL DATA

Project: Iredell Background
Pace Project No.: 92187385

METHOD BLANK: 1126877 Matrix: Water
Associated Lab Samples: 92187385001, 92187385002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,4-Dichloro-2-butene	ug/L	ND	100	01/24/14 19:59	
Trichloroethene	ug/L	ND	1.0	01/24/14 19:59	
Trichlorofluoromethane	ug/L	ND	1.0	01/24/14 19:59	
Vinyl acetate	ug/L	ND	50.0	01/24/14 19:59	
Vinyl chloride	ug/L	ND	1.0	01/24/14 19:59	
Xylene (Total)	ug/L	ND	5.0	01/24/14 19:59	
1,2-Dichloroethane-d4 (S)	%	89	70-130	01/24/14 19:59	
4-Bromofluorobenzene (S)	%	99	70-130	01/24/14 19:59	
Toluene-d8 (S)	%	94	70-130	01/24/14 19:59	

LABORATORY CONTROL SAMPLE: 1126878

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	47.4	95	70-130	
1,1,1-Trichloroethane	ug/L	50	43.2	86	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	47.4	95	70-130	
1,1,2-Trichloroethane	ug/L	50	45.5	91	70-130	
1,1-Dichloroethane	ug/L	50	43.3	87	70-130	
1,1-Dichloroethene	ug/L	50	43.1	86	70-132	
1,2,3-Trichloropropane	ug/L	50	46.2	92	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	47.1	94	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	47.8	96	70-130	
1,2-Dichlorobenzene	ug/L	50	46.9	94	70-130	
1,2-Dichloroethane	ug/L	50	41.9	84	70-130	
1,2-Dichloropropane	ug/L	50	45.5	91	70-130	
1,3-Dichloropropane	ug/L	50	47.3	95	70-130	
1,4-Dichlorobenzene	ug/L	50	47.3	95	70-130	
2-Butanone (MEK)	ug/L	100	85.3J	85	70-145	
2-Hexanone	ug/L	100	92.3	92	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	91.5J	92	70-140	
Acetone	ug/L	100	80.5J	80	50-175	
Acrylonitrile	ug/L	250	220	88	70-143	
Benzene	ug/L	50	47.0	94	70-130	
Bromochloromethane	ug/L	50	34.2	68	70-130	L0
Bromodichloromethane	ug/L	50	44.6	89	70-130	
Bromoform	ug/L	50	48.8	98	70-130	
Bromomethane	ug/L	50	40.1	80	54-130	
Carbon disulfide	ug/L	50	45.7J	91	70-131	
Carbon tetrachloride	ug/L	50	47.1	94	70-132	
Chlorobenzene	ug/L	50	46.6	93	70-130	
Chloroethane	ug/L	50	32.7	65	64-134	
Chloroform	ug/L	50	42.2	84	70-130	
Chloromethane	ug/L	50	38.7	77	64-130	
cis-1,2-Dichloroethene	ug/L	50	41.6	83	70-131	
cis-1,3-Dichloropropene	ug/L	50	45.4	91	70-130	

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QUALITY CONTROL DATA

Project: Iredell Background
Pace Project No.: 92187385

LABORATORY CONTROL SAMPLE: 1126878

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	50	48.7	97	70-130	
Dibromomethane	ug/L	50	45.2	90	70-131	
Ethylbenzene	ug/L	50	46.1	92	70-130	
Iodomethane	ug/L	100	83.4	83	49-180	
Methylene Chloride	ug/L	50	43.1	86	63-130	
Styrene	ug/L	50	47.6	95	70-130	
Tetrachloroethene	ug/L	50	48.8	98	70-130	
Tetrahydrofuran	ug/L	500	435	87	70-130	
Toluene	ug/L	50	44.9	90	70-130	
trans-1,2-Dichloroethene	ug/L	50	41.0	82	70-130	
trans-1,3-Dichloropropene	ug/L	50	45.7	91	70-132	
trans-1,4-Dichloro-2-butene	ug/L	50	47.2J	94	70-141	
Trichloroethene	ug/L	50	42.9	86	70-130	
Trichlorofluoromethane	ug/L	50	36.3	73	62-133	
Vinyl acetate	ug/L	100	142	142	66-157	
Vinyl chloride	ug/L	50	38.6	77	69-130	
Xylene (Total)	ug/L	150	140	94	70-130	
1,2-Dichloroethane-d4 (S)	%			92	70-130	
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1126879 1126880

Parameter	Units	92187380001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	42.0	42.7	84	85	70-166	2	30	
Benzene	ug/L	ND	50	50	47.8	49.0	96	98	70-148	2	30	
Chlorobenzene	ug/L	ND	50	50	48.4	49.2	97	98	70-146	2	30	
Toluene	ug/L	ND	50	50	44.4	45.0	89	90	70-155	1	30	
Trichloroethene	ug/L	ND	50	50	45.9	47.0	92	94	69-151	2	30	
1,2-Dichloroethane-d4 (S)	%						90	91	70-130			
4-Bromofluorobenzene (S)	%						98	98	70-130			
Toluene-d8 (S)	%						97	97	70-130			

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QUALIFIERS

Project: Iredell Background
Pace Project No.: 92187385

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

ANALYTE QUALIFIERS

L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Iredell Background
Pace Project No.: 92187385

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92187385001	**MW-1A**	EPA 3010	MPRP/15112	EPA 6010	ICP/13715
92187385002	**MW-1C**	EPA 3010	MPRP/15112	EPA 6010	ICP/13715
92187385001	**MW-1A**	EPA 8260	MSV/25595		
92187385002	**MW-1C**	EPA 8260	MSV/25595		

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Pace Analytical	Sample Condition Upon Receipt (SCUR)	Page 1 of 2
	Document Number: F-CHR-CS-03-rev.13	Issuing Authority: Pace Huntersville Quality Office

Client Name: Mun

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

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

Optional
Proj. Due Date:
Proj. Name:

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

Thermometer Used: IR Gun T1102 T1301 Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Temp Correction Factor T1102: No Correction T1301: No Correction

Corrected Cooler Temp.: 2.6 °C Biological Tissue is Frozen: Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: TMR

		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:_____		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	
Samples checked for dechlorination:	☑Yes ☐No ☐N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):_____		

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review:	AMPMC	Date:	1/22/14
SRF Review:		Date:	1/23/14

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

WO# : 92187385

92187385

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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 : 1 Of 1

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

Regulatory Agency
State / Location
North Carolina

Requested Analysis Filtered (Y/N)

ITEM#	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test	VOCs- App I	Metals-App I	Tetrahydrofuran										92187385
																		Y/N	N	N	N	N	N	N	N	N	N	N	N	N	
1	MW-1A	WT	G			1/22/14	5:10												X	X	X										001
2	MW-1C	WT	G			↓	5:30												X	X	X										002
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	MESCO	1/22/14	7:15	Moody Pace	01-22-14	07:15				
	B Moody	01-22-14	17:10	Smore Pace	1/22	1710	2.6	4	N	4

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Jonathan Pfohl					
SIGNATURE of SAMPLER:		DATE Signed: 1/22/14				

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(704)875-9092

February 04, 2014

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

RE: Project: Iredell SW-2
Pace Project No.: 92187380

Dear Mr. Pfohl:
Enclosed are the analytical results for sample(s) received by the laboratory on January 22, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: Iredell SW-2
Pace Project No.: 92187380

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 SUMMARY

Project: Iredell SW-2
Pace Project No.: 92187380

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92187380001	**SW-2**	Water	01/21/14 17:55	01/22/14 17:10

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SAMPLE ANALYTE COUNT

Project: Iredell SW-2
Pace Project No.: 92187380

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92187380001	**SW-2**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C

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ANALYTICAL RESULTS

Project: Iredell SW-2
Pace Project No.: 92187380

Sample: SW-2 **Lab ID: 92187380001** Collected: 01/21/14 17:55 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	5.0	1	01/23/14 10:45	01/23/14 23:26	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/23/14 23:26	7440-38-2	
Barium	**38.6J**	ug/L	100	5.0	1	01/23/14 10:45	01/23/14 23:26	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	01/23/14 10:45	01/23/14 23:26	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	01/23/14 10:45	01/23/14 23:26	7440-43-9	
Chromium	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/23/14 23:26	7440-47-3	
Cobalt	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/23/14 23:26	7440-48-4	
Copper	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/23/14 23:26	7440-50-8	
Lead	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/23/14 23:26	7439-92-1	
Nickel	ND	ug/L	50.0	5.0	1	01/23/14 10:45	01/23/14 23:26	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	01/23/14 10:45	01/23/14 23:26	7782-49-2	
Silver	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/23/14 23:26	7440-22-4	
Thallium	ND	ug/L	5.5	5.4	1	01/23/14 10:45	01/23/14 23:26	7440-28-0	
Vanadium	ND	ug/L	25.0	5.0	1	01/23/14 10:45	01/23/14 23:26	7440-62-2	
Zinc	**30.8**	ug/L	10.0	10.0	1	01/23/14 10:45	01/23/14 23:26	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		01/24/14 20:30	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		01/24/14 20:30	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		01/24/14 20:30	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		01/24/14 20:30	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/24/14 20:30	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		01/24/14 20:30	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		01/24/14 20:30	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		01/24/14 20:30	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		01/24/14 20:30	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/24/14 20:30	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		01/24/14 20:30	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		01/24/14 20:30	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		01/24/14 20:30	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/24/14 20:30	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		01/24/14 20:30	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		01/24/14 20:30	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/24/14 20:30	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		01/24/14 20:30	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		01/24/14 20:30	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/24/14 20:30	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		01/24/14 20:30	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		01/24/14 20:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/24/14 20:30	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		01/24/14 20:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		01/24/14 20:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		01/24/14 20:30	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/24/14 20:30	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		01/24/14 20:30	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/24/14 20:30	10061-01-5	

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ANALYTICAL RESULTS

Project: Iredell SW-2
Pace Project No.: 92187380

Sample: SW-2 **Lab ID: 92187380001** Collected: 01/21/14 17:55 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/24/14 20:30	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/24/14 20:30	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		01/24/14 20:30	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		01/24/14 20:30	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		01/24/14 20:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		01/24/14 20:30	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		01/24/14 20:30	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		01/24/14 20:30	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		01/24/14 20:30	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/24/14 20:30	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	3.1	1		01/24/14 20:30	109-99-9	
Toluene	ND	ug/L	1.0	0.26	1		01/24/14 20:30	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/24/14 20:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/24/14 20:30	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/24/14 20:30	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/24/14 20:30	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		01/24/14 20:30	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		01/24/14 20:30	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/24/14 20:30	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		01/24/14 20:30	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/24/14 20:30	460-00-4	
1,2-Dichloroethane-d4 (S)	89	%	70-130		1		01/24/14 20:30	17060-07-0	
Toluene-d8 (S)	94	%	70-130		1		01/24/14 20:30	2037-26-5	

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QUALITY CONTROL DATA

Project: Iredell SW-2
Pace Project No.: 92187380

QC Batch: MPRP/15112
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92187380001

METHOD BLANK: 1126318
Matrix: Water
Associated Lab Samples: 92187380001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	6.0	01/23/14 23:06	
Arsenic	ug/L	ND	10.0	01/23/14 23:06	
Barium	ug/L	ND	100	01/23/14 23:06	
Beryllium	ug/L	ND	1.0	01/23/14 23:06	
Cadmium	ug/L	ND	1.0	01/23/14 23:06	
Chromium	ug/L	ND	10.0	01/23/14 23:06	
Cobalt	ug/L	ND	10.0	01/23/14 23:06	
Copper	ug/L	ND	10.0	01/23/14 23:06	
Lead	ug/L	ND	10.0	01/23/14 23:06	
Nickel	ug/L	ND	50.0	01/23/14 23:06	
Selenium	ug/L	ND	10.0	01/23/14 23:06	
Silver	ug/L	ND	10.0	01/23/14 23:06	
Thallium	ug/L	ND	5.5	01/23/14 23:06	
Vanadium	ug/L	ND	25.0	01/23/14 23:06	
Zinc	ug/L	ND	10.0	01/23/14 23:06	

