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) |
|---|---|---|---|---|
| Wayne County Active C&D and Closed MSWLF | 460-B South Landfill Road Dudley, NC 28333 | 96-01 | .1600 | August 26-27, 2014 |

**Environmental Status: (Check all that apply)**

☐ Initial/Background Monitoring ☒ Detection Monitoring ☒ Assessment Monitoring (App II relief granted 11/21/14) ☒ Corrective Action

**Type of data submitted: (Check all that apply)**

☒ Groundwater monitoring data from monitoring wells
☐ Groundwater monitoring data from private water supply wells
☐ Leachate monitoring data
☒ Surface water monitoring data
☐ Methane gas monitoring data
☒ Corrective action data (specify) MNA for MW-2, MW-8 & MW-1R
☐ Other(specify)

**Notification attached?**

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

## Certification

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

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

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

Signature 5/8/2015 Date

Affix NC Licensed/ Professional Geologist Seal

NORTH CAROLINA PROFESSIONAL SEAL 31020 ENGINEER STEVEN R. GANDY

P.O. Box 97, Garner NC 27529

Facility Representative Address

C-0281

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

Revised 6/2009

# Semi-Annual Water Quality Monitoring Report with Corrective Action Update

*Prepared for*

Wayne County Active C&D and Closed MSWLF
Dudley, North Carolina

## August 2014

**Permit Number: 96-01**
**MESCO Project Number: G14016.0**

Submittal Date: 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 and Boone, North Carolina

# TABLE OF CONTENTS

**SECTION**

Introduction ..... Page 1
Background ..... Page 1
Sampling Procedure ..... Page 2
Field Parameter Data ..... Page 2
Laboratory Results ..... Page 2
Quality Control Samples ..... Page 3
Groundwater Samples ..... Page 3
Surface Water Samples ..... Page 3
Corrective Action Update ..... Page 3
Groundwater and Surface Water Characterization ..... Page 4
Findings ..... Page 4
Closing ..... Page 4

**FIGURES**

Topographic Map with Site Location ..... Figure 1
Potentiometric Map of Uppermost Aquifer w/ VOC Detection Above 2L Standard ..... Figure 2
Time-Series Graphs of Select Constituents ..... Figure 3

**TABLES**

Groundwater Monitoring Well Construction Table ..... Table 1
Field Observations of Monitoring Locations ..... Table 2
Field Parameter Data Summary ..... Table 3
Sampling and Analysis Summary ..... Table 4
Detections Above SWSL, GWP, 2L, or 2B (Appendix 1) ..... Table 5
MNA Parameter Data Summary ..... Table 6
Hydrologic Properties at Monitoring Well Locations ..... Table 7

**APPENDICIES**

Laboratory Analysis Reports and Chains of Custody ..... Appendix A
Field Sampling Data Sheet(s) ..... Appendix B

License No. C-0281

CIVIL/SANITARY/ENVIRONMENTAL ENGINEERS
SOLID WASTE MANAGEMENT

Municipal Services
Engineering Company, P.A.

SITE PLANNING/SUBDIVISIONS
SUBSURFACE UTILITY ENGINEERING (SUE)

May 8, 2015

Ms. Jaclynne Drummond
Solid Waste Section
Division of Waste Management
North Carolina Department of Environment and Natural Resources
217 West Jones Street
Raleigh, NC 27603

Re: ***Semi-Annual Water Quality Monitoring Report with Corrective Action Update***
Wayne County Active C&D and Closed MSWLF (Dudley)
Permit No. 96-01
MESCO Project No. G14016.0
Event Date(s): August 26-27, 2014

Dear Ms. Drummond:

## Introduction

The Wayne County landfill (Permit #96-01) is located at 460 S Landfill Road (SR 1129), Dudley, Wayne County, North Carolina. A topographic map showing the location of the site is included as **Figure 1.**

The Wayne County unlined closed Municipal Solid Waste Landfill (MSWLF) and active Construction and Demolition (C&D) Landfill located in Dudley NC, currently operating under Permit #96-01 is required to submit semi-annual compliance reports as a condition of 15A NCAC 13B.1630. This report documents the quality of the ground and surface waters during this monitoring event performed on August 26-27, 2014. Laboratory analytical results indicate that benzene continues to be detected in MW-2 in concentrations slightly above the NC Groundwater 2L Standard. Corrective action to remediate volatile organic compounds (VOCs) as detected in groundwater via monitored natural attenuation (MNA) is planned to continue.

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

## Background

Prior to operating as a C&D landfill the site operated as a Municipal Solid Waste (MSW) unlined sanitary landfill that consisted of two units. The first unit (Unit 1) was closed prior to October 1991 with a 24 inch final soil cover. The second unit (Unit 2) was closed with a low permeability cohesive cap and erosive layer prior to December 31, 1998 in accordance with the T*ransition Plan*. The C&D landfill is operating on top of the Unit 2 MSW landfill. The separate active Subtitle D Lined MSWLF (permit #96-06), located adjacent to the C&D landfill across the unnamed tributary of Edward's Branch, was monitored in conjunction with this site but reported separately.

