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 | July 22-24, 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: 5/8/2015

Affix NC Licensed/ Professional Geologist Seal

NORTH CAROLINA PROFESSIONAL SEAL 31020 ENGINEER STEVEN R. GANDY

P.O. Box 97, Garner, NC 27529

Facility Representative Address

C-0281

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

Revised 6/2009

# Semi-Annual Water Quality Monitoring Report

*Prepared for*

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

## July 2014

**Permit Number: 49-03**
**MESCO Project Number: G14014.0**

Submitted: May 8, 2015

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

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License No. C-0281

CIVIL/SANITARY/ENVIRONMENTAL ENGINEERS

SOLID WASTE MANAGEMENT

Municipal Services Engineering Company, P.A.

SITE PLANNING/SUBDIVISIONS

SUBSURFACE UTILITY ENGINEERING (SUE)

May 8, 2015

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): July 22-24, 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 2014 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 July 22-24, 2014. The only detection above an applicable regulatory compliance standard attributed to an anthropogenic source was benzene in a sample collected from MW-16. However, the benzene concentration remains below federally established Primary Drinking Water Standards.

## 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 from this site 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, a well construction table, potentiometric map, quality assurance/quality control data, and full 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.**

A summary detailing the construction of the water monitoring wells is presented on **Table 1**. The function and integrity of all monitoring locations were visually evaluated and no deficiencies identified as documented on **Table 2.** The depth to water in each well was electronically gaged prior to purging to quantify the static water level elevation. Low-flow pumping 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, total dissolved solids (TDS) and visual turbidity. A summary of the field parameter data is presented in **Table 3** and the field sampling data sheet is enclosed as **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 4**. 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 5** 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

None of the targeted constituents were detected in the quality control samples (EB, FB, TB). Therefore the data set appears to not be affected by false positives or high bias attributed to field or laboratory induced artifact contamination.

### Groundwater Samples

Total antimony was detected in downgradient well MW-9R (14.9 ug/L) in levels above the GWP Standard (1.4 ug/L) and MCL Standard (6 ug/L). Benzene was detected in MW-16 (1.4 ug/L) in concentrations exceeding the 2L Standard (1.0 ug/L) but below the MCL Standard for drinking water (5 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 6**. 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 10 ft/yr (MW-22) to 380 ft/yr (MW-9RR), averaging approximately 163 ft/yr. Flow directions and gradients are generally consistent with reported historical observations. Streams located within the facility boundaries were visually observed to have low seasonal volume and flow with low turbidity.

## Findings

Total antimony was detected in sample MW-9RR for the first time. The preliminary source assigned to the detection of total antimony is an anomaly. Total antimony has never previously been detected at this facility except for a low "j-qualified" concentration once at MW-26D in January 2010. Antimony was absent from the sample collected from MW-9RR during the subsequent event performed in February 2015 which strengthens the assertion the unprecedented detection was an anomaly.

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 during the last three 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, was detected in "j-qualified" levels within MW-9R (3.7 ug/L) and MW-16 (9.7 ug/L). A regulatory standard has not been adopted by the SWS for tetrahydrofuran.

## Closing

Post-closure semi-annual water quality monitoring was performed again in February 2015. 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

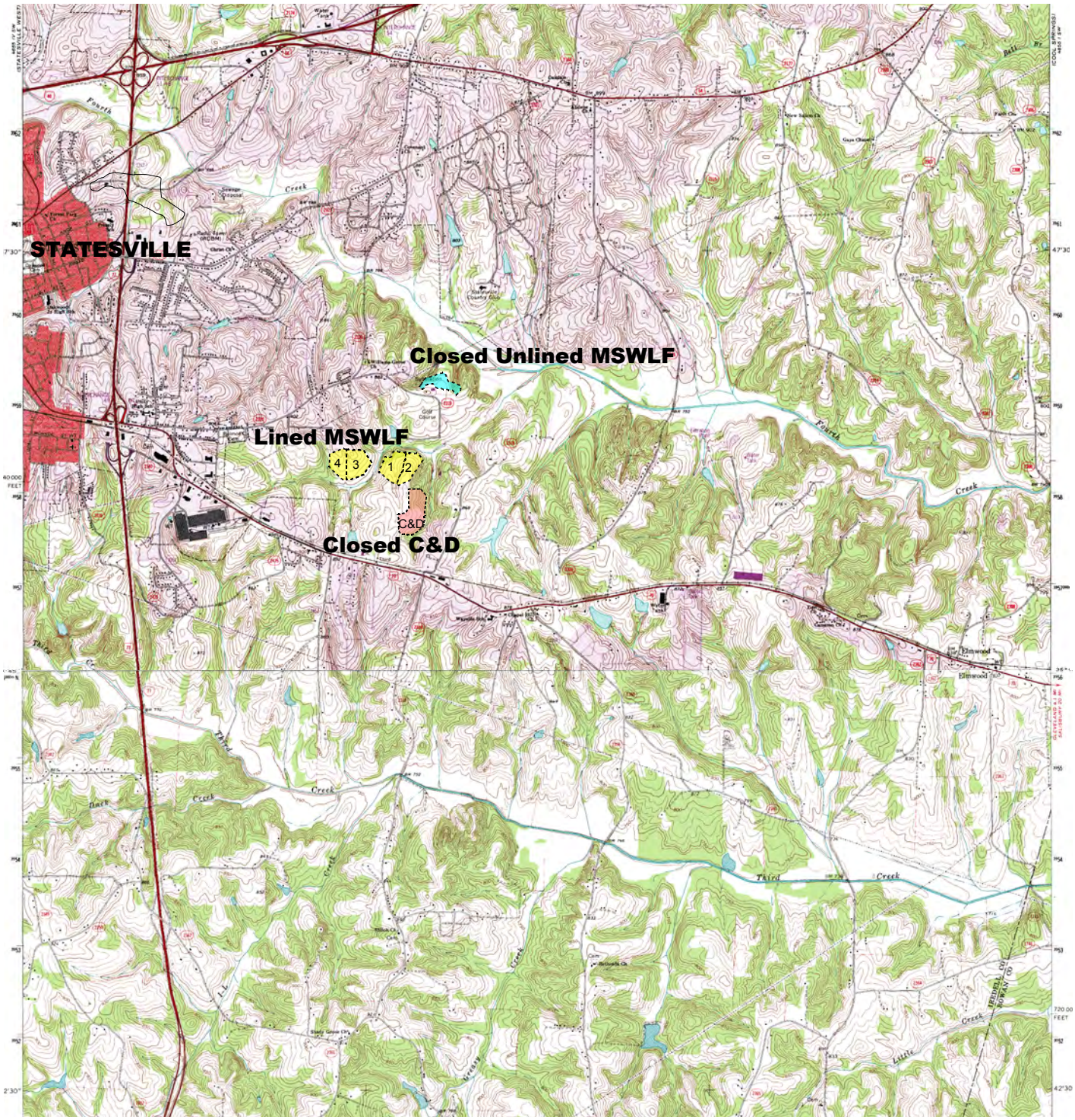
cc: Mr. David Lambert
Iredell County

# 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**

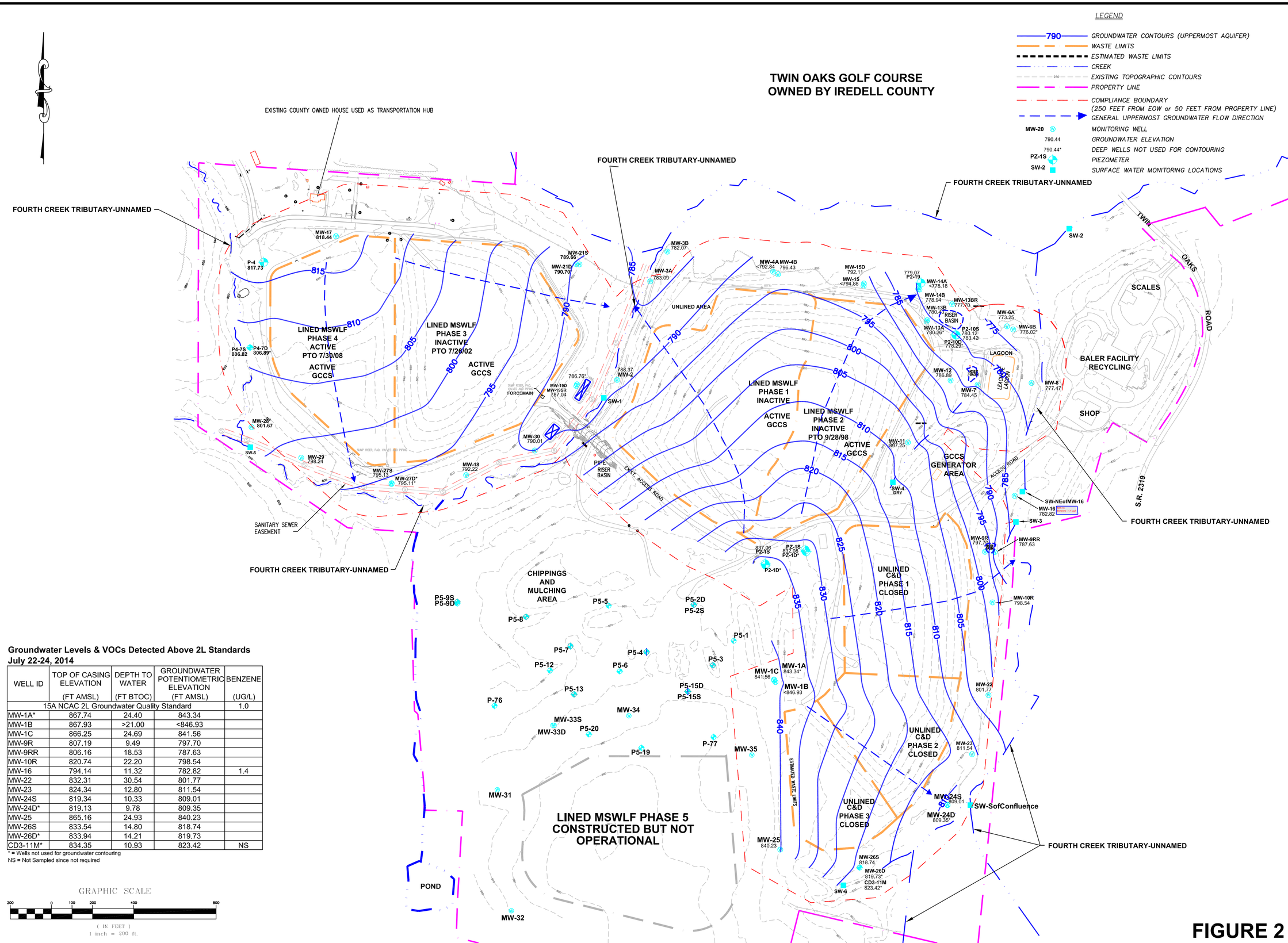
**STATESVILLE EAST QUADRANGLE**

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**
**July 22-24, 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 | 24.40 | 843.34 | |
| MW-1B | 867.93 | >21.00 | <846.93 | |
| MW-1C | 866.25 | 24.69 | 841.56 | |
| MW-9R | 807.19 | 9.49 | 797.70 | |
| MW-9RR | 806.16 | 18.53 | 787.63 | |
| MW-10R | 820.74 | 22.20 | 798.54 | |
| MW-16 | 794.14 | 11.32 | 782.82 | 1.4 |
| MW-22 | 832.31 | 30.54 | 801.77 | |
| MW-23 | 824.34 | 12.80 | 811.54 | |
| MW-24S | 819.34 | 10.33 | 809.01 | |
| MW-24D* | 819.13 | 9.78 | 809.35 | |
| MW-25 | 865.16 | 24.93 | 840.23 | |
| MW-26S | 833.54 | 14.80 | 818.74 | |
| MW-26D* | 833.94 | 14.21 | 819.73 | |
| CD3-11M* | 834.35 | 10.93 | 823.42 | 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: | 12/15/14 |
| DRWN. BY: | R. MOSS |
| CHKD. BY: | S. GANDY |
| PROJECT NUMBER | G14014.0 |
| DRAWING NO. | FIGURE 2 |
| SHEET NO. | 1 OF 1 |

# Tables

**Table 1**
**Groundwater Monitoring Well Construction Table**
**July 22-24, 2014**

| Monitoring Well | Date Installed | Well Diameter (inches) | Total Well Depth (ft bgs) | Top of Screen Depth (ft bgs) | Screen Length (ft) | Geology of Screened Interval | Top of Casing Elevation (ft amsl) | Ground Elevation (ft amsl) | Groundwater Elevation (ft amsl) | Depth to Water (ft btoc) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1A | 4/27/93 | 2 | 40 | 30 | 10 | Silty Cl. Sand | 867.74 | 865.94 | 843.34 | 24.40 | 35.7659 | -80.8294 |
| MW-1B | 4/28/93 | 2 | 20 | 5 | 15 | Silty Cl. Sand | 867.93 | 867.93 | <846.93 | >21.00 | 35.7659 | -80.8294 |
| MW-1C | 10/20/03 | 2 | 34 | 19 | 15 | Silty Cl. Sand | 866.25 | 863.44 | 841.56 | 24.69 | 35.7659 | -80.8294 |
| MW-9R | 6/26/00 | 2 | 20 | 5 | 15 | Sandy Silt | 807.19 | 804.04 | 797.70 | 9.49 | 35.7676 | -80.8259 |
| MW-9RR | 11/28/01 | 2 | 22 | 7 | 15 | Sandy Silt | 806.16 | 803.56 | 787.63 | 18.53 | 35.7676 | -80.8258 |
| MW-10R | 6/26/00 | 2 | 25 | 10 | 15 | Silty Sand | 820.74 | 817.14 | 798.54 | 22.20 | 35.7670 | -80.8258 |
| MW-16 | 6/27/00 | 2 | 20 | 5 | 15 | Sandy Silt | 794.14 | 791.33 | 782.82 | 11.32 | 35.7684 | -80.8255 |
| MW-22 | 11/27/01 | 2 | 37 | 22 | 15 | Clayey Sand | 832.31 | 829.31 | 801.77 | 30.54 | 35.7657 | -80.8258 |
| MW-23 | 11/27/01 | 2 | 23 | 8 | 15 | Silty Sand | 824.34 | 821.07 | 811.54 | 12.80 | 35.7649 | -80.8261 |
| MW-24S | 10/21/03 | 2 | 16 | 6 | 10 | Silty Sand | 819.34 | 816.40 | 809.01 | 10.33 | 35.7643 | -80.8265 |
| MW-24D | 10/21/03 | 2 | 38 | 28 | 10 | Rock | 819.13 | 816.35 | 809.35 | 9.78 | 35.7643 | -80.8265 |
| MW-25 | 12/8/04 | 2 | 24.93 | 9.93 | 15 | Silty Sand | 865.16 | 861.81 | 840.23 | 24.93 | 35.7636 | -80.8292 |
| MW-26S | 12/15/04 | 2 | 20.25 | 5.25 | 15 | Clayey Sand | 833.54 | 830.54 | 818.74 | 14.80 | 35.7634 | -80.8279 |
| MW-26D | 12/17/04 | 2 | 61.76 | 56.76 | 5 | Rock | 833.94 | 830.93 | 819.73 | 14.21 | 35.7634 | -80.8279 |

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

**Table 2**
**Field Observations of Monitoring Locations**
**July 22-24, 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 | Wasps in case |
| MW-9RR | Yes | Yes | Yes | Yes | Yes | Yes | |
| MW-10R | Yes | Yes | Yes | Yes | Yes | Yes | Wasps in case |
| 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 typical for this well |
| 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 constructed but not in operation 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 3**
**Field Parameter Data Summary**
**July 22-24, 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 | 24.40 | 843.34 | 867.74 | 15.8 | NR | NR | 6.73 | 90 | 40 | Slight |
| MW-1B | Dry <21.00 | <846.93 | 867.93 | NR | NR | NR | NR | NR | NR | NR |
| MW-1C | 24.69 | 841.56 | 866.25 | 16.1 | NR | NR | 6.28 | 80 | 30 | Slight |
| **Minimum** | 24.40 | 841.56 | 866.25 | 15.8 | NR | NR | 7.23 | 80 | 30 | Clear |
| **Average** | 24.55 | 842.45 | 867.31 | 16.0 | NR | NR | 6.83 | 85 | 35 | Slight |
| **Maximum** | 24.69 | 843.34 | 867.93 | 16.1 | NR | NR | 5.92 | 90 | 40 | Slight |
| MW-9R | 9.49 | 797.70 | 807.19 | 17.9 | NR | NR | 6.16 | 610 | 300 | Clear |
| MW-9RR | 18.53 | 787.63 | 806.16 | 16.9 | NR | NR | 6.31 | 180 | 80 | Slight |
| MW-10R | 22.20 | 798.54 | 820.74 | 17.0 | NR | NR | 6.93 | 330 | 160 | Slight |
| MW-16 | 11.32 | 782.82 | 794.14 | 15.2 | NR | NR | 6.41 | 310 | 150 | Clear |
| MW-22 | 30.54 | 801.77 | 832.31 | 15.6 | NR | NR | 6.47 | 80 | 30 | Clear |
| MW-23 | 12.80 | 811.54 | 824.34 | 16.1 | NR | NR | 6.51 | 410 | 200 | Clear |
| MW-24S | 10.33 | 809.01 | 819.34 | 15.1 | NR | NR | 5.99 | 420 | 100 | Clear |
| MW-24D | 9.78 | 809.35 | 819.13 | 15.5 | NR | NR | 6.31 | 90 | 40 | Clear |
| MW-25 | 24.93 | 840.23 | 865.16 | 17.9 | NR | NR | 6.97 | 80 | 30 | Moderate |
| MW-26S | 14.80 | 818.74 | 833.54 | 16.1 | NR | NR | 6.99 | 80 | 30 | Slight |
| MW-26D | 14.21 | 819.73 | 833.94 | 15.8 | NR | NR | 8.21 | 210 | 100 | Slight |
| **Minimum** | 9.49 | 782.82 | 794.14 | 15.1 | NR | NR | 5.99 | 80 | 30 | Clear |
| **Average** | 16.27 | 807.01 | 823.27 | 16.3 | NR | NR | 6.66 | 255 | 111 | Slight |
| **Maximum** | 30.54 | 840.23 | 865.16 | 17.9 | NR | NR | 8.21 | 610 | 300 | Moderate |
| SW-2 | - | - | - | 23.5 | NR | NR | 7.33 | 40 | 10 | Clear |
| SW-3 | - | - | - | 25.1 | NR | NR | 7.05 | 80 | 30 | Clear |
| SW-6 | - | - | - | 25.3 | NR | NR | 7.01 | 80 | 30 | Clear |
| SW-NEofMW-16 | - | - | - | 23.4 | NR | NR | 6.63 | 290 | 140 | Clear |
| SW-SofConfluence | - | - | - | 24.2 | NR | NR | 6.98 | 310 | 150 | Clear |
| **Minimum** | - | - | - | 23.4 | NR | NR | 6.63 | 40 | 10 | Clear |
| **Average** | | | | 24.3 | NR | NR | 7.00 | 160 | 72 | Clear |
| **Maximum** | - | - | - | 25.3 | NR | NR | 7.33 | 310 | 150 | Clear |

NR = No Reading attempted

btoc = below top of casing

amsl = above mean sea level

**Table 4**
**Sampling and Analysis Summary**
**July 22-24, 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 |
| MW-1B | Dry | | | | | | | | | | |
| MW-1C | | x | x | x | | | x | x | x | x | x |
| MW-9R | | x | x | x | | | x | x | x | x | x |
| MW-9RR | | x | x | x | | | x | x | x | x | x |
| MW-10R | | x | x | x | | | x | x | x | x | x |
| MW-16 | | x | x | x | | | x | x | x | x | x |
| MW-22 | | x | x | x | | | x | x | x | x | x |
| MW-23 | | x | x | x | | | x | x | x | x | x |
| MW-24S | | x | x | x | | | x | x | x | x | x |
| MW-24D | | x | x | x | | | x | x | x | x | x |
| MW-25 | | x | x | x | | | x | x | x | x | x |
| MW-26S | | x | x | x | | | x | x | x | x | x |
| MW-26D | | x | x | x | | | x | x | x | x | x |
| SW-2 | | x | x | x | | | x | x | x | x | x |
| SW-3 | | x | x | x | | | x | x | x | x | x |
| SW-SofConfluence | | | x | | | | x | x | x | x | x |
| SW-6 | | x | x | x | | | x | x | x | x | x |
| SW-NEofMW-16 | | 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 5**
**Detections Above SWSL, GWP, 2L or 2B**
**July 22-23, 2014**

| Sample ID | Parameter Name [1] | Sample Date | Result | Unit | MDL [2] | SWSL [3] | 2L [4] | 2B [5] | GWP [6] | MCL [7] | Preliminary Cause [8] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1A | Cadmium, total | 7/23/14 | 8.6 | ug/L | 1 | 1 | 1.75 | | | 5 | N & B |
| MW-1A | Vanadium, total | 7/23/14 | 20.9,j | ug/L | 5 | 25 | | | 3.5 | | |
| MW-1A | Barium, total | 7/23/14 | 137 | ug/L | 5 | 100 | 700 | | | 2000 | |
| MW-1A | Zinc, total | 7/23/14 | 76.8 | ug/L | 10 | 10 | 1050 | | | 5000 | |
| MW-1A | Copper, total | 7/23/14 | 18.2 | ug/L | 5 | 10 | 1000 | | | 1300 | |
| MW-1C | Chromium, total | 7/23/14 | 15.6 | ug/L | 5 | 10 | 10 | | | 100 | N & B |
| MW-1C | Vanadium, total | 7/23/14 | 90.6 | ug/L | 5 | 25 | | | 3.5 | | |
| MW-1C | Zinc, total | 7/23/14 | 142 | ug/L | 10 | 10 | 1050 | | | 5000 | |
| MW-1C | Copper, total | 7/23/14 | 47.9 | ug/L | 5 | 10 | 1000 | | | 1300 | |
| MW-1C | Barium, total | 7/23/14 | 462 | ug/L | 5 | 100 | 700 | | | 2000 | |
| MW-1C | Beryllium, total | 7/23/14 | 3.1 | ug/L | 1 | 1 | | | 4 | 4 | |
| MW-1C | Cadmium, total | 7/23/14 | 1.1 | ug/L | 1 | 1 | 1.75 | | | 5 | |
| MW-1C | Cobalt, total | 7/23/14 | 15.9 | ug/L | 5 | 10 | | | 70 | | |
| MW-10R | Barium, total | 7/22/14 | 107 | ug/L | 5 | 100 | 700 | | | 2000 | |
| MW-16 | Benzene | 7/23/14 | 1.4 | ug/L | 0.25 | 1 | 1 | | | 5 | L &/or LFG |
| MW-16 | Barium, total | 7/23/14 | 184 | ug/L | 5 | 100 | 700 | | | 2000 | |
| MW-16 | Zinc, total | 7/23/14 | 11.1 | ug/L | 10 | 10 | 1050 | | | 5000 | |
| MW-22 | Barium, total | 7/23/14 | 107 | ug/L | 5 | 100 | 700 | | | 2000 | |
| MW-22 | Zinc, total | 7/23/14 | 14.2 | ug/L | 10 | 10 | 1050 | | | 5000 | |
| MW-24D | Vanadium, total | 7/23/14 | 6.7,j | ug/L | 5 | 25 | | | 3.5 | | |
| MW-24S | Barium, total | 7/23/14 | 462 | ug/L | 5 | 100 | 700 | | | 2000 | |
| MW-24S | Beryllium, total | 7/23/14 | 1.7 | ug/L | 1 | 1 | | | 4 | 4 | |
| MW-24S | Zinc, total | 7/23/14 | 29.5 | ug/L | 10 | 10 | 1050 | | | 5000 | |
| MW-26D | Vanadium, total | 7/23/14 | 12.3,j | ug/L | 5 | 25 | | | 3.5 | | |
| MW-26S | Barium, total | 7/23/14 | 149 | ug/L | 5 | 100 | 700 | | | 2000 | |
| MW-26S | Vanadium, total | 7/23/14 | 10.6,j | ug/L | 5 | 25 | | | 3.5 | | |
| MW-9R | Antimony, total | 7/22/14 | 14.9 | ug/L | 5 | 6 | | | 1.4 | 6 | N |
| MW-9R | Barium, total | 7/22/14 | 327 | ug/L | 5 | 100 | 700 | | | 2000 | |
| MW-9R | Cobalt, total | 7/22/14 | 30.8 | ug/L | 5 | 10 | | | 70 | | |
| MW-9RR | Vanadium, total | 7/22/14 | 7.9,j | ug/L | 5 | 25 | | | 3.5 | | |

| Sample ID | Parameter Name [1] | Sample Date | Result | Unit | MDL [2] | SWSL [3] | 2L [4] | 2B [5] | GWP [6] | MCL [7] | Preliminary Cause [8] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SW-3 | Zinc, total | 7/23/14 | 183 | ug/L | 10 | 10 | | **50** | | 5000 | Offsite |
| SW-SofConfluence | Zinc, total | 7/23/14 | 677 | ug/L | 10 | 10 | | **50** | | 5000 | Offsite |