LABORATORY CONTROL SAMPLE: 1126319

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	489	98	80-120	
Arsenic	ug/L	500	472	94	80-120	
Barium	ug/L	500	484	97	80-120	
Beryllium	ug/L	500	482	96	80-120	
Cadmium	ug/L	500	488	98	80-120	
Chromium	ug/L	500	491	98	80-120	
Cobalt	ug/L	500	487	97	80-120	
Copper	ug/L	500	488	98	80-120	
Lead	ug/L	500	482	96	80-120	
Nickel	ug/L	500	490	98	80-120	
Selenium	ug/L	500	492	98	80-120	
Silver	ug/L	250	246	98	80-120	
Thallium	ug/L	500	464	93	80-120	
Vanadium	ug/L	500	495	99	80-120	
Zinc	ug/L	500	479	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1126320 1126321

Parameter	Units	92186756001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	500	500	484	491	96	98	75-125	1	25	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Iredell SW-2
Pace Project No.: 92187380

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1126320 1126321

Parameter	Units	92186756001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	500	500	464	476	93	95	75-125	3	25	
Barium	ug/L	37.4	500	500	517	525	96	98	75-125	2	25	
Beryllium	ug/L	ND	500	500	480	487	96	97	75-125	1	25	
Cadmium	ug/L	ND	500	500	484	491	97	98	75-125	1	25	
Chromium	ug/L	16.7	500	500	506	513	98	99	75-125	1	25	
Cobalt	ug/L	ND	500	500	486	494	97	98	75-125	2	25	
Copper	ug/L	ND	500	500	490	498	98	99	75-125	2	25	
Lead	ug/L	ND	500	500	472	481	94	96	75-125	2	25	
Nickel	ug/L	12.4J	500	500	495	501	97	98	75-125	1	25	
Selenium	ug/L	ND	500	500	483	488	96	97	75-125	1	25	
Silver	ug/L	ND	250	250	244	248	97	99	75-125	2	25	
Thallium	ug/L	ND	500	500	458	467	91	92	75-125	2	25	
Vanadium	ug/L	ND	500	500	493	499	98	99	75-125	1	25	
Zinc	ug/L	11.6	500	500	479	485	93	95	75-125	1	25	

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QUALITY CONTROL DATA

Project: Iredell SW-2
Pace Project No.: 92187380

QC Batch: MSV/25595
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92187380001

METHOD BLANK: 1126877
Matrix: Water
Associated Lab Samples: 92187380001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	01/24/14 19:59	
1,1,1-Trichloroethane	ug/L	ND	1.0	01/24/14 19:59	
1,1,2,2-Tetrachloroethane	ug/L	ND	3.0	01/24/14 19:59	
1,1,2-Trichloroethane	ug/L	ND	1.0	01/24/14 19:59	
1,1-Dichloroethane	ug/L	ND	5.0	01/24/14 19:59	
1,1-Dichloroethene	ug/L	ND	5.0	01/24/14 19:59	
1,2,3-Trichloropropane	ug/L	ND	1.0	01/24/14 19:59	
1,2-Dibromo-3-chloropropane	ug/L	ND	13.0	01/24/14 19:59	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	01/24/14 19:59	
1,2-Dichlorobenzene	ug/L	ND	5.0	01/24/14 19:59	
1,2-Dichloroethane	ug/L	ND	1.0	01/24/14 19:59	
1,2-Dichloropropane	ug/L	ND	1.0	01/24/14 19:59	
1,3-Dichloropropane	ug/L	ND	1.0	01/24/14 19:59	
1,4-Dichlorobenzene	ug/L	ND	1.0	01/24/14 19:59	
2-Butanone (MEK)	ug/L	ND	100	01/24/14 19:59	
2-Hexanone	ug/L	ND	50.0	01/24/14 19:59	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	01/24/14 19:59	
Acetone	ug/L	ND	100	01/24/14 19:59	
Acrylonitrile	ug/L	ND	200	01/24/14 19:59	
Benzene	ug/L	ND	1.0	01/24/14 19:59	
Bromochloromethane	ug/L	ND	3.0	01/24/14 19:59	
Bromodichloromethane	ug/L	ND	1.0	01/24/14 19:59	
Bromoform	ug/L	ND	3.0	01/24/14 19:59	
Bromomethane	ug/L	ND	10.0	01/24/14 19:59	
Carbon disulfide	ug/L	ND	100	01/24/14 19:59	
Carbon tetrachloride	ug/L	ND	1.0	01/24/14 19:59	
Chlorobenzene	ug/L	ND	3.0	01/24/14 19:59	
Chloroethane	ug/L	ND	10.0	01/24/14 19:59	
Chloroform	ug/L	ND	5.0	01/24/14 19:59	
Chloromethane	ug/L	ND	1.0	01/24/14 19:59	
cis-1,2-Dichloroethene	ug/L	ND	5.0	01/24/14 19:59	
cis-1,3-Dichloropropene	ug/L	ND	1.0	01/24/14 19:59	
Dibromochloromethane	ug/L	ND	3.0	01/24/14 19:59	
Dibromomethane	ug/L	ND	10.0	01/24/14 19:59	
Ethylbenzene	ug/L	ND	1.0	01/24/14 19:59	
Iodomethane	ug/L	ND	10.0	01/24/14 19:59	
Methylene Chloride	ug/L	ND	1.0	01/24/14 19:59	
Styrene	ug/L	ND	1.0	01/24/14 19:59	
Tetrachloroethene	ug/L	ND	1.0	01/24/14 19:59	
Tetrahydrofuran	ug/L	ND	10.0	01/24/14 19:59	
Toluene	ug/L	ND	1.0	01/24/14 19:59	
trans-1,2-Dichloroethene	ug/L	ND	5.0	01/24/14 19:59	
trans-1,3-Dichloropropene	ug/L	ND	1.0	01/24/14 19:59	

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

QUALITY CONTROL DATA

Project: Iredell SW-2
Pace Project No.: 92187380

METHOD BLANK: 1126877 Matrix: Water
Associated Lab Samples: 92187380001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,4-Dichloro-2-butene	ug/L	ND	100	01/24/14 19:59	
Trichloroethene	ug/L	ND	1.0	01/24/14 19:59	
Trichlorofluoromethane	ug/L	ND	1.0	01/24/14 19:59	
Vinyl acetate	ug/L	ND	50.0	01/24/14 19:59	
Vinyl chloride	ug/L	ND	1.0	01/24/14 19:59	
Xylene (Total)	ug/L	ND	5.0	01/24/14 19:59	
1,2-Dichloroethane-d4 (S)	%	89	70-130	01/24/14 19:59	
4-Bromofluorobenzene (S)	%	99	70-130	01/24/14 19:59	
Toluene-d8 (S)	%	94	70-130	01/24/14 19:59	

LABORATORY CONTROL SAMPLE: 1126878

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	47.4	95	70-130	
1,1,1-Trichloroethane	ug/L	50	43.2	86	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	47.4	95	70-130	
1,1,2-Trichloroethane	ug/L	50	45.5	91	70-130	
1,1-Dichloroethane	ug/L	50	43.3	87	70-130	
1,1-Dichloroethene	ug/L	50	43.1	86	70-132	
1,2,3-Trichloropropane	ug/L	50	46.2	92	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	47.1	94	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	47.8	96	70-130	
1,2-Dichlorobenzene	ug/L	50	46.9	94	70-130	
1,2-Dichloroethane	ug/L	50	41.9	84	70-130	
1,2-Dichloropropane	ug/L	50	45.5	91	70-130	
1,3-Dichloropropane	ug/L	50	47.3	95	70-130	
1,4-Dichlorobenzene	ug/L	50	47.3	95	70-130	
2-Butanone (MEK)	ug/L	100	85.3J	85	70-145	
2-Hexanone	ug/L	100	92.3	92	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	91.5J	92	70-140	
Acetone	ug/L	100	80.5J	80	50-175	
Acrylonitrile	ug/L	250	220	88	70-143	
Benzene	ug/L	50	47.0	94	70-130	
Bromochloromethane	ug/L	50	34.2	68	70-130	L0
Bromodichloromethane	ug/L	50	44.6	89	70-130	
Bromoform	ug/L	50	48.8	98	70-130	
Bromomethane	ug/L	50	40.1	80	54-130	
Carbon disulfide	ug/L	50	45.7J	91	70-131	
Carbon tetrachloride	ug/L	50	47.1	94	70-132	
Chlorobenzene	ug/L	50	46.6	93	70-130	
Chloroethane	ug/L	50	32.7	65	64-134	
Chloroform	ug/L	50	42.2	84	70-130	
Chloromethane	ug/L	50	38.7	77	64-130	
cis-1,2-Dichloroethene	ug/L	50	41.6	83	70-131	
cis-1,3-Dichloropropene	ug/L	50	45.4	91	70-130	

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QUALITY CONTROL DATA

Project: Iredell SW-2
Pace Project No.: 92187380

LABORATORY CONTROL SAMPLE: 1126878

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	50	48.7	97	70-130	
Dibromomethane	ug/L	50	45.2	90	70-131	
Ethylbenzene	ug/L	50	46.1	92	70-130	
Iodomethane	ug/L	100	83.4	83	49-180	
Methylene Chloride	ug/L	50	43.1	86	63-130	
Styrene	ug/L	50	47.6	95	70-130	
Tetrachloroethene	ug/L	50	48.8	98	70-130	
Tetrahydrofuran	ug/L	500	435	87	70-130	
Toluene	ug/L	50	44.9	90	70-130	
trans-1,2-Dichloroethene	ug/L	50	41.0	82	70-130	
trans-1,3-Dichloropropene	ug/L	50	45.7	91	70-132	
trans-1,4-Dichloro-2-butene	ug/L	50	47.2J	94	70-141	
Trichloroethene	ug/L	50	42.9	86	70-130	
Trichlorofluoromethane	ug/L	50	36.3	73	62-133	
Vinyl acetate	ug/L	100	142	142	66-157	
Vinyl chloride	ug/L	50	38.6	77	69-130	
Xylene (Total)	ug/L	150	140	94	70-130	
1,2-Dichloroethane-d4 (S)	%			92	70-130	
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1126879 1126880

Parameter	Units	92187380001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	42.0	42.7	84	85	70-166	2	30	
Benzene	ug/L	ND	50	50	47.8	49.0	96	98	70-148	2	30	
Chlorobenzene	ug/L	ND	50	50	48.4	49.2	97	98	70-146	2	30	
Toluene	ug/L	ND	50	50	44.4	45.0	89	90	70-155	1	30	
Trichloroethene	ug/L	ND	50	50	45.9	47.0	92	94	69-151	2	30	
1,2-Dichloroethane-d4 (S)	%						90	91	70-130			
4-Bromofluorobenzene (S)	%						98	98	70-130			
Toluene-d8 (S)	%						97	97	70-130			

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QUALIFIERS

Project: Iredell SW-2
Pace Project No.: 92187380

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

ANALYTE QUALIFIERS

L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Iredell SW-2
Pace Project No.: 92187380

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92187380001	**SW-2**	EPA 3010	MPRP/15112	EPA 6010	ICP/13715
92187380001	**SW-2**	EPA 8260	MSV/25595		