PO Box 97, Garner, North Carolina 27529 (919) 772-5393 PO Box 349, Boone, NC 28607 (828) 262-1767

Water quality at this landfill has been monitored at least semi-annually since 1991. Current data was compared to data compiled since 1994 in support of this report. Municipal Engineering Services Company, P.A. (MESCO) submitted an *Assessment and Corrective Action* (*ACM*) [DIN8821] report dated August 30, 2007 which was approved by the NC Solid Waste Section (SWS) on November 1, 2007 [DIN3328]. MESCO then developed a *Corrective Action Plan* (*CAP*) [DIN8821] on October 22, 2009 which was approved by the SWS on October 23, 2009 [DIN8822]. Groundwater remediation using Monitored Natural Attenuation (MNA) was initiated on August 6, 2009 and has continued on a semi-annual basis. Following establishment of the two year MNA baseline, MESCO completed a *Corrective Action Evaluation Report* (*CAER*) [DIN 13923] on May 10, 2011. The *CAER* was reviewed and the proposed modifications of MNA parameters and frequency were approved by the SWS [DIN 16967]. Background well MW-1 was abandoned and replaced by MW-1R as pre-authorized by SWS [DIN 19050] on June 4, 2013. MESCO submitted a *Request for Appendix II Groundwater Monitoring Modification* dated April 24, 2014 which was approved by the SWS. The *Water Quality Sampling and Analysis Plan* (*SAP*) which provides for a subset of wells to decrease Appendix II monitoring frequency was revised and submitted on December 15, 2014 as requested by Ms. Christine Ritter of the SWS. Groundwater remediation through MNA per the *CAP* is scheduled to continue provided there is no change directed by the SWS.

# Sampling Procedure

MESCO performed this sampling event utilizing portable monitoring methodology in accordance with the approved *SAP* based on the NCDENR SWS guidance document S*olid Waste Section Guidelines for Groundwater, Soil, and Surface Water Sampling* revised April 2008. The new site-specific *SAP* entails continued semi-annual water quality monitoring which includes annual corrective action monitoring and targeting of specific Appendix II constituents at a subset of wells once every three years. Keeping with the historical schedule this event consists of detection monitoring (Appendix I) at all locations and corrective action monitoring via select MNA performance parameters at MW-2, MW-8 and background well MW-1R. Water samples were collected from monitoring locations designated in the *SAP* with the exception of SW-2 and SW-3, which were dry. Water quality monitoring was performed on ten wells (MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10 and MW-11), one background well (MW-1R) and one surface water point (SW-1). Quality control measures implemented during this event included quantification of an equipment blank (EB), field blank (FB) and travel blank (TB). A supplemental surface water sample (SW-By_MW-2) was collected from the western tributary of Edward's Branch directly downgradient of MW-2. Data from two surface water locations from the Subtitle D Lined *SAP* SW-2 (shared) and SW-3 (shared) are presented because this local discharge feature is shared by both permits. Monitoring locations are depicted on the potentiometric map, included as **Figure 2**.

Keeping the historical schedule, this semi-annual event consists of assessment monitoring (Appendix I plus previous Appendix II detections). Analysis of MNA performance parameters was not conducted during this event since it is required annually and occurred during the previous August 2013 event. Water samples were collected from monitoring locations designated in the *SAP* with the exception of SW-2 and SW-3, which were dry. Water quality monitoring was performed on ten wells (MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10 and MW-11), one background well (MW-1R) and one surface water point (SW-1). Quality control measures implemented during this event included quantification of an equipment blank (EB), field blank (FB) and travel blank (TB). A supplemental surface water sample (SW-By_MW-2) was collected from the western tributary of Edward's Branch directly downgradient of MW-2. Data from two surface water locations from the Subtitle D Lined *SAP* SW-2 (shared) and SW-3 (shared) are presented because this local discharge feature is shared by both permits. Monitoring locations are depicted on the potentiometric map, included as **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 adequately purge the wells a minimum of three times the volume of standing water in the well or until dry. Surface water samples were dipped from the surface of the creeks at previously designated locations. Samples were then placed into laboratory-prepared, pre-preserved containers. Samples were kept on ice and transported to a NC-certified laboratory under proper chain of custody (C-O-C) protocol and analyzed within the required hold times.

# Field Parameter Data

Stabilized field parameters were recorded during purging which included pH, specific conductance, temperature, dissolved oxygen (DO), oxidation reduction potential (ORP), dissolved carbon dioxide (CO2), total dissolved solids (TDS) and turbidity. A summary of the field parameter data is presented in **Table 3** and the field sampling data sheet is enclosed in **Appendix B**.