[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] MCL = Maximum Contaminant Level aks "Federal Primary Drinking Water Standard" (not currently applicable for regulatory comparisons)

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

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

B = Background as detected upgradient/upstream of facility

N = Natural from erosion of natural deposits

L = Leachate

LFG = Landfill Gas

**BOLD =** Concentration above respective 2L, 2B or MCL Standard

**Table 6**
**Hydrologic Properties at Monitoring Well Locations**
**July 24, 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 | 24.40 | 843.34 | Silty Clayey Sand |
| MW-1C | na | 20.00 | 0.04 | na | N80E | 24.69 | 841.56 | Silty Clayey Sand |
| MW-9R | 2.00E-04 | 15.00 | 0.13 | 185 | S83E | 9.49 | 797.70 | Sandy Silt |
| MW-9RR | 1.53E-04 | 15.00 | 0.36 | 380 | N79E | 18.53 | 787.63 | Sandy Silt |
| MW-10R | 9.00E-05 | 15.00 | 0.12 | 76 | N89E | 22.20 | 798.54 | Sandy Silt |
| MW-16 | 4.65E-04 | 15.00 | 0.05 | 167 | N83E | 11.32 | 782.82 | Sandy Silt |
| MW-22 | 3.35E-05 | 16.08 | 0.05 | 10 | N55E | 30.54 | 801.77 | Sandy Silt |
| MW-23 | 1.18E-04 | 16.08 | 0.06 | 45 | N71E | 12.80 | 811.54 | Silty Sand |
| MW-24S | 2.63E-04 | 16.08 | 0.04 | 65 | S60E | 10.33 | 809.01 | Silty Sand |
| MW-25 | 3.72E-04 | 9.70 | 0.09 | 351 | S86E | 24.93 | 840.23 | Silty Sand |
| MW-26S | 1.81E-04 | 4.50 | 0.05 | 188 | S67E | 14.80 | 818.74 | Clayey Sand/Sandy Clay |
| **Minimum** | 3.35E-05 | 4.50 | 0.04 | 10 | - | 9.49 | 782.82 | - |
| **Average** | 2.08E-04 | 14.77 | 0.10 | 163 | - | 18.55 | 812.08 | - |
| **Maximum** | 4.65E-04 | 20.00 | 0.36 | 380 | - | 30.54 | 843.34 | - |

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 July 24, 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

**Pace Analytical Services, Inc.**
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July 31, 2014

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

RE: Project: IREDELL C&D
Pace Project No.: 92210573

Dear Mr. Pfohl:
Enclosed are the analytical results for sample(s) received by the laboratory on July 24, 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.: 92210573

**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.: 92210573

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| **92210573001** | **MW-9R** | Water | 07/22/14 09:45 | 07/24/14 12:50 |
| **92210573002** | **MW-9RR** | Water | 07/22/14 09:10 | 07/24/14 12:50 |
| **92210573003** | **MW-10R** | Water | 07/22/14 17:00 | 07/24/14 12:50 |
| **92210573004** | **MW-16** | Water | 07/23/14 08:40 | 07/24/14 12:50 |
| **92210573005** | **MW-22** | Water | 07/23/14 10:30 | 07/24/14 12:50 |
| **92210573006** | **MW-23** | Water | 07/23/14 11:00 | 07/24/14 12:50 |
| **92210573007** | **MW-24S** | Water | 07/23/14 14:10 | 07/24/14 12:50 |
| **92210573008** | **MW-24D** | Water | 07/23/14 13:40 | 07/24/14 12:50 |
| **92210573009** | **MW-25** | Water | 07/23/14 11:30 | 07/24/14 12:50 |
| **92210573010** | **MW-26S** | Water | 07/23/14 15:35 | 07/24/14 12:50 |
| **92210573011** | **MW-26D** | Water | 07/23/14 15:00 | 07/24/14 12:50 |
| **92210573012** | **SW-6** | Water | 07/23/14 15:10 | 07/24/14 12:50 |



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# SAMPLE ANALYTE COUNT

Project: IREDELL C&D
Pace Project No.: 92210573

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **92210573001** | **MW-9R** | EPA 6010 | JMW | 15 | PASI-A |
| | | EPA 8260 | MCK | 52 | PASI-C |
| **92210573002** | **MW-9RR** | EPA 6010 | JMW | 15 | PASI-A |
| | | EPA 8260 | MCK | 52 | PASI-C |
| **92210573003** | **MW-10R** | EPA 6010 | JMW | 15 | PASI-A |
| | | EPA 8260 | MCK | 52 | PASI-C |
| **92210573004** | **MW-16** | EPA 6010 | JMW | 15 | PASI-A |
| | | EPA 8260 | MCK | 52 | PASI-C |
| **92210573005** | **MW-22** | EPA 6010 | JMW | 15 | PASI-A |
| | | EPA 8260 | MCK | 52 | PASI-C |
| **92210573006** | **MW-23** | EPA 6010 | JMW | 15 | PASI-A |
| | | EPA 8260 | MCK | 52 | PASI-C |
| **92210573007** | **MW-24S** | EPA 6010 | JMW | 15 | PASI-A |
| | | EPA 8260 | MCK | 52 | PASI-C |
| **92210573008** | **MW-24D** | EPA 6010 | JMW | 15 | PASI-A |
| | | EPA 8260 | MCK | 52 | PASI-C |
| **92210573009** | **MW-25** | EPA 6010 | JMW | 15 | PASI-A |
| | | EPA 8260 | MCK | 52 | PASI-C |
| **92210573010** | **MW-26S** | EPA 6010 | JMW | 15 | PASI-A |
| | | EPA 8260 | MCK | 52 | PASI-C |
| **92210573011** | **MW-26D** | EPA 6010 | JMW | 15 | PASI-A |
| | | EPA 8260 | MCK | 52 | PASI-C |
| **92210573012** | **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.: 92210573

**Sample: MW-9R** **Lab ID: 92210573001** Collected: 07/22/14 09:45 Received: 07/24/14 12:50 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 | **14.9** | ug/L | 6.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:38 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:38 | 7440-38-2 | |
| Barium | **327** | ug/L | 100 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 17:28 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 08:38 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 08:38 | 7440-43-9 | |
| Chromium | **8.0J** | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:38 | 7440-47-3 | |
| Cobalt | **30.8** | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:38 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 17:28 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:38 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:38 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 08:38 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:38 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 07/28/14 16:30 | 07/30/14 08:38 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:38 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 08:38 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 07/25/14 21:13 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 07/25/14 21:13 | 107-13-1 | |
| Benzene | **0.73J** | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 21:13 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 07/25/14 21:13 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 07/25/14 21:13 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 07/25/14 21:13 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 07/25/14 21:13 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 07/25/14 21:13 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 07/25/14 21:13 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 21:13 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 07/25/14 21:13 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 07/25/14 21:13 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 07/25/14 21:13 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 07/25/14 21:13 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 07/25/14 21:13 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 07/25/14 21:13 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 21:13 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 07/25/14 21:13 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 07/25/14 21:13 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 07/25/14 21:13 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 07/25/14 21:13 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 07/25/14 21:13 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 07/25/14 21:13 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 07/25/14 21:13 | 75-35-4 | |
| cis-1,2-Dichloroethene | **1.5J** | ug/L | 5.0 | 0.19 | 1 | | 07/25/14 21:13 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 07/25/14 21:13 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 21:13 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 07/25/14 21:13 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 07/25/14 21:13 | 10061-01-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL C&D
Pace Project No.: 92210573

**Sample: MW-9R** **Lab ID: 92210573001** Collected: 07/22/14 09:45 Received: 07/24/14 12:50 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 | | 07/25/14 21:13 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 07/25/14 21:13 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 07/25/14 21:13 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 07/25/14 21:13 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 07/25/14 21:13 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 07/25/14 21:13 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 21:13 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 07/25/14 21:13 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 07/25/14 21:13 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 07/25/14 21:13 | 127-18-4 | |
| Tetrahydrofuran | **3.7J** | ug/L | 10.0 | 3.1 | 1 | | 07/25/14 21:13 | 109-99-9 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 21:13 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 07/25/14 21:13 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 07/25/14 21:13 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 07/25/14 21:13 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 07/25/14 21:13 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 07/25/14 21:13 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 07/25/14 21:13 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 07/25/14 21:13 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 07/25/14 21:13 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 102 | % | 70-130 | | 1 | | 07/25/14 21:13 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 115 | % | 70-130 | | 1 | | 07/25/14 21:13 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 07/25/14 21:13 | 2037-26-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL C&D
Pace Project No.: 92210573

**Sample: MW-9RR** **Lab ID: 92210573002** Collected: 07/22/14 09:10 Received: 07/24/14 12:50 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 | 07/28/14 16:30 | 07/30/14 08:42 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:42 | 7440-38-2 | |
| Barium | **63.1J** | ug/L | 100 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 17:32 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 08:42 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 08:42 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:42 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:42 | 7440-48-4 | |
| Copper | **9.8J** | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 17:32 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:42 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:42 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 08:42 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:42 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 07/28/14 16:30 | 07/30/14 08:42 | 7440-28-0 | |
| Vanadium | **7.9J** | ug/L | 25.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:42 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 08:42 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 07/25/14 21:29 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 07/25/14 21:29 | 107-13-1 | |
| Benzene | **0.44J** | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 21:29 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 07/25/14 21:29 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 07/25/14 21:29 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 07/25/14 21:29 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 07/25/14 21:29 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 07/25/14 21:29 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 07/25/14 21:29 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 21:29 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 07/25/14 21:29 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 07/25/14 21:29 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 07/25/14 21:29 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 07/25/14 21:29 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 07/25/14 21:29 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 07/25/14 21:29 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 21:29 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 07/25/14 21:29 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 07/25/14 21:29 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 07/25/14 21:29 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 07/25/14 21:29 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 07/25/14 21:29 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 07/25/14 21:29 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 07/25/14 21:29 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 07/25/14 21:29 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 07/25/14 21:29 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 21:29 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 07/25/14 21:29 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 07/25/14 21:29 | 10061-01-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL C&D
Pace Project No.: 92210573

**Sample: MW-9RR** **Lab ID: 92210573002** Collected: 07/22/14 09:10 Received: 07/24/14 12:50 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 | | 07/25/14 21:29 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 07/25/14 21:29 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 07/25/14 21:29 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 07/25/14 21:29 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 07/25/14 21:29 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 07/25/14 21:29 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 21:29 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 07/25/14 21:29 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 07/25/14 21:29 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 07/25/14 21:29 | 127-18-4 | |
| Tetrahydrofuran | ND | ug/L | 10.0 | 3.1 | 1 | | 07/25/14 21:29 | 109-99-9 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 21:29 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 07/25/14 21:29 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 07/25/14 21:29 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 07/25/14 21:29 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 07/25/14 21:29 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 07/25/14 21:29 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 07/25/14 21:29 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 07/25/14 21:29 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 07/25/14 21:29 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 103 | % | 70-130 | | 1 | | 07/25/14 21:29 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 114 | % | 70-130 | | 1 | | 07/25/14 21:29 | 17060-07-0 | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 1 | | 07/25/14 21:29 | 2037-26-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL C&D
Pace Project No.: 92210573

**Sample: MW-10R** **Lab ID: 92210573003** Collected: 07/22/14 17:00 Received: 07/24/14 12:50 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 | 07/28/14 16:30 | 07/30/14 08:45 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:45 | 7440-38-2 | |
| Barium | **107** | ug/L | 100 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 17:38 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 08:45 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 08:45 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:45 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:45 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 17:38 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:45 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:45 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 08:45 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:45 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 07/28/14 16:30 | 07/30/14 08:45 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:45 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 08:45 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 07/25/14 21:45 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 07/25/14 21:45 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 21:45 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 07/25/14 21:45 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 07/25/14 21:45 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 07/25/14 21:45 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 07/25/14 21:45 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 07/25/14 21:45 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 07/25/14 21:45 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 21:45 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 07/25/14 21:45 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 07/25/14 21:45 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 07/25/14 21:45 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 07/25/14 21:45 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 07/25/14 21:45 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 07/25/14 21:45 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 21:45 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 07/25/14 21:45 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 07/25/14 21:45 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 07/25/14 21:45 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 07/25/14 21:45 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 07/25/14 21:45 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 07/25/14 21:45 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 07/25/14 21:45 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 07/25/14 21:45 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 07/25/14 21:45 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 21:45 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 07/25/14 21:45 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 07/25/14 21:45 | 10061-01-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL C&D
Pace Project No.: 92210573

**Sample: MW-10R** **Lab ID: 92210573003** Collected: 07/22/14 17:00 Received: 07/24/14 12:50 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 | | 07/25/14 21:45 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 07/25/14 21:45 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 07/25/14 21:45 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 07/25/14 21:45 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 07/25/14 21:45 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 07/25/14 21:45 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 21:45 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 07/25/14 21:45 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 07/25/14 21:45 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 07/25/14 21:45 | 127-18-4 | |
| Tetrahydrofuran | ND | ug/L | 10.0 | 3.1 | 1 | | 07/25/14 21:45 | 109-99-9 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 21:45 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 07/25/14 21:45 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 07/25/14 21:45 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 07/25/14 21:45 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 07/25/14 21:45 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 07/25/14 21:45 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 07/25/14 21:45 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 07/25/14 21:45 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 07/25/14 21:45 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 103 | % | 70-130 | | 1 | | 07/25/14 21:45 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 112 | % | 70-130 | | 1 | | 07/25/14 21:45 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 07/25/14 21:45 | 2037-26-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL C&D
Pace Project No.: 92210573

**Sample: MW-16** **Lab ID: 92210573004** Collected: 07/23/14 08:40 Received: 07/24/14 12:50 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 | 07/28/14 16:30 | 07/30/14 08:48 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:48 | 7440-38-2 | |
| Barium | **184** | ug/L | 100 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 17:41 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 08:48 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 08:48 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:48 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:48 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 17:41 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:48 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:48 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 08:48 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:48 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 07/28/14 16:30 | 07/30/14 08:48 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:48 | 7440-62-2 | |
| Zinc | **11.1** | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 08:48 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 07/25/14 22:01 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 07/25/14 22:01 | 107-13-1 | |
| Benzene | **1.4** | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 22:01 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 07/25/14 22:01 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 07/25/14 22:01 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 07/25/14 22:01 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 07/25/14 22:01 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 07/25/14 22:01 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 07/25/14 22:01 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 22:01 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 07/25/14 22:01 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 07/25/14 22:01 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 07/25/14 22:01 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 07/25/14 22:01 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 07/25/14 22:01 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 07/25/14 22:01 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 22:01 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 07/25/14 22:01 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 07/25/14 22:01 | 95-50-1 | |
| 1,4-Dichlorobenzene | **0.78J** | ug/L | 1.0 | 0.33 | 1 | | 07/25/14 22:01 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 07/25/14 22:01 | 110-57-6 | |
| 1,1-Dichloroethane | **0.40J** | ug/L | 5.0 | 0.32 | 1 | | 07/25/14 22:01 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 07/25/14 22:01 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 07/25/14 22:01 | 75-35-4 | |
| cis-1,2-Dichloroethene | **2.5J** | ug/L | 5.0 | 0.19 | 1 | | 07/25/14 22:01 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 07/25/14 22:01 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 22:01 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 07/25/14 22:01 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 07/25/14 22:01 | 10061-01-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL C&D
Pace Project No.: 92210573

**Sample: MW-16** **Lab ID: 92210573004** Collected: 07/23/14 08:40 Received: 07/24/14 12:50 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 | | 07/25/14 22:01 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 07/25/14 22:01 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 07/25/14 22:01 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 07/25/14 22:01 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 07/25/14 22:01 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 07/25/14 22:01 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 22:01 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 07/25/14 22:01 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 07/25/14 22:01 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 07/25/14 22:01 | 127-18-4 | |
| Tetrahydrofuran | **9.7J** | ug/L | 10.0 | 3.1 | 1 | | 07/25/14 22:01 | 109-99-9 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 22:01 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 07/25/14 22:01 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 07/25/14 22:01 | 79-00-5 | |
| Trichloroethene | **0.80J** | ug/L | 1.0 | 0.47 | 1 | | 07/25/14 22:01 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 07/25/14 22:01 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 07/25/14 22:01 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 07/25/14 22:01 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 07/25/14 22:01 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 07/25/14 22:01 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 102 | % | 70-130 | | 1 | | 07/25/14 22:01 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 113 | % | 70-130 | | 1 | | 07/25/14 22:01 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 07/25/14 22:01 | 2037-26-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL C&D
Pace Project No.: 92210573

**Sample: MW-22** **Lab ID: 92210573005** Collected: 07/23/14 10:30 Received: 07/24/14 12:50 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 | 07/28/14 16:30 | 07/30/14 08:51 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:51 | 7440-38-2 | |
| Barium | **107** | ug/L | 100 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 17:44 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 08:51 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 08:51 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:51 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:51 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 17:44 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:51 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:51 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 08:51 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:51 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 07/28/14 16:30 | 07/30/14 08:51 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:51 | 7440-62-2 | |
| Zinc | **14.2** | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 08:51 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 07/25/14 22:17 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 07/25/14 22:17 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 22:17 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 07/25/14 22:17 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 07/25/14 22:17 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 07/25/14 22:17 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 07/25/14 22:17 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 07/25/14 22:17 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 07/25/14 22:17 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 22:17 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 07/25/14 22:17 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 07/25/14 22:17 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 07/25/14 22:17 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 07/25/14 22:17 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 07/25/14 22:17 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 07/25/14 22:17 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 22:17 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 07/25/14 22:17 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 07/25/14 22:17 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 07/25/14 22:17 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 07/25/14 22:17 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 07/25/14 22:17 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 07/25/14 22:17 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 07/25/14 22:17 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 07/25/14 22:17 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 07/25/14 22:17 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 22:17 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 07/25/14 22:17 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 07/25/14 22:17 | 10061-01-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL C&D
Pace Project No.: 92210573

**Sample: MW-22** **Lab ID: 92210573005** Collected: 07/23/14 10:30 Received: 07/24/14 12:50 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 | | 07/25/14 22:17 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 07/25/14 22:17 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 07/25/14 22:17 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 07/25/14 22:17 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 07/25/14 22:17 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 07/25/14 22:17 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 22:17 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 07/25/14 22:17 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 07/25/14 22:17 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 07/25/14 22:17 | 127-18-4 | |
| Tetrahydrofuran | ND | ug/L | 10.0 | 3.1 | 1 | | 07/25/14 22:17 | 109-99-9 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 22:17 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 07/25/14 22:17 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 07/25/14 22:17 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 07/25/14 22:17 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 07/25/14 22:17 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 07/25/14 22:17 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 07/25/14 22:17 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 07/25/14 22:17 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 07/25/14 22:17 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 102 | % | 70-130 | | 1 | | 07/25/14 22:17 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 113 | % | 70-130 | | 1 | | 07/25/14 22:17 | 17060-07-0 | |
| Toluene-d8 (S) | 102 | % | 70-130 | | 1 | | 07/25/14 22:17 | 2037-26-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL C&D
Pace Project No.: 92210573

**Sample: MW-23** **Lab ID: 92210573006** Collected: 07/23/14 11:00 Received: 07/24/14 12:50 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 | 07/28/14 16:30 | 07/30/14 09:00 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 09:00 | 7440-38-2 | |
| Barium | **40.4J** | ug/L | 100 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 17:57 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 09:00 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 09:00 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 09:00 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 09:00 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 17:57 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 09:00 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 09:00 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 09:00 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 09:00 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 07/28/14 16:30 | 07/30/14 09:00 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 09:00 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 09:00 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 07/25/14 22:34 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 07/25/14 22:34 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 22:34 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 07/25/14 22:34 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 07/25/14 22:34 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 07/25/14 22:34 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 07/25/14 22:34 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 07/25/14 22:34 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 07/25/14 22:34 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 22:34 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 07/25/14 22:34 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 07/25/14 22:34 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 07/25/14 22:34 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 07/25/14 22:34 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 07/25/14 22:34 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 07/25/14 22:34 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 22:34 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 07/25/14 22:34 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 07/25/14 22:34 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 07/25/14 22:34 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 07/25/14 22:34 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 07/25/14 22:34 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 07/25/14 22:34 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 07/25/14 22:34 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 07/25/14 22:34 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 07/25/14 22:34 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 22:34 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 07/25/14 22:34 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 07/25/14 22:34 | 10061-01-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL C&D
Pace Project No.: 92210573

**Sample: MW-23** **Lab ID: 92210573006** Collected: 07/23/14 11:00 Received: 07/24/14 12:50 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 | | 07/25/14 22:34 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 07/25/14 22:34 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 07/25/14 22:34 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 07/25/14 22:34 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 07/25/14 22:34 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 07/25/14 22:34 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 22:34 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 07/25/14 22:34 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 07/25/14 22:34 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 07/25/14 22:34 | 127-18-4 | |
| Tetrahydrofuran | ND | ug/L | 10.0 | 3.1 | 1 | | 07/25/14 22:34 | 109-99-9 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 22:34 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 07/25/14 22:34 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 07/25/14 22:34 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 07/25/14 22:34 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 07/25/14 22:34 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 07/25/14 22:34 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 07/25/14 22:34 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 07/25/14 22:34 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 07/25/14 22:34 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 106 | % | 70-130 | | 1 | | 07/25/14 22:34 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 113 | % | 70-130 | | 1 | | 07/25/14 22:34 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 07/25/14 22:34 | 2037-26-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL C&D
Pace Project No.: 92210573

**Sample: MW-24S** **Lab ID: 92210573007** Collected: 07/23/14 14:10 Received: 07/24/14 12:50 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 | 07/28/14 16:30 | 07/30/14 18:00 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:00 | 7440-38-2 | |
| Barium | **462** | ug/L | 100 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:00 | 7440-39-3 | |
| Beryllium | **1.7** | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 18:00 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 18:00 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:00 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:00 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:00 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:00 | 7439-92-1 | |
| Nickel | **9.1J** | ug/L | 50.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:00 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 18:00 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:00 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 07/28/14 16:30 | 07/30/14 18:00 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:00 | 7440-62-2 | |
| Zinc | **29.5** | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 18:00 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 07/25/14 22:50 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 07/25/14 22:50 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 22:50 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 07/25/14 22:50 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 07/25/14 22:50 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 07/25/14 22:50 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 07/25/14 22:50 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 07/25/14 22:50 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 07/25/14 22:50 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 22:50 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 07/25/14 22:50 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 07/25/14 22:50 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 07/25/14 22:50 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 07/25/14 22:50 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 07/25/14 22:50 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 07/25/14 22:50 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 22:50 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 07/25/14 22:50 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 07/25/14 22:50 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 07/25/14 22:50 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 07/25/14 22:50 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 07/25/14 22:50 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 07/25/14 22:50 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 07/25/14 22:50 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 07/25/14 22:50 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 07/25/14 22:50 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 22:50 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 07/25/14 22:50 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 07/25/14 22:50 | 10061-01-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL C&D
Pace Project No.: 92210573

**Sample: MW-24S** **Lab ID: 92210573007** Collected: 07/23/14 14:10 Received: 07/24/14 12:50 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 | | 07/25/14 22:50 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 07/25/14 22:50 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 07/25/14 22:50 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 07/25/14 22:50 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 07/25/14 22:50 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 07/25/14 22:50 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 22:50 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 07/25/14 22:50 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 07/25/14 22:50 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 07/25/14 22:50 | 127-18-4 | |
| Tetrahydrofuran | ND | ug/L | 10.0 | 3.1 | 1 | | 07/25/14 22:50 | 109-99-9 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 22:50 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 07/25/14 22:50 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 07/25/14 22:50 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 07/25/14 22:50 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 07/25/14 22:50 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 07/25/14 22:50 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 07/25/14 22:50 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 07/25/14 22:50 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 07/25/14 22:50 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 101 | % | 70-130 | | 1 | | 07/25/14 22:50 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 114 | % | 70-130 | | 1 | | 07/25/14 22:50 | 17060-07-0 | |
| Toluene-d8 (S) | 101 | % | 70-130 | | 1 | | 07/25/14 22:50 | 2037-26-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL C&D
Pace Project No.: 92210573