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Pace Analytical	Document Name: Sample Condition Upon Receipt (SCUR)	Page 1 of 2
	Document Number: F-CHR-CS-03-rev.13	Issuing Authority: Pace Huntersville Quality Office

Client Name: Municipal

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

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

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

Thermometer Used: IR Gun T1102 T1301 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor **T1102**: No Correction **T1301**: No Correction

Corrected Cooler Temp.: 2.6 °C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Optional
Proj. Due Date:
Proj. Name:

Date and Initials of person examining contents: 1/22/14

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: JG Date: 1/22/14

SRF Review: JG Date: 1/23/14

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

WO# : 92187380

92187380

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 1 Of 1

Section A — Required Client Information:

Company:	Municipal Engineering Services
Address:	P.O. Box 97
	Garner, NC 27529
Email To:	jpfohl@mesco.com
Phone:	919-772-5393 Fax
Requested Due Date/TAT:	10 Day (Default)

Section B — Required Project Information:

Report To:	Jonathan Pfohl
Copy To:	
Purchase Order No.	Iredell - SW-2
Client Project ID:	~~Franklin MSW Landfill~~
Container Order Number:	

Section C — Invoice Information:

Attention:	Municipal Engineering Services
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Godwin
Pace Profile #:	

Regulatory Agency
State / Location
North Carolina

Requested Analysis Filtered (Y/N)

ITEM#	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test	VOCs- App I	Metals- App I	Tetrahydrofuran										92187380
																		Y/N	N	N	N	N	N	N	N	N	N	N	N		
1	~~SW-BY MW-2~~ SW-2	WT	G			1/21/14	5:55		3			1	3						X	X	X										WI
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	MESCO	1/22/14	7:15	B Moody - Pace	01-22-14	07:15	
	B Moody	01-22-14	17:10	[illegible]	1/22/14	17:10	

SAMPLER NAME AND SIGNATURE		
PRINT Name of SAMPLER:	Jonathan Pfohl	
SIGNATURE of SAMPLER:		DATE Signed: 1/22/14

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

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February 03, 2014

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

RE: Project: Iredell SW-3
Pace Project No.: 92187560

Dear Mr. Pfohl:
Enclosed are the analytical results for sample(s) received by the laboratory on January 22, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: Iredell SW-3
Pace Project No.: 92187560

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 SUMMARY

Project: Iredell SW-3
Pace Project No.: 92187560

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92187560001	**SW-3**	Water	01/21/14 13:50	01/22/14 17:10

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SAMPLE ANALYTE COUNT

Project: Iredell SW-3
Pace Project No.: 92187560

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92187560001	**SW-3**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C

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ANALYTICAL RESULTS

Project: Iredell SW-3
Pace Project No.: 92187560

Sample: SW-3 **Lab ID: 92187560001** Collected: 01/21/14 13:50 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	5.0	1	01/24/14 10:40	01/28/14 21:51	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:51	7440-38-2	
Barium	**72.1J**	ug/L	100	5.0	1	01/24/14 10:40	01/28/14 21:51	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	01/24/14 10:40	01/28/14 21:51	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	01/24/14 10:40	01/28/14 21:51	7440-43-9	
Chromium	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:51	7440-47-3	
Cobalt	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:51	7440-48-4	
Copper	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:51	7440-50-8	
Lead	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/31/14 18:04	7439-92-1	
Nickel	ND	ug/L	50.0	5.0	1	01/24/14 10:40	01/28/14 21:51	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	01/24/14 10:40	01/28/14 21:51	7782-49-2	
Silver	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 21:51	7440-22-4	
Thallium	ND	ug/L	5.5	5.4	1	01/24/14 10:40	01/28/14 21:51	7440-28-0	
Vanadium	ND	ug/L	25.0	5.0	1	01/24/14 10:40	01/28/14 21:51	7440-62-2	
Zinc	**269**	ug/L	10.0	10.0	1	01/24/14 10:40	01/28/14 21:51	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		01/29/14 04:43	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		01/29/14 04:43	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		01/29/14 04:43	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		01/29/14 04:43	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/29/14 04:43	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		01/29/14 04:43	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		01/29/14 04:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		01/29/14 04:43	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		01/29/14 04:43	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/29/14 04:43	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		01/29/14 04:43	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		01/29/14 04:43	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		01/29/14 04:43	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/29/14 04:43	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		01/29/14 04:43	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		01/29/14 04:43	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/29/14 04:43	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		01/29/14 04:43	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		01/29/14 04:43	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/29/14 04:43	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		01/29/14 04:43	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		01/29/14 04:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/29/14 04:43	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		01/29/14 04:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		01/29/14 04:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		01/29/14 04:43	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/29/14 04:43	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		01/29/14 04:43	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/29/14 04:43	10061-01-5	

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ANALYTICAL RESULTS

Project: Iredell SW-3
Pace Project No.: 92187560

Sample: SW-3 **Lab ID: 92187560001** Collected: 01/21/14 13:50 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/29/14 04:43	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/29/14 04:43	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		01/29/14 04:43	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		01/29/14 04:43	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		01/29/14 04:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		01/29/14 04:43	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		01/29/14 04:43	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		01/29/14 04:43	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		01/29/14 04:43	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/29/14 04:43	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	3.1	1		01/29/14 04:43	109-99-9	
Toluene	ND	ug/L	1.0	0.26	1		01/29/14 04:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/29/14 04:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/29/14 04:43	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/29/14 04:43	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/29/14 04:43	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		01/29/14 04:43	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		01/29/14 04:43	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/29/14 04:43	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		01/29/14 04:43	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/29/14 04:43	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		01/29/14 04:43	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		01/29/14 04:43	2037-26-5	

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QUALITY CONTROL DATA

Project: Iredell SW-3
Pace Project No.: 92187560

QC Batch: MPRP/15123
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92187560001

METHOD BLANK: 1127328
Matrix: Water
Associated Lab Samples: 92187560001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	6.0	01/28/14 20:47	
Arsenic	ug/L	ND	10.0	01/28/14 20:47	
Barium	ug/L	ND	100	01/28/14 20:47	
Beryllium	ug/L	ND	1.0	01/28/14 20:47	
Cadmium	ug/L	ND	1.0	01/28/14 20:47	
Chromium	ug/L	ND	10.0	01/28/14 20:47	
Cobalt	ug/L	ND	10.0	01/28/14 20:47	
Copper	ug/L	ND	10.0	01/28/14 20:47	
Lead	ug/L	ND	10.0	01/28/14 20:47	
Nickel	ug/L	ND	50.0	01/28/14 20:47	
Selenium	ug/L	ND	10.0	01/28/14 20:47	
Silver	ug/L	ND	10.0	01/28/14 20:47	
Thallium	ug/L	ND	5.5	01/28/14 20:47	
Vanadium	ug/L	ND	25.0	01/28/14 20:47	
Zinc	ug/L	ND	10.0	01/28/14 20:47	

LABORATORY CONTROL SAMPLE: 1127329

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	492	98	80-120	
Arsenic	ug/L	500	467	93	80-120	
Barium	ug/L	500	489	98	80-120	
Beryllium	ug/L	500	490	98	80-120	
Cadmium	ug/L	500	495	99	80-120	
Chromium	ug/L	500	505	101	80-120	
Cobalt	ug/L	500	484	97	80-120	
Copper	ug/L	500	502	100	80-120	
Lead	ug/L	500	484	97	80-120	
Nickel	ug/L	500	495	99	80-120	
Selenium	ug/L	500	487	97	80-120	
Silver	ug/L	250	250	100	80-120	
Thallium	ug/L	500	479	96	80-120	
Vanadium	ug/L	500	494	99	80-120	
Zinc	ug/L	500	475	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1127330 1127331

Parameter	Units	92187386008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	500	500	476	478	95	95	75-125	0	25	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Iredell SW-3
Pace Project No.: 92187560

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1127330 1127331

Parameter	Units	92187386008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	500	500	458	458	92	92	75-125	0	25	
Barium	ug/L	6.5J	500	500	483	486	95	96	75-125	1	25	
Beryllium	ug/L	ND	500	500	482	486	96	97	75-125	1	25	
Cadmium	ug/L	ND	500	500	485	481	97	96	75-125	1	25	
Chromium	ug/L	ND	500	500	496	496	99	99	75-125	0	25	
Cobalt	ug/L	ND	500	500	470	469	94	94	75-125	0	25	
Copper	ug/L	ND	500	500	493	495	99	99	75-125	0	25	
Lead	ug/L	ND	500	500	468	469	94	94	75-125	0	25	
Nickel	ug/L	ND	500	500	483	481	96	96	75-125	0	25	
Selenium	ug/L	ND	500	500	468	465	94	93	75-125	1	25	
Silver	ug/L	ND	250	250	243	243	97	97	75-125	0	25	
Thallium	ug/L	ND	500	500	457	460	91	92	75-125	1	25	
Vanadium	ug/L	ND	500	500	491	491	97	97	75-125	0	25	
Zinc	ug/L	ND	500	500	467	467	92	92	75-125	0	25	

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QUALITY CONTROL DATA

Project: Iredell SW-3
Pace Project No.: 92187560

QC Batch: MSV/25630
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92187560001

METHOD BLANK: 1129290
Matrix: Water
Associated Lab Samples: 92187560001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	01/29/14 04:28	
1,1,1-Trichloroethane	ug/L	ND	1.0	01/29/14 04:28	
1,1,2,2-Tetrachloroethane	ug/L	ND	3.0	01/29/14 04:28	
1,1,2-Trichloroethane	ug/L	ND	1.0	01/29/14 04:28	
1,1-Dichloroethane	ug/L	ND	5.0	01/29/14 04:28	
1,1-Dichloroethene	ug/L	ND	5.0	01/29/14 04:28	
1,2,3-Trichloropropane	ug/L	ND	1.0	01/29/14 04:28	
1,2-Dibromo-3-chloropropane	ug/L	ND	13.0	01/29/14 04:28	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	01/29/14 04:28	
1,2-Dichlorobenzene	ug/L	ND	5.0	01/29/14 04:28	
1,2-Dichloroethane	ug/L	ND	1.0	01/29/14 04:28	
1,2-Dichloropropane	ug/L	ND	1.0	01/29/14 04:28	
1,3-Dichloropropane	ug/L	ND	1.0	01/29/14 04:28	
1,4-Dichlorobenzene	ug/L	ND	1.0	01/29/14 04:28	
2-Butanone (MEK)	ug/L	ND	100	01/29/14 04:28	
2-Hexanone	ug/L	ND	50.0	01/29/14 04:28	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	01/29/14 04:28	
Acetone	ug/L	ND	100	01/29/14 04:28	
Acrylonitrile	ug/L	ND	200	01/29/14 04:28	
Benzene	ug/L	ND	1.0	01/29/14 04:28	
Bromochloromethane	ug/L	ND	3.0	01/29/14 04:28	
Bromodichloromethane	ug/L	ND	1.0	01/29/14 04:28	
Bromoform	ug/L	ND	3.0	01/29/14 04:28	
Bromomethane	ug/L	ND	10.0	01/29/14 04:28	
Carbon disulfide	ug/L	ND	100	01/29/14 04:28	
Carbon tetrachloride	ug/L	ND	1.0	01/29/14 04:28	
Chlorobenzene	ug/L	ND	3.0	01/29/14 04:28	
Chloroethane	ug/L	ND	10.0	01/29/14 04:28	
Chloroform	ug/L	ND	5.0	01/29/14 04:28	
Chloromethane	ug/L	ND	1.0	01/29/14 04:28	
cis-1,2-Dichloroethene	ug/L	ND	5.0	01/29/14 04:28	
cis-1,3-Dichloropropene	ug/L	ND	1.0	01/29/14 04:28	
Dibromochloromethane	ug/L	ND	3.0	01/29/14 04:28	
Dibromomethane	ug/L	ND	10.0	01/29/14 04:28	
Ethylbenzene	ug/L	ND	1.0	01/29/14 04:28	
Iodomethane	ug/L	ND	10.0	01/29/14 04:28	
Methylene Chloride	ug/L	ND	1.0	01/29/14 04:28	
Styrene	ug/L	ND	1.0	01/29/14 04:28	
Tetrachloroethene	ug/L	ND	1.0	01/29/14 04:28	
Tetrahydrofuran	ug/L	ND	10.0	01/29/14 04:28	
Toluene	ug/L	ND	1.0	01/29/14 04:28	
trans-1,2-Dichloroethene	ug/L	ND	5.0	01/29/14 04:28	
trans-1,3-Dichloropropene	ug/L	ND	1.0	01/29/14 04:28	