# Laboratory Results

Pace Analytical Laboratories (PACE) of Huntersville and Asheville, NC performed the laboratory analysis. All samples were analyzed for Appendix I constituents listed in 40 CFR 258. Additionally, the prescribed MNA parameters were quantified from samples collected from MW-2, MW-8 and background well MW-1R. A sampling and analysis table summarizing the locations, targeted constituents and methods is presented as **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), the applicable North Carolina Surface Water Standards (2B) for a Class C waterbody and Maximum Contaminant Levels (MCL) also known as "Federal Primary Drinking Water Standards".

## Quality Control Samples

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

## Groundwater Samples

Total metals detected in excess of their respective 2L Standards were arsenic in MW-2 [11.5 µg/L / (2L limit of 10 µg/L)] and cadmium in MW-11 [2.8 µg/L / (2L limit of 1.75 µg/L)] and chromium in hydraulically upgradient background well MW-1R [(27.7 µg/L / (2L limit of 10 µg/L)].

Total vanadium was detected above the GWP (3.5 µg/L) in MW-3 (7j µg/L), MW-11 (12.9j µg/L) and hydraulically upgradient background well MW-1R (10.4 µg/L).

VOC benzene (1.6 µg/L) continues to be detected above the 2L Standard (1.0 ug/L) in MW-2. Although not applicable for regulatory compliance purposes benzene has never been detected at this facility in levels above EPA established maximum contaminant levels (MCLs) primary "Drinking Water Standards". A site map depicting the single VOC concentration that exceeded the 2L Standard during this event is presented as **Figure 2.**

## Surface Water Samples

Constituents were not detected in any surface water sample in concentrations above the established 2B Standards. Supplemental surface water sample SW-By_MW-2 collected at the property line approximately 166 feet hydraulically downgradient of MW-2 continues to lack Appendix II VOCs.

# Corrective Action Update

Groundwater remediation measures using MNA continues to be implemented at the facility. Semi-annual MNA monitoring of MW-2, MW-8 and background well MW-1 was initiated on August 6, 2009 and was consistently performed for the full suite of SWS recommended parameters for six consecutive semi-annual events. The *SAP* prescribes MNA monitoring to be performed annually or bi-annually depending upon specific constituents. Keeping with established schedule the full suite of MNA parameters were analyzed during this event as presented on **Table 7.** Interpretation of current MNA data continues to support previous assertions that groundwater geochemical conditions exist that may be considered favorable for continued natural attenuation.

The active Landfill Gas Collection and Control System (GCCS) continues operations. The GCCS extracts LFG for energy production therefore is closely maintained for optimum efficiency which may have a collateral remediation effect on groundwater.

## Groundwater and Surface Water Characterization

A potentiometric map of the uppermost aquifer created from groundwater elevation data collected during this event is included as **Figure 2.** Groundwater flow rates and directions were calculated based on collected data and are included in **Table 8**. Groundwater generally generally flows southwesterly towards Edward's Branch ranging from approximately 3 foot/year (MW-5) to 654 feet/year (MW-3).with an average rate of 107 feet/year The calculated flow directions and gradients are consistent with historical observations. Streams located within the facility boundaries were visually observed at low seasonal flow, low volume and low turbidity.

## Findings

The laboratory results indicate that only a small portion of the uppermost aquifer, located south of Unit 2, has been compromised by an anthropogenic source. The groundwater sample collected from MW-2 contained aromatic VOCs, including benzene slightly above its 2L Standard. However, benzene concentrations remain within its lowest historically identified quartile [ND(<0.21 µg/L) to 5 µg/L], below "Drinking Water Standards" and an increasing trend is not evident (**Figure 3**). The horizontal extent of impact downgradient of MW-2 appears to have not impacted the adjacent local discharge feature as evidenced by the lack of detections in samples SW-By_MW-2 and SW-1.

Groundwater quality monitored by MW-8, located hydraulically upgradient of waste, has improved significantly since the *ACM* was drafted as evidenced by the lack of contaminant detections in levels exceeding the 2L Standard during the past 7 years. The single contaminant of concern detected above 2L in MW-8 since *ACM (*1,4-dichlorobenzene) has not been detected at a concentration above its current 2L Standard since August 2007 (**Figure 3**). Samples collected from MW-9 and MW-10, installed to delineate the impact beyond MW-8, continue to lack detections.

The preliminary source of the few metal detections is not believed to be anthropogenic but rather originating from erosion of natural deposits.

The lack of detections in surface water samples indicate the streams remain unimpacted.

## Closing

Water quality monitoring continued at this facility and was sampled in February 2015. Per the *SAP* Appendix II monitoring will continue on a once every three year basis with the next event scheduled for August 2016. If you have any questions or comments regarding this report, please contact us at (919) 772-5393 or by email at jpfohl@mesco.com or sgandy@mesco.com.