**Sample: MW-24D** **Lab ID: 92210573008** Collected: 07/23/14 13:40 Received: 07/24/14 12:50 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 | 07/28/14 16:30 | 07/30/14 18:03 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:03 | 7440-38-2 | |
| Barium | **10.4J** | ug/L | 100 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:03 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 18:03 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 18:03 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:03 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:03 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:03 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:03 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:03 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 18:03 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:03 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 07/28/14 16:30 | 07/30/14 18:03 | 7440-28-0 | |
| Vanadium | **6.7J** | ug/L | 25.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:03 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 18:03 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 07/25/14 23:06 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 07/25/14 23:06 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 23:06 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 07/25/14 23:06 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 07/25/14 23:06 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 07/25/14 23:06 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 07/25/14 23:06 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 07/25/14 23:06 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 07/25/14 23:06 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 23:06 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 07/25/14 23:06 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 07/25/14 23:06 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 07/25/14 23:06 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 07/25/14 23:06 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 07/25/14 23:06 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 07/25/14 23:06 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 23:06 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 07/25/14 23:06 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 07/25/14 23:06 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 07/25/14 23:06 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 07/25/14 23:06 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 07/25/14 23:06 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 07/25/14 23:06 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 07/25/14 23:06 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 07/25/14 23:06 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 07/25/14 23:06 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 23:06 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 07/25/14 23:06 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 07/25/14 23:06 | 10061-01-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL C&D
Pace Project No.: 92210573

**Sample: MW-24D** **Lab ID: 92210573008** Collected: 07/23/14 13:40 Received: 07/24/14 12:50 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 | | 07/25/14 23:06 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 07/25/14 23:06 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 07/25/14 23:06 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 07/25/14 23:06 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 07/25/14 23:06 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 07/25/14 23:06 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 23:06 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 07/25/14 23:06 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 07/25/14 23:06 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 07/25/14 23:06 | 127-18-4 | |
| Tetrahydrofuran | ND | ug/L | 10.0 | 3.1 | 1 | | 07/25/14 23:06 | 109-99-9 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 23:06 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 07/25/14 23:06 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 07/25/14 23:06 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 07/25/14 23:06 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 07/25/14 23:06 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 07/25/14 23:06 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 07/25/14 23:06 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 07/25/14 23:06 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 07/25/14 23:06 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 100 | % | 70-130 | | 1 | | 07/25/14 23:06 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 115 | % | 70-130 | | 1 | | 07/25/14 23:06 | 17060-07-0 | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 1 | | 07/25/14 23:06 | 2037-26-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL C&D
Pace Project No.: 92210573

**Sample: MW-25** **Lab ID: 92210573009** Collected: 07/23/14 11:30 Received: 07/24/14 12:50 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 | 07/28/14 16:30 | 07/30/14 18:07 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:07 | 7440-38-2 | |
| Barium | **45.7J** | ug/L | 100 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:07 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 18:07 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 18:07 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:07 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:07 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:07 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:07 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:07 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 18:07 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:07 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 07/28/14 16:30 | 07/30/14 18:07 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:07 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 18:07 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 07/25/14 23:22 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 07/25/14 23:22 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 23:22 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 07/25/14 23:22 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 07/25/14 23:22 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 07/25/14 23:22 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 07/25/14 23:22 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 07/25/14 23:22 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 07/25/14 23:22 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 23:22 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 07/25/14 23:22 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 07/25/14 23:22 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 07/25/14 23:22 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 07/25/14 23:22 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 07/25/14 23:22 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 07/25/14 23:22 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 23:22 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 07/25/14 23:22 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 07/25/14 23:22 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 07/25/14 23:22 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 07/25/14 23:22 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 07/25/14 23:22 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 07/25/14 23:22 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 07/25/14 23:22 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 07/25/14 23:22 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 07/25/14 23:22 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 23:22 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 07/25/14 23:22 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 07/25/14 23:22 | 10061-01-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL C&D
Pace Project No.: 92210573

**Sample: MW-25** **Lab ID: 92210573009** Collected: 07/23/14 11:30 Received: 07/24/14 12:50 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 | | 07/25/14 23:22 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 07/25/14 23:22 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 07/25/14 23:22 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 07/25/14 23:22 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 07/25/14 23:22 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 07/25/14 23:22 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 23:22 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 07/25/14 23:22 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 07/25/14 23:22 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 07/25/14 23:22 | 127-18-4 | |
| Tetrahydrofuran | ND | ug/L | 10.0 | 3.1 | 1 | | 07/25/14 23:22 | 109-99-9 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 23:22 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 07/25/14 23:22 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 07/25/14 23:22 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 07/25/14 23:22 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 07/25/14 23:22 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 07/25/14 23:22 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 07/25/14 23:22 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 07/25/14 23:22 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 07/25/14 23:22 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 103 | % | 70-130 | | 1 | | 07/25/14 23:22 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 116 | % | 70-130 | | 1 | | 07/25/14 23:22 | 17060-07-0 | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 1 | | 07/25/14 23:22 | 2037-26-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL C&D
Pace Project No.: 92210573

**Sample: MW-26S** **Lab ID: 92210573010** Collected: 07/23/14 15:35 Received: 07/24/14 12:50 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 | 07/28/14 16:30 | 07/30/14 18:10 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:10 | 7440-38-2 | |
| Barium | **149** | ug/L | 100 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:10 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 18:10 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 18:10 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:10 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:10 | 7440-48-4 | |
| Copper | **7.1J** | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:10 | 7440-50-8 | |
| Lead | **5.2J** | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:10 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:10 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 18:10 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:10 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 07/28/14 16:30 | 07/30/14 18:10 | 7440-28-0 | |
| Vanadium | **10.6J** | ug/L | 25.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:10 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 18:10 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 07/25/14 23:38 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 07/25/14 23:38 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 23:38 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 07/25/14 23:38 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 07/25/14 23:38 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 07/25/14 23:38 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 07/25/14 23:38 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 07/25/14 23:38 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 07/25/14 23:38 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 23:38 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 07/25/14 23:38 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 07/25/14 23:38 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 07/25/14 23:38 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 07/25/14 23:38 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 07/25/14 23:38 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 07/25/14 23:38 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 23:38 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 07/25/14 23:38 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 07/25/14 23:38 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 07/25/14 23:38 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 07/25/14 23:38 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 07/25/14 23:38 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 07/25/14 23:38 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 07/25/14 23:38 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 07/25/14 23:38 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 07/25/14 23:38 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 23:38 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 07/25/14 23:38 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 07/25/14 23:38 | 10061-01-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL C&D
Pace Project No.: 92210573

**Sample: MW-26S** **Lab ID: 92210573010** Collected: 07/23/14 15:35 Received: 07/24/14 12:50 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 | | 07/25/14 23:38 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 07/25/14 23:38 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 07/25/14 23:38 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 07/25/14 23:38 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 07/25/14 23:38 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 07/25/14 23:38 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 23:38 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 07/25/14 23:38 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 07/25/14 23:38 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 07/25/14 23:38 | 127-18-4 | |
| Tetrahydrofuran | ND | ug/L | 10.0 | 3.1 | 1 | | 07/25/14 23:38 | 109-99-9 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 23:38 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 07/25/14 23:38 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 07/25/14 23:38 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 07/25/14 23:38 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 07/25/14 23:38 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 07/25/14 23:38 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 07/25/14 23:38 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 07/25/14 23:38 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 07/25/14 23:38 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 104 | % | 70-130 | | 1 | | 07/25/14 23:38 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 117 | % | 70-130 | | 1 | | 07/25/14 23:38 | 17060-07-0 | |
| Toluene-d8 (S) | 101 | % | 70-130 | | 1 | | 07/25/14 23:38 | 2037-26-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL C&D
Pace Project No.: 92210573

**Sample: MW-26D** **Lab ID: 92210573011** Collected: 07/23/14 15:00 Received: 07/24/14 12:50 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 | 07/28/14 16:30 | 07/30/14 18:13 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:13 | 7440-38-2 | |
| Barium | **13.6J** | ug/L | 100 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:13 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 18:13 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 18:13 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:13 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:13 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:13 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:13 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:13 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 18:13 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:13 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 07/28/14 16:30 | 07/30/14 18:13 | 7440-28-0 | |
| Vanadium | **12.3J** | ug/L | 25.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:13 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 18:13 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 07/25/14 23:54 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 07/25/14 23:54 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 23:54 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 07/25/14 23:54 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 07/25/14 23:54 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 07/25/14 23:54 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 07/25/14 23:54 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 07/25/14 23:54 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 07/25/14 23:54 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 23:54 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 07/25/14 23:54 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 07/25/14 23:54 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 07/25/14 23:54 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 07/25/14 23:54 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 07/25/14 23:54 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 07/25/14 23:54 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 23:54 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 07/25/14 23:54 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 07/25/14 23:54 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 07/25/14 23:54 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 07/25/14 23:54 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 07/25/14 23:54 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 07/25/14 23:54 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 07/25/14 23:54 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 07/25/14 23:54 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 07/25/14 23:54 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 23:54 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 07/25/14 23:54 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 07/25/14 23:54 | 10061-01-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL C&D
Pace Project No.: 92210573

**Sample: MW-26D** **Lab ID: 92210573011** Collected: 07/23/14 15:00 Received: 07/24/14 12:50 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 | | 07/25/14 23:54 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 07/25/14 23:54 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 07/25/14 23:54 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 07/25/14 23:54 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 07/25/14 23:54 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 07/25/14 23:54 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 23:54 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 07/25/14 23:54 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 07/25/14 23:54 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 07/25/14 23:54 | 127-18-4 | |
| Tetrahydrofuran | ND | ug/L | 10.0 | 3.1 | 1 | | 07/25/14 23:54 | 109-99-9 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 23:54 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 07/25/14 23:54 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 07/25/14 23:54 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 07/25/14 23:54 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 07/25/14 23:54 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 07/25/14 23:54 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 07/25/14 23:54 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 07/25/14 23:54 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 07/25/14 23:54 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 102 | % | 70-130 | | 1 | | 07/25/14 23:54 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 117 | % | 70-130 | | 1 | | 07/25/14 23:54 | 17060-07-0 | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 1 | | 07/25/14 23:54 | 2037-26-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL C&D
Pace Project No.: 92210573

**Sample: SW-6** **Lab ID: 92210573012** Collected: 07/23/14 15:10 Received: 07/24/14 12:50 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 | 07/28/14 16:30 | 07/30/14 18:16 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:16 | 7440-38-2 | |
| Barium | **59.6J** | ug/L | 100 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:16 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 18:16 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 18:16 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:16 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:16 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:16 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:16 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:16 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 18:16 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:16 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 07/28/14 16:30 | 07/30/14 18:16 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 18:16 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 18:16 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 07/26/14 00:10 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 07/26/14 00:10 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 07/26/14 00:10 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 07/26/14 00:10 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 07/26/14 00:10 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 07/26/14 00:10 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 07/26/14 00:10 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 07/26/14 00:10 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 07/26/14 00:10 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 07/26/14 00:10 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 07/26/14 00:10 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 07/26/14 00:10 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 07/26/14 00:10 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 07/26/14 00:10 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 07/26/14 00:10 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 07/26/14 00:10 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 07/26/14 00:10 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 07/26/14 00:10 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 07/26/14 00:10 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 07/26/14 00:10 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 07/26/14 00:10 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 07/26/14 00:10 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 07/26/14 00:10 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 07/26/14 00:10 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 07/26/14 00:10 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 07/26/14 00:10 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 07/26/14 00:10 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 07/26/14 00:10 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 07/26/14 00:10 | 10061-01-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL C&D
Pace Project No.: 92210573

**Sample: SW-6** **Lab ID: 92210573012** Collected: 07/23/14 15:10 Received: 07/24/14 12:50 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 | | 07/26/14 00:10 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 07/26/14 00:10 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 07/26/14 00:10 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 07/26/14 00:10 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 07/26/14 00:10 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 07/26/14 00:10 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/26/14 00:10 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 07/26/14 00:10 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 07/26/14 00:10 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 07/26/14 00:10 | 127-18-4 | |
| Tetrahydrofuran | ND | ug/L | 10.0 | 3.1 | 1 | | 07/26/14 00:10 | 109-99-9 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/26/14 00:10 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 07/26/14 00:10 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 07/26/14 00:10 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 07/26/14 00:10 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 07/26/14 00:10 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 07/26/14 00:10 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 07/26/14 00:10 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 07/26/14 00:10 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 07/26/14 00:10 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 101 | % | 70-130 | | 1 | | 07/26/14 00:10 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 117 | % | 70-130 | | 1 | | 07/26/14 00:10 | 17060-07-0 | |
| Toluene-d8 (S) | 101 | % | 70-130 | | 1 | | 07/26/14 00:10 | 2037-26-5 | |



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# QUALITY CONTROL DATA

Project: IREDELL C&D
Pace Project No.: 92210573

QC Batch: MPRP/16541 — Analysis Method: EPA 6010
QC Batch Method: EPA 3010 — Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92210573001, 92210573002, 92210573003, 92210573004, 92210573005, 92210573006, 92210573007, 92210573008, 92210573009, 92210573010, 92210573011, 92210573012

METHOD BLANK: 1251119 — Matrix: Water
Associated Lab Samples: 92210573001, 92210573002, 92210573003, 92210573004, 92210573005, 92210573006, 92210573007, 92210573008, 92210573009, 92210573010, 92210573011, 92210573012

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Antimony | ug/L | ND | 6.0 | 07/30/14 08:14 | |
| Arsenic | ug/L | ND | 10.0 | 07/30/14 08:14 | |
| Barium | ug/L | ND | 100 | 07/30/14 08:14 | |
| Beryllium | ug/L | ND | 1.0 | 07/30/14 08:14 | |
| Cadmium | ug/L | ND | 1.0 | 07/30/14 08:14 | |
| Chromium | ug/L | ND | 10.0 | 07/30/14 08:14 | |
| Cobalt | ug/L | ND | 10.0 | 07/30/14 08:14 | |
| Copper | ug/L | ND | 10.0 | 07/30/14 17:12 | |
| Lead | ug/L | ND | 10.0 | 07/30/14 08:14 | |
| Nickel | ug/L | ND | 50.0 | 07/30/14 08:14 | |
| Selenium | ug/L | ND | 10.0 | 07/30/14 08:14 | |
| Silver | ug/L | ND | 10.0 | 07/30/14 08:14 | |
| Thallium | ug/L | ND | 5.5 | 07/30/14 08:14 | |
| Vanadium | ug/L | ND | 25.0 | 07/30/14 08:14 | |
| Zinc | ug/L | ND | 10.0 | 07/30/14 08:14 | |

LABORATORY CONTROL SAMPLE: 1251120

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Antimony | ug/L | 500 | 490 | 98 | 80-120 | |
| Arsenic | ug/L | 500 | 477 | 95 | 80-120 | |
| Barium | ug/L | 500 | 447 | 89 | 80-120 | |
| Beryllium | ug/L | 500 | 488 | 98 | 80-120 | |
| Cadmium | ug/L | 500 | 492 | 98 | 80-120 | |
| Chromium | ug/L | 500 | 471 | 94 | 80-120 | |
| Cobalt | ug/L | 500 | 474 | 95 | 80-120 | |
| Copper | ug/L | 500 | 495 | 99 | 80-120 | |
| Lead | ug/L | 500 | 476 | 95 | 80-120 | |
| Nickel | ug/L | 500 | 488 | 98 | 80-120 | |
| Selenium | ug/L | 500 | 482 | 96 | 80-120 | |
| Silver | ug/L | 250 | 242 | 97 | 80-120 | |
| Thallium | ug/L | 500 | 483 | 97 | 80-120 | |
| Vanadium | ug/L | 500 | 487 | 97 | 80-120 | |
| Zinc | ug/L | 500 | 471 | 94 | 80-120 | |

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



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# QUALITY CONTROL DATA

Project: IREDELL C&D
Pace Project No.: 92210573

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1251121 1251122

| Parameter | Units | 92210568002 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 | 478 | 473 | 96 | 95 | 75-125 | 1 | 25 | |
| Arsenic | ug/L | ND | 500 | 500 | 470 | 466 | 94 | 93 | 75-125 | 1 | 25 | |
| Barium | ug/L | 21.0J | 500 | 500 | 461 | 456 | 88 | 87 | 75-125 | 1 | 25 | |
| Beryllium | ug/L | ND | 500 | 500 | 482 | 474 | 96 | 95 | 75-125 | 2 | 25 | |
| Cadmium | ug/L | ND | 500 | 500 | 483 | 478 | 97 | 95 | 75-125 | 1 | 25 | |
| Chromium | ug/L | ND | 500 | 500 | 467 | 463 | 93 | 92 | 75-125 | 1 | 25 | |
| Cobalt | ug/L | ND | 500 | 500 | 464 | 455 | 93 | 91 | 75-125 | 2 | 25 | |
| Copper | ug/L | ND | 500 | 500 | 490 | 480 | 98 | 96 | 75-125 | 2 | 25 | |
| Lead | ug/L | ND | 500 | 500 | 463 | 457 | 93 | 91 | 75-125 | 1 | 25 | |
| Nickel | ug/L | ND | 500 | 500 | 476 | 473 | 95 | 94 | 75-125 | 1 | 25 | |
| Selenium | ug/L | ND | 500 | 500 | 470 | 468 | 94 | 94 | 75-125 | 0 | 25 | |
| Silver | ug/L | ND | 250 | 250 | 239 | 237 | 95 | 95 | 75-125 | 1 | 25 | |
| Thallium | ug/L | ND | 500 | 500 | 471 | 463 | 94 | 92 | 75-125 | 2 | 25 | |
| Vanadium | ug/L | ND | 500 | 500 | 481 | 478 | 96 | 95 | 75-125 | 1 | 25 | |
| Zinc | ug/L | ND | 500 | 500 | 464 | 459 | 92 | 91 | 75-125 | 1 | 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.: 92210573

QC Batch: MSV/27725 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92210573001, 92210573002, 92210573003, 92210573004, 92210573005, 92210573006, 92210573007, 92210573008, 92210573009, 92210573010, 92210573011, 92210573012

METHOD BLANK: 1250070 Matrix: Water
Associated Lab Samples: 92210573001, 92210573002, 92210573003, 92210573004, 92210573005, 92210573006, 92210573007, 92210573008, 92210573009, 92210573010, 92210573011, 92210573012

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| 1,1,1-Trichloroethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,1,2,2-Tetrachloroethane | ug/L | ND | 3.0 | 07/25/14 15:37 | |
| 1,1,2-Trichloroethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,1-Dichloroethane | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| 1,1-Dichloroethene | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| 1,2,3-Trichloropropane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,2-Dibromo-3-chloropropane | ug/L | ND | 13.0 | 07/25/14 15:37 | |
| 1,2-Dibromoethane (EDB) | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,2-Dichlorobenzene | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| 1,2-Dichloroethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,2-Dichloropropane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,3-Dichloropropane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,4-Dichlorobenzene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 2-Butanone (MEK) | ug/L | ND | 100 | 07/25/14 15:37 | |
| 2-Hexanone | ug/L | ND | 50.0 | 07/25/14 15:37 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | ND | 100 | 07/25/14 15:37 | |
| Acetone | ug/L | ND | 100 | 07/25/14 15:37 | |
| Acrylonitrile | ug/L | ND | 200 | 07/25/14 15:37 | |
| Benzene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Bromochloromethane | ug/L | ND | 3.0 | 07/25/14 15:37 | |
| Bromodichloromethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Bromoform | ug/L | ND | 3.0 | 07/25/14 15:37 | |
| Bromomethane | ug/L | ND | 10.0 | 07/25/14 15:37 | |
| Carbon disulfide | ug/L | ND | 100 | 07/25/14 15:37 | |
| Carbon tetrachloride | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Chlorobenzene | ug/L | ND | 3.0 | 07/25/14 15:37 | |
| Chloroethane | ug/L | ND | 10.0 | 07/25/14 15:37 | |
| Chloroform | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| Chloromethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| cis-1,2-Dichloroethene | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| cis-1,3-Dichloropropene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Dibromochloromethane | ug/L | ND | 3.0 | 07/25/14 15:37 | |
| Dibromomethane | ug/L | ND | 10.0 | 07/25/14 15:37 | |
| Ethylbenzene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Iodomethane | ug/L | ND | 10.0 | 07/25/14 15:37 | |
| Methylene Chloride | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Styrene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Tetrachloroethene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Tetrahydrofuran | ug/L | ND | 10.0 | 07/25/14 15:37 | |

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(704)875-9092

# QUALITY CONTROL DATA

Project: IREDELL C&D
Pace Project No.: 92210573

METHOD BLANK: 1250070 Matrix: Water

Associated Lab Samples: 92210573001, 92210573002, 92210573003, 92210573004, 92210573005, 92210573006, 92210573007, 92210573008, 92210573009, 92210573010, 92210573011, 92210573012

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Toluene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| trans-1,2-Dichloroethene | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| trans-1,3-Dichloropropene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| trans-1,4-Dichloro-2-butene | ug/L | ND | 100 | 07/25/14 15:37 | |
| Trichloroethene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Trichlorofluoromethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Vinyl acetate | ug/L | ND | 50.0 | 07/25/14 15:37 | |
| Vinyl chloride | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Xylene (Total) | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| 1,2-Dichloroethane-d4 (S) | % | 108 | 70-130 | 07/25/14 15:37 | |
| 4-Bromofluorobenzene (S) | % | 101 | 70-130 | 07/25/14 15:37 | |
| Toluene-d8 (S) | % | 99 | 70-130 | 07/25/14 15:37 | |

LABORATORY CONTROL SAMPLE: 1250071

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | 50 | 55.7 | 111 | 80-125 | |
| 1,1,1-Trichloroethane | ug/L | 50 | 52.7 | 105 | 71-129 | |
| 1,1,2,2-Tetrachloroethane | ug/L | 50 | 53.7 | 107 | 79-124 | |
| 1,1,2-Trichloroethane | ug/L | 50 | 54.8 | 110 | 85-125 | |
| 1,1-Dichloroethane | ug/L | 50 | 50.1 | 100 | 73-126 | |
| 1,1-Dichloroethene | ug/L | 50 | 56.0 | 112 | 66-135 | |
| 1,2,3-Trichloropropane | ug/L | 50 | 57.8 | 116 | 75-130 | |
| 1,2-Dibromo-3-chloropropane | ug/L | 50 | 54.3 | 109 | 71-133 | |
| 1,2-Dibromoethane (EDB) | ug/L | 50 | 57.1 | 114 | 83-124 | |
| 1,2-Dichlorobenzene | ug/L | 50 | 55.2 | 110 | 80-133 | |
| 1,2-Dichloroethane | ug/L | 50 | 52.1 | 104 | 67-128 | |
| 1,2-Dichloropropane | ug/L | 50 | 54.2 | 108 | 75-132 | |
| 1,3-Dichloropropane | ug/L | 50 | 56.0 | 112 | 76-131 | |
| 1,4-Dichlorobenzene | ug/L | 50 | 56.0 | 112 | 78-130 | |
| 2-Butanone (MEK) | ug/L | 100 | 105 | 105 | 61-144 | |
| 2-Hexanone | ug/L | 100 | 108 | 108 | 68-143 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | 100 | 108 | 108 | 72-135 | |
| Acetone | ug/L | 100 | 103 | 103 | 48-146 | |
| Acrylonitrile | ug/L | 250 | 250 | 100 | 40-160 | |
| Benzene | ug/L | 50 | 56.8 | 114 | 80-125 | |
| Bromochloromethane | ug/L | 50 | 50.3 | 101 | 71-125 | |
| Bromodichloromethane | ug/L | 50 | 63.3 | 127 | 78-124 | L0 |
| Bromoform | ug/L | 50 | 61.6 | 123 | 71-128 | |
| Bromomethane | ug/L | 50 | 48.8 | 98 | 40-160 | |
| Carbon disulfide | ug/L | 50 | 50.8J | 102 | 50-160 | |
| Carbon tetrachloride | ug/L | 50 | 60.1 | 120 | 69-131 | |
| Chlorobenzene | ug/L | 50 | 55.3 | 111 | 81-122 | |