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QUALITY CONTROL DATA

Project: Iredell SW-3
Pace Project No.: 92187560

METHOD BLANK: 1129290 Matrix: Water
Associated Lab Samples: 92187560001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,4-Dichloro-2-butene	ug/L	ND	100	01/29/14 04:28	
Trichloroethene	ug/L	ND	1.0	01/29/14 04:28	
Trichlorofluoromethane	ug/L	ND	1.0	01/29/14 04:28	
Vinyl acetate	ug/L	ND	50.0	01/29/14 04:28	
Vinyl chloride	ug/L	ND	1.0	01/29/14 04:28	
Xylene (Total)	ug/L	ND	5.0	01/29/14 04:28	
1,2-Dichloroethane-d4 (S)	%	109	70-130	01/29/14 04:28	
4-Bromofluorobenzene (S)	%	95	70-130	01/29/14 04:28	
Toluene-d8 (S)	%	100	70-130	01/29/14 04:28	

LABORATORY CONTROL SAMPLE: 1129291

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	47.0	94	70-130	
1,1,1-Trichloroethane	ug/L	50	48.7	97	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	45.4	91	70-130	
1,1,2-Trichloroethane	ug/L	50	46.8	94	70-130	
1,1-Dichloroethane	ug/L	50	49.0	98	70-130	
1,1-Dichloroethene	ug/L	50	51.6	103	70-132	
1,2,3-Trichloropropane	ug/L	50	46.0	92	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	47.0	94	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	47.6	95	70-130	
1,2-Dichlorobenzene	ug/L	50	46.6	93	70-130	
1,2-Dichloroethane	ug/L	50	48.7	97	70-130	
1,2-Dichloropropane	ug/L	50	47.9	96	70-130	
1,3-Dichloropropane	ug/L	50	48.1	96	70-130	
1,4-Dichlorobenzene	ug/L	50	45.6	91	70-130	
2-Butanone (MEK)	ug/L	100	95.2J	95	70-145	
2-Hexanone	ug/L	100	97.6	98	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	97.4J	97	70-140	
Acetone	ug/L	100	99.6J	100	50-175	
Acrylonitrile	ug/L	250	254	102	70-143	
Benzene	ug/L	50	48.3	97	70-130	
Bromochloromethane	ug/L	50	47.4	95	70-130	
Bromodichloromethane	ug/L	50	45.1	90	70-130	
Bromoform	ug/L	50	44.2	88	70-130	
Bromomethane	ug/L	50	53.1	106	54-130	
Carbon disulfide	ug/L	50	51.5J	103	70-131	
Carbon tetrachloride	ug/L	50	46.8	94	70-132	
Chlorobenzene	ug/L	50	46.4	93	70-130	
Chloroethane	ug/L	50	46.4	93	64-134	
Chloroform	ug/L	50	46.5	93	70-130	
Chloromethane	ug/L	50	51.2	102	64-130	
cis-1,2-Dichloroethene	ug/L	50	48.1	96	70-131	
cis-1,3-Dichloropropene	ug/L	50	45.5	91	70-130	

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QUALITY CONTROL DATA

Project: Iredell SW-3
Pace Project No.: 92187560

LABORATORY CONTROL SAMPLE: 1129291

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	50	46.1	92	70-130	
Dibromomethane	ug/L	50	43.6	87	70-131	
Ethylbenzene	ug/L	50	46.2	92	70-130	
Iodomethane	ug/L	100	104	104	49-180	
Methylene Chloride	ug/L	50	54.9	110	63-130	
Styrene	ug/L	50	48.0	96	70-130	
Tetrachloroethene	ug/L	50	46.4	93	70-130	
Tetrahydrofuran	ug/L	500	527	105	70-130	
Toluene	ug/L	50	46.0	92	70-130	
trans-1,2-Dichloroethene	ug/L	50	48.4	97	70-130	
trans-1,3-Dichloropropene	ug/L	50	46.6	93	70-132	
trans-1,4-Dichloro-2-butene	ug/L	50	51.7J	103	70-141	
Trichloroethene	ug/L	50	44.6	89	70-130	
Trichlorofluoromethane	ug/L	50	49.1	98	62-133	
Vinyl acetate	ug/L	100	161	161	66-157	F3,L0
Vinyl chloride	ug/L	50	49.8	100	69-130	
Xylene (Total)	ug/L	150	142	95	70-130	
1,2-Dichloroethane-d4 (S)	%			108	70-130	
4-Bromofluorobenzene (S)	%			96	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1129729 1129730

Parameter	Units	92187383004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	37.2	37.1	74	74	70-166	0	30	
Benzene	ug/L	ND	50	50	52.0	52.7	104	105	70-148	1	30	
Chlorobenzene	ug/L	ND	50	50	54.5	55.1	109	110	70-146	1	30	
Toluene	ug/L	ND	50	50	51.1	50.4	102	101	70-155	1	30	
Trichloroethene	ug/L	ND	50	50	57.1	57.1	114	114	69-151	0	30	
1,2-Dichloroethane-d4 (S)	%						95	96	70-130			
4-Bromofluorobenzene (S)	%						101	102	70-130			
Toluene-d8 (S)	%						98	96	70-130			

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QUALIFIERS

Project: Iredell SW-3
Pace Project No.: 92187560

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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LABORATORIES

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

ANALYTE QUALIFIERS

F3	The recovery of the second source standard used to verify the initial calibration curve for this analyte is outside the laboratory's control limits. The result is estimated.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Iredell SW-3
Pace Project No.: 92187560

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92187560001	**SW-3**	EPA 3010	MPRP/15123	EPA 6010	ICP/13727
92187560001	**SW-3**	EPA 8260	MSV/25630		

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Pace Analytical	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: December 16, 2013 Page 1 of 2
	Document Number: **F-CHR-CS-03-rev.13**	Issuing Authority: Pace Huntersville Quality Office

Client Name: Municipal

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

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

Optional
Proj. Due Date:
Proj. Name:

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

Thermometer Used: IR Gun T1102 T1301 **Type of Ice:** Wet Blue None ☐ Samples on ice, cooling process has begun

Temp Correction Factor **T1102**: No Correction **T1301**: No Correction

Corrected Cooler Temp.: 2.4 °C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 1/22/14

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: [signature] Date: 1/23/14

SRF Review: [signature] Date: 1/24/14

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

WO# : 92187560

92187560

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 1 Of 1

Section A
Required Client Information:

Company:	Municipal Engineering Services
Address:	P.O. Box 97
	Garner, NC 27529
Email To:	jpfohl@mesco.com
Phone:	919-772-5393 Fax:
Requested Due Date/TAT:	10 Day (Default)

Section B
Required Project Information:

Report To:	Jonathan Pfohl
Copy To:	
Purchase Order No.	
Client Project ID:	Iredell SW-3
Container Order Number:	

Section C
Invoice Information:

Attention:	Municipal Engineering Services
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Godwin
Pace Profile #:	

Regulatory Agency
State / Location
North Carolina

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

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

Requested Analysis Filtered (Y/N)

ITEM#	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	VOCs- App 1	Metals-App 1		TETRAHYDROFURAN									
																			N	N	N	N	N	N	N	N	N	N	N	N	
1	SW-3	WT	G			1/21/14	1:50		4			1	3						x	x		x									9218 7560001
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			
	/MESCO	1/22/14	7:15AM	PICKED UP BY						
				(George CPACE) But						
				C-O-C submitted 1/23/14						
					1/22/14	17:17	2.6	Y	Y	Y
							TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jonathan Pfohl

SIGNATURE of SAMPLER:

DATE Signed: 1/22/14

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

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

February 03, 2014

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

RE: Project: Iredell Blanks
Pace Project No.: 92187567

Dear Mr. Pfohl:
Enclosed are the analytical results for sample(s) received by the laboratory on January 23, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: Iredell Blanks
Pace Project No.: 92187567

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 SUMMARY

Project: Iredell Blanks
Pace Project No.: 92187567

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92187567001	**EB**	Water	01/23/14 16:00	01/23/14 16:30
92187567002	**FB**	Water	01/23/14 16:10	01/23/14 16:30
92187567003	**TB**	Water	01/23/14 00:00	01/23/14 16:30

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SAMPLE ANALYTE COUNT

Project: Iredell Blanks
Pace Project No.: 92187567

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92187567001	**EB**	EPA 6010	JMW, NJZ	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92187567002	**FB**	EPA 8260	MCK	52	PASI-C
92187567003	**TB**	EPA 8260	MCK	52	PASI-C

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ANALYTICAL RESULTS

Project: Iredell Blanks
Pace Project No.: 92187567

Sample: EB **Lab ID: 92187567001** Collected: 01/23/14 16:00 Received: 01/23/14 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	5.0	1	01/24/14 10:40	01/28/14 22:25	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 22:25	7440-38-2	
Barium	ND	ug/L	100	5.0	1	01/24/14 10:40	01/28/14 22:25	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	01/24/14 10:40	01/28/14 22:25	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	01/24/14 10:40	01/28/14 22:25	7440-43-9	
Chromium	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 22:25	7440-47-3	
Cobalt	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 22:25	7440-48-4	
Copper	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 22:25	7440-50-8	
Lead	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/29/14 19:54	7439-92-1	
Nickel	ND	ug/L	50.0	5.0	1	01/24/14 10:40	01/28/14 22:25	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	01/24/14 10:40	01/28/14 22:25	7782-49-2	
Silver	ND	ug/L	10.0	5.0	1	01/24/14 10:40	01/28/14 22:25	7440-22-4	
Thallium	ND	ug/L	5.5	5.4	1	01/24/14 10:40	01/28/14 22:25	7440-28-0	
Vanadium	ND	ug/L	25.0	5.0	1	01/24/14 10:40	01/28/14 22:25	7440-62-2	
Zinc	ND	ug/L	10.0	10.0	1	01/24/14 10:40	01/28/14 22:25	7440-66-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		01/29/14 12:31	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		01/29/14 12:31	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		01/29/14 12:31	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		01/29/14 12:31	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/29/14 12:31	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		01/29/14 12:31	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		01/29/14 12:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		01/29/14 12:31	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		01/29/14 12:31	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/29/14 12:31	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		01/29/14 12:31	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		01/29/14 12:31	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		01/29/14 12:31	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/29/14 12:31	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		01/29/14 12:31	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		01/29/14 12:31	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/29/14 12:31	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		01/29/14 12:31	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		01/29/14 12:31	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/29/14 12:31	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		01/29/14 12:31	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		01/29/14 12:31	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/29/14 12:31	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		01/29/14 12:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		01/29/14 12:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		01/29/14 12:31	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/29/14 12:31	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		01/29/14 12:31	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/29/14 12:31	10061-01-5	