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

Jonathan Pfohl
Environmental Specialist

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

Enclosures

cc: Mr. Tim Rogers
Wayne County

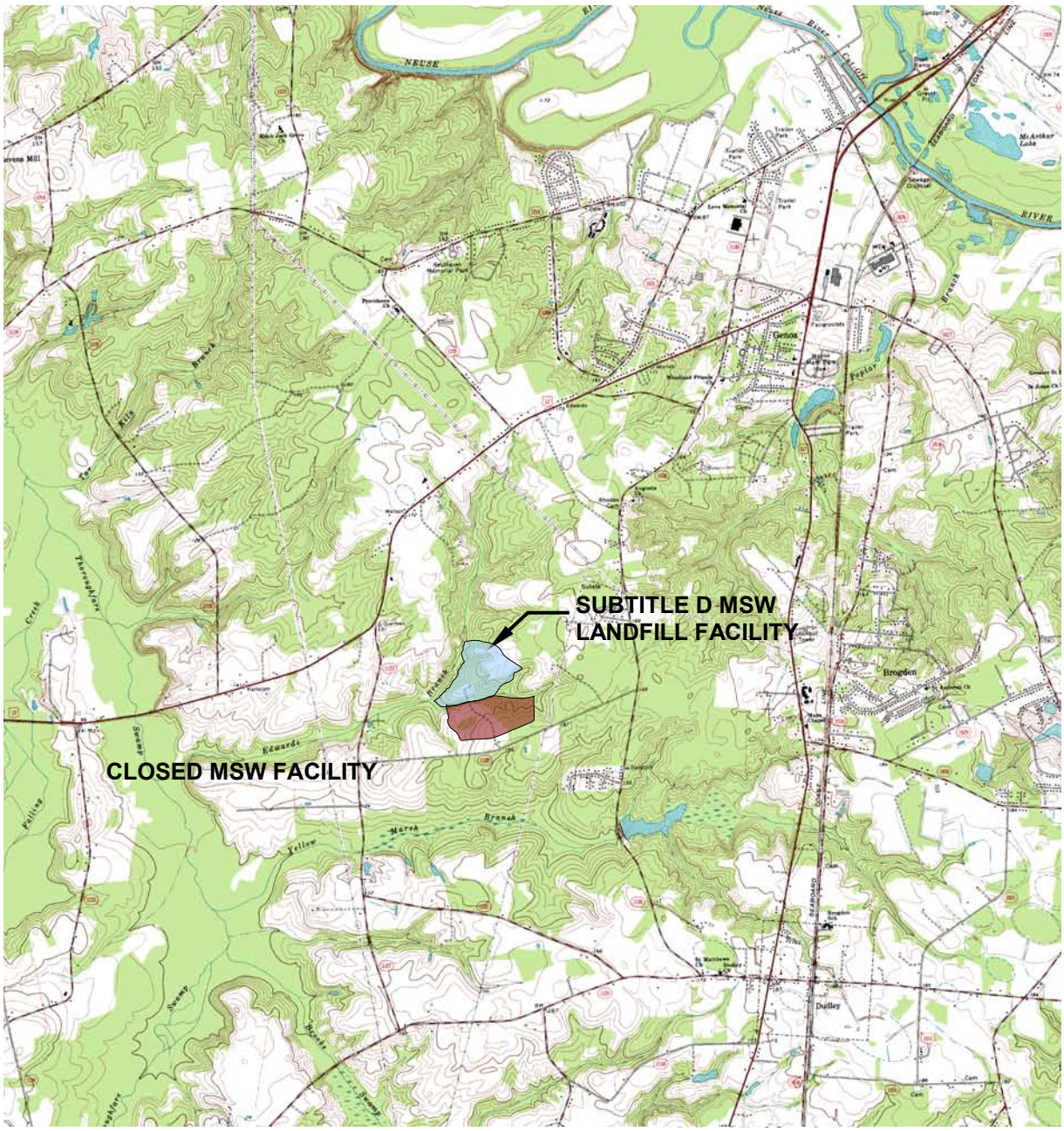
Ms. Christine Ritter
Solid Waste Section