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(704)875-9092

# QUALITY CONTROL DATA

Project: IREDELL C&D
Pace Project No.: 92210573

LABORATORY CONTROL SAMPLE: 1250071

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Chloroethane | ug/L | 50 | 39.1 | 78 | 39-148 | |
| Chloroform | ug/L | 50 | 60.7 | 121 | 73-127 | |
| Chloromethane | ug/L | 50 | 43.1 | 86 | 44-146 | |
| cis-1,2-Dichloroethene | ug/L | 50 | 57.3 | 115 | 74-124 | |
| cis-1,3-Dichloropropene | ug/L | 50 | 57.9 | 116 | 72-132 | |
| Dibromochloromethane | ug/L | 50 | 65.1 | 130 | 78-125 | L0 |
| Dibromomethane | ug/L | 50 | 59.1 | 118 | 82-120 | |
| Ethylbenzene | ug/L | 50 | 57.5 | 115 | 79-121 | |
| Iodomethane | ug/L | 100 | 87.5 | 87 | 39-154 | |
| Methylene Chloride | ug/L | 50 | 49.2 | 98 | 64-133 | |
| Styrene | ug/L | 50 | 58.3 | 117 | 84-126 | |
| Tetrachloroethene | ug/L | 50 | 56.9 | 114 | 78-122 | |
| Tetrahydrofuran | ug/L | 500 | 497 | 99 | 69-148 | |
| Toluene | ug/L | 50 | 56.1 | 112 | 80-121 | |
| trans-1,2-Dichloroethene | ug/L | 50 | 56.4 | 113 | 71-127 | |
| trans-1,3-Dichloropropene | ug/L | 50 | 57.9 | 116 | 69-141 | |
| trans-1,4-Dichloro-2-butene | ug/L | 50 | 55.2J | 110 | 40-160 | |
| Trichloroethene | ug/L | 50 | 56.6 | 113 | 78-122 | |
| Trichlorofluoromethane | ug/L | 50 | 51.7 | 103 | 53-137 | |
| Vinyl acetate | ug/L | 100 | 112 | 112 | 40-160 | |
| Vinyl chloride | ug/L | 50 | 50.3 | 101 | 58-137 | |
| Xylene (Total) | ug/L | 150 | 173 | 115 | 81-126 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 92 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 103 | 70-130 | |
| Toluene-d8 (S) | % | | | 100 | 70-130 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1250072 1250073

| Parameter | Units | 92210562001 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 | 53.8 | 57.0 | 108 | 114 | 70-166 | 6 | 30 | |
| Benzene | ug/L | ND | 50 | 50 | 51.1 | 53.9 | 102 | 108 | 70-148 | 5 | 30 | |
| Chlorobenzene | ug/L | ND | 50 | 50 | 51.9 | 51.7 | 104 | 103 | 70-146 | 0 | 30 | |
| Toluene | ug/L | ND | 50 | 50 | 49.3 | 52.7 | 99 | 105 | 70-155 | 7 | 30 | |
| Trichloroethene | ug/L | ND | 50 | 50 | 54.1 | 58.7 | 108 | 117 | 69-151 | 8 | 30 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | | | 108 | 110 | 70-130 | | | |
| 4-Bromofluorobenzene (S) | % | | | | | | 103 | 102 | 70-130 | | | |
| Toluene-d8 (S) | % | | | | | | 98 | 101 | 70-130 | | | |

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(704)875-9092

# QUALIFIERS

Project: IREDELL C&D
Pace Project No.: 92210573

## DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

## LABORATORIES

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

## ANALYTE QUALIFIERS

| | |
|---|---|
| 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
Pace Project No.: 92210573

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **92210573001** | **MW-9R** | EPA 3010 | MPRP/16541 | EPA 6010 | ICP/14938 |
| **92210573002** | **MW-9RR** | EPA 3010 | MPRP/16541 | EPA 6010 | ICP/14938 |
| **92210573003** | **MW-10R** | EPA 3010 | MPRP/16541 | EPA 6010 | ICP/14938 |
| **92210573004** | **MW-16** | EPA 3010 | MPRP/16541 | EPA 6010 | ICP/14938 |
| **92210573005** | **MW-22** | EPA 3010 | MPRP/16541 | EPA 6010 | ICP/14938 |
| **92210573006** | **MW-23** | EPA 3010 | MPRP/16541 | EPA 6010 | ICP/14938 |
| **92210573007** | **MW-24S** | EPA 3010 | MPRP/16541 | EPA 6010 | ICP/14938 |
| **92210573008** | **MW-24D** | EPA 3010 | MPRP/16541 | EPA 6010 | ICP/14938 |
| **92210573009** | **MW-25** | EPA 3010 | MPRP/16541 | EPA 6010 | ICP/14938 |
| **92210573010** | **MW-26S** | EPA 3010 | MPRP/16541 | EPA 6010 | ICP/14938 |
| **92210573011** | **MW-26D** | EPA 3010 | MPRP/16541 | EPA 6010 | ICP/14938 |
| **92210573012** | **SW-6** | EPA 3010 | MPRP/16541 | EPA 6010 | ICP/14938 |
| **92210573001** | **MW-9R** | EPA 8260 | MSV/27725 | | |
| **92210573002** | **MW-9RR** | EPA 8260 | MSV/27725 | | |
| **92210573003** | **MW-10R** | EPA 8260 | MSV/27725 | | |
| **92210573004** | **MW-16** | EPA 8260 | MSV/27725 | | |
| **92210573005** | **MW-22** | EPA 8260 | MSV/27725 | | |
| **92210573006** | **MW-23** | EPA 8260 | MSV/27725 | | |
| **92210573007** | **MW-24S** | EPA 8260 | MSV/27725 | | |
| **92210573008** | **MW-24D** | EPA 8260 | MSV/27725 | | |
| **92210573009** | **MW-25** | EPA 8260 | MSV/27725 | | |
| **92210573010** | **MW-26S** | EPA 8260 | MSV/27725 | | |
| **92210573011** | **MW-26D** | EPA 8260 | MSV/27725 | | |
| **92210573012** | **SW-6** | EPA 8260 | MSV/27725 | | |



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| Pace Analytical | Document Name: **Sample Condition Upon Receipt (SCUR)** | Document Revised: April 07. 2014 Page 1 of 2 |
|---|---|---|
| | Document Number: **F-CHR-CS-003-rev.14** | 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 (T1401)** **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.:** 2.7 °C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

**Date and Initials of person examining contents:** AMS 7/24/14

| | | **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/times on bottles - ALL |
| All containers needing preservation have been checked. | ☒Yes ☐No ☐N/A | 13. Sample 1 & 2 - pH is 6<br>Sample 3 & 7 - pH is 3<br>Sample 4, 6, 11 - pH is 3.5<br>Sample 10 - pH is 2.5<br>Sample 12 - pH is 4.5 |
| 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: 7/24/14

**SRF Review:** [illegible] Date: 7/24/14

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#: 92210573**

92210573

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 | | | | | | | | | 92210573 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 | | | | | | | | | | | | | | | | | | N | N | N | N | N | N | N | N | N | N | N | |
| 1 | MW-9R | WT | G | 7/22/14 | | 7/22/14 | 9:45 | | 4 | | | 1 | 3 | | | | | | X | X | x | | | | | | | | | 001 |
| 2 | MW-9RR | WT | G | | | 7/22/14 | 9:10 | | 4 | | | 1 | 3 | | | | | | X | X | x | | | | | | | | | 002 |
| 3 | MW-10R | WT | G | | | 7/22/14 | 5:00 | | 4 | | | 1 | 3 | | | | | | X | X | x | | | | | | | | | 003 |
| 4 | MW-16 | WT | G | | | 7/23/14 | 8:40 | | 4 | | | 1 | 3 | | | | | | X | X | x | | | | | | | | | 004 |
| 5 | MW-22 | WT | G | | | 7/23/14 | 10:30 | | 4 | | | 1 | 3 | | | | | | X | X | x | | | | | | | | | 005 |
| 6 | MW-23 | WT | G | | | | 11:00 | | 4 | | | 1 | 3 | | | | | | X | X | x | | | | | | | | | 006 |
| 7 | MW-24S | WT | G | | | | 2:10 | | 4 | | | 1 | 3 | | | | | | X | X | x | | | | | | | | | 007 |
| 8 | MW-24D | WT | G | | | | 1:40 | | 4 | | | 1 | 3 | | | | | | X | X | x | | | | | | | | | 008 |
| 9 | MW-25 | WT | G | | | | 11:30 | | 4 | | | 1 | 3 | | | | | | X | X | x | | | | | | | | | 009 |
| 10 | MW-26S | WT | G | | | | 3:35 | | 4 | | | 1 | 3 | | | | | | X | X | x | | | | | | | | | 010 |
| 11 | MW-26D | WT | G | | | | 3:00 | | 4 | | | 1 | 3 | | | | | | X | X | x | | | | | | | | | 011 |
| 12 | SW-6 | WT | G | | | | 3:10 | | 4 | | | 1 | 3 | | | | | | X | X | x | | | | | | | | | 012 |

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 7/24/14 | 10:30 | | 7/24 | 1055 | | | | |
| | | 7/14 | 1200 | | 7/24/14 | 1200 | 27 | Y | N | Y |
| | | | | | | | | | | |
| | | | | | | | | | | |

| SAMPLER NAME AND SIGNATURE | | | |
|---|---|---|---|
| PRINT Name of SAMPLER: | Jonathan Pfohl | | |
| SIGNATURE of SAMPLER: | | DATE Signed: | 7/24 |

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

# Appendix A
# Laboratory Analysis Reports
# Chains of Custody

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

July 31, 2014

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

RE: Project: IREDELL BACKGROUND
Pace Project No.: 92210570

Dear Mr. Pfohl:
Enclosed are the analytical results for sample(s) received by the laboratory on July 24, 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 BACKGROUND
Pace Project No.: 92210570

**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.: 92210570

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| **92210570001** | **MW-1A** | Water | 07/23/14 13:00 | 07/24/14 12:50 |
| **92210570002** | **MW-1C** | Water | 07/23/14 13:30 | 07/24/14 12:50 |



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## SAMPLE ANALYTE COUNT

Project: IREDELL BACKGROUND
Pace Project No.: 92210570

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **92210570001** | **MW-1A** | EPA 6010 | JMW | 15 | PASI-A |
| | | EPA 8260 | MCK | 52 | PASI-C |
| **92210570002** | **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.: 92210570

**Sample: MW-1A** **Lab ID: 92210570001** Collected: 07/23/14 13:00 Received: 07/24/14 12:50 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 | 07/25/14 13:45 | 07/29/14 17:54 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:46 | 7440-38-2 | |
| Barium | **137** | ug/L | 100 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:46 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 07/25/14 13:45 | 07/28/14 17:46 | 7440-41-7 | |
| Cadmium | **8.6** | ug/L | 1.0 | 1.0 | 1 | 07/25/14 13:45 | 07/28/14 17:46 | 7440-43-9 | |
| Chromium | **6.1J** | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:46 | 7440-47-3 | |
| Cobalt | **5.3J** | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:46 | 7440-48-4 | |
| Copper | **18.2** | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:46 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:46 | 7439-92-1 | |
| Nickel | **6.2J** | ug/L | 50.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:46 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 07/25/14 13:45 | 07/28/14 17:46 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:46 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 07/25/14 13:45 | 07/28/14 17:46 | 7440-28-0 | |
| Vanadium | **20.9J** | ug/L | 25.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:46 | 7440-62-2 | |
| Zinc | **76.8** | ug/L | 10.0 | 10.0 | 1 | 07/25/14 13:45 | 07/28/14 17:46 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 07/25/14 20:42 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 07/25/14 20:42 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 20:42 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 07/25/14 20:42 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 07/25/14 20:42 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 07/25/14 20:42 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 07/25/14 20:42 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 07/25/14 20:42 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 07/25/14 20:42 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 20:42 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 07/25/14 20:42 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 07/25/14 20:42 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 07/25/14 20:42 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 07/25/14 20:42 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 07/25/14 20:42 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 07/25/14 20:42 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 20:42 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 07/25/14 20:42 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 07/25/14 20:42 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 07/25/14 20:42 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 07/25/14 20:42 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 07/25/14 20:42 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 07/25/14 20:42 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 07/25/14 20:42 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 07/25/14 20:42 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 07/25/14 20:42 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 20:42 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 07/25/14 20:42 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 07/25/14 20:42 | 10061-01-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL BACKGROUND
Pace Project No.: 92210570

**Sample: MW-1A** **Lab ID: 92210570001** Collected: 07/23/14 13:00 Received: 07/24/14 12:50 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 | | 07/25/14 20:42 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 07/25/14 20:42 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 07/25/14 20:42 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 07/25/14 20:42 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 07/25/14 20:42 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 07/25/14 20:42 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 20:42 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 07/25/14 20:42 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 07/25/14 20:42 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 07/25/14 20:42 | 127-18-4 | |
| Tetrahydrofuran | ND | ug/L | 10.0 | 3.1 | 1 | | 07/25/14 20:42 | 109-99-9 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 20:42 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 07/25/14 20:42 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 07/25/14 20:42 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 07/25/14 20:42 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 07/25/14 20:42 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 07/25/14 20:42 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 07/25/14 20:42 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 07/25/14 20:42 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 07/25/14 20:42 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 103 | % | 70-130 | | 1 | | 07/25/14 20:42 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 109 | % | 70-130 | | 1 | | 07/25/14 20:42 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 07/25/14 20:42 | 2037-26-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL BACKGROUND
Pace Project No.: 92210570

**Sample: MW-1C** **Lab ID: 92210570002** Collected: 07/23/14 13:30 Received: 07/24/14 12:50 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 | 07/25/14 13:45 | 07/29/14 17:57 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:49 | 7440-38-2 | |
| Barium | **462** | ug/L | 100 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:49 | 7440-39-3 | |
| Beryllium | **3.1** | ug/L | 1.0 | 1.0 | 1 | 07/25/14 13:45 | 07/28/14 17:49 | 7440-41-7 | |
| Cadmium | **1.1** | ug/L | 1.0 | 1.0 | 1 | 07/25/14 13:45 | 07/28/14 17:49 | 7440-43-9 | |
| Chromium | **15.6** | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:49 | 7440-47-3 | |
| Cobalt | **15.9** | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:49 | 7440-48-4 | |
| Copper | **47.9** | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:49 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:49 | 7439-92-1 | |
| Nickel | **14.3J** | ug/L | 50.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:49 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 07/25/14 13:45 | 07/28/14 17:49 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:49 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 07/25/14 13:45 | 07/28/14 17:49 | 7440-28-0 | |
| Vanadium | **90.6** | ug/L | 25.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:49 | 7440-62-2 | |
| Zinc | **142** | ug/L | 10.0 | 10.0 | 1 | 07/25/14 13:45 | 07/28/14 17:49 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | **12.5J** | ug/L | 100 | 10.0 | 1 | | 07/25/14 20:58 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 07/25/14 20:58 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 20:58 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 07/25/14 20:58 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 07/25/14 20:58 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 07/25/14 20:58 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 07/25/14 20:58 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 07/25/14 20:58 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 07/25/14 20:58 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 20:58 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 07/25/14 20:58 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 07/25/14 20:58 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 07/25/14 20:58 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 07/25/14 20:58 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 07/25/14 20:58 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 07/25/14 20:58 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 20:58 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 07/25/14 20:58 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 07/25/14 20:58 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 07/25/14 20:58 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 07/25/14 20:58 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 07/25/14 20:58 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 07/25/14 20:58 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 07/25/14 20:58 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 07/25/14 20:58 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 07/25/14 20:58 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 20:58 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 07/25/14 20:58 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 07/25/14 20:58 | 10061-01-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL BACKGROUND
Pace Project No.: 92210570

**Sample: MW-1C** **Lab ID: 92210570002** Collected: 07/23/14 13:30 Received: 07/24/14 12:50 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 | | 07/25/14 20:58 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 07/25/14 20:58 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 07/25/14 20:58 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 07/25/14 20:58 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 07/25/14 20:58 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 07/25/14 20:58 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 20:58 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 07/25/14 20:58 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 07/25/14 20:58 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 07/25/14 20:58 | 127-18-4 | |
| Tetrahydrofuran | ND | ug/L | 10.0 | 3.1 | 1 | | 07/25/14 20:58 | 109-99-9 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 20:58 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 07/25/14 20:58 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 07/25/14 20:58 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 07/25/14 20:58 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 07/25/14 20:58 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 07/25/14 20:58 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 07/25/14 20:58 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 07/25/14 20:58 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 07/25/14 20:58 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 105 | % | 70-130 | | 1 | | 07/25/14 20:58 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 112 | % | 70-130 | | 1 | | 07/25/14 20:58 | 17060-07-0 | |
| Toluene-d8 (S) | 101 | % | 70-130 | | 1 | | 07/25/14 20:58 | 2037-26-5 | |



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# QUALITY CONTROL DATA

Project: IREDELL BACKGROUND
Pace Project No.: 92210570

QC Batch: MPRP/16529 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010 | Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92210570001, 92210570002

METHOD BLANK: 1249993 | Matrix: Water
Associated Lab Samples: 92210570001, 92210570002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Antimony | ug/L | ND | 6.0 | 07/28/14 16:19 | |
| Arsenic | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Barium | ug/L | ND | 100 | 07/28/14 16:19 | |
| Beryllium | ug/L | ND | 1.0 | 07/28/14 16:19 | |
| Cadmium | ug/L | ND | 1.0 | 07/28/14 16:19 | |
| Chromium | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Cobalt | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Copper | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Lead | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Nickel | ug/L | ND | 50.0 | 07/28/14 16:19 | |
| Selenium | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Silver | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Thallium | ug/L | ND | 5.5 | 07/28/14 16:19 | |
| Vanadium | ug/L | ND | 25.0 | 07/28/14 16:19 | |
| Zinc | ug/L | ND | 10.0 | 07/28/14 16:19 | |

LABORATORY CONTROL SAMPLE: 1249994

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Antimony | ug/L | 500 | 502 | 100 | 80-120 | |
| Arsenic | ug/L | 500 | 487 | 97 | 80-120 | |
| Barium | ug/L | 500 | 488 | 98 | 80-120 | |
| Beryllium | ug/L | 500 | 497 | 99 | 80-120 | |
| Cadmium | ug/L | 500 | 500 | 100 | 80-120 | |
| Chromium | ug/L | 500 | 483 | 97 | 80-120 | |
| Cobalt | ug/L | 500 | 488 | 98 | 80-120 | |
| Copper | ug/L | 500 | 504 | 101 | 80-120 | |
| Lead | ug/L | 500 | 491 | 98 | 80-120 | |
| Nickel | ug/L | 500 | 497 | 99 | 80-120 | |
| Selenium | ug/L | 500 | 496 | 99 | 80-120 | |
| Silver | ug/L | 250 | 248 | 99 | 80-120 | |
| Thallium | ug/L | 500 | 494 | 99 | 80-120 | |
| Vanadium | ug/L | 500 | 493 | 99 | 80-120 | |
| Zinc | ug/L | 500 | 484 | 97 | 80-120 | |

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# QUALITY CONTROL DATA

Project: IREDELL BACKGROUND
Pace Project No.: 92210570

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1249995 1249996

| Parameter | Units | 92210419001 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 | 480 | 492 | 96 | 98 | 75-125 | 2 | 25 | |
| Arsenic | ug/L | ND | 500 | 500 | 467 | 467 | 93 | 93 | 75-125 | 0 | 25 | |
| Barium | ug/L | 6.0 | 500 | 500 | 474 | 475 | 94 | 94 | 75-125 | 0 | 25 | |
| Beryllium | ug/L | ND | 500 | 500 | 478 | 480 | 96 | 96 | 75-125 | 0 | 25 | |
| Cadmium | ug/L | ND | 500 | 500 | 477 | 476 | 95 | 95 | 75-125 | 0 | 25 | |
| Chromium | ug/L | ND | 500 | 500 | 462 | 466 | 92 | 93 | 75-125 | 1 | 25 | |
| Cobalt | ug/L | ND | 500 | 500 | 462 | 460 | 92 | 92 | 75-125 | 0 | 25 | |
| Copper | ug/L | 28.1 | 500 | 500 | 508 | 510 | 96 | 96 | 75-125 | 0 | 25 | |
| Lead | ug/L | ND | 500 | 500 | 467 | 465 | 92 | 92 | 75-125 | 0 | 25 | |
| Nickel | ug/L | ND | 500 | 500 | 469 | 471 | 94 | 94 | 75-125 | 0 | 25 | |
| Selenium | ug/L | ND | 500 | 500 | 472 | 469 | 94 | 94 | 75-125 | 1 | 25 | |
| Silver | ug/L | ND | 250 | 250 | 237 | 237 | 95 | 94 | 75-125 | 0 | 25 | |
| Thallium | ug/L | ND | 500 | 500 | 467 | 464 | 93 | 93 | 75-125 | 1 | 25 | |
| Vanadium | ug/L | ND | 500 | 500 | 474 | 476 | 95 | 95 | 75-125 | 1 | 25 | |
| Zinc | ug/L | ND | 500 | 500 | 461 | 463 | 92 | 92 | 75-125 | 1 | 25 | |

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# QUALITY CONTROL DATA

Project: IREDELL BACKGROUND
Pace Project No.: 92210570

QC Batch: MSV/27725 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92210570001, 92210570002

METHOD BLANK: 1250070 | Matrix: Water
Associated Lab Samples: 92210570001, 92210570002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| 1,1,1-Trichloroethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,1,2,2-Tetrachloroethane | ug/L | ND | 3.0 | 07/25/14 15:37 | |
| 1,1,2-Trichloroethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,1-Dichloroethane | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| 1,1-Dichloroethene | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| 1,2,3-Trichloropropane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,2-Dibromo-3-chloropropane | ug/L | ND | 13.0 | 07/25/14 15:37 | |
| 1,2-Dibromoethane (EDB) | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,2-Dichlorobenzene | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| 1,2-Dichloroethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,2-Dichloropropane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,3-Dichloropropane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,4-Dichlorobenzene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 2-Butanone (MEK) | ug/L | ND | 100 | 07/25/14 15:37 | |
| 2-Hexanone | ug/L | ND | 50.0 | 07/25/14 15:37 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | ND | 100 | 07/25/14 15:37 | |
| Acetone | ug/L | ND | 100 | 07/25/14 15:37 | |
| Acrylonitrile | ug/L | ND | 200 | 07/25/14 15:37 | |
| Benzene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Bromochloromethane | ug/L | ND | 3.0 | 07/25/14 15:37 | |
| Bromodichloromethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Bromoform | ug/L | ND | 3.0 | 07/25/14 15:37 | |
| Bromomethane | ug/L | ND | 10.0 | 07/25/14 15:37 | |
| Carbon disulfide | ug/L | ND | 100 | 07/25/14 15:37 | |
| Carbon tetrachloride | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Chlorobenzene | ug/L | ND | 3.0 | 07/25/14 15:37 | |
| Chloroethane | ug/L | ND | 10.0 | 07/25/14 15:37 | |
| Chloroform | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| Chloromethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| cis-1,2-Dichloroethene | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| cis-1,3-Dichloropropene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Dibromochloromethane | ug/L | ND | 3.0 | 07/25/14 15:37 | |
| Dibromomethane | ug/L | ND | 10.0 | 07/25/14 15:37 | |
| Ethylbenzene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Iodomethane | ug/L | ND | 10.0 | 07/25/14 15:37 | |
| Methylene Chloride | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Styrene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Tetrachloroethene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Tetrahydrofuran | ug/L | ND | 10.0 | 07/25/14 15:37 | |
| Toluene | ug/L | ND | 1.0 | 07/25/14 15:37 | |

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# QUALITY CONTROL DATA

Project: IREDELL BACKGROUND
Pace Project No.: 92210570

METHOD BLANK: 1250070 Matrix: Water
Associated Lab Samples: 92210570001, 92210570002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| trans-1,3-Dichloropropene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| trans-1,4-Dichloro-2-butene | ug/L | ND | 100 | 07/25/14 15:37 | |
| Trichloroethene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Trichlorofluoromethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Vinyl acetate | ug/L | ND | 50.0 | 07/25/14 15:37 | |
| Vinyl chloride | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Xylene (Total) | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| 1,2-Dichloroethane-d4 (S) | % | 108 | 70-130 | 07/25/14 15:37 | |
| 4-Bromofluorobenzene (S) | % | 101 | 70-130 | 07/25/14 15:37 | |
| Toluene-d8 (S) | % | 99 | 70-130 | 07/25/14 15:37 | |