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ANALYTICAL RESULTS

Project: Iredell Blanks
Pace Project No.: 92187567

Sample: EB **Lab ID: 92187567001** Collected: 01/23/14 16:00 Received: 01/23/14 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/29/14 12:31	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/29/14 12:31	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		01/29/14 12:31	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		01/29/14 12:31	74-88-4	
Methylene Chloride	**1.2**	ug/L	1.0	0.97	1		01/29/14 12:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		01/29/14 12:31	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		01/29/14 12:31	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		01/29/14 12:31	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		01/29/14 12:31	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/29/14 12:31	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	3.1	1		01/29/14 12:31	109-99-9	
Toluene	ND	ug/L	1.0	0.26	1		01/29/14 12:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/29/14 12:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/29/14 12:31	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/29/14 12:31	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/29/14 12:31	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		01/29/14 12:31	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		01/29/14 12:31	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/29/14 12:31	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		01/29/14 12:31	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		01/29/14 12:31	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		01/29/14 12:31	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		01/29/14 12:31	2037-26-5	

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ANALYTICAL RESULTS

Project: Iredell Blanks
Pace Project No.: 92187567

Sample: FB **Lab ID: 92187567002** Collected: 01/23/14 16:10 Received: 01/23/14 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		01/29/14 12:47	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		01/29/14 12:47	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		01/29/14 12:47	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		01/29/14 12:47	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/29/14 12:47	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		01/29/14 12:47	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		01/29/14 12:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		01/29/14 12:47	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		01/29/14 12:47	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/29/14 12:47	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		01/29/14 12:47	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		01/29/14 12:47	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		01/29/14 12:47	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/29/14 12:47	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		01/29/14 12:47	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		01/29/14 12:47	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/29/14 12:47	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		01/29/14 12:47	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		01/29/14 12:47	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/29/14 12:47	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		01/29/14 12:47	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		01/29/14 12:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/29/14 12:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		01/29/14 12:47	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		01/29/14 12:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		01/29/14 12:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/29/14 12:47	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		01/29/14 12:47	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/29/14 12:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/29/14 12:47	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/29/14 12:47	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		01/29/14 12:47	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		01/29/14 12:47	74-88-4	
Methylene Chloride	**1.1**	ug/L	1.0	0.97	1		01/29/14 12:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		01/29/14 12:47	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		01/29/14 12:47	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		01/29/14 12:47	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		01/29/14 12:47	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/29/14 12:47	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	3.1	1		01/29/14 12:47	109-99-9	
Toluene	ND	ug/L	1.0	0.26	1		01/29/14 12:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/29/14 12:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/29/14 12:47	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/29/14 12:47	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/29/14 12:47	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		01/29/14 12:47	96-18-4	

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ANALYTICAL RESULTS

Project: Iredell Blanks
Pace Project No.: 92187567

Sample: FB **Lab ID: 92187567002** Collected: 01/23/14 16:10 Received: 01/23/14 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Vinyl acetate	ND	ug/L	50.0	0.35	1		01/29/14 12:47	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/29/14 12:47	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		01/29/14 12:47	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		01/29/14 12:47	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		01/29/14 12:47	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		01/29/14 12:47	2037-26-5	

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ANALYTICAL RESULTS

Project: Iredell Blanks
Pace Project No.: 92187567

Sample: TB **Lab ID: 92187567003** Collected: 01/23/14 00:00 Received: 01/23/14 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		01/29/14 13:02	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		01/29/14 13:02	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		01/29/14 13:02	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		01/29/14 13:02	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/29/14 13:02	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		01/29/14 13:02	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		01/29/14 13:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		01/29/14 13:02	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		01/29/14 13:02	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/29/14 13:02	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		01/29/14 13:02	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		01/29/14 13:02	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		01/29/14 13:02	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/29/14 13:02	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		01/29/14 13:02	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		01/29/14 13:02	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/29/14 13:02	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		01/29/14 13:02	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		01/29/14 13:02	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/29/14 13:02	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		01/29/14 13:02	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		01/29/14 13:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/29/14 13:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		01/29/14 13:02	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.19	1		01/29/14 13:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		01/29/14 13:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/29/14 13:02	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		01/29/14 13:02	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/29/14 13:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/29/14 13:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/29/14 13:02	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		01/29/14 13:02	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		01/29/14 13:02	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		01/29/14 13:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		01/29/14 13:02	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		01/29/14 13:02	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		01/29/14 13:02	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		01/29/14 13:02	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/29/14 13:02	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	3.1	1		01/29/14 13:02	109-99-9	
Toluene	ND	ug/L	1.0	0.26	1		01/29/14 13:02	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/29/14 13:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/29/14 13:02	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/29/14 13:02	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/29/14 13:02	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		01/29/14 13:02	96-18-4	

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ANALYTICAL RESULTS

Project: Iredell Blanks
Pace Project No.: 92187567

Sample: TB **Lab ID: 92187567003** Collected: 01/23/14 00:00 Received: 01/23/14 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Vinyl acetate	ND	ug/L	50.0	0.35	1		01/29/14 13:02	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/29/14 13:02	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		01/29/14 13:02	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		01/29/14 13:02	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		01/29/14 13:02	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		01/29/14 13:02	2037-26-5	

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QUALITY CONTROL DATA

Project: Iredell Blanks
Pace Project No.: 92187567

QC Batch: MPRP/15123
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92187567001

METHOD BLANK: 1127328
Matrix: Water
Associated Lab Samples: 92187567001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	6.0	01/28/14 20:47	
Arsenic	ug/L	ND	10.0	01/28/14 20:47	
Barium	ug/L	ND	100	01/28/14 20:47	
Beryllium	ug/L	ND	1.0	01/28/14 20:47	
Cadmium	ug/L	ND	1.0	01/28/14 20:47	
Chromium	ug/L	ND	10.0	01/28/14 20:47	
Cobalt	ug/L	ND	10.0	01/28/14 20:47	
Copper	ug/L	ND	10.0	01/28/14 20:47	
Lead	ug/L	ND	10.0	01/28/14 20:47	
Nickel	ug/L	ND	50.0	01/28/14 20:47	
Selenium	ug/L	ND	10.0	01/28/14 20:47	
Silver	ug/L	ND	10.0	01/28/14 20:47	
Thallium	ug/L	ND	5.5	01/28/14 20:47	
Vanadium	ug/L	ND	25.0	01/28/14 20:47	
Zinc	ug/L	ND	10.0	01/28/14 20:47	

LABORATORY CONTROL SAMPLE: 1127329

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	492	98	80-120	
Arsenic	ug/L	500	467	93	80-120	
Barium	ug/L	500	489	98	80-120	
Beryllium	ug/L	500	490	98	80-120	
Cadmium	ug/L	500	495	99	80-120	
Chromium	ug/L	500	505	101	80-120	
Cobalt	ug/L	500	484	97	80-120	
Copper	ug/L	500	502	100	80-120	
Lead	ug/L	500	484	97	80-120	
Nickel	ug/L	500	495	99	80-120	
Selenium	ug/L	500	487	97	80-120	
Silver	ug/L	250	250	100	80-120	
Thallium	ug/L	500	479	96	80-120	
Vanadium	ug/L	500	494	99	80-120	
Zinc	ug/L	500	475	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1127330 1127331

Parameter	Units	92187386008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	500	500	476	478	95	95	75-125	0	25	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Iredell Blanks
Pace Project No.: 92187567

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1127330 1127331

Parameter	Units	92187386008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	500	500	458	458	92	92	75-125	0	25	
Barium	ug/L	6.5J	500	500	483	486	95	96	75-125	1	25	
Beryllium	ug/L	ND	500	500	482	486	96	97	75-125	1	25	
Cadmium	ug/L	ND	500	500	485	481	97	96	75-125	1	25	
Chromium	ug/L	ND	500	500	496	496	99	99	75-125	0	25	
Cobalt	ug/L	ND	500	500	470	469	94	94	75-125	0	25	
Copper	ug/L	ND	500	500	493	495	99	99	75-125	0	25	
Lead	ug/L	ND	500	500	468	469	94	94	75-125	0	25	
Nickel	ug/L	ND	500	500	483	481	96	96	75-125	0	25	
Selenium	ug/L	ND	500	500	468	465	94	93	75-125	1	25	
Silver	ug/L	ND	250	250	243	243	97	97	75-125	0	25	
Thallium	ug/L	ND	500	500	457	460	91	92	75-125	1	25	
Vanadium	ug/L	ND	500	500	491	491	97	97	75-125	0	25	
Zinc	ug/L	ND	500	500	467	467	92	92	75-125	0	25	

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QUALITY CONTROL DATA

Project: Iredell Blanks
Pace Project No.: 92187567

QC Batch: MSV/25631 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92187567001, 92187567002, 92187567003

METHOD BLANK: 1129293 Matrix: Water
Associated Lab Samples: 92187567001, 92187567002, 92187567003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	01/29/14 04:12	
1,1,1-Trichloroethane	ug/L	ND	1.0	01/29/14 04:12	
1,1,2,2-Tetrachloroethane	ug/L	ND	3.0	01/29/14 04:12	
1,1,2-Trichloroethane	ug/L	ND	1.0	01/29/14 04:12	
1,1-Dichloroethane	ug/L	ND	5.0	01/29/14 04:12	
1,1-Dichloroethene	ug/L	ND	5.0	01/29/14 04:12	
1,2,3-Trichloropropane	ug/L	ND	1.0	01/29/14 04:12	
1,2-Dibromo-3-chloropropane	ug/L	ND	13.0	01/29/14 04:12	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	01/29/14 04:12	
1,2-Dichlorobenzene	ug/L	ND	5.0	01/29/14 04:12	
1,2-Dichloroethane	ug/L	ND	1.0	01/29/14 04:12	
1,2-Dichloropropane	ug/L	ND	1.0	01/29/14 04:12	
1,3-Dichloropropane	ug/L	ND	1.0	01/29/14 04:12	
1,4-Dichlorobenzene	ug/L	ND	1.0	01/29/14 04:12	
2-Butanone (MEK)	ug/L	ND	100	01/29/14 04:12	
2-Hexanone	ug/L	ND	50.0	01/29/14 04:12	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	01/29/14 04:12	
Acetone	ug/L	ND	100	01/29/14 04:12	
Acrylonitrile	ug/L	ND	200	01/29/14 04:12	
Benzene	ug/L	ND	1.0	01/29/14 04:12	
Bromochloromethane	ug/L	ND	3.0	01/29/14 04:12	
Bromodichloromethane	ug/L	ND	1.0	01/29/14 04:12	
Bromoform	ug/L	ND	3.0	01/29/14 04:12	
Bromomethane	ug/L	ND	10.0	01/29/14 04:12	
Carbon disulfide	ug/L	ND	100	01/29/14 04:12	
Carbon tetrachloride	ug/L	ND	1.0	01/29/14 04:12	
Chlorobenzene	ug/L	ND	3.0	01/29/14 04:12	
Chloroethane	ug/L	ND	10.0	01/29/14 04:12	
Chloroform	ug/L	ND	5.0	01/29/14 04:12	
Chloromethane	ug/L	ND	1.0	01/29/14 04:12	
cis-1,2-Dichloroethene	ug/L	ND	5.0	01/29/14 04:12	
cis-1,3-Dichloropropene	ug/L	ND	1.0	01/29/14 04:12	
Dibromochloromethane	ug/L	ND	3.0	01/29/14 04:12	
Dibromomethane	ug/L	ND	10.0	01/29/14 04:12	
Ethylbenzene	ug/L	ND	1.0	01/29/14 04:12	
Iodomethane	ug/L	ND	10.0	01/29/14 04:12	
Methylene Chloride	ug/L	ND	1.0	01/29/14 04:12	
Styrene	ug/L	ND	1.0	01/29/14 04:12	
Tetrachloroethene	ug/L	ND	1.0	01/29/14 04:12	
Tetrahydrofuran	ug/L	ND	10.0	01/29/14 04:12	
Toluene	ug/L	ND	1.0	01/29/14 04:12	
trans-1,2-Dichloroethene	ug/L	ND	5.0	01/29/14 04:12	
trans-1,3-Dichloropropene	ug/L	ND	1.0	01/29/14 04:12	