# Figures

# Topographic Map with Site Location

## Wayne County Landfill North Carolina (Dudley)

N



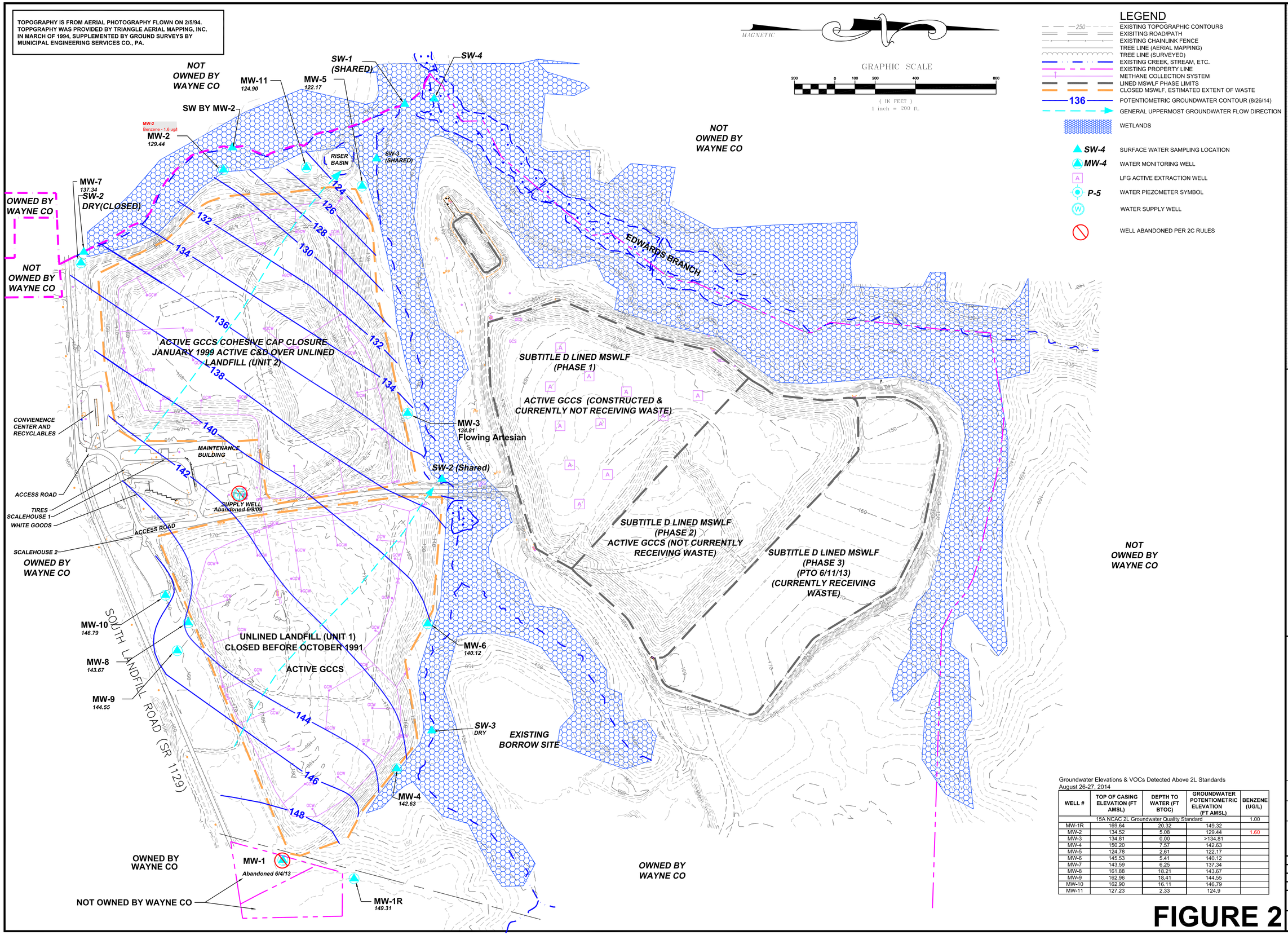

**460 B South Landfill Rd**
**Dudley, NC 28333**
**Lat:35-17-19.1338**
**Long:-78-04-17.2971**
**Northing:561283.19**
**Easting:2277068.62**

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

1 0 1 MILE

**FIGURE 1**

TOPOGRAPHY IS FROM AERIAL PHOTOGRAPHY FLOWN ON 2/5/94. TOPPGRAPHY WAS PROVIDED BY TRIANGLE AERIAL MAPPING, INC. IN MARCH OF 1994, SUPPLEMENTED BY GROUND SURVEYS BY MUNICIPAL ENGINEERING SERVICES CO., PA.




Groundwater Elevations & VOCs Detected Above 2L Standards
August 26-27, 2014

| WELL # | 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 | | | | 1.00 |
| MW-1R | 169.64 | 20.32 | 149.32 | |
| MW-2 | 134.52 | 5.08 | 129.44 | 1.60 |
| MW-3 | 134.81 | 0.00 | >134.81 | |
| MW-4 | 150.20 | 7.57 | 142.63 | |
| MW-5 | 124.78 | 2.61 | 122.17 | |
| MW-6 | 145.53 | 5.41 | 140.12 | |
| MW-7 | 143.59 | 6.25 | 137.34 | |
| MW-8 | 161.88 | 18.21 | 143.67 | |
| MW-9 | 162.96 | 18.41 | 144.55 | |
| MW-10 | 162.90 | 16.11 | 146.79 | |
| MW-11 | 127.23 | 2.33 | 124.9 | |