LABORATORY CONTROL SAMPLE: 1250071

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | 50 | 55.7 | 111 | 80-125 | |
| 1,1,1-Trichloroethane | ug/L | 50 | 52.7 | 105 | 71-129 | |
| 1,1,2,2-Tetrachloroethane | ug/L | 50 | 53.7 | 107 | 79-124 | |
| 1,1,2-Trichloroethane | ug/L | 50 | 54.8 | 110 | 85-125 | |
| 1,1-Dichloroethane | ug/L | 50 | 50.1 | 100 | 73-126 | |
| 1,1-Dichloroethene | ug/L | 50 | 56.0 | 112 | 66-135 | |
| 1,2,3-Trichloropropane | ug/L | 50 | 57.8 | 116 | 75-130 | |
| 1,2-Dibromo-3-chloropropane | ug/L | 50 | 54.3 | 109 | 71-133 | |
| 1,2-Dibromoethane (EDB) | ug/L | 50 | 57.1 | 114 | 83-124 | |
| 1,2-Dichlorobenzene | ug/L | 50 | 55.2 | 110 | 80-133 | |
| 1,2-Dichloroethane | ug/L | 50 | 52.1 | 104 | 67-128 | |
| 1,2-Dichloropropane | ug/L | 50 | 54.2 | 108 | 75-132 | |
| 1,3-Dichloropropane | ug/L | 50 | 56.0 | 112 | 76-131 | |
| 1,4-Dichlorobenzene | ug/L | 50 | 56.0 | 112 | 78-130 | |
| 2-Butanone (MEK) | ug/L | 100 | 105 | 105 | 61-144 | |
| 2-Hexanone | ug/L | 100 | 108 | 108 | 68-143 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | 100 | 108 | 108 | 72-135 | |
| Acetone | ug/L | 100 | 103 | 103 | 48-146 | |
| Acrylonitrile | ug/L | 250 | 250 | 100 | 40-160 | |
| Benzene | ug/L | 50 | 56.8 | 114 | 80-125 | |
| Bromochloromethane | ug/L | 50 | 50.3 | 101 | 71-125 | |
| Bromodichloromethane | ug/L | 50 | 63.3 | 127 | 78-124 | L0 |
| Bromoform | ug/L | 50 | 61.6 | 123 | 71-128 | |
| Bromomethane | ug/L | 50 | 48.8 | 98 | 40-160 | |
| Carbon disulfide | ug/L | 50 | 50.8J | 102 | 50-160 | |
| Carbon tetrachloride | ug/L | 50 | 60.1 | 120 | 69-131 | |
| Chlorobenzene | ug/L | 50 | 55.3 | 111 | 81-122 | |
| Chloroethane | ug/L | 50 | 39.1 | 78 | 39-148 | |
| Chloroform | ug/L | 50 | 60.7 | 121 | 73-127 | |

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# QUALITY CONTROL DATA

Project: IREDELL BACKGROUND
Pace Project No.: 92210570

LABORATORY CONTROL SAMPLE: 1250071

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Chloromethane | ug/L | 50 | 43.1 | 86 | 44-146 | |
| cis-1,2-Dichloroethene | ug/L | 50 | 57.3 | 115 | 74-124 | |
| cis-1,3-Dichloropropene | ug/L | 50 | 57.9 | 116 | 72-132 | |
| Dibromochloromethane | ug/L | 50 | 65.1 | 130 | 78-125 | L0 |
| Dibromomethane | ug/L | 50 | 59.1 | 118 | 82-120 | |
| Ethylbenzene | ug/L | 50 | 57.5 | 115 | 79-121 | |
| Iodomethane | ug/L | 100 | 87.5 | 87 | 39-154 | |
| Methylene Chloride | ug/L | 50 | 49.2 | 98 | 64-133 | |
| Styrene | ug/L | 50 | 58.3 | 117 | 84-126 | |
| Tetrachloroethene | ug/L | 50 | 56.9 | 114 | 78-122 | |
| Tetrahydrofuran | ug/L | 500 | 497 | 99 | 69-148 | |
| Toluene | ug/L | 50 | 56.1 | 112 | 80-121 | |
| trans-1,2-Dichloroethene | ug/L | 50 | 56.4 | 113 | 71-127 | |
| trans-1,3-Dichloropropene | ug/L | 50 | 57.9 | 116 | 69-141 | |
| trans-1,4-Dichloro-2-butene | ug/L | 50 | 55.2J | 110 | 40-160 | |
| Trichloroethene | ug/L | 50 | 56.6 | 113 | 78-122 | |
| Trichlorofluoromethane | ug/L | 50 | 51.7 | 103 | 53-137 | |
| Vinyl acetate | ug/L | 100 | 112 | 112 | 40-160 | |
| Vinyl chloride | ug/L | 50 | 50.3 | 101 | 58-137 | |
| Xylene (Total) | ug/L | 150 | 173 | 115 | 81-126 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 92 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 103 | 70-130 | |
| Toluene-d8 (S) | % | | | 100 | 70-130 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1250072 1250073

| Parameter | Units | 92210562001 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 | 53.8 | 57.0 | 108 | 114 | 70-166 | 6 | 30 | |
| Benzene | ug/L | ND | 50 | 50 | 51.1 | 53.9 | 102 | 108 | 70-148 | 5 | 30 | |
| Chlorobenzene | ug/L | ND | 50 | 50 | 51.9 | 51.7 | 104 | 103 | 70-146 | 0 | 30 | |
| Toluene | ug/L | ND | 50 | 50 | 49.3 | 52.7 | 99 | 105 | 70-155 | 7 | 30 | |
| Trichloroethene | ug/L | ND | 50 | 50 | 54.1 | 58.7 | 108 | 117 | 69-151 | 8 | 30 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | | | 108 | 110 | 70-130 | | | |
| 4-Bromofluorobenzene (S) | % | | | | | | 103 | 102 | 70-130 | | | |
| Toluene-d8 (S) | % | | | | | | 98 | 101 | 70-130 | | | |

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# QUALIFIERS

Project: IREDELL BACKGROUND
Pace Project No.: 92210570

## DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

## LABORATORIES

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

## ANALYTE QUALIFIERS

| | |
|---|---|
| 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.: 92210570

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **92210570001** | **MW-1A** | EPA 3010 | MPRP/16529 | EPA 6010 | ICP/14929 |
| **92210570002** | **MW-1C** | EPA 3010 | MPRP/16529 | EPA 6010 | ICP/14929 |
| **92210570001** | **MW-1A** | EPA 8260 | MSV/27725 | | |
| **92210570002** | **MW-1C** | EPA 8260 | MSV/27725 | | |



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| Pace Analytical | Document Name: **Sample Condition Upon Receipt (SCUR)** | Document Revised: April 07. 2014 Page 1 of 2 |
|---|---|---|
| | Document Number: **F-CHR-CS-003-rev.14** | 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 (T1401) **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.:** 2.7 °C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

**Date and Initials of person examining contents:** AVO 7/24/14

| | | Comments: |
|---|---|---|
| Chain of Custody Present: | ☒Yes ☐No ☐N/A | 1. |
| Chain of Custody Filled Out: | ☒Yes ☐No ☐N/A | 2. |
| Chain of Custody Relinquished: | ☒Yes ☐No ☐N/A | 3. |
| Sampler Name & Signature on COC: | ☒Yes ☐No ☐N/A | 4. |
| Samples Arrived within Hold Time: | ☒Yes ☐No ☐N/A | 5. |
| **Short Hold Time Analysis (<72hr):** | ☐Yes ☒No ☐N/A | 6. |
| **Rush Turn Around Time Requested:** | ☐Yes ☒No ☐N/A | 7. |
| Sufficient Volume: | ☒Yes ☐No ☐N/A | 8. |
| Correct Containers Used: | ☒Yes ☐No ☐N/A | 9. |
| -Pace Containers Used: | ☒Yes ☐No ☐N/A | |
| Containers Intact: | ☒Yes ☐No ☐N/A | 10. |
| Filtered volume received for Dissolved tests | ☐Yes ☐No ☒N/A | 11. |
| Sample Labels match COC: | ☐Yes ☒No ☐N/A | 12. No dates/times on bottles -ALL |
| -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: _____

WO#: 92210570

92210570

**SCURF Review:** HG Date: 7/24/14

**SRF Review:** HG Date: 7/24/14

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)

(if no label available)

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 Background |
| 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 |

| 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 I | Metals-App I | Tetrahydrofuran | | | | | | | | | | 9202150 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | Requested Analysis Filtered (Y/N) | N | N | N | N | N | N | N | N | N | N | N | | |
| 1 | MW-1A | WT | G | 7/23/14 | 1:00 | [redacted] | | | | | | | | | | | | | X | X | X | | | | | | | | | | 201 |
| 2 | MW-1C | WT | G | 7/23/14 | 1:30 | [redacted] | | | | | | | | | | | | | X | X | X | | | | | | | | | | 202 |
| 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 | 7/24/14 | 10:30 | PACE | 7/24 | 1055 | | | | |
| | PACE | 7/24 | 1250 | PACE | 7/24/14 | 1250 | 2.7 | Y | N | Y |
| | | | | | | | | | | |
| | | | | | | | | | | |

| SAMPLER NAME AND SIGNATURE | | | |
|---|---|---|---|
| PRINT Name of SAMPLER: | Jonathan Pfohl | | |
| SIGNATURE of SAMPLER: | | DATE Signed: | 7/24/14 |

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

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

July 31, 2014

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

RE: Project: IREDELL SW-3
Pace Project No.: 92210567

Dear Mr. Pfohl:
Enclosed are the analytical results for sample(s) received by the laboratory on July 24, 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.: 92210567

**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.: 92210567

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| **92210567001** | **SW-3** | Water | 07/23/14 08:50 | 07/24/14 12:50 |



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## SAMPLE ANALYTE COUNT

Project: IREDELL SW-3
Pace Project No.: 92210567

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **92210567001** | **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.: 92210567

**Sample: SW-3** **Lab ID: 92210567001** Collected: 07/23/14 08:50 Received: 07/24/14 12:50 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 | 07/25/14 13:45 | 07/29/14 17:48 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:40 | 7440-38-2 | |
| Barium | **50.9J** | ug/L | 100 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:40 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 07/25/14 13:45 | 07/28/14 17:40 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 07/25/14 13:45 | 07/28/14 17:40 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:40 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:40 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:40 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:40 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:40 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 07/25/14 13:45 | 07/28/14 17:40 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:40 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 07/25/14 13:45 | 07/28/14 17:40 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:40 | 7440-62-2 | |
| Zinc | **183** | ug/L | 10.0 | 10.0 | 1 | 07/25/14 13:45 | 07/28/14 17:40 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 07/25/14 19:54 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 07/25/14 19:54 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 19:54 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 07/25/14 19:54 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 07/25/14 19:54 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 07/25/14 19:54 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 07/25/14 19:54 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 07/25/14 19:54 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 07/25/14 19:54 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 19:54 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 07/25/14 19:54 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 07/25/14 19:54 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 07/25/14 19:54 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 07/25/14 19:54 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 07/25/14 19:54 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 07/25/14 19:54 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 19:54 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 07/25/14 19:54 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 07/25/14 19:54 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 07/25/14 19:54 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 07/25/14 19:54 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 07/25/14 19:54 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 07/25/14 19:54 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 07/25/14 19:54 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 07/25/14 19:54 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 07/25/14 19:54 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 19:54 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 07/25/14 19:54 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 07/25/14 19:54 | 10061-01-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL SW-3
Pace Project No.: 92210567

**Sample: SW-3** **Lab ID: 92210567001** Collected: 07/23/14 08:50 Received: 07/24/14 12:50 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 | | 07/25/14 19:54 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 07/25/14 19:54 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 07/25/14 19:54 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 07/25/14 19:54 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 07/25/14 19:54 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 07/25/14 19:54 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 19:54 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 07/25/14 19:54 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 07/25/14 19:54 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 07/25/14 19:54 | 127-18-4 | |
| Tetrahydrofuran | ND | ug/L | 10.0 | 3.1 | 1 | | 07/25/14 19:54 | 109-99-9 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 19:54 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 07/25/14 19:54 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 07/25/14 19:54 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 07/25/14 19:54 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 07/25/14 19:54 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 07/25/14 19:54 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 07/25/14 19:54 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 07/25/14 19:54 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 07/25/14 19:54 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 104 | % | 70-130 | | 1 | | 07/25/14 19:54 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 111 | % | 70-130 | | 1 | | 07/25/14 19:54 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 07/25/14 19:54 | 2037-26-5 | |



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# QUALITY CONTROL DATA

Project: IREDELL SW-3
Pace Project No.: 92210567

QC Batch: MPRP/16529
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92210567001

METHOD BLANK: 1249993
Matrix: Water
Associated Lab Samples: 92210567001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Antimony | ug/L | ND | 6.0 | 07/28/14 16:19 | |
| Arsenic | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Barium | ug/L | ND | 100 | 07/28/14 16:19 | |
| Beryllium | ug/L | ND | 1.0 | 07/28/14 16:19 | |
| Cadmium | ug/L | ND | 1.0 | 07/28/14 16:19 | |
| Chromium | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Cobalt | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Copper | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Lead | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Nickel | ug/L | ND | 50.0 | 07/28/14 16:19 | |
| Selenium | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Silver | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Thallium | ug/L | ND | 5.5 | 07/28/14 16:19 | |
| Vanadium | ug/L | ND | 25.0 | 07/28/14 16:19 | |
| Zinc | ug/L | ND | 10.0 | 07/28/14 16:19 | |

LABORATORY CONTROL SAMPLE: 1249994

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Antimony | ug/L | 500 | 502 | 100 | 80-120 | |
| Arsenic | ug/L | 500 | 487 | 97 | 80-120 | |
| Barium | ug/L | 500 | 488 | 98 | 80-120 | |
| Beryllium | ug/L | 500 | 497 | 99 | 80-120 | |
| Cadmium | ug/L | 500 | 500 | 100 | 80-120 | |
| Chromium | ug/L | 500 | 483 | 97 | 80-120 | |
| Cobalt | ug/L | 500 | 488 | 98 | 80-120 | |
| Copper | ug/L | 500 | 504 | 101 | 80-120 | |
| Lead | ug/L | 500 | 491 | 98 | 80-120 | |
| Nickel | ug/L | 500 | 497 | 99 | 80-120 | |
| Selenium | ug/L | 500 | 496 | 99 | 80-120 | |
| Silver | ug/L | 250 | 248 | 99 | 80-120 | |
| Thallium | ug/L | 500 | 494 | 99 | 80-120 | |
| Vanadium | ug/L | 500 | 493 | 99 | 80-120 | |
| Zinc | ug/L | 500 | 484 | 97 | 80-120 | |

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



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# QUALITY CONTROL DATA

Project: IREDELL SW-3
Pace Project No.: 92210567

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1249995 1249996

| Parameter | Units | 92210419001 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 | 480 | 492 | 96 | 98 | 75-125 | 2 | 25 | |
| Arsenic | ug/L | ND | 500 | 500 | 467 | 467 | 93 | 93 | 75-125 | 0 | 25 | |
| Barium | ug/L | 6.0 | 500 | 500 | 474 | 475 | 94 | 94 | 75-125 | 0 | 25 | |
| Beryllium | ug/L | ND | 500 | 500 | 478 | 480 | 96 | 96 | 75-125 | 0 | 25 | |
| Cadmium | ug/L | ND | 500 | 500 | 477 | 476 | 95 | 95 | 75-125 | 0 | 25 | |
| Chromium | ug/L | ND | 500 | 500 | 462 | 466 | 92 | 93 | 75-125 | 1 | 25 | |
| Cobalt | ug/L | ND | 500 | 500 | 462 | 460 | 92 | 92 | 75-125 | 0 | 25 | |
| Copper | ug/L | 28.1 | 500 | 500 | 508 | 510 | 96 | 96 | 75-125 | 0 | 25 | |
| Lead | ug/L | ND | 500 | 500 | 467 | 465 | 92 | 92 | 75-125 | 0 | 25 | |
| Nickel | ug/L | ND | 500 | 500 | 469 | 471 | 94 | 94 | 75-125 | 0 | 25 | |
| Selenium | ug/L | ND | 500 | 500 | 472 | 469 | 94 | 94 | 75-125 | 1 | 25 | |
| Silver | ug/L | ND | 250 | 250 | 237 | 237 | 95 | 94 | 75-125 | 0 | 25 | |
| Thallium | ug/L | ND | 500 | 500 | 467 | 464 | 93 | 93 | 75-125 | 1 | 25 | |
| Vanadium | ug/L | ND | 500 | 500 | 474 | 476 | 95 | 95 | 75-125 | 1 | 25 | |
| Zinc | ug/L | ND | 500 | 500 | 461 | 463 | 92 | 92 | 75-125 | 1 | 25 | |

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# QUALITY CONTROL DATA

Project: IREDELL SW-3
Pace Project No.: 92210567

QC Batch: MSV/27725
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92210567001

METHOD BLANK: 1250070
Matrix: Water
Associated Lab Samples: 92210567001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| 1,1,1-Trichloroethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,1,2,2-Tetrachloroethane | ug/L | ND | 3.0 | 07/25/14 15:37 | |
| 1,1,2-Trichloroethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,1-Dichloroethane | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| 1,1-Dichloroethene | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| 1,2,3-Trichloropropane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,2-Dibromo-3-chloropropane | ug/L | ND | 13.0 | 07/25/14 15:37 | |
| 1,2-Dibromoethane (EDB) | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,2-Dichlorobenzene | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| 1,2-Dichloroethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,2-Dichloropropane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,3-Dichloropropane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,4-Dichlorobenzene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 2-Butanone (MEK) | ug/L | ND | 100 | 07/25/14 15:37 | |
| 2-Hexanone | ug/L | ND | 50.0 | 07/25/14 15:37 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | ND | 100 | 07/25/14 15:37 | |
| Acetone | ug/L | ND | 100 | 07/25/14 15:37 | |
| Acrylonitrile | ug/L | ND | 200 | 07/25/14 15:37 | |
| Benzene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Bromochloromethane | ug/L | ND | 3.0 | 07/25/14 15:37 | |
| Bromodichloromethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Bromoform | ug/L | ND | 3.0 | 07/25/14 15:37 | |
| Bromomethane | ug/L | ND | 10.0 | 07/25/14 15:37 | |
| Carbon disulfide | ug/L | ND | 100 | 07/25/14 15:37 | |
| Carbon tetrachloride | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Chlorobenzene | ug/L | ND | 3.0 | 07/25/14 15:37 | |
| Chloroethane | ug/L | ND | 10.0 | 07/25/14 15:37 | |
| Chloroform | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| Chloromethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| cis-1,2-Dichloroethene | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| cis-1,3-Dichloropropene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Dibromochloromethane | ug/L | ND | 3.0 | 07/25/14 15:37 | |
| Dibromomethane | ug/L | ND | 10.0 | 07/25/14 15:37 | |
| Ethylbenzene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Iodomethane | ug/L | ND | 10.0 | 07/25/14 15:37 | |
| Methylene Chloride | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Styrene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Tetrachloroethene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Tetrahydrofuran | ug/L | ND | 10.0 | 07/25/14 15:37 | |
| Toluene | ug/L | ND | 1.0 | 07/25/14 15:37 | |

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

## REPORT OF LABORATORY ANALYSIS

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

# QUALITY CONTROL DATA

Project: IREDELL SW-3
Pace Project No.: 92210567

METHOD BLANK: 1250070 Matrix: Water
Associated Lab Samples: 92210567001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| trans-1,3-Dichloropropene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| trans-1,4-Dichloro-2-butene | ug/L | ND | 100 | 07/25/14 15:37 | |
| Trichloroethene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Trichlorofluoromethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Vinyl acetate | ug/L | ND | 50.0 | 07/25/14 15:37 | |
| Vinyl chloride | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Xylene (Total) | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| 1,2-Dichloroethane-d4 (S) | % | 108 | 70-130 | 07/25/14 15:37 | |
| 4-Bromofluorobenzene (S) | % | 101 | 70-130 | 07/25/14 15:37 | |
| Toluene-d8 (S) | % | 99 | 70-130 | 07/25/14 15:37 | |

LABORATORY CONTROL SAMPLE: 1250071

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | 50 | 55.7 | 111 | 80-125 | |
| 1,1,1-Trichloroethane | ug/L | 50 | 52.7 | 105 | 71-129 | |
| 1,1,2,2-Tetrachloroethane | ug/L | 50 | 53.7 | 107 | 79-124 | |
| 1,1,2-Trichloroethane | ug/L | 50 | 54.8 | 110 | 85-125 | |
| 1,1-Dichloroethane | ug/L | 50 | 50.1 | 100 | 73-126 | |
| 1,1-Dichloroethene | ug/L | 50 | 56.0 | 112 | 66-135 | |
| 1,2,3-Trichloropropane | ug/L | 50 | 57.8 | 116 | 75-130 | |
| 1,2-Dibromo-3-chloropropane | ug/L | 50 | 54.3 | 109 | 71-133 | |
| 1,2-Dibromoethane (EDB) | ug/L | 50 | 57.1 | 114 | 83-124 | |
| 1,2-Dichlorobenzene | ug/L | 50 | 55.2 | 110 | 80-133 | |
| 1,2-Dichloroethane | ug/L | 50 | 52.1 | 104 | 67-128 | |
| 1,2-Dichloropropane | ug/L | 50 | 54.2 | 108 | 75-132 | |
| 1,3-Dichloropropane | ug/L | 50 | 56.0 | 112 | 76-131 | |
| 1,4-Dichlorobenzene | ug/L | 50 | 56.0 | 112 | 78-130 | |
| 2-Butanone (MEK) | ug/L | 100 | 105 | 105 | 61-144 | |
| 2-Hexanone | ug/L | 100 | 108 | 108 | 68-143 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | 100 | 108 | 108 | 72-135 | |
| Acetone | ug/L | 100 | 103 | 103 | 48-146 | |
| Acrylonitrile | ug/L | 250 | 250 | 100 | 40-160 | |
| Benzene | ug/L | 50 | 56.8 | 114 | 80-125 | |
| Bromochloromethane | ug/L | 50 | 50.3 | 101 | 71-125 | |
| Bromodichloromethane | ug/L | 50 | 63.3 | 127 | 78-124 | L0 |
| Bromoform | ug/L | 50 | 61.6 | 123 | 71-128 | |
| Bromomethane | ug/L | 50 | 48.8 | 98 | 40-160 | |
| Carbon disulfide | ug/L | 50 | 50.8J | 102 | 50-160 | |
| Carbon tetrachloride | ug/L | 50 | 60.1 | 120 | 69-131 | |
| Chlorobenzene | ug/L | 50 | 55.3 | 111 | 81-122 | |
| Chloroethane | ug/L | 50 | 39.1 | 78 | 39-148 | |
| Chloroform | ug/L | 50 | 60.7 | 121 | 73-127 | |

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(704)875-9092

# QUALITY CONTROL DATA

Project: IREDELL SW-3
Pace Project No.: 92210567

LABORATORY CONTROL SAMPLE: 1250071

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Chloromethane | ug/L | 50 | 43.1 | 86 | 44-146 | |
| cis-1,2-Dichloroethene | ug/L | 50 | 57.3 | 115 | 74-124 | |
| cis-1,3-Dichloropropene | ug/L | 50 | 57.9 | 116 | 72-132 | |
| Dibromochloromethane | ug/L | 50 | 65.1 | 130 | 78-125 | L0 |
| Dibromomethane | ug/L | 50 | 59.1 | 118 | 82-120 | |
| Ethylbenzene | ug/L | 50 | 57.5 | 115 | 79-121 | |
| Iodomethane | ug/L | 100 | 87.5 | 87 | 39-154 | |
| Methylene Chloride | ug/L | 50 | 49.2 | 98 | 64-133 | |
| Styrene | ug/L | 50 | 58.3 | 117 | 84-126 | |
| Tetrachloroethene | ug/L | 50 | 56.9 | 114 | 78-122 | |
| Tetrahydrofuran | ug/L | 500 | 497 | 99 | 69-148 | |
| Toluene | ug/L | 50 | 56.1 | 112 | 80-121 | |
| trans-1,2-Dichloroethene | ug/L | 50 | 56.4 | 113 | 71-127 | |
| trans-1,3-Dichloropropene | ug/L | 50 | 57.9 | 116 | 69-141 | |
| trans-1,4-Dichloro-2-butene | ug/L | 50 | 55.2J | 110 | 40-160 | |
| Trichloroethene | ug/L | 50 | 56.6 | 113 | 78-122 | |
| Trichlorofluoromethane | ug/L | 50 | 51.7 | 103 | 53-137 | |
| Vinyl acetate | ug/L | 100 | 112 | 112 | 40-160 | |
| Vinyl chloride | ug/L | 50 | 50.3 | 101 | 58-137 | |
| Xylene (Total) | ug/L | 150 | 173 | 115 | 81-126 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 92 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 103 | 70-130 | |
| Toluene-d8 (S) | % | | | 100 | 70-130 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1250072 1250073

| Parameter | Units | 92210562001 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 | 53.8 | 57.0 | 108 | 114 | 70-166 | 6 | 30 | |
| Benzene | ug/L | ND | 50 | 50 | 51.1 | 53.9 | 102 | 108 | 70-148 | 5 | 30 | |
| Chlorobenzene | ug/L | ND | 50 | 50 | 51.9 | 51.7 | 104 | 103 | 70-146 | 0 | 30 | |
| Toluene | ug/L | ND | 50 | 50 | 49.3 | 52.7 | 99 | 105 | 70-155 | 7 | 30 | |
| Trichloroethene | ug/L | ND | 50 | 50 | 54.1 | 58.7 | 108 | 117 | 69-151 | 8 | 30 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | | | 108 | 110 | 70-130 | | | |
| 4-Bromofluorobenzene (S) | % | | | | | | 103 | 102 | 70-130 | | | |
| Toluene-d8 (S) | % | | | | | | 98 | 101 | 70-130 | | | |