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QUALITY CONTROL DATA

Project: Iredell Blanks
Pace Project No.: 92187567

METHOD BLANK: 1129293 Matrix: Water
Associated Lab Samples: 92187567001, 92187567002, 92187567003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,4-Dichloro-2-butene	ug/L	ND	100	01/29/14 04:12	
Trichloroethene	ug/L	ND	1.0	01/29/14 04:12	
Trichlorofluoromethane	ug/L	ND	1.0	01/29/14 04:12	
Vinyl acetate	ug/L	ND	50.0	01/29/14 04:12	
Vinyl chloride	ug/L	ND	1.0	01/29/14 04:12	
Xylene (Total)	ug/L	ND	5.0	01/29/14 04:12	
1,2-Dichloroethane-d4 (S)	%	109	70-130	01/29/14 04:12	
4-Bromofluorobenzene (S)	%	96	70-130	01/29/14 04:12	
Toluene-d8 (S)	%	100	70-130	01/29/14 04:12	

LABORATORY CONTROL SAMPLE: 1129294

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	47.0	94	70-130	
1,1,1-Trichloroethane	ug/L	50	49.7	99	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	46.7	93	70-130	
1,1,2-Trichloroethane	ug/L	50	47.9	96	70-130	
1,1-Dichloroethane	ug/L	50	50.5	101	70-130	
1,1-Dichloroethene	ug/L	50	52.6	105	70-132	
1,2,3-Trichloropropane	ug/L	50	46.8	94	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	47.9	96	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	48.0	96	70-130	
1,2-Dichlorobenzene	ug/L	50	46.9	94	70-130	
1,2-Dichloroethane	ug/L	50	50.2	100	70-130	
1,2-Dichloropropane	ug/L	50	47.7	95	70-130	
1,3-Dichloropropane	ug/L	50	48.6	97	70-130	
1,4-Dichlorobenzene	ug/L	50	46.2	92	70-130	
2-Butanone (MEK)	ug/L	100	98.0J	98	70-145	
2-Hexanone	ug/L	100	102	102	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	101	101	70-140	
Acetone	ug/L	100	102	102	50-175	
Acrylonitrile	ug/L	250	264	105	70-143	
Benzene	ug/L	50	48.5	97	70-130	
Bromochloromethane	ug/L	50	48.6	97	70-130	
Bromodichloromethane	ug/L	50	46.0	92	70-130	
Bromoform	ug/L	50	45.1	90	70-130	
Bromomethane	ug/L	50	56.2	112	54-130	
Carbon disulfide	ug/L	50	52.0J	104	70-131	
Carbon tetrachloride	ug/L	50	48.1	96	70-132	
Chlorobenzene	ug/L	50	46.8	94	70-130	
Chloroethane	ug/L	50	46.7	93	64-134	
Chloroform	ug/L	50	48.8	98	70-130	
Chloromethane	ug/L	50	52.2	104	64-130	
cis-1,2-Dichloroethene	ug/L	50	48.6	97	70-131	
cis-1,3-Dichloropropene	ug/L	50	46.0	92	70-130	

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QUALITY CONTROL DATA

Project: Iredell Blanks
Pace Project No.: 92187567

LABORATORY CONTROL SAMPLE: 1129294

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	50	46.2	92	70-130	
Dibromomethane	ug/L	50	44.8	90	70-131	
Ethylbenzene	ug/L	50	46.7	93	70-130	
Iodomethane	ug/L	100	102	102	49-180	
Methylene Chloride	ug/L	50	55.0	110	63-130	
Styrene	ug/L	50	48.0	96	70-130	
Tetrachloroethene	ug/L	50	47.0	94	70-130	
Tetrahydrofuran	ug/L	500	546	109	70-130	
Toluene	ug/L	50	46.7	93	70-130	
trans-1,2-Dichloroethene	ug/L	50	49.6	99	70-130	
trans-1,3-Dichloropropene	ug/L	50	47.4	95	70-132	
trans-1,4-Dichloro-2-butene	ug/L	50	50.6J	101	70-141	
Trichloroethene	ug/L	50	45.4	91	70-130	
Trichlorofluoromethane	ug/L	50	49.4	99	62-133	
Vinyl acetate	ug/L	100	167	167	66-157	F3,L0
Vinyl chloride	ug/L	50	50.9	102	69-130	
Xylene (Total)	ug/L	150	143	95	70-130	
1,2-Dichloroethane-d4 (S)	%			110	70-130	
4-Bromofluorobenzene (S)	%			96	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1129731 1129732

Parameter	Units	92187566003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	36.6	33.1	73	66	70-166	10	30	M0
Benzene	ug/L	ND	50	50	52.0	47.8	104	96	70-148	8	30	
Chlorobenzene	ug/L	ND	50	50	53.1	48.9	106	98	70-146	8	30	
Toluene	ug/L	ND	50	50	50.0	46.0	100	92	70-155	8	30	
Trichloroethene	ug/L	ND	50	50	56.7	51.9	113	104	69-151	9	30	
1,2-Dichloroethane-d4 (S)	%						96	94	70-130			
4-Bromofluorobenzene (S)	%						101	97	70-130			
Toluene-d8 (S)	%						97	96	70-130			

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QUALIFIERS

Project: Iredell Blanks
Pace Project No.: 92187567

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

ANALYTE QUALIFIERS

F3	The recovery of the second source standard used to verify the initial calibration curve for this analyte is outside the laboratory's control limits. The result is estimated.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Iredell Blanks
Pace Project No.: 92187567

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92187567001	**EB**	EPA 3010	MPRP/15123	EPA 6010	ICP/13727
92187567001	**EB**	EPA 8260	MSV/25631		
92187567002	**FB**	EPA 8260	MSV/25631		
92187567003	**TB**	EPA 8260	MSV/25631		

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Pace Analytical	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: December 16, 2013 Page 1 of 2
	Document Number: **F-CHR-CS-03-rev.13**	Issuing Authority: Pace Huntersville Quality Office

Client Name: Municipal Engineering Services

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

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

Optional
Proj. Due Date:
Proj. Name:

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

Thermometer Used: IR Gun T1102 T1301 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor **T1102**: No Correction **T1301**: No Correction

Corrected Cooler Temp.: 1.2 °C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: AD 1/23/14

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review:	[illegible]	Date:	1/23/14
SRF Review:	[illegible]	Date:	1/24/14

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

WO# : 92187567

92187567

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 1 Of 1

Section A — Required Client Information:

Company:	Municipal Engineering Services
Address:	P.O. Box 97
	Garner, NC 27529
Email To:	jpfohl@mesco.com
Phone:	919-772-5393 Fax
Requested Due Date/TAT:	10 Day (Default)

Section B — Required Project Information:

Report To:	Jonathan Pfohl
Copy To:	
Purchase Order No.	
Client Project ID:	Iredell Blanks
Container Order Number:	

Section C — Invoice Information:

Attention:	Municipal Engineering Services
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Godwin
Pace Profile #:	

Regulatory Agency
State / Location
North Carolina

Requested Analysis Filtered (Y/N)

ITEM#	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	VOCs- App I	Metals-App I	Tetrahydrofuran									PLEASE PROVIDE Liter of DI water from same source as TB
																			N	N	N	N	N	N	N	N	N	N	N	
1	EB	WT	G			1/23/14	4:00PM		4			1	3						X	X	X									9218756700 1
2	FB	WT	G			↓	4:10PM		3			[redacted]	3						X	[redacted]	X									002
3	TB	WT	G			↓	Pace Filled		2				2						X		X									003
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
DI water provided By PACE		1/23/14	12:15PM	/Pace	01/23/14	1315				
EB - D. Boiler (Geotech) & Nitrile Gloves & poly tube rinsate		Left @ Steele								
	/Pace	01/23/14	1630	/Pace	1/23/14	1680	1.2	Y	N	Y
							TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jonathan Pfohl

SIGNATURE of SAMPLER:

DATE Signed: 1/23/14

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January 24, 2014

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

RE: Project: IREDELL C&D (OFFSITE)
Pace Project No.: 92187384

Dear Mr. Pfohl:
Enclosed are the analytical results for sample(s) received by the laboratory on January 22, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: IREDELL C&D (OFFSITE)
Pace Project No.: 92187384

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 SUMMARY

Project: IREDELL C&D (OFFSITE)
Pace Project No.: 92187384

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92187384001	**SW-SOF CONFLUENCE**	Water	01/21/14 16:50	01/22/14 17:10

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SAMPLE ANALYTE COUNT

Project: IREDELL C&D (OFFSITE)
Pace Project No.: 92187384

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92187384001	**SW-SOF CONFLUENCE**	EPA 6010	JMW	15	PASI-A

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ANALYTICAL RESULTS

Project: IREDELL C&D (OFFSITE)
Pace Project No.: 92187384

Sample: SW-SOF CONFLUENCE **Lab ID: 92187384001** Collected: 01/21/14 16:50 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	6.0	5.0	1	01/23/14 10:45	01/23/14 23:40	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/23/14 23:40	7440-38-2	
Barium	**105**	ug/L	100	5.0	1	01/23/14 10:45	01/23/14 23:40	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	01/23/14 10:45	01/23/14 23:40	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	01/23/14 10:45	01/23/14 23:40	7440-43-9	
Chromium	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/23/14 23:40	7440-47-3	
Cobalt	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/23/14 23:40	7440-48-4	
Copper	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/23/14 23:40	7440-50-8	
Lead	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/23/14 23:40	7439-92-1	
Nickel	ND	ug/L	50.0	5.0	1	01/23/14 10:45	01/23/14 23:40	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	01/23/14 10:45	01/23/14 23:40	7782-49-2	
Silver	ND	ug/L	10.0	5.0	1	01/23/14 10:45	01/23/14 23:40	7440-22-4	
Thallium	ND	ug/L	5.5	5.4	1	01/23/14 10:45	01/23/14 23:40	7440-28-0	
Vanadium	ND	ug/L	25.0	5.0	1	01/23/14 10:45	01/23/14 23:40	7440-62-2	
Zinc	**1020**	ug/L	10.0	10.0	1	01/23/14 10:45	01/23/14 23:40	7440-66-6	

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QUALITY CONTROL DATA

Project: IREDELL C&D (OFFSITE)
Pace Project No.: 92187384

QC Batch: MPRP/15112
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92187384001

METHOD BLANK: 1126318
Matrix: Water
Associated Lab Samples: 92187384001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	6.0	01/23/14 23:06	
Arsenic	ug/L	ND	10.0	01/23/14 23:06	
Barium	ug/L	ND	100	01/23/14 23:06	
Beryllium	ug/L	ND	1.0	01/23/14 23:06	
Cadmium	ug/L	ND	1.0	01/23/14 23:06	
Chromium	ug/L	ND	10.0	01/23/14 23:06	
Cobalt	ug/L	ND	10.0	01/23/14 23:06	
Copper	ug/L	ND	10.0	01/23/14 23:06	
Lead	ug/L	ND	10.0	01/23/14 23:06	
Nickel	ug/L	ND	50.0	01/23/14 23:06	
Selenium	ug/L	ND	10.0	01/23/14 23:06	
Silver	ug/L	ND	10.0	01/23/14 23:06	
Thallium	ug/L	ND	5.5	01/23/14 23:06	
Vanadium	ug/L	ND	25.0	01/23/14 23:06	
Zinc	ug/L	ND	10.0	01/23/14 23:06	