# 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

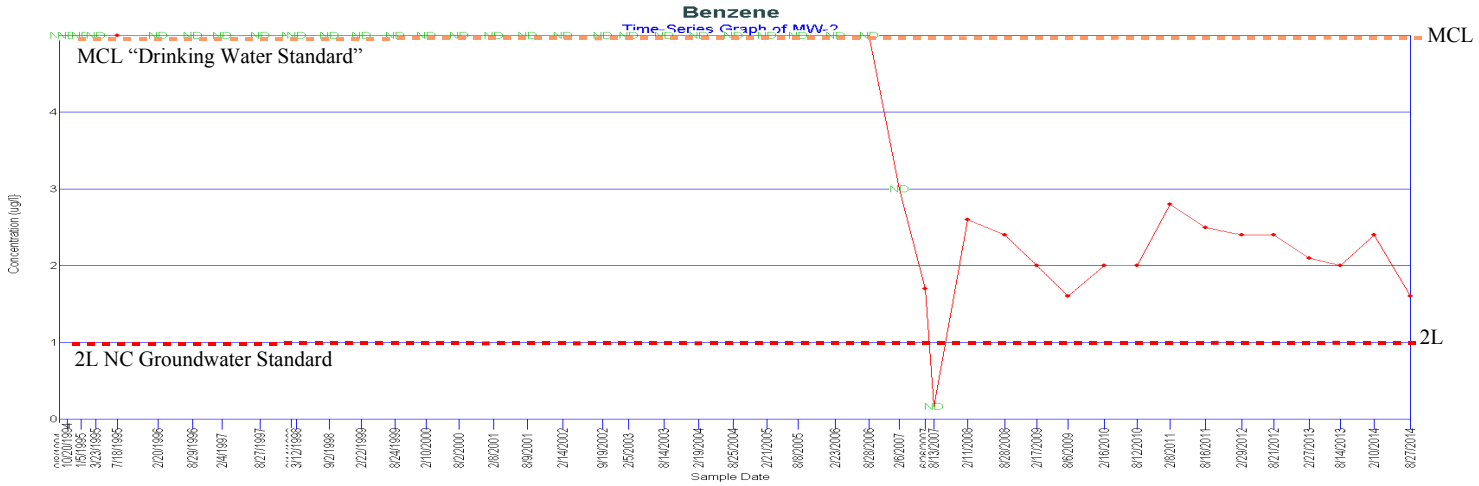

ACTIVE C&D AND CLOSED MSW LANDFILL FACILIITY (DUDLEY)
WAYNE COUNTY
NORTH CAROLINA

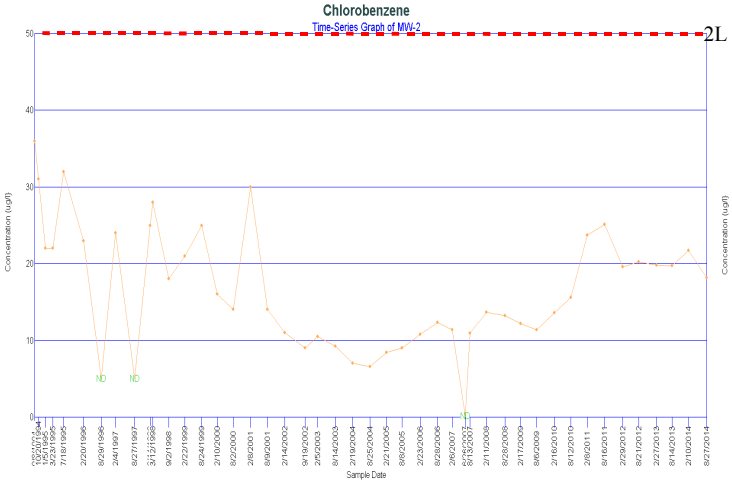
| DATE | BY | REV. | DESCRIPTION |
|---|---|---|---|