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## REPORT OF LABORATORY ANALYSIS

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(704)875-9092

# QUALIFIERS

Project: IREDELL SW-3
Pace Project No.: 92210567

## DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

## LABORATORIES

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

## ANALYTE QUALIFIERS

| | |
|---|---|
| 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.: 92210567

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **92210567001** | **SW-3** | EPA 3010 | MPRP/16529 | EPA 6010 | ICP/14929 |
| **92210567001** | **SW-3** | EPA 8260 | MSV/27725 | | |



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| Pace Analytical | Document Name: **Sample Condition Upon Receipt (SCUR)** | Document Revised: April 07. 2014 Page 1 of 2 |
|---|---|---|
| | Document Number: **F-CHR-CS-003-rev.14** | 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** (T1401) **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.:** 2.7 °C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

**Date and Initials of person examining contents:** aus 7/24/14

| | | **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/times on bottles - ALL |
| 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:** 7/24/14

**SRF Review:** JG **Date:** 7/24/14

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)

Place label here

**WO# : 92210567**

92210567

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 SW-3 | Pace Project Manager: | Kevin Godwin |
| Requested Due Date/TAT: | 10 Day (Default) | Container Order Number: | | Pace Profile #: | |

Regulatory Agency

State / Location: North Carolina

Requested Analysis Filtered (Y/N)

| ITEM# | SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample ids must be unique) | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED START DATE | COLLECTED START TIME | COLLECTED END DATE | COLLECTED END TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Unpreserved | H2SO4 | HNO3 | HCl | NaOH | Na2S2O3 | Methanol | Other | Analyses Test Y/N | VOCs- App I | Metals-App I | Tetrahydrofuran | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | N | N | N | N | N | N | N | N | N | N | N | N |
| 1 | SW-3 | WT | G | | | 7/23/14 | 8:50 | | 4 | | | 1 | 3 | | | | | | X | X | x | | | | | | | | | |
| 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

C922105267 P01

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | [signature] | 7/24/14 | 10:30 | [signature] | 7/24 | 10:55 | | | | |
| | [signature] | 7/24 | 1200 | [signature] PACE | 7/24/14 | 12:10 | 2.7 | Y | N | Y |
| | | | | | | | | | | |
| | | | | | | | | | | |

| SAMPLER NAME AND SIGNATURE | | | |
|---|---|---|---|
| PRINT Name of SAMPLER: | Jonathan Pfohl | | |
| SIGNATURE of SAMPLER: | [signature] | DATE Signed: | 7/24/14 |

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

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

July 31, 2014

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

RE: Project: IREDELL SW-1_5
Pace Project No.: 92210568

Dear Mr. Pfohl:
Enclosed are the analytical results for sample(s) received by the laboratory on July 24, 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-1_5
Pace Project No.: 92210568

**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-1_5
Pace Project No.: 92210568

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| **92210568001** | **SW-1** | Water | 07/23/14 15:45 | 07/24/14 12:50 |
| **92210568002** | **SW-5** | Water | 07/23/14 16:45 | 07/24/14 12:50 |



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## SAMPLE ANALYTE COUNT

Project: IREDELL SW-1_5
Pace Project No.: 92210568

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **92210568001** | **SW-1** | EPA 6010 | JMW | 15 | PASI-A |
| | | EPA 8260 | MCK | 51 | PASI-C |
| **92210568002** | **SW-5** | EPA 6010 | JMW | 15 | PASI-A |
| | | EPA 8260 | MCK | 51 | PASI-C |



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Huntersville, NC 28078
(704)875-9092

# ANALYTICAL RESULTS

Project: IREDELL SW-1_5
Pace Project No.: 92210568

**Sample: SW-1** **Lab ID: 92210568001** Collected: 07/23/14 15:45 Received: 07/24/14 12:50 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 | 07/25/14 13:45 | 07/29/14 17:51 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:43 | 7440-38-2 | |
| Barium | **21.4J** | ug/L | 100 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:43 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 07/25/14 13:45 | 07/28/14 17:43 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 07/25/14 13:45 | 07/28/14 17:43 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:43 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:43 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:43 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:43 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:43 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 07/25/14 13:45 | 07/28/14 17:43 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:43 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 07/25/14 13:45 | 07/28/14 17:43 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:43 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 07/25/14 13:45 | 07/28/14 17:43 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 07/25/14 20:10 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 07/25/14 20:10 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 20:10 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 07/25/14 20:10 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 07/25/14 20:10 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 07/25/14 20:10 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 07/25/14 20:10 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 07/25/14 20:10 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 07/25/14 20:10 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 20:10 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 07/25/14 20:10 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 07/25/14 20:10 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 07/25/14 20:10 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 07/25/14 20:10 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 07/25/14 20:10 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 07/25/14 20:10 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 20:10 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 07/25/14 20:10 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 07/25/14 20:10 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 07/25/14 20:10 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 07/25/14 20:10 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 07/25/14 20:10 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 07/25/14 20:10 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 07/25/14 20:10 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 07/25/14 20:10 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 07/25/14 20:10 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 20:10 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 07/25/14 20:10 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 07/25/14 20:10 | 10061-01-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL SW-1_5
Pace Project No.: 92210568

**Sample: SW-1** **Lab ID: 92210568001** Collected: 07/23/14 15:45 Received: 07/24/14 12:50 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 | | 07/25/14 20:10 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 07/25/14 20:10 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 07/25/14 20:10 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 07/25/14 20:10 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 07/25/14 20:10 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 07/25/14 20:10 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 20:10 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 07/25/14 20:10 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 07/25/14 20:10 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 07/25/14 20:10 | 127-18-4 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 20:10 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 07/25/14 20:10 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 07/25/14 20:10 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 07/25/14 20:10 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 07/25/14 20:10 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 07/25/14 20:10 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 07/25/14 20:10 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 07/25/14 20:10 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 07/25/14 20:10 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 104 | % | 70-130 | | 1 | | 07/25/14 20:10 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 113 | % | 70-130 | | 1 | | 07/25/14 20:10 | 17060-07-0 | |
| Toluene-d8 (S) | 101 | % | 70-130 | | 1 | | 07/25/14 20:10 | 2037-26-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL SW-1_5
Pace Project No.: 92210568

**Sample: SW-5** **Lab ID: 92210568002** Collected: 07/23/14 16:45 Received: 07/24/14 12:50 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 | 07/28/14 16:30 | 07/30/14 08:20 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:20 | 7440-38-2 | |
| Barium | **21.0J** | ug/L | 100 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:20 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 08:20 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 07/28/14 16:30 | 07/30/14 08:20 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:20 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:20 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 17:18 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:20 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:20 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 08:20 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:20 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 07/28/14 16:30 | 07/30/14 08:20 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 07/28/14 16:30 | 07/30/14 08:20 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 07/28/14 16:30 | 07/30/14 08:20 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 07/25/14 20:26 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 07/25/14 20:26 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 20:26 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 07/25/14 20:26 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 07/25/14 20:26 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 07/25/14 20:26 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 07/25/14 20:26 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 07/25/14 20:26 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 07/25/14 20:26 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 07/25/14 20:26 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 07/25/14 20:26 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 07/25/14 20:26 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 07/25/14 20:26 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 07/25/14 20:26 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 07/25/14 20:26 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 07/25/14 20:26 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 20:26 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 07/25/14 20:26 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 07/25/14 20:26 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 07/25/14 20:26 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 07/25/14 20:26 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 07/25/14 20:26 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 07/25/14 20:26 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 07/25/14 20:26 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 07/25/14 20:26 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 07/25/14 20:26 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 07/25/14 20:26 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 07/25/14 20:26 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 07/25/14 20:26 | 10061-01-5 | |



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# ANALYTICAL RESULTS

Project: IREDELL SW-1_5
Pace Project No.: 92210568

**Sample: SW-5** **Lab ID: 92210568002** Collected: 07/23/14 16:45 Received: 07/24/14 12:50 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 | | 07/25/14 20:26 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 07/25/14 20:26 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 07/25/14 20:26 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 07/25/14 20:26 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 07/25/14 20:26 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 07/25/14 20:26 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 20:26 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 07/25/14 20:26 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 07/25/14 20:26 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 07/25/14 20:26 | 127-18-4 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/25/14 20:26 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 07/25/14 20:26 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 07/25/14 20:26 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 07/25/14 20:26 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 07/25/14 20:26 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 07/25/14 20:26 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 07/25/14 20:26 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 07/25/14 20:26 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 07/25/14 20:26 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 102 | % | 70-130 | | 1 | | 07/25/14 20:26 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 112 | % | 70-130 | | 1 | | 07/25/14 20:26 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 07/25/14 20:26 | 2037-26-5 | |



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# QUALITY CONTROL DATA

Project: IREDELL SW-1_5
Pace Project No.: 92210568

QC Batch: MPRP/16529
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92210568001

METHOD BLANK: 1249993
Matrix: Water
Associated Lab Samples: 92210568001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Antimony | ug/L | ND | 6.0 | 07/28/14 16:19 | |
| Arsenic | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Barium | ug/L | ND | 100 | 07/28/14 16:19 | |
| Beryllium | ug/L | ND | 1.0 | 07/28/14 16:19 | |
| Cadmium | ug/L | ND | 1.0 | 07/28/14 16:19 | |
| Chromium | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Cobalt | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Copper | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Lead | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Nickel | ug/L | ND | 50.0 | 07/28/14 16:19 | |
| Selenium | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Silver | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Thallium | ug/L | ND | 5.5 | 07/28/14 16:19 | |
| Vanadium | ug/L | ND | 25.0 | 07/28/14 16:19 | |
| Zinc | ug/L | ND | 10.0 | 07/28/14 16:19 | |

LABORATORY CONTROL SAMPLE: 1249994

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Antimony | ug/L | 500 | 502 | 100 | 80-120 | |
| Arsenic | ug/L | 500 | 487 | 97 | 80-120 | |
| Barium | ug/L | 500 | 488 | 98 | 80-120 | |
| Beryllium | ug/L | 500 | 497 | 99 | 80-120 | |
| Cadmium | ug/L | 500 | 500 | 100 | 80-120 | |
| Chromium | ug/L | 500 | 483 | 97 | 80-120 | |
| Cobalt | ug/L | 500 | 488 | 98 | 80-120 | |
| Copper | ug/L | 500 | 504 | 101 | 80-120 | |
| Lead | ug/L | 500 | 491 | 98 | 80-120 | |
| Nickel | ug/L | 500 | 497 | 99 | 80-120 | |
| Selenium | ug/L | 500 | 496 | 99 | 80-120 | |
| Silver | ug/L | 250 | 248 | 99 | 80-120 | |
| Thallium | ug/L | 500 | 494 | 99 | 80-120 | |
| Vanadium | ug/L | 500 | 493 | 99 | 80-120 | |
| Zinc | ug/L | 500 | 484 | 97 | 80-120 | |

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



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# QUALITY CONTROL DATA

Project: IREDELL SW-1_5
Pace Project No.: 92210568

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1249995 1249996

| Parameter | Units | 92210419001 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 | 480 | 492 | 96 | 98 | 75-125 | 2 | 25 | |
| Arsenic | ug/L | ND | 500 | 500 | 467 | 467 | 93 | 93 | 75-125 | 0 | 25 | |
| Barium | ug/L | 6.0 | 500 | 500 | 474 | 475 | 94 | 94 | 75-125 | 0 | 25 | |
| Beryllium | ug/L | ND | 500 | 500 | 478 | 480 | 96 | 96 | 75-125 | 0 | 25 | |
| Cadmium | ug/L | ND | 500 | 500 | 477 | 476 | 95 | 95 | 75-125 | 0 | 25 | |
| Chromium | ug/L | ND | 500 | 500 | 462 | 466 | 92 | 93 | 75-125 | 1 | 25 | |
| Cobalt | ug/L | ND | 500 | 500 | 462 | 460 | 92 | 92 | 75-125 | 0 | 25 | |
| Copper | ug/L | 28.1 | 500 | 500 | 508 | 510 | 96 | 96 | 75-125 | 0 | 25 | |
| Lead | ug/L | ND | 500 | 500 | 467 | 465 | 92 | 92 | 75-125 | 0 | 25 | |
| Nickel | ug/L | ND | 500 | 500 | 469 | 471 | 94 | 94 | 75-125 | 0 | 25 | |
| Selenium | ug/L | ND | 500 | 500 | 472 | 469 | 94 | 94 | 75-125 | 1 | 25 | |
| Silver | ug/L | ND | 250 | 250 | 237 | 237 | 95 | 94 | 75-125 | 0 | 25 | |
| Thallium | ug/L | ND | 500 | 500 | 467 | 464 | 93 | 93 | 75-125 | 1 | 25 | |
| Vanadium | ug/L | ND | 500 | 500 | 474 | 476 | 95 | 95 | 75-125 | 1 | 25 | |
| Zinc | ug/L | ND | 500 | 500 | 461 | 463 | 92 | 92 | 75-125 | 1 | 25 | |

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(704)875-9092

# QUALITY CONTROL DATA

Project: IREDELL SW-1_5
Pace Project No.: 92210568

QC Batch: MPRP/16541
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92210568002

METHOD BLANK: 1251119
Matrix: Water
Associated Lab Samples: 92210568002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Antimony | ug/L | ND | 6.0 | 07/30/14 08:14 | |
| Arsenic | ug/L | ND | 10.0 | 07/30/14 08:14 | |
| Barium | ug/L | ND | 100 | 07/30/14 08:14 | |
| Beryllium | ug/L | ND | 1.0 | 07/30/14 08:14 | |
| Cadmium | ug/L | ND | 1.0 | 07/30/14 08:14 | |
| Chromium | ug/L | ND | 10.0 | 07/30/14 08:14 | |
| Cobalt | ug/L | ND | 10.0 | 07/30/14 08:14 | |
| Copper | ug/L | ND | 10.0 | 07/30/14 17:12 | |
| Lead | ug/L | ND | 10.0 | 07/30/14 08:14 | |
| Nickel | ug/L | ND | 50.0 | 07/30/14 08:14 | |
| Selenium | ug/L | ND | 10.0 | 07/30/14 08:14 | |
| Silver | ug/L | ND | 10.0 | 07/30/14 08:14 | |
| Thallium | ug/L | ND | 5.5 | 07/30/14 08:14 | |
| Vanadium | ug/L | ND | 25.0 | 07/30/14 08:14 | |
| Zinc | ug/L | ND | 10.0 | 07/30/14 08:14 | |

LABORATORY CONTROL SAMPLE: 1251120

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Antimony | ug/L | 500 | 490 | 98 | 80-120 | |
| Arsenic | ug/L | 500 | 477 | 95 | 80-120 | |
| Barium | ug/L | 500 | 447 | 89 | 80-120 | |
| Beryllium | ug/L | 500 | 488 | 98 | 80-120 | |
| Cadmium | ug/L | 500 | 492 | 98 | 80-120 | |
| Chromium | ug/L | 500 | 471 | 94 | 80-120 | |
| Cobalt | ug/L | 500 | 474 | 95 | 80-120 | |
| Copper | ug/L | 500 | 495 | 99 | 80-120 | |
| Lead | ug/L | 500 | 476 | 95 | 80-120 | |
| Nickel | ug/L | 500 | 488 | 98 | 80-120 | |
| Selenium | ug/L | 500 | 482 | 96 | 80-120 | |
| Silver | ug/L | 250 | 242 | 97 | 80-120 | |
| Thallium | ug/L | 500 | 483 | 97 | 80-120 | |
| Vanadium | ug/L | 500 | 487 | 97 | 80-120 | |
| Zinc | ug/L | 500 | 471 | 94 | 80-120 | |

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# QUALITY CONTROL DATA

Project: IREDELL SW-1_5
Pace Project No.: 92210568

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1251121 1251122

| Parameter | Units | 92210568002 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 | 478 | 473 | 96 | 95 | 75-125 | 1 | 25 | |
| Arsenic | ug/L | ND | 500 | 500 | 470 | 466 | 94 | 93 | 75-125 | 1 | 25 | |
| Barium | ug/L | 21.0J | 500 | 500 | 461 | 456 | 88 | 87 | 75-125 | 1 | 25 | |
| Beryllium | ug/L | ND | 500 | 500 | 482 | 474 | 96 | 95 | 75-125 | 2 | 25 | |
| Cadmium | ug/L | ND | 500 | 500 | 483 | 478 | 97 | 95 | 75-125 | 1 | 25 | |
| Chromium | ug/L | ND | 500 | 500 | 467 | 463 | 93 | 92 | 75-125 | 1 | 25 | |
| Cobalt | ug/L | ND | 500 | 500 | 464 | 455 | 93 | 91 | 75-125 | 2 | 25 | |
| Copper | ug/L | ND | 500 | 500 | 490 | 480 | 98 | 96 | 75-125 | 2 | 25 | |
| Lead | ug/L | ND | 500 | 500 | 463 | 457 | 93 | 91 | 75-125 | 1 | 25 | |
| Nickel | ug/L | ND | 500 | 500 | 476 | 473 | 95 | 94 | 75-125 | 1 | 25 | |
| Selenium | ug/L | ND | 500 | 500 | 470 | 468 | 94 | 94 | 75-125 | 0 | 25 | |
| Silver | ug/L | ND | 250 | 250 | 239 | 237 | 95 | 95 | 75-125 | 1 | 25 | |
| Thallium | ug/L | ND | 500 | 500 | 471 | 463 | 94 | 92 | 75-125 | 2 | 25 | |
| Vanadium | ug/L | ND | 500 | 500 | 481 | 478 | 96 | 95 | 75-125 | 1 | 25 | |
| Zinc | ug/L | ND | 500 | 500 | 464 | 459 | 92 | 91 | 75-125 | 1 | 25 | |

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# QUALITY CONTROL DATA

Project: IREDELL SW-1_5
Pace Project No.: 92210568

QC Batch: MSV/27725 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92210568001, 92210568002

METHOD BLANK: 1250070 | Matrix: Water
Associated Lab Samples: 92210568001, 92210568002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| 1,1,1-Trichloroethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,1,2,2-Tetrachloroethane | ug/L | ND | 3.0 | 07/25/14 15:37 | |
| 1,1,2-Trichloroethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,1-Dichloroethane | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| 1,1-Dichloroethene | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| 1,2,3-Trichloropropane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,2-Dibromo-3-chloropropane | ug/L | ND | 13.0 | 07/25/14 15:37 | |
| 1,2-Dibromoethane (EDB) | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,2-Dichlorobenzene | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| 1,2-Dichloroethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,2-Dichloropropane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,3-Dichloropropane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 1,4-Dichlorobenzene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| 2-Butanone (MEK) | ug/L | ND | 100 | 07/25/14 15:37 | |
| 2-Hexanone | ug/L | ND | 50.0 | 07/25/14 15:37 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | ND | 100 | 07/25/14 15:37 | |
| Acetone | ug/L | ND | 100 | 07/25/14 15:37 | |
| Acrylonitrile | ug/L | ND | 200 | 07/25/14 15:37 | |
| Benzene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Bromochloromethane | ug/L | ND | 3.0 | 07/25/14 15:37 | |
| Bromodichloromethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Bromoform | ug/L | ND | 3.0 | 07/25/14 15:37 | |
| Bromomethane | ug/L | ND | 10.0 | 07/25/14 15:37 | |
| Carbon disulfide | ug/L | ND | 100 | 07/25/14 15:37 | |
| Carbon tetrachloride | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Chlorobenzene | ug/L | ND | 3.0 | 07/25/14 15:37 | |
| Chloroethane | ug/L | ND | 10.0 | 07/25/14 15:37 | |
| Chloroform | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| Chloromethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| cis-1,2-Dichloroethene | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| cis-1,3-Dichloropropene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Dibromochloromethane | ug/L | ND | 3.0 | 07/25/14 15:37 | |
| Dibromomethane | ug/L | ND | 10.0 | 07/25/14 15:37 | |
| Ethylbenzene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Iodomethane | ug/L | ND | 10.0 | 07/25/14 15:37 | |
| Methylene Chloride | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Styrene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Tetrachloroethene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Toluene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| trans-1,2-Dichloroethene | ug/L | ND | 5.0 | 07/25/14 15:37 | |

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## REPORT OF LABORATORY ANALYSIS

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# QUALITY CONTROL DATA

Project: IREDELL SW-1_5
Pace Project No.: 92210568

METHOD BLANK: 1250070 Matrix: Water
Associated Lab Samples: 92210568001, 92210568002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| trans-1,3-Dichloropropene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| trans-1,4-Dichloro-2-butene | ug/L | ND | 100 | 07/25/14 15:37 | |
| Trichloroethene | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Trichlorofluoromethane | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Vinyl acetate | ug/L | ND | 50.0 | 07/25/14 15:37 | |
| Vinyl chloride | ug/L | ND | 1.0 | 07/25/14 15:37 | |
| Xylene (Total) | ug/L | ND | 5.0 | 07/25/14 15:37 | |
| 1,2-Dichloroethane-d4 (S) | % | 108 | 70-130 | 07/25/14 15:37 | |
| 4-Bromofluorobenzene (S) | % | 101 | 70-130 | 07/25/14 15:37 | |
| Toluene-d8 (S) | % | 99 | 70-130 | 07/25/14 15:37 | |

LABORATORY CONTROL SAMPLE: 1250071

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | 50 | 55.7 | 111 | 80-125 | |
| 1,1,1-Trichloroethane | ug/L | 50 | 52.7 | 105 | 71-129 | |
| 1,1,2,2-Tetrachloroethane | ug/L | 50 | 53.7 | 107 | 79-124 | |
| 1,1,2-Trichloroethane | ug/L | 50 | 54.8 | 110 | 85-125 | |
| 1,1-Dichloroethane | ug/L | 50 | 50.1 | 100 | 73-126 | |
| 1,1-Dichloroethene | ug/L | 50 | 56.0 | 112 | 66-135 | |
| 1,2,3-Trichloropropane | ug/L | 50 | 57.8 | 116 | 75-130 | |
| 1,2-Dibromo-3-chloropropane | ug/L | 50 | 54.3 | 109 | 71-133 | |
| 1,2-Dibromoethane (EDB) | ug/L | 50 | 57.1 | 114 | 83-124 | |
| 1,2-Dichlorobenzene | ug/L | 50 | 55.2 | 110 | 80-133 | |
| 1,2-Dichloroethane | ug/L | 50 | 52.1 | 104 | 67-128 | |
| 1,2-Dichloropropane | ug/L | 50 | 54.2 | 108 | 75-132 | |
| 1,3-Dichloropropane | ug/L | 50 | 56.0 | 112 | 76-131 | |
| 1,4-Dichlorobenzene | ug/L | 50 | 56.0 | 112 | 78-130 | |
| 2-Butanone (MEK) | ug/L | 100 | 105 | 105 | 61-144 | |
| 2-Hexanone | ug/L | 100 | 108 | 108 | 68-143 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | 100 | 108 | 108 | 72-135 | |
| Acetone | ug/L | 100 | 103 | 103 | 48-146 | |
| Acrylonitrile | ug/L | 250 | 250 | 100 | 40-160 | |
| Benzene | ug/L | 50 | 56.8 | 114 | 80-125 | |
| Bromochloromethane | ug/L | 50 | 50.3 | 101 | 71-125 | |
| Bromodichloromethane | ug/L | 50 | 63.3 | 127 | 78-124 | L0 |
| Bromoform | ug/L | 50 | 61.6 | 123 | 71-128 | |
| Bromomethane | ug/L | 50 | 48.8 | 98 | 40-160 | |
| Carbon disulfide | ug/L | 50 | 50.8J | 102 | 50-160 | |
| Carbon tetrachloride | ug/L | 50 | 60.1 | 120 | 69-131 | |
| Chlorobenzene | ug/L | 50 | 55.3 | 111 | 81-122 | |
| Chloroethane | ug/L | 50 | 39.1 | 78 | 39-148 | |
| Chloroform | ug/L | 50 | 60.7 | 121 | 73-127 | |
| Chloromethane | ug/L | 50 | 43.1 | 86 | 44-146 | |