LABORATORY CONTROL SAMPLE: 1126319

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	489	98	80-120	
Arsenic	ug/L	500	472	94	80-120	
Barium	ug/L	500	484	97	80-120	
Beryllium	ug/L	500	482	96	80-120	
Cadmium	ug/L	500	488	98	80-120	
Chromium	ug/L	500	491	98	80-120	
Cobalt	ug/L	500	487	97	80-120	
Copper	ug/L	500	488	98	80-120	
Lead	ug/L	500	482	96	80-120	
Nickel	ug/L	500	490	98	80-120	
Selenium	ug/L	500	492	98	80-120	
Silver	ug/L	250	246	98	80-120	
Thallium	ug/L	500	464	93	80-120	
Vanadium	ug/L	500	495	99	80-120	
Zinc	ug/L	500	479	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1126320 1126321

Parameter	Units	92186756001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	500	500	484	491	96	98	75-125	1	25	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: IREDELL C&D (OFFSITE)
Pace Project No.: 92187384

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1126320 1126321

Parameter	Units	92186756001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	500	500	464	476	93	95	75-125	3	25	
Barium	ug/L	37.4	500	500	517	525	96	98	75-125	2	25	
Beryllium	ug/L	ND	500	500	480	487	96	97	75-125	1	25	
Cadmium	ug/L	ND	500	500	484	491	97	98	75-125	1	25	
Chromium	ug/L	16.7	500	500	506	513	98	99	75-125	1	25	
Cobalt	ug/L	ND	500	500	486	494	97	98	75-125	2	25	
Copper	ug/L	ND	500	500	490	498	98	99	75-125	2	25	
Lead	ug/L	ND	500	500	472	481	94	96	75-125	2	25	
Nickel	ug/L	12.4J	500	500	495	501	97	98	75-125	1	25	
Selenium	ug/L	ND	500	500	483	488	96	97	75-125	1	25	
Silver	ug/L	ND	250	250	244	248	97	99	75-125	2	25	
Thallium	ug/L	ND	500	500	458	467	91	92	75-125	2	25	
Vanadium	ug/L	ND	500	500	493	499	98	99	75-125	1	25	
Zinc	ug/L	11.6	500	500	479	485	93	95	75-125	1	25	

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QUALIFIERS

Project: IREDELL C&D (OFFSITE)
Pace Project No.: 92187384

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: IREDELL C&D (OFFSITE)
Pace Project No.: 92187384

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92187384001	**SW-SOF CONFLUENCE**	EPA 3010	MPRP/15112	EPA 6010	ICP/13715

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Pace Analytical	Sample Condition Upon Receipt (SCUR)	Page 1 of 2
	Document Number: F-CHR-CS-03-rev.13	Issuing Authority: Pace Huntersville Quality Office

Client Name: Municipal

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

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

Optional
Proj. Due Date:
Proj. Name:

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

Thermometer Used: IR Gun T1102 T1301 Type of Ice: Wet Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor T1102: No Correction T1301: No Correction

Corrected Cooler Temp.: 2.6 °C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: EW 1/22/14

Temp should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: JG Date: 1/22/14

SRF Review: JG Date: 1/23/14

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

WO# : 92187384

92187384

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 1 Of 1

Section A — Required Client Information:

Company:	Municipal Engineering Services
Address:	P.O. Box 97
	Garner, NC 27529
Email To:	jpfohl@mesco.com
Phone:	919-772-5393 Fax
Requested Due Date/TAT:	10 Day (Default)

Section B — Required Project Information:

Report To:	Jonathan Pfohl
Copy To:	
Purchase Order No.	
Client Project ID:	Iredell C&D (Offsite)
Container Order Number:	

Section C — Invoice Information:

Attention:	Municipal Engineering Services
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Kevin Godwin
Pace Profile #:	

Regulatory Agency	
State / Location	
	North Carolina

ITEM#	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test	Metals-App I										
																		Requested Analysis Filtered (Y/N)	N	N	N	N	N	N	N	N	N	N	N
1	SW-SofConfluence	WT	G			1/21/14	4:50		1			1								X									
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

MATRIX CODE

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

92187384
001

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	MESCO	1/22/14	7:15	J Moody - Pace	01-22-14	07:15	
	J Moody	01-22-14 ~~07:15~~	1710	Zack Kerr	1/22/14	1710	2.6 Y N Y

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	Jonathan Pfohl		
SIGNATURE of SAMPLER:		DATE Signed:	1/22/14

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

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February 04, 2014

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

RE: Project: Iredell C&D (Offsite)
Pace Project No.: 92187381

Dear Mr. Pfohl:
Enclosed are the analytical results for sample(s) received by the laboratory on January 22, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: Iredell C&D (Offsite)
Pace Project No.: 92187381

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

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SAMPLE SUMMARY

Project: Iredell C&D (Offsite)
Pace Project No.: 92187381

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92187381001	**SW-NEofMW-16**	Water	01/21/14 13:40	01/22/14 17:10

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SAMPLE ANALYTE COUNT

Project: Iredell C&D (Offsite)
Pace Project No.: 92187381

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92187381001	**SW-NEofMW-16**	EPA 8260	MCK	51	PASI-C

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ANALYTICAL RESULTS

Project: Iredell C&D (Offsite)
Pace Project No.: 92187381

Sample: SW-NEofMW-16 **Lab ID: 92187381001** Collected: 01/21/14 13:40 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	10.0	1		01/24/14 20:46	67-64-1	
Acrylonitrile	ND	ug/L	200	1.9	1		01/24/14 20:46	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		01/24/14 20:46	71-43-2	
Bromochloromethane	ND	ug/L	3.0	0.17	1		01/24/14 20:46	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		01/24/14 20:46	75-27-4	
Bromoform	ND	ug/L	3.0	0.26	1		01/24/14 20:46	75-25-2	
Bromomethane	ND	ug/L	10.0	0.29	1		01/24/14 20:46	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	0.96	1		01/24/14 20:46	78-93-3	
Carbon disulfide	ND	ug/L	100	1.2	1		01/24/14 20:46	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		01/24/14 20:46	56-23-5	
Chlorobenzene	ND	ug/L	3.0	0.23	1		01/24/14 20:46	108-90-7	
Chloroethane	ND	ug/L	10.0	0.54	1		01/24/14 20:46	75-00-3	
Chloroform	ND	ug/L	5.0	0.14	1		01/24/14 20:46	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		01/24/14 20:46	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	13.0	2.5	1		01/24/14 20:46	96-12-8	
Dibromochloromethane	ND	ug/L	3.0	0.21	1		01/24/14 20:46	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		01/24/14 20:46	106-93-4	
Dibromomethane	ND	ug/L	10.0	0.21	1		01/24/14 20:46	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.30	1		01/24/14 20:46	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		01/24/14 20:46	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1.0	1		01/24/14 20:46	110-57-6	
1,1-Dichloroethane	ND	ug/L	5.0	0.32	1		01/24/14 20:46	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		01/24/14 20:46	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	0.56	1		01/24/14 20:46	75-35-4	
cis-1,2-Dichloroethene	**0.19J**	ug/L	5.0	0.19	1		01/24/14 20:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	0.49	1		01/24/14 20:46	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		01/24/14 20:46	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		01/24/14 20:46	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		01/24/14 20:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		01/24/14 20:46	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		01/24/14 20:46	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		01/24/14 20:46	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		01/24/14 20:46	74-88-4	
Methylene Chloride	ND	ug/L	1.0	0.97	1		01/24/14 20:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		01/24/14 20:46	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		01/24/14 20:46	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		01/24/14 20:46	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		01/24/14 20:46	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		01/24/14 20:46	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		01/24/14 20:46	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		01/24/14 20:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		01/24/14 20:46	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		01/24/14 20:46	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		01/24/14 20:46	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		01/24/14 20:46	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		01/24/14 20:46	108-05-4	

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ANALYTICAL RESULTS

Project: Iredell C&D (Offsite)
Pace Project No.: 92187381

Sample: SW-NEofMW-16 **Lab ID: 92187381001** Collected: 01/21/14 13:40 Received: 01/22/14 17:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Vinyl chloride	ND	ug/L	1.0	0.62	1		01/24/14 20:46	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		01/24/14 20:46	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		01/24/14 20:46	460-00-4	
1,2-Dichloroethane-d4 (S)	89	%	70-130		1		01/24/14 20:46	17060-07-0	
Toluene-d8 (S)	93	%	70-130		1		01/24/14 20:46	2037-26-5	

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QUALITY CONTROL DATA

Project: Iredell C&D (Offsite)
Pace Project No.: 92187381

QC Batch: MSV/25595
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92187381001

METHOD BLANK: 1126877
Matrix: Water
Associated Lab Samples: 92187381001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	01/24/14 19:59	
1,1,1-Trichloroethane	ug/L	ND	1.0	01/24/14 19:59	
1,1,2,2-Tetrachloroethane	ug/L	ND	3.0	01/24/14 19:59	
1,1,2-Trichloroethane	ug/L	ND	1.0	01/24/14 19:59	
1,1-Dichloroethane	ug/L	ND	5.0	01/24/14 19:59	
1,1-Dichloroethene	ug/L	ND	5.0	01/24/14 19:59	
1,2,3-Trichloropropane	ug/L	ND	1.0	01/24/14 19:59	
1,2-Dibromo-3-chloropropane	ug/L	ND	13.0	01/24/14 19:59	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	01/24/14 19:59	
1,2-Dichlorobenzene	ug/L	ND	5.0	01/24/14 19:59	
1,2-Dichloroethane	ug/L	ND	1.0	01/24/14 19:59	
1,2-Dichloropropane	ug/L	ND	1.0	01/24/14 19:59	
1,3-Dichloropropane	ug/L	ND	1.0	01/24/14 19:59	
1,4-Dichlorobenzene	ug/L	ND	1.0	01/24/14 19:59	
2-Butanone (MEK)	ug/L	ND	100	01/24/14 19:59	
2-Hexanone	ug/L	ND	50.0	01/24/14 19:59	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	01/24/14 19:59	
Acetone	ug/L	ND	100	01/24/14 19:59	
Acrylonitrile	ug/L	ND	200	01/24/14 19:59	
Benzene	ug/L	ND	1.0	01/24/14 19:59	
Bromochloromethane	ug/L	ND	3.0	01/24/14 19:59	
Bromodichloromethane	ug/L	ND	1.0	01/24/14 19:59	
Bromoform	ug/L	ND	3.0	01/24/14 19:59	
Bromomethane	ug/L	ND	10.0	01/24/14 19:59	
Carbon disulfide	ug/L	ND	100	01/24/14 19:59	
Carbon tetrachloride	ug/L	ND	1.0	01/24/14 19:59	
Chlorobenzene	ug/L	ND	3.0	01/24/14 19:59	
Chloroethane	ug/L	ND	10.0	01/24/14 19:59	
Chloroform	ug/L	ND	5.0	01/24/14 19:59	
Chloromethane	ug/L	ND	1.0	01/24/14 19:59	
cis-1,2-Dichloroethene	ug/L	ND	5.0	01/24/14 19:59	
cis-1,3-Dichloropropene	ug/L	ND	1.0	01/24/14 19:59	
Dibromochloromethane	ug/L	ND	3.0	01/24/14 19:59	
Dibromomethane	ug/L	ND	10.0	01/24/14 19:59	
Ethylbenzene	ug/L	ND	1.0	01/24/14 19:59	
Iodomethane	ug/L	ND	10.0	01/24/14 19:59	
Methylene Chloride	ug/L	ND	1.0	01/24/14 19:59	
Styrene	ug/L	ND	1.0	01/24/14 19:59	
Tetrachloroethene	ug/L	ND	1.0	01/24/14 19:59	
Toluene	ug/L	ND	1.0	01/24/14 19:59	
trans-1,2-Dichloroethene	ug/L	ND	5.0	01/24/14 19:59	
trans-1,3-Dichloropropene	ug/L	ND	1.0	01/24/14 19:59	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	01/24/14 19:59	