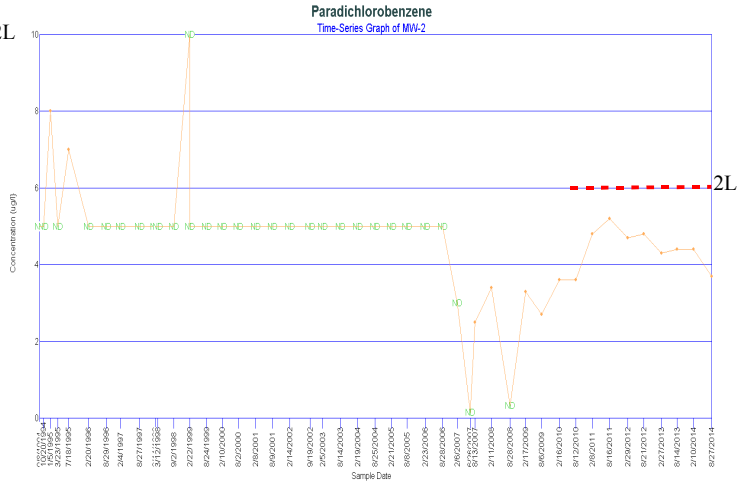
SINGLE DAY POTENTIOMETRIC MAP WITH VOC ABOVE 2L STANDARD

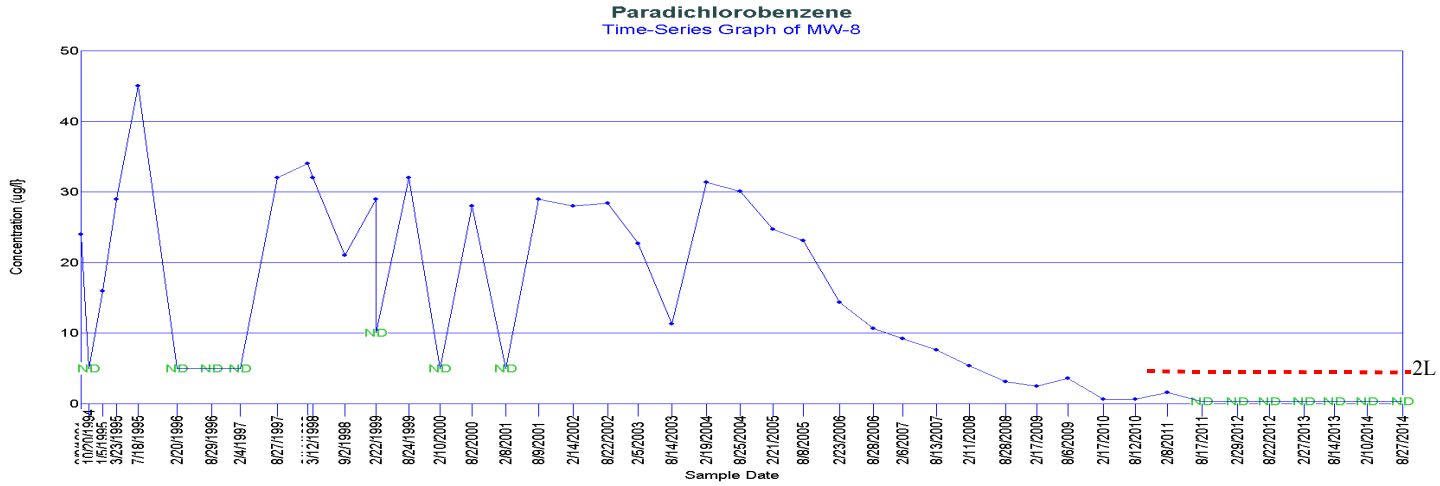
| | |
|---|---|
| SCALE: | SEE BAR SCALE |
| DATE: | 12/8/14 |
| DRWN. BY: | R. MOSS |
| CHKD. BY: | S. GANDY |
| PROJECT NUMBER | G14016.0 |
| DRAWING NO. | FIGURE 2 |
| SHEET NO. | 1 OF 1 |

**Figure 3**
**Time-Series Graphs of Select Constituents**
**September 8, 1994 - August 27, 2014**




Non-Detects Shown at Method Detection Level.

# Tables

**Table 1**
**Groundwater Monitoring Well Construction Table**
**August 26-27, 2014**

| Monitoring Well | Date Installed | Well Diameter | Total Well Depth | Top of Screen Depth | Screen Length | Geology of Screened Interval | Top of Casing Elevation | Ground Elevation | Groundwater Elevation | Depth to Water | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | (inches) | (ft bgs) | (ft bgs) | (ft) | | (ft amsl) | (ft amsl) | (ft amsl) | (ft btoc) | | |
| MW-1R | 6/4/13 | 2 | 27.32 | 12.32 | 15 | Soil Sand | 169.64 | 166.64 | 149.32 | 20.32 | 35.292408 | -78.064431 |
| MW-2 | 8/28/90 | 2 | 15 | 10 | 5 | Soil Sand | 134.52 | 132.78 | 129.44 | 5.08 | 35.290714 | -78.076225 |
| MW-3 | 8/27/90 | 2 | 18 | 12 | 6 | Soil Sand | 134.81 | 133.03 | 134.81 | 0.00 | 35.293192 | -78.072156 |
| MW-4 | 8/28/90 | 2 | 15 | 10 | 5 | Soil Sand | 150.20 | 148.17 | 142.63 | 7.57 | 35.293003 | -78.066253 |
| MW-5 | 8/31/94 | 2 | 18 | 3 | 15 | Soil Sand | 124.78 | 120.56 | 122.17 | 2.61 | 35.292597 | -78.075936 |
| MW-6 | 8/31/94 | 2 | 18.14 | 3.14 | 15 | Soil Sand | 145.53 | 143.62 | 140.12 | 5.41 | 35.293439 | -78.068656 |
| MW-7 | 8/31/94 | 2 | 19 | 4 | 15 | Soil Sand | 143.59 | 140.74 | 137.34 | 6.25 | 35.288761 | -78.074700 |
| MW-8 | 8/30/94 | 2 | 29 | 14 | 15 | Soil Sand | 161.88 | 160.88 | 143.67 | 18.21 | 35.290178 | -78.068706 |
| MW-9 | 7/9/09 | 2 | 25 | 10 | 15 | Soil Sand | 162.96 | 159.78 | 144.55 | 18.41 | 35.290025 | -78.068242 |
| MW-10 | 7/9/09 | 2 | 25 | 10 | 15 | Soil Sand | 162.90 | 160.01 | 146.79 | 16.11 | 35.289869 | -78.069167 |
| MW-11 | 7/9/09 | 2 | 15 | 5 | 10 | Soil Sand | 127.23 | 124.50 | 124.90 | 2.33 | 35.291844 | -78.076250 |