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# QUALITY CONTROL DATA

Project: IREDELL SW-1_5
Pace Project No.: 92210568

LABORATORY CONTROL SAMPLE: 1250071

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | ug/L | 50 | 57.3 | 115 | 74-124 | |
| cis-1,3-Dichloropropene | ug/L | 50 | 57.9 | 116 | 72-132 | |
| Dibromochloromethane | ug/L | 50 | 65.1 | 130 | 78-125 | L0 |
| Dibromomethane | ug/L | 50 | 59.1 | 118 | 82-120 | |
| Ethylbenzene | ug/L | 50 | 57.5 | 115 | 79-121 | |
| Iodomethane | ug/L | 100 | 87.5 | 87 | 39-154 | |
| Methylene Chloride | ug/L | 50 | 49.2 | 98 | 64-133 | |
| Styrene | ug/L | 50 | 58.3 | 117 | 84-126 | |
| Tetrachloroethene | ug/L | 50 | 56.9 | 114 | 78-122 | |
| Toluene | ug/L | 50 | 56.1 | 112 | 80-121 | |
| trans-1,2-Dichloroethene | ug/L | 50 | 56.4 | 113 | 71-127 | |
| trans-1,3-Dichloropropene | ug/L | 50 | 57.9 | 116 | 69-141 | |
| trans-1,4-Dichloro-2-butene | ug/L | 50 | 55.2J | 110 | 40-160 | |
| Trichloroethene | ug/L | 50 | 56.6 | 113 | 78-122 | |
| Trichlorofluoromethane | ug/L | 50 | 51.7 | 103 | 53-137 | |
| Vinyl acetate | ug/L | 100 | 112 | 112 | 40-160 | |
| Vinyl chloride | ug/L | 50 | 50.3 | 101 | 58-137 | |
| Xylene (Total) | ug/L | 150 | 173 | 115 | 81-126 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 92 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 103 | 70-130 | |
| Toluene-d8 (S) | % | | | 100 | 70-130 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1250072 1250073

| Parameter | Units | 92210562001 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 | 53.8 | 57.0 | 108 | 114 | 70-166 | 6 | 30 | |
| Benzene | ug/L | ND | 50 | 50 | 51.1 | 53.9 | 102 | 108 | 70-148 | 5 | 30 | |
| Chlorobenzene | ug/L | ND | 50 | 50 | 51.9 | 51.7 | 104 | 103 | 70-146 | 0 | 30 | |
| Toluene | ug/L | ND | 50 | 50 | 49.3 | 52.7 | 99 | 105 | 70-155 | 7 | 30 | |
| Trichloroethene | ug/L | ND | 50 | 50 | 54.1 | 58.7 | 108 | 117 | 69-151 | 8 | 30 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | | | 108 | 110 | 70-130 | | | |
| 4-Bromofluorobenzene (S) | % | | | | | | 103 | 102 | 70-130 | | | |
| Toluene-d8 (S) | % | | | | | | 98 | 101 | 70-130 | | | |

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# QUALIFIERS

Project: IREDELL SW-1_5
Pace Project No.: 92210568

## DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

## LABORATORIES

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

## ANALYTE QUALIFIERS

| | |
|---|---|
| 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-1_5
Pace Project No.: 92210568

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **92210568001** | **SW-1** | EPA 3010 | MPRP/16529 | EPA 6010 | ICP/14929 |
| **92210568002** | **SW-5** | EPA 3010 | MPRP/16541 | EPA 6010 | ICP/14938 |
| **92210568001** | **SW-1** | EPA 8260 | MSV/27725 | | |
| **92210568002** | **SW-5** | EPA 8260 | MSV/27725 | | |



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| Pace Analytical | Document Name: **Sample Condition Upon Receipt (SCUR)** | Document Revised: April 07. 2014 Page 1 of 2 |
|---|---|---|
| | Document Number: **F-CHR-CS-003-rev.14** | 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 (T1401)** **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.:** 2.7 °C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

**Date and Initials of person examining contents:** AAS 7/24/14

| | | **Comments:** |
|---|---|---|
| Chain of Custody Present: | ☒Yes ☐No ☐N/A | 1. |
| Chain of Custody Filled Out: | ☒Yes ☐No ☐N/A | 2. |
| Chain of Custody Relinquished: | ☒Yes ☐No ☐N/A | 3. |
| Sampler Name & Signature on COC: | ☒Yes ☐No ☐N/A | 4. |
| Samples Arrived within Hold Time: | ☒Yes ☐No ☐N/A | 5. |
| **Short Hold Time Analysis (<72hr):** | ☐Yes ☒No ☐N/A | 6. |
| **Rush Turn Around Time Requested:** | ☐Yes ☒No ☐N/A | 7. |
| Sufficient Volume: | ☒Yes ☐No ☐N/A | 8. |
| Correct Containers Used: | ☒Yes ☐No ☐N/A | 9. |
| -Pace Containers Used: | ☒Yes ☐No ☐N/A | |
| Containers Intact: | ☒Yes ☐No ☐N/A | 10. |
| Filtered volume received for Dissolved tests | ☐Yes ☐No ☒N/A | 11. |
| Sample Labels match COC: | ☐Yes ☒No ☐N/A | 12. No dates/times on bottles ALL |
| -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:** 7/24/14

**SRF Review:** JG **Date:** 7/24/14

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#: 92210568

92210568

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-1_5
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 | | | | | | | | | | | 9221505 68 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | N | N | | N | N | N | N | N | N | N | N | | |
| 1 | SW-1 | WT | G | | | 7/23/14 | 3:45 | | 4 | | | 1 | 3 | | | | | | X | X | | | | | | | | | | | 001 |
| 2 | SW-5 | WT | G | | | 7/23/14 | 4:45 | | 4 | | | 1 | 3 | | | | | | x | x | | | | | | | | | | | 002 |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 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 | 7/23/14 | 10:30 | | 7/24 | 10:55 | | | | |
| | | 7/24 | 1250 | PACE | 7/24/14 | 1250 | 2.7 | 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: 7/24/14

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

July 31, 2014

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

RE: Project: IREDELL C&D (OFFSITE)
Pace Project No.: 92210561

Dear Mr. Pfohl:
Enclosed are the analytical results for sample(s) received by the laboratory on July 24, 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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9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

# CERTIFICATIONS

Project: IREDELL C&D (OFFSITE)
Pace Project No.: 92210561

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



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(704)875-9092

## SAMPLE SUMMARY

Project: IREDELL C&D (OFFSITE)
Pace Project No.: 92210561

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| **92210561001** | **SW-S OF CONFLUENCE** | Water | 07/23/14 14:05 | 07/24/14 12:50 |



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## SAMPLE ANALYTE COUNT

Project: IREDELL C&D (OFFSITE)
Pace Project No.: 92210561

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **92210561001** | **SW-S OF CONFLUENCE** | EPA 6010 | JMW | 15 | PASI-A |



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# ANALYTICAL RESULTS

Project: IREDELL C&D (OFFSITE)
Pace Project No.: 92210561

**Sample: SW-S OF CONFLUENCE** **Lab ID: 92210561001** Collected: 07/23/14 14:05 Received: 07/24/14 12:50 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 | 07/25/14 13:45 | 07/29/14 13:16 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:33 | 7440-38-2 | |
| Barium | **82.1J** | ug/L | 100 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:33 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 07/25/14 13:45 | 07/28/14 17:33 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 07/25/14 13:45 | 07/28/14 17:33 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:33 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:33 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:33 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:33 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:33 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 07/25/14 13:45 | 07/28/14 17:33 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:33 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 07/25/14 13:45 | 07/28/14 17:33 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 07/25/14 13:45 | 07/28/14 17:33 | 7440-62-2 | |
| Zinc | **677** | ug/L | 10.0 | 10.0 | 1 | 07/25/14 13:45 | 07/28/14 17:33 | 7440-66-6 | |



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(704)875-9092

# QUALITY CONTROL DATA

Project: IREDELL C&D (OFFSITE)
Pace Project No.: 92210561

QC Batch: MPRP/16529
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92210561001

METHOD BLANK: 1249993
Matrix: Water
Associated Lab Samples: 92210561001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Antimony | ug/L | ND | 6.0 | 07/28/14 16:19 | |
| Arsenic | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Barium | ug/L | ND | 100 | 07/28/14 16:19 | |
| Beryllium | ug/L | ND | 1.0 | 07/28/14 16:19 | |
| Cadmium | ug/L | ND | 1.0 | 07/28/14 16:19 | |
| Chromium | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Cobalt | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Copper | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Lead | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Nickel | ug/L | ND | 50.0 | 07/28/14 16:19 | |
| Selenium | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Silver | ug/L | ND | 10.0 | 07/28/14 16:19 | |
| Thallium | ug/L | ND | 5.5 | 07/28/14 16:19 | |
| Vanadium | ug/L | ND | 25.0 | 07/28/14 16:19 | |
| Zinc | ug/L | ND | 10.0 | 07/28/14 16:19 | |

LABORATORY CONTROL SAMPLE: 1249994

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Antimony | ug/L | 500 | 502 | 100 | 80-120 | |
| Arsenic | ug/L | 500 | 487 | 97 | 80-120 | |
| Barium | ug/L | 500 | 488 | 98 | 80-120 | |
| Beryllium | ug/L | 500 | 497 | 99 | 80-120 | |
| Cadmium | ug/L | 500 | 500 | 100 | 80-120 | |
| Chromium | ug/L | 500 | 483 | 97 | 80-120 | |
| Cobalt | ug/L | 500 | 488 | 98 | 80-120 | |
| Copper | ug/L | 500 | 504 | 101 | 80-120 | |
| Lead | ug/L | 500 | 491 | 98 | 80-120 | |
| Nickel | ug/L | 500 | 497 | 99 | 80-120 | |
| Selenium | ug/L | 500 | 496 | 99 | 80-120 | |
| Silver | ug/L | 250 | 248 | 99 | 80-120 | |
| Thallium | ug/L | 500 | 494 | 99 | 80-120 | |
| Vanadium | ug/L | 500 | 493 | 99 | 80-120 | |
| Zinc | ug/L | 500 | 484 | 97 | 80-120 | |

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



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

# QUALITY CONTROL DATA

Project: IREDELL C&D (OFFSITE)
Pace Project No.: 92210561

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1249995 1249996

| Parameter | Units | 92210419001 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 | 480 | 492 | 96 | 98 | 75-125 | 2 | 25 | |
| Arsenic | ug/L | ND | 500 | 500 | 467 | 467 | 93 | 93 | 75-125 | 0 | 25 | |
| Barium | ug/L | 6.0 | 500 | 500 | 474 | 475 | 94 | 94 | 75-125 | 0 | 25 | |
| Beryllium | ug/L | ND | 500 | 500 | 478 | 480 | 96 | 96 | 75-125 | 0 | 25 | |
| Cadmium | ug/L | ND | 500 | 500 | 477 | 476 | 95 | 95 | 75-125 | 0 | 25 | |
| Chromium | ug/L | ND | 500 | 500 | 462 | 466 | 92 | 93 | 75-125 | 1 | 25 | |
| Cobalt | ug/L | ND | 500 | 500 | 462 | 460 | 92 | 92 | 75-125 | 0 | 25 | |
| Copper | ug/L | 28.1 | 500 | 500 | 508 | 510 | 96 | 96 | 75-125 | 0 | 25 | |
| Lead | ug/L | ND | 500 | 500 | 467 | 465 | 92 | 92 | 75-125 | 0 | 25 | |
| Nickel | ug/L | ND | 500 | 500 | 469 | 471 | 94 | 94 | 75-125 | 0 | 25 | |
| Selenium | ug/L | ND | 500 | 500 | 472 | 469 | 94 | 94 | 75-125 | 1 | 25 | |
| Silver | ug/L | ND | 250 | 250 | 237 | 237 | 95 | 94 | 75-125 | 0 | 25 | |
| Thallium | ug/L | ND | 500 | 500 | 467 | 464 | 93 | 93 | 75-125 | 1 | 25 | |
| Vanadium | ug/L | ND | 500 | 500 | 474 | 476 | 95 | 95 | 75-125 | 1 | 25 | |
| Zinc | ug/L | ND | 500 | 500 | 461 | 463 | 92 | 92 | 75-125 | 1 | 25 | |

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



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Huntersville, NC 28078
(704)875-9092

# QUALIFIERS

Project: IREDELL C&D (OFFSITE)
Pace Project No.: 92210561

## DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

## LABORATORIES

PASI-A Pace Analytical Services - Asheville



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

# QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: IREDELL C&D (OFFSITE)
Pace Project No.: 92210561

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **92210561001** | **SW-S OF CONFLUENCE** | EPA 3010 | MPRP/16529 | EPA 6010 | ICP/14929 |



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| Pace Analytical | Document Name: **Sample Condition Upon Receipt (SCUR)** | Document Revised: April 07. 2014 Page 1 of 2 |
|---|---|---|
| | Document Number: **F-CHR-CS-003-rev.14** | 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 T1401** **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.:** 2.7 °C **Biological Tissue is Frozen:** Yes No (N/A)

Temp should be above freezing to 6°C

**Date and Initials of person examining contents:** 07/24/14

| | | Comments: |
|---|---|---|
| Chain of Custody Present: | ☑Yes ☐No ☐N/A | 1. |
| Chain of Custody Filled Out: | ☑Yes ☐No ☐N/A | 2. |
| Chain of Custody Relinquished: | ☑Yes ☐No ☐N/A | 3. |
| Sampler Name & Signature on COC: | ☑Yes ☐No ☐N/A | 4. |
| Samples Arrived within Hold Time: | ☑Yes ☐No ☐N/A | 5. |
| **Short Hold Time Analysis (<72hr):** | ☐Yes ☑No ☐N/A | 6. |
| **Rush Turn Around Time Requested:** | ☐Yes ☑No ☐N/A | 7. |
| Sufficient Volume: | ☑Yes ☐No ☐N/A | 8. |
| Correct Containers Used: | ☑Yes ☐No ☐N/A | 9. |
| -Pace Containers Used: | ☑Yes ☐No ☐N/A | |
| Containers Intact: | ☑Yes ☐No ☐N/A | 10. |
| Filtered volume received for Dissolved tests | ☐Yes ☐No ☑N/A | 11. |
| Sample Labels match COC: | ☐Yes ☑No ☐N/A | 12. No Date Time on label |
| -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:** [signature] **Date:** 7/24/14

**SRF Review:** [signature] **Date:** 7/24/14

Place label here

WO#: 92210561

92210561

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

Pace Analytical

# CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 1 Of 1

**Section A** Required Client Information:

| | |
|---|---|
| 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 |

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 | Metals-App I | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | N | N | N | N | N | N | N | N | N | N | N |
| 1 | SW-SofConfluence | WT | G | | | 7/23/14 | 9:05 | | 1 | | | 1 | | | | | | | | X | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 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

922105601

001

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 7/24 | 10:30 | | 7/24 | 1055 | | | | |
| | / Pace | 7/24 | 1250 | / PACE | 7/24/14 | 1250 | 27 | 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: 7/24/14 | | | | |

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

August 06, 2014

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

RE: Project: Iredell Blanks
Pace Project No.: 92210774

Dear Mr. Pfohl:
Enclosed are the analytical results for sample(s) received by the laboratory on July 25, 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.: 92210774

**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.: 92210774

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| **92210774001** | **EB** | Water | 07/25/14 14:00 | 07/25/14 14:06 |
| **92210774002** | **FB** | Water | 07/25/14 14:05 | 07/25/14 14:06 |
| **92210774003** | **TB** | Water | 07/25/14 14:00 | 07/25/14 14:06 |



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## SAMPLE ANALYTE COUNT

Project: Iredell Blanks
Pace Project No.: 92210774

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **92210774001** | **EB** | EPA 6010 | JMW | 15 | PASI-A |
| | | EPA 8260 | MCK | 52 | PASI-C |
| **92210774002** | **FB** | EPA 8260 | MCK | 52 | PASI-C |
| **92210774003** | **TB** | EPA 8260 | MCK | 52 | PASI-C |



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# ANALYTICAL RESULTS

Project: Iredell Blanks
Pace Project No.: 92210774

**Sample: EB** **Lab ID: 92210774001** Collected: 07/25/14 14:00 Received: 07/25/14 14:06 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 | 07/30/14 15:25 | 07/31/14 22:50 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 07/30/14 15:25 | 07/31/14 22:50 | 7440-38-2 | |
| Barium | ND | ug/L | 100 | 5.0 | 1 | 07/30/14 15:25 | 07/31/14 22:50 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 07/30/14 15:25 | 07/31/14 22:50 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 07/30/14 15:25 | 07/31/14 22:50 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 07/30/14 15:25 | 07/31/14 22:50 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 07/30/14 15:25 | 07/31/14 22:50 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 07/30/14 15:25 | 07/31/14 22:50 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 07/30/14 15:25 | 07/31/14 22:50 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 07/30/14 15:25 | 07/31/14 22:50 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 07/30/14 15:25 | 07/31/14 22:50 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 07/30/14 15:25 | 07/31/14 22:50 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 07/30/14 15:25 | 07/31/14 22:50 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 07/30/14 15:25 | 07/31/14 22:50 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 07/30/14 15:25 | 07/31/14 22:50 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 07/29/14 23:23 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 07/29/14 23:23 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 07/29/14 23:23 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 07/29/14 23:23 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 07/29/14 23:23 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 07/29/14 23:23 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 07/29/14 23:23 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 07/29/14 23:23 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 07/29/14 23:23 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 07/29/14 23:23 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 07/29/14 23:23 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 07/29/14 23:23 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 07/29/14 23:23 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 07/29/14 23:23 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 07/29/14 23:23 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 07/29/14 23:23 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 07/29/14 23:23 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 07/29/14 23:23 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 07/29/14 23:23 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 07/29/14 23:23 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 07/29/14 23:23 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 07/29/14 23:23 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 07/29/14 23:23 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 07/29/14 23:23 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 07/29/14 23:23 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 07/29/14 23:23 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 07/29/14 23:23 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 07/29/14 23:23 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 07/29/14 23:23 | 10061-01-5 | |



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# ANALYTICAL RESULTS

Project: Iredell Blanks
Pace Project No.: 92210774

**Sample: EB** **Lab ID: 92210774001** Collected: 07/25/14 14:00 Received: 07/25/14 14:06 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 | | 07/29/14 23:23 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 07/29/14 23:23 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 07/29/14 23:23 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 07/29/14 23:23 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 07/29/14 23:23 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 07/29/14 23:23 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/29/14 23:23 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 07/29/14 23:23 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 07/29/14 23:23 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 07/29/14 23:23 | 127-18-4 | |
| Tetrahydrofuran | ND | ug/L | 10.0 | 3.1 | 1 | | 07/29/14 23:23 | 109-99-9 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/29/14 23:23 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 07/29/14 23:23 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 07/29/14 23:23 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 07/29/14 23:23 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 07/29/14 23:23 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 07/29/14 23:23 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 07/29/14 23:23 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 07/29/14 23:23 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 07/29/14 23:23 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 102 | % | 70-130 | | 1 | | 07/29/14 23:23 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 118 | % | 70-130 | | 1 | | 07/29/14 23:23 | 17060-07-0 | |
| Toluene-d8 (S) | 101 | % | 70-130 | | 1 | | 07/29/14 23:23 | 2037-26-5 | |



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# ANALYTICAL RESULTS

Project: Iredell Blanks
Pace Project No.: 92210774

**Sample: FB** **Lab ID: 92210774002** Collected: 07/25/14 14:05 Received: 07/25/14 14:06 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 | | 07/29/14 23:39 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 07/29/14 23:39 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 07/29/14 23:39 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 07/29/14 23:39 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 07/29/14 23:39 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 07/29/14 23:39 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 07/29/14 23:39 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 07/29/14 23:39 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 07/29/14 23:39 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 07/29/14 23:39 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 07/29/14 23:39 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 07/29/14 23:39 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 07/29/14 23:39 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 07/29/14 23:39 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 07/29/14 23:39 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 07/29/14 23:39 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 07/29/14 23:39 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 07/29/14 23:39 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 07/29/14 23:39 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 07/29/14 23:39 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 07/29/14 23:39 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 07/29/14 23:39 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 07/29/14 23:39 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 07/29/14 23:39 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 07/29/14 23:39 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 07/29/14 23:39 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 07/29/14 23:39 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 07/29/14 23:39 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 07/29/14 23:39 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/29/14 23:39 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 07/29/14 23:39 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 07/29/14 23:39 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 07/29/14 23:39 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 07/29/14 23:39 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 07/29/14 23:39 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/29/14 23:39 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 07/29/14 23:39 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 07/29/14 23:39 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 07/29/14 23:39 | 127-18-4 | |
| Tetrahydrofuran | ND | ug/L | 10.0 | 3.1 | 1 | | 07/29/14 23:39 | 109-99-9 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/29/14 23:39 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 07/29/14 23:39 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 07/29/14 23:39 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 07/29/14 23:39 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 07/29/14 23:39 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 07/29/14 23:39 | 96-18-4 | |



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# ANALYTICAL RESULTS

Project: Iredell Blanks
Pace Project No.: 92210774

**Sample: FB** **Lab ID: 92210774002** Collected: 07/25/14 14:05 Received: 07/25/14 14:06 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 | | 07/29/14 23:39 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 07/29/14 23:39 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 07/29/14 23:39 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 104 | % | 70-130 | | 1 | | 07/29/14 23:39 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 117 | % | 70-130 | | 1 | | 07/29/14 23:39 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 07/29/14 23:39 | 2037-26-5 | |



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# ANALYTICAL RESULTS

Project: Iredell Blanks
Pace Project No.: 92210774

**Sample: TB** **Lab ID: 92210774003** Collected: 07/25/14 14:00 Received: 07/25/14 14:06 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 | | 07/29/14 23:55 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 07/29/14 23:55 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 07/29/14 23:55 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 07/29/14 23:55 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 07/29/14 23:55 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 07/29/14 23:55 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 07/29/14 23:55 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 07/29/14 23:55 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 07/29/14 23:55 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 07/29/14 23:55 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 07/29/14 23:55 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 07/29/14 23:55 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 07/29/14 23:55 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 07/29/14 23:55 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 07/29/14 23:55 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 07/29/14 23:55 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 07/29/14 23:55 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 07/29/14 23:55 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 07/29/14 23:55 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 07/29/14 23:55 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 07/29/14 23:55 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 07/29/14 23:55 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 07/29/14 23:55 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 07/29/14 23:55 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 07/29/14 23:55 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 07/29/14 23:55 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 07/29/14 23:55 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 07/29/14 23:55 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 07/29/14 23:55 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/29/14 23:55 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 07/29/14 23:55 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 07/29/14 23:55 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 07/29/14 23:55 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 07/29/14 23:55 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 07/29/14 23:55 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/29/14 23:55 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 07/29/14 23:55 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 07/29/14 23:55 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 07/29/14 23:55 | 127-18-4 | |
| Tetrahydrofuran | ND | ug/L | 10.0 | 3.1 | 1 | | 07/29/14 23:55 | 109-99-9 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 07/29/14 23:55 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 07/29/14 23:55 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 07/29/14 23:55 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 07/29/14 23:55 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 07/29/14 23:55 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 07/29/14 23:55 | 96-18-4 | |



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# ANALYTICAL RESULTS

Project: Iredell Blanks
Pace Project No.: 92210774

**Sample: TB** **Lab ID: 92210774003** Collected: 07/25/14 14:00 Received: 07/25/14 14:06 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 | | 07/29/14 23:55 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 07/29/14 23:55 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 07/29/14 23:55 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 108 | % | 70-130 | | 1 | | 07/29/14 23:55 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 114 | % | 70-130 | | 1 | | 07/29/14 23:55 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 07/29/14 23:55 | 2037-26-5 | |