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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Iredell C&D (Offsite)
Pace Project No.: 92187381

METHOD BLANK: 1126877 Matrix: Water
Associated Lab Samples: 92187381001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Trichloroethene	ug/L	ND	1.0	01/24/14 19:59	
Trichlorofluoromethane	ug/L	ND	1.0	01/24/14 19:59	
Vinyl acetate	ug/L	ND	50.0	01/24/14 19:59	
Vinyl chloride	ug/L	ND	1.0	01/24/14 19:59	
Xylene (Total)	ug/L	ND	5.0	01/24/14 19:59	
1,2-Dichloroethane-d4 (S)	%	89	70-130	01/24/14 19:59	
4-Bromofluorobenzene (S)	%	99	70-130	01/24/14 19:59	
Toluene-d8 (S)	%	94	70-130	01/24/14 19:59	

LABORATORY CONTROL SAMPLE: 1126878

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	47.4	95	70-130	
1,1,1-Trichloroethane	ug/L	50	43.2	86	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	47.4	95	70-130	
1,1,2-Trichloroethane	ug/L	50	45.5	91	70-130	
1,1-Dichloroethane	ug/L	50	43.3	87	70-130	
1,1-Dichloroethene	ug/L	50	43.1	86	70-132	
1,2,3-Trichloropropane	ug/L	50	46.2	92	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	47.1	94	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	47.8	96	70-130	
1,2-Dichlorobenzene	ug/L	50	46.9	94	70-130	
1,2-Dichloroethane	ug/L	50	41.9	84	70-130	
1,2-Dichloropropane	ug/L	50	45.5	91	70-130	
1,3-Dichloropropane	ug/L	50	47.3	95	70-130	
1,4-Dichlorobenzene	ug/L	50	47.3	95	70-130	
2-Butanone (MEK)	ug/L	100	85.3J	85	70-145	
2-Hexanone	ug/L	100	92.3	92	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	91.5J	92	70-140	
Acetone	ug/L	100	80.5J	80	50-175	
Acrylonitrile	ug/L	250	220	88	70-143	
Benzene	ug/L	50	47.0	94	70-130	
Bromochloromethane	ug/L	50	34.2	68	70-130	L0
Bromodichloromethane	ug/L	50	44.6	89	70-130	
Bromoform	ug/L	50	48.8	98	70-130	
Bromomethane	ug/L	50	40.1	80	54-130	
Carbon disulfide	ug/L	50	45.7J	91	70-131	
Carbon tetrachloride	ug/L	50	47.1	94	70-132	
Chlorobenzene	ug/L	50	46.6	93	70-130	
Chloroethane	ug/L	50	32.7	65	64-134	
Chloroform	ug/L	50	42.2	84	70-130	
Chloromethane	ug/L	50	38.7	77	64-130	
cis-1,2-Dichloroethene	ug/L	50	41.6	83	70-131	
cis-1,3-Dichloropropene	ug/L	50	45.4	91	70-130	
Dibromochloromethane	ug/L	50	48.7	97	70-130	

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QUALITY CONTROL DATA

Project: Iredell C&D (Offsite)
Pace Project No.: 92187381

LABORATORY CONTROL SAMPLE: 1126878

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromomethane	ug/L	50	45.2	90	70-131	
Ethylbenzene	ug/L	50	46.1	92	70-130	
Iodomethane	ug/L	100	83.4	83	49-180	
Methylene Chloride	ug/L	50	43.1	86	63-130	
Styrene	ug/L	50	47.6	95	70-130	
Tetrachloroethene	ug/L	50	48.8	98	70-130	
Toluene	ug/L	50	44.9	90	70-130	
trans-1,2-Dichloroethene	ug/L	50	41.0	82	70-130	
trans-1,3-Dichloropropene	ug/L	50	45.7	91	70-132	
trans-1,4-Dichloro-2-butene	ug/L	50	47.2J	94	70-141	
Trichloroethene	ug/L	50	42.9	86	70-130	
Trichlorofluoromethane	ug/L	50	36.3	73	62-133	
Vinyl acetate	ug/L	100	142	142	66-157	
Vinyl chloride	ug/L	50	38.6	77	69-130	
Xylene (Total)	ug/L	150	140	94	70-130	
1,2-Dichloroethane-d4 (S)	%			92	70-130	
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1126879 1126880

Parameter	Units	92187380001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	42.0	42.7	84	85	70-166	2	30	
Benzene	ug/L	ND	50	50	47.8	49.0	96	98	70-148	2	30	
Chlorobenzene	ug/L	ND	50	50	48.4	49.2	97	98	70-146	2	30	
Toluene	ug/L	ND	50	50	44.4	45.0	89	90	70-155	1	30	
Trichloroethene	ug/L	ND	50	50	45.9	47.0	92	94	69-151	2	30	
1,2-Dichloroethane-d4 (S)	%						90	91	70-130			
4-Bromofluorobenzene (S)	%						98	98	70-130			
Toluene-d8 (S)	%						97	97	70-130			

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QUALIFIERS

Project: Iredell C&D (Offsite)
Pace Project No.: 92187381

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-C	Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Iredell C&D (Offsite)
Pace Project No.: 92187381

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92187381001	**SW-NEofMW-16**	EPA 8260	MSV/25595		

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Pace Analytical	Document Name: Sample Condition Upon Receipt (SCUR)	Page 1 of 2
	Document Number: F-CHR-CS-03-rev.13	Issuing Authority: Pace Huntersville Quality Office

Client Name: Municipal

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

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

Optional
Proj. Due Date:
Proj. Name:

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

Thermometer Used: IR Gun T1102 T1301 Type of Ice: Wet Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor T1102: No Correction T1301: No Correction

Corrected Cooler Temp.: 2.6 °C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: EW 1/22/14

Temp should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: [signature] Date: 1/22/14

SRF Review: [signature] Date: 1/23/14

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

WO#: 92187381

92187381

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 1 Of 1

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

Regulatory Agency

State / Location: North Carolina

Requested Analysis Filtered (Y/N)

ITEM#	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test	VOCs- App I											92187381
																		Y/N	N	N	N	N	N	N	N	N	N	N	N	
1	SW-NEofMW-16	WT	G			1/21/14	1:40		3				3						x											001
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	/MESCO	1/22/14	7:15	Zmoody-Pace	01-22-14	09:45				
	Zmoody	01-22-14	17:10	[illegible]	1/22/14	1710	TC	Y	N	Y

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Jonathan Pfohl					
SIGNATURE of SAMPLER:		DATE Signed: 1/22/14				

Appendix B
Field Sampling Parameter Data Sheet(s)

Sampling Data Sheet

Municipal Services Garner, NC — Engineering Company Boone, NC

Project: Iredell County Closed C&D Landfill January 21 & 23, 2014

Samplers: J. Pfohl Page 1 of 1

Monitoring Point	Sample Date	Sample Time	Sampling Parameters: Depth to Water (BTOP) 7/ /13	Depth to Water (BTOP) Static Sample Time	Lab Parameters to be analyzed for	Volume Purged (Gal)	Sample Type	Goes Dry During Purge	Comments	Total Depth Expected	Water Quality Parameters: Locked & Tagged	~~DO~~ (mg/L)	ORP	pH	Temp. ©	Specific Cond. (us/cm	TDS (mg/L)	Turbidity	CH4 Gas Vapors (ppm)
MW-9R	1/21/14	4:05		29.33	1 1	11	P&DB	N	Water in adjacent Foamy Basin	20			96	6.46	11.8	0.82	0.41	C	NR
MW-9RR		3:40		16.92	1	5	P&DB	Y	Water in adjacent Foamy Basin	22		7.15	46	7.18	17.8	1.34	0.67	C	NR
MW-10R		3:00		30.38	1	2	DB	Y		25			212	5.33	16.5	0.06	0.03	ST	NR
MW-16		4:35		10.69	12	5	P&DB	N		20			73	6.39	15.1	.33	.16	C	NR
MW-22		2:25		30.44	1	4	P&DB	Y		37			303	5.74	15.0	0.02	0.01	C	NR
MW-23		1:35		8.71	1	4	DB	N	Water in Adjacent Basin	23			223	6.89	15.1	.02	.00	C	NR
MW-24S		1:00		7.72	1	3	P&DB	N		16			351	5.66	13.5	.22	.11	C	NR
MW-24D		12:40		7.17	1	15	P&DB	N		38			314	7.12	14.0	.10	.05	C	NR
MW-25		10:55		23.75	1	2	DB	Y		24.93			258	6.61	15.8	.07	.04	MT	NR
MW-26S		11:55		13.62	1	3	P&DB	Y		20.25			332	5.76	13.8	.06	.03	C	NR
MW-26D		11:30		11.91	1	14	P&DB	Y		61.76			283	8.75	14.2	.15	.07	MT	NR
SW-3		1:50	-	-	1 & Dissolved Zn	-	Dip	-	-	-			244	7.49	9.3	.250	0.12	C	-
SW-6		10:25	-	-	1	-	Dip	-	-	-			328	6.83	10.8	.06	.03	C	-
CD3-11M	-	-		9.75	WLR	-		-	-	-									-
CD-8M	-	-			WLR	-		-	-	-									-
SW-SofConfluence	1/21/13	4:50	-	-	(Metals only) Total & Dissolved Zn	-		-	-	-			191	7.30	9.1	.12	.06	C	-
SW-NE of MW-16	1/21/13	1:40					Dip						181	7.25	8.3	.12	.06	C	
SW-2	1/21/13	5:55PM					Dip						(17)	7.32	6.3	.12	.06	C	

Comments

SS B=Stainless Steel Baler, D B=Disposable Baler, P=Low flow Pump, PD=Purged Dry

VT=Very Turbid, MT=Moderately Turbid, ST=Slightly Turbid, C=Clear

NR=No Reading Attempted, NS=No Sample Obtained

Sampling Data Sheet

Municipal Services Engineering Company
Garner, NC Boone, NC

Project: Iredell County Subtitle D MSWLF and CDLF (Common Downstream Surface Water Point)

Samplers: J. Pfohl Page 1 of 1

Monitoring Point	Sample Date	Sample Time	Sampling Parameters								Water Quality Parameters								
			Depth to Water (BTOP) 1/ /10	Depth to Water (BTOP) Static Sample Time	Lab Parameters to be analyzed for	Volume Purged (Gal)	Sample Type	Gage Height	Flow Rate	Comments	~~DO~~ (mg/l)	~~DO~~ (mg/L)	ORP	pH	Temp. ©	Specific Cond. (us/cm	TDS (mg/L)	Turbidity	CH4 Gas Vapors (ppm)
SW-2	1/21/14	5:55	-	-	1	-	Dip	Low	Low				171	7.32	6.3	.12	.06	C	-
																			-

Comments

SS B=Stainless Steel Baler, D B=Disposable Baler, P=Low flow Pump, PD=Purged Dry

VT=Very Turbid, MT=Moderately Turbid, ST=Slightly Turbid, C=Clear

NR=No Reading Attempted, NS=No Sample Obtained