NOTE:
na = not available
bgs = below ground surface
amsl= above mean sea level
btoc = below top of PVC well casing

**Table 2**
**Field Observations of Monitoring Locations**
**August 26-27, 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-1R | Yes | Yes | Yes | Yes | Yes | Yes | |
| MW-2 | Yes | Yes | Yes | Yes | Yes | Yes | |
| MW-3 | Yes | Yes | Yes | Yes | Yes | Yes | Flowing artesian |
| MW-4 | Yes | Yes | Yes | Yes | Yes | Yes | |
| MW-5 | Yes | Yes | Yes | Yes | Yes | Yes | |
| MW-6 | Yes | Yes | Yes | Yes | Yes | Yes | |
| MW-7 | Yes | Yes | Yes | Yes | Yes | Yes | |
| MW-8 | Yes | Yes | Yes | Yes | Yes | Yes | |
| MW-9 | Yes | Yes | No | Yes | Yes | Yes | |
| MW-10 | Yes | Yes | Yes | Yes | Yes | Yes | |
| MW-11 | Yes | Yes | Yes | Yes | Yes | Yes | Artesian |
| SW-1 | Yes | - | - | - | - | - | Shared Downstream of SW-3 |
| SW-2 | No | - | - | - | - | - | Dry-Upstream nearest MW-7 |
| SW-2 | Yes | - | - | - | - | - | Shared nearest lined MW-2 |
| SW-3 | Yes | - | - | - | - | - | Shared downstream of SW-2 |
| SW-3 | No | - | - | - | - | - | Dry-Shared Upstream nearest MW-4 |
| SW-By _MW-2 | Yes | - | - | - | - | - | Not required but supplemental sample |

**Any unusual field conditions, observations, or events:**

All wells with the exception of MW-1R and MW-4 have been painted blue by the County since August 2013.
Wells have sediment removed from concrete pads by County since August 2013.

**Table 3**
**Field Parameter Data Summary**
**August 26-27, 2014**

| Parameter | Depth to Water | Water Elevation | TOC Elevation | Temp. | ORP | DO | pH | Specific Conductance | TDS | Turbidity |
|---|---|---|---|---|---|---|---|---|---|---|
| **Units** | **ft (btoc)** | **ft (amsl)** | **ft (amsl)** | **C** | **mV** | **mg/L** | **SU** | **umhos/cm** | **mg/L** | **NTU or Visual** |
| MW-1R | 20.32 | 149.31 | 169.63 | 16.9 | 410 | 5.5 | 6.12 | 0 | 0 | 300 |
| MW-2 | 5.08 | 129.44 | 134.52 | 20.3 | -47 | 0.9 | 6.81 | 1610 | 800 | 220 |
| MW-3 | 0.00 | 134.81 | 134.81 | 18.8 | NR | NR | 5.31 | 20 | 10 | Clear |
| MW-4 | 7.57 | 142.63 | 150.20 | 19.2 | NR | NR | 5.93 | 10 | 0 | Clear |
| MW-5 | 2.61 | 122.17 | 124.78 | 19.4 | NR | NR | 5.56 | 60 | 20 | Slight |
| MW-6 | 5.41 | 140.12 | 145.53 | 20.9 | NR | NR | 5.34 | 90 | 40 | Clear |
| MW-7 | 6.25 | 137.34 | 143.59 | 20.7 | NR | NR | 5.01 | 90 | 40 | Clear |
| MW-8 | 18.21 | 143.67 | 161.88 | 17.4 | 281 | 2.6 | 5.10 | 20 | 0 | 74 |
| MW-9 | 18.41 | 144.55 | 162.96 | 18.4 | NR | NR | 5.14 | 80 | 30 | Moderate |
| MW-10 | 16.11 | 146.79 | 162.90 | 18.5 | NR | NR | 5.81 | 80 | 30 | Moderate |
| MW-11 | 2.33 | 124.90 | 127.23 | 19.5 | NR | NR | 5.76 | 1210 | 600 | Very |
| **Minimum** | 0.00 | 122.17 | 124.78 | 16.9 | -47 | 0.9 | 5.01 | 0 | 0 | Clear |
| **Average** | 9.30 | 137.79 | 147.09 | 19.1 | 215 | 3.0 | 5.63 | 297 | 143 | Slight |
| **