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# QUALITY CONTROL DATA

Project: Iredell Blanks
Pace Project No.: 92210774

QC Batch: MPRP/16565
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92210774001

METHOD BLANK: 1252869
Matrix: Water
Associated Lab Samples: 92210774001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Antimony | ug/L | ND | 6.0 | 07/31/14 22:17 | |
| Arsenic | ug/L | ND | 10.0 | 07/31/14 22:17 | |
| Barium | ug/L | ND | 100 | 07/31/14 22:17 | |
| Beryllium | ug/L | ND | 1.0 | 07/31/14 22:17 | |
| Cadmium | ug/L | ND | 1.0 | 07/31/14 22:17 | |
| Chromium | ug/L | ND | 10.0 | 07/31/14 22:17 | |
| Cobalt | ug/L | ND | 10.0 | 07/31/14 22:17 | |
| Copper | ug/L | ND | 10.0 | 07/31/14 22:17 | |
| Lead | ug/L | ND | 10.0 | 07/31/14 22:17 | |
| Nickel | ug/L | ND | 50.0 | 07/31/14 22:17 | |
| Selenium | ug/L | ND | 10.0 | 07/31/14 22:17 | |
| Silver | ug/L | ND | 10.0 | 07/31/14 22:17 | |
| Thallium | ug/L | ND | 5.5 | 07/31/14 22:17 | |
| Vanadium | ug/L | ND | 25.0 | 07/31/14 22:17 | |
| Zinc | ug/L | ND | 10.0 | 07/31/14 22:17 | |

LABORATORY CONTROL SAMPLE: 1252870

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Antimony | ug/L | 500 | 488 | 98 | 80-120 | |
| Arsenic | ug/L | 500 | 474 | 95 | 80-120 | |
| Barium | ug/L | 500 | 478 | 96 | 80-120 | |
| Beryllium | ug/L | 500 | 486 | 97 | 80-120 | |
| Cadmium | ug/L | 500 | 482 | 96 | 80-120 | |
| Chromium | ug/L | 500 | 478 | 96 | 80-120 | |
| Cobalt | ug/L | 500 | 477 | 95 | 80-120 | |
| Copper | ug/L | 500 | 497 | 99 | 80-120 | |
| Lead | ug/L | 500 | 480 | 96 | 80-120 | |
| Nickel | ug/L | 500 | 482 | 96 | 80-120 | |
| Selenium | ug/L | 500 | 480 | 96 | 80-120 | |
| Silver | ug/L | 250 | 242 | 97 | 80-120 | |
| Thallium | ug/L | 500 | 473 | 95 | 80-120 | |
| Vanadium | ug/L | 500 | 486 | 97 | 80-120 | |
| Zinc | ug/L | 500 | 472 | 94 | 80-120 | |

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# QUALITY CONTROL DATA

Project: Iredell Blanks
Pace Project No.: 92210774

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1252871 1252872

| Parameter | Units | 92210772008 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 | 468 | 470 | 94 | 94 | 75-125 | 0 | 25 | |
| Arsenic | ug/L | ND | 500 | 500 | 477 | 480 | 95 | 96 | 75-125 | 1 | 25 | |
| Barium | ug/L | 132 | 500 | 500 | 617 | 626 | 97 | 99 | 75-125 | 1 | 25 | |
| Beryllium | ug/L | ND | 500 | 500 | 490 | 495 | 98 | 99 | 75-125 | 1 | 25 | |
| Cadmium | ug/L | ND | 500 | 500 | 484 | 487 | 97 | 97 | 75-125 | 1 | 25 | |
| Chromium | ug/L | ND | 500 | 500 | 482 | 483 | 96 | 96 | 75-125 | 0 | 25 | |
| Cobalt | ug/L | ND | 500 | 500 | 483 | 488 | 96 | 97 | 75-125 | 1 | 25 | |
| Copper | ug/L | 7.8J | 500 | 500 | 511 | 517 | 101 | 102 | 75-125 | 1 | 25 | |
| Lead | ug/L | ND | 500 | 500 | 476 | 484 | 95 | 97 | 75-125 | 2 | 25 | |
| Nickel | ug/L | 6.3J | 500 | 500 | 487 | 491 | 96 | 97 | 75-125 | 1 | 25 | |
| Selenium | ug/L | ND | 500 | 500 | 478 | 485 | 96 | 97 | 75-125 | 1 | 25 | |
| Silver | ug/L | ND | 250 | 250 | 240 | 243 | 96 | 97 | 75-125 | 1 | 25 | |
| Thallium | ug/L | ND | 500 | 500 | 472 | 474 | 94 | 95 | 75-125 | 0 | 25 | |
| Vanadium | ug/L | 7.9J | 500 | 500 | 493 | 497 | 97 | 98 | 75-125 | 1 | 25 | |
| Zinc | ug/L | 22.5 | 500 | 500 | 491 | 497 | 94 | 95 | 75-125 | 1 | 25 | |

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# QUALITY CONTROL DATA

Project: Iredell Blanks
Pace Project No.: 92210774

QC Batch: MSV/27757 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92210774001, 92210774002, 92210774003

METHOD BLANK: 1251833 Matrix: Water
Associated Lab Samples: 92210774001, 92210774002, 92210774003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | ND | 5.0 | 07/29/14 17:15 | |
| 1,1,1-Trichloroethane | ug/L | ND | 1.0 | 07/29/14 17:15 | |
| 1,1,2,2-Tetrachloroethane | ug/L | ND | 3.0 | 07/29/14 17:15 | |
| 1,1,2-Trichloroethane | ug/L | ND | 1.0 | 07/29/14 17:15 | |
| 1,1-Dichloroethane | ug/L | ND | 5.0 | 07/29/14 17:15 | |
| 1,1-Dichloroethene | ug/L | ND | 5.0 | 07/29/14 17:15 | |
| 1,2,3-Trichloropropane | ug/L | ND | 1.0 | 07/29/14 17:15 | |
| 1,2-Dibromo-3-chloropropane | ug/L | ND | 13.0 | 07/29/14 17:15 | |
| 1,2-Dibromoethane (EDB) | ug/L | ND | 1.0 | 07/29/14 17:15 | |
| 1,2-Dichlorobenzene | ug/L | ND | 5.0 | 07/29/14 17:15 | |
| 1,2-Dichloroethane | ug/L | ND | 1.0 | 07/29/14 17:15 | |
| 1,2-Dichloropropane | ug/L | ND | 1.0 | 07/29/14 17:15 | |
| 1,3-Dichloropropane | ug/L | ND | 1.0 | 07/29/14 17:15 | |
| 1,4-Dichlorobenzene | ug/L | ND | 1.0 | 07/29/14 17:15 | |
| 2-Butanone (MEK) | ug/L | ND | 100 | 07/29/14 17:15 | |
| 2-Hexanone | ug/L | ND | 50.0 | 07/29/14 17:15 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | ND | 100 | 07/29/14 17:15 | |
| Acetone | ug/L | ND | 100 | 07/29/14 17:15 | |
| Acrylonitrile | ug/L | ND | 200 | 07/29/14 17:15 | |
| Benzene | ug/L | ND | 1.0 | 07/29/14 17:15 | |
| Bromochloromethane | ug/L | ND | 3.0 | 07/29/14 17:15 | |
| Bromodichloromethane | ug/L | ND | 1.0 | 07/29/14 17:15 | |
| Bromoform | ug/L | ND | 3.0 | 07/29/14 17:15 | |
| Bromomethane | ug/L | ND | 10.0 | 07/29/14 17:15 | |
| Carbon disulfide | ug/L | ND | 100 | 07/29/14 17:15 | |
| Carbon tetrachloride | ug/L | ND | 1.0 | 07/29/14 17:15 | |
| Chlorobenzene | ug/L | ND | 3.0 | 07/29/14 17:15 | |
| Chloroethane | ug/L | ND | 10.0 | 07/29/14 17:15 | |
| Chloroform | ug/L | ND | 5.0 | 07/29/14 17:15 | |
| Chloromethane | ug/L | ND | 1.0 | 07/29/14 17:15 | |
| cis-1,2-Dichloroethene | ug/L | ND | 5.0 | 07/29/14 17:15 | |
| cis-1,3-Dichloropropene | ug/L | ND | 1.0 | 07/29/14 17:15 | |
| Dibromochloromethane | ug/L | ND | 3.0 | 07/29/14 17:15 | |
| Dibromomethane | ug/L | ND | 10.0 | 07/29/14 17:15 | |
| Ethylbenzene | ug/L | ND | 1.0 | 07/29/14 17:15 | |
| Iodomethane | ug/L | ND | 10.0 | 07/29/14 17:15 | |
| Methylene Chloride | ug/L | ND | 1.0 | 07/29/14 17:15 | |
| Styrene | ug/L | ND | 1.0 | 07/29/14 17:15 | |
| Tetrachloroethene | ug/L | ND | 1.0 | 07/29/14 17:15 | |
| Tetrahydrofuran | ug/L | ND | 10.0 | 07/29/14 17:15 | |
| Toluene | ug/L | 1.0 | 1.0 | 07/29/14 17:15 | |

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# QUALITY CONTROL DATA

Project: Iredell Blanks
Pace Project No.: 92210774

METHOD BLANK: 1251833 Matrix: Water
Associated Lab Samples: 92210774001, 92210774002, 92210774003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | ug/L | ND | 5.0 | 07/29/14 17:15 | |
| trans-1,3-Dichloropropene | ug/L | ND | 1.0 | 07/29/14 17:15 | |
| trans-1,4-Dichloro-2-butene | ug/L | ND | 100 | 07/29/14 17:15 | |
| Trichloroethene | ug/L | ND | 1.0 | 07/29/14 17:15 | |
| Trichlorofluoromethane | ug/L | ND | 1.0 | 07/29/14 17:15 | |
| Vinyl acetate | ug/L | ND | 50.0 | 07/29/14 17:15 | |
| Vinyl chloride | ug/L | ND | 1.0 | 07/29/14 17:15 | |
| Xylene (Total) | ug/L | ND | 5.0 | 07/29/14 17:15 | |
| 1,2-Dichloroethane-d4 (S) | % | 113 | 70-130 | 07/29/14 17:15 | |
| 4-Bromofluorobenzene (S) | % | 104 | 70-130 | 07/29/14 17:15 | |
| Toluene-d8 (S) | % | 103 | 70-130 | 07/29/14 17:15 | |

LABORATORY CONTROL SAMPLE: 1251834

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | 50 | 55.9 | 112 | 80-125 | |
| 1,1,1-Trichloroethane | ug/L | 50 | 55.8 | 112 | 71-129 | |
| 1,1,2,2-Tetrachloroethane | ug/L | 50 | 54.5 | 109 | 79-124 | |
| 1,1,2-Trichloroethane | ug/L | 50 | 55.5 | 111 | 85-125 | |
| 1,1-Dichloroethane | ug/L | 50 | 49.8 | 100 | 73-126 | |
| 1,1-Dichloroethene | ug/L | 50 | 58.3 | 117 | 66-135 | |
| 1,2,3-Trichloropropane | ug/L | 50 | 57.3 | 115 | 75-130 | |
| 1,2-Dibromo-3-chloropropane | ug/L | 50 | 58.4 | 117 | 71-133 | |
| 1,2-Dibromoethane (EDB) | ug/L | 50 | 57.1 | 114 | 83-124 | |
| 1,2-Dichlorobenzene | ug/L | 50 | 56.2 | 112 | 80-133 | |
| 1,2-Dichloroethane | ug/L | 50 | 54.8 | 110 | 67-128 | |
| 1,2-Dichloropropane | ug/L | 50 | 54.1 | 108 | 75-132 | |
| 1,3-Dichloropropane | ug/L | 50 | 54.7 | 109 | 76-131 | |
| 1,4-Dichlorobenzene | ug/L | 50 | 55.4 | 111 | 78-130 | |
| 2-Butanone (MEK) | ug/L | 100 | 115 | 115 | 61-144 | |
| 2-Hexanone | ug/L | 100 | 116 | 116 | 68-143 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | 100 | 111 | 111 | 72-135 | |
| Acetone | ug/L | 100 | 116 | 116 | 48-146 | |
| Acrylonitrile | ug/L | 250 | 273 | 109 | 40-160 | |
| Benzene | ug/L | 50 | 56.1 | 112 | 80-125 | |
| Bromochloromethane | ug/L | 50 | 53.3 | 107 | 71-125 | |
| Bromodichloromethane | ug/L | 50 | 63.9 | 128 | 78-124 | L3 |
| Bromoform | ug/L | 50 | 63.0 | 126 | 71-128 | |
| Bromomethane | ug/L | 50 | 41.1 | 82 | 40-160 | |
| Carbon disulfide | ug/L | 50 | 51.6J | 103 | 50-160 | |
| Carbon tetrachloride | ug/L | 50 | 60.9 | 122 | 69-131 | |
| Chlorobenzene | ug/L | 50 | 55.5 | 111 | 81-122 | |
| Chloroethane | ug/L | 50 | 45.2 | 90 | 39-148 | |
| Chloroform | ug/L | 50 | 63.4 | 127 | 73-127 | |

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# QUALITY CONTROL DATA

Project: Iredell Blanks
Pace Project No.: 92210774

LABORATORY CONTROL SAMPLE: 1251834

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Chloromethane | ug/L | 50 | 46.5 | 93 | 44-146 | |
| cis-1,2-Dichloroethene | ug/L | 50 | 58.7 | 117 | 74-124 | |
| cis-1,3-Dichloropropene | ug/L | 50 | 58.5 | 117 | 72-132 | |
| Dibromochloromethane | ug/L | 50 | 66.0 | 132 | 78-125 | L3 |
| Dibromomethane | ug/L | 50 | 61.8 | 124 | 82-120 | L3 |
| Ethylbenzene | ug/L | 50 | 56.8 | 114 | 79-121 | |
| Iodomethane | ug/L | 100 | 85.3 | 85 | 39-154 | |
| Methylene Chloride | ug/L | 50 | 52.4 | 105 | 64-133 | |
| Styrene | ug/L | 50 | 57.8 | 116 | 84-126 | |
| Tetrachloroethene | ug/L | 50 | 56.6 | 113 | 78-122 | |
| Tetrahydrofuran | ug/L | 500 | 550 | 110 | 69-148 | |
| Toluene | ug/L | 50 | 57.3 | 115 | 80-121 | |
| trans-1,2-Dichloroethene | ug/L | 50 | 58.5 | 117 | 71-127 | |
| trans-1,3-Dichloropropene | ug/L | 50 | 59.1 | 118 | 69-141 | |
| trans-1,4-Dichloro-2-butene | ug/L | 50 | 60.0J | 120 | 40-160 | |
| Trichloroethene | ug/L | 50 | 56.7 | 113 | 78-122 | |
| Trichlorofluoromethane | ug/L | 50 | 57.1 | 114 | 53-137 | |
| Vinyl acetate | ug/L | 100 | 118 | 118 | 40-160 | |
| Vinyl chloride | ug/L | 50 | 51.6 | 103 | 58-137 | |
| Xylene (Total) | ug/L | 150 | 169 | 112 | 81-126 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 93 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 104 | 70-130 | |
| Toluene-d8 (S) | % | | | 101 | 70-130 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1251835 1251836

| Parameter | Units | 92210772010 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 | 52.4 | 54.3 | 105 | 109 | 70-166 | 4 | 30 | |
| Benzene | ug/L | ND | 50 | 50 | 51.1 | 53.1 | 102 | 106 | 70-148 | 4 | 30 | |
| Chlorobenzene | ug/L | ND | 50 | 50 | 50.3 | 52.0 | 101 | 104 | 70-146 | 3 | 30 | |
| Toluene | ug/L | ND | 50 | 50 | 48.2 | 49.2 | 96 | 98 | 70-155 | 2 | 30 | |
| Trichloroethene | ug/L | ND | 50 | 50 | 55.1 | 56.5 | 110 | 113 | 69-151 | 2 | 30 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | | | 95 | 96 | 70-130 | | | |
| 4-Bromofluorobenzene (S) | % | | | | | | 96 | 95 | 70-130 | | | |
| Toluene-d8 (S) | % | | | | | | 97 | 97 | 70-130 | | | |

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# QUALIFIERS

Project: Iredell Blanks
Pace Project No.: 92210774

## DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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TNI - The NELAC Institute.

## LABORATORIES

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

## ANALYTE QUALIFIERS

| | |
|---|---|
| L3 | Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias. |



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

# QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Iredell Blanks
Pace Project No.: 92210774

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **92210774001** | **EB** | EPA 3010 | MPRP/16565 | EPA 6010 | ICP/14957 |
| **92210774001** | **EB** | EPA 8260 | MSV/27757 | | |
| **92210774002** | **FB** | EPA 8260 | MSV/27757 | | |
| **92210774003** | **TB** | EPA 8260 | MSV/27757 | | |



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| Pace Analytical | Document Name: **Sample Condition Upon Receipt (SCUR)** | Document Revised: April 07. 2014 Page 1 of 2 |
|---|---|---|
| | Document Number: **F-CHR-CS-003-rev.14** | 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

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

**Thermometer Used: IR Gun T1102 (T1401)** **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.:** 1.8 °C **Biological Tissue is Frozen:** Yes No (N/A)

Temp should be above freezing to 6°C

Optional
Proj. Due Date:
Proj. Name:

**Date and Initials of person examining contents:** CE 7-25-14

| | | **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. # 2 Metals bottle is missing |
| 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. Times are not on bottles + dates |
| 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: | CE 7-25-14 ☐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: Jonathan Pfohl Date/Time: 7/28/14

Comments/ Resolution: Jonathan informed the EB was collected @ 14:00.

| | | | |
|---|---|---|---|
| **SCURF Review:** | JY | Date: | 7/25/14 |
| **SRF Review:** | JDB | Date: | 7/25/14 |

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#: 92210774**

92210774

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 Blanks | Pace Project Manager: | Kevin Godwin |
| Requested Due Date/TAT: | 10 Day (Default) | Container Order Number: | | Pace Profile #: | |

| Regulatory Agency | |
|---|---|
| | |
| State / Location | |
| North Carolina | |

Requested Analysis Filtered (Y/N)

| ITEM# | SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique) | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED START DATE | COLLECTED START TIME | COLLECTED END DATE | COLLECTED END TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives: Unpreserved | H2SO4 | HNO3 | HCl | NaOH | Na2S2O3 | Methanol | Other | Analyses Test Y/N | VOCs- 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 | N | 92210774 |
| 1 | EB | WT | G | | | 7/25/14 | ~~2:10~~ 2:06 | | 4 | | | 1 | 3 | | | | | | X | X | X | | | | | | | | | | 001 |
| 2 | FB | WT | G | | | | 2:05 | | 4 | | | 1 | 3 | | | | | | X | X | X | | | | | | | | | | 002 |
| 3 | TB | WT | G | | | | 2:00 | | 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 | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| TB was filled on 7/25/14 in my presence | / MESCO | 7/25/14 | 2:06 | CE 7-25-14 | 7/25/14 | 14:06 | 1.8 | Y | N | Y |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| SAMPLER NAME AND SIGNATURE | | | |
|---|---|---|---|
| PRINT Name of SAMPLER: | Jonathan Pfohl | | |
| SIGNATURE of SAMPLER: | | DATE Signed: | 7/25/14 |

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

# Appendix B
# Field Sampling Parameter Data Sheet(s)

# Sampling Data Sheet

Municipal Services Engineering Company — Garner, NC — Boone, NC

Project: Iredell County Closed C&D Landfill

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) NR @ all |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-9R | 7/24/14 | 9:45 | 9.49 | 7/23 | I 1 | 8 | P&DB | N | Wasps | 20 | Y | | | 6.16 | 17.9 | 610 | 300 | C | |
| MW-9RR | 7/24/14 | 9:10 | 18.53 | 7/23 | I | 5 | DB | Barely Y | | 22 | Y | | | 6.31 | 16.9 | 180 | 80 | ST | |
| MW-10R | 7/24/14 | 5:00 | 22.20 | 7/23 | I | 1 | DB | Barely Y | Wasps | 25 | Y | | | 6.93 | 17.0 | 330 | 160 | ST | |
| MW-16 | 7/24/14 | 8:40 | 11.32 | 7/23 | I 2 | 7 | P&DB | N | | 20 | Y | | | 6.41 | 15.2 | 310 | 150 | C | |
| MW-22 | 7/24/14 | 10:30 | 30.54 | 7/23 | I | 3 | P&DB | Almost N | | 37 | Y | | | 6.47 | 15.6 | 80 | 30 | C | |
| MW-23 | 7/24/14 | 11:00 | 12.80 | 7/23 | I | 4 | DB | N | slight surface constriction | 23 | Y | | | 6.51 | 16.1 | 410 | 200 | C | |
| MW-24S | 7/24/14 | 2:10 | 10.33 | 7/23 | I | 2.5 | P&DB | N | | 16 | Y | | | 5.99 | 15.1 | 420 | 100 | C | |
| MW-24D | 7/24/14 | 1:40 | 9.78 | 7/23 | I | 16 | P&DB | N | | 38 | Y | | | 6.31 | 15.5 | 90 | 40 | C | |
| MW-25 | 7/24/14 | 11:30 | 24.93 | 7/23 | I | 2 | DB | Y | slow Recharge | 28.40 BTOC ~~24.93~~ Y | Y | | | 6.97 | 17.9 | 80 | 30 | MT | |
| MW-26S | 7/24/14 | 3:35 | 14.80 | 7/23 | I | 3 | P&DB | N | | 20.25 | Y | | | 6.99 | 16.1 | 80 | 30 | ST | |
| MW-26D | 7/24/14 | 3:00 | 14.21 | 7/23 | I | 13 | P&DB | Y | | 61.76 | Y | | | 8.21 | 85.8 | 210 | 100 | White ST | |
| SW-3 | 7/24/14 | 1:00 | - | 7/23 | I & Dissolved Zn | - | | - | - | - | | | | 7.05 | 25.1 | 80 | 30 | C | - |
| SW-6 | 7/24/14 | 11:40 | - | 7/23 | I | - | | - | - | - | | | | 7.01 | 25.3 | 80 | 30 | C | - |
| CD3-11M | - | - | | | WLR | - | | - | - | - | | | | | | | | | - |
| CD-8M | - | - | | | WLR | - | | - | - | - | | | | | | | | | - |
| SW-SofConfluence | 7/24/14 | 3:50 | - | 7/23 | Metals only ~~Total & Dissolved Zn~~ | - | | - | off site | - | | | | 6.98 | 24.2 | 310 | 150 | C | - |
| W-NE of MW-16 | 7/24/14 | 8:35 | | 7/23 | VOCs only | | | | | | | | | 6.63 | 23.4 | 290 | 140 | 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 Landfill-Background Wells

Samplers: J. Pfohl Page 1 of 1

| Monitoring Point | Sample Date | Sample Time | Sampling Parameters | | | | | | | | Water Quality 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 | Locked & Tagged | ~~DO (mg/L)~~ NR | ~~ORP~~ NR | pH | Temp. © | Specific Cond. (us/cm | TDS (mg/L) | Turbidity | ~~CH4 Gas Vapors (ppm)~~ NR |
| MW-1A | ~~7/22/14~~ | 3:30 | 24.40 | 7/22/14 | 1 | 4 | PD B | Y | | 40 | Y | | | 6.73 | 15.8 | 90 | 40 | 55 | - |
| MW-1B | 115 | | | | 1 | | | | | 21 | Y | | | | | | | | - |
| MW-1C | ~~7/22/14~~ | 4:05 | 24.69 | 7/22/14 | 1 | 5 | PD B | N | | 34 | Y | | | 6.08 | 16.1 | 80 | 30 | 59 | |

Comments

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

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NR=No Reading Attempted, NS=No Sample Obtained

# Sampling Data Sheet

Municipal Services Garner, NC — Engineering Company 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: 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 | Water Quality Parameters: CO2 (mg/l) | DO (mg/L) | ORP | pH | Temp. © | Specific Cond. (us/cm | TDS (mg/L) | Turbidity | CH4 Gas Vapors (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW-2 | 7/23/14 | 5:30 | - | - | 1 | - | dip | low | Low | | | | | 7.33 | 23.5 | 40 | 10 | < | - |
| | | | | | | | | | | | | | | | | | | | - |

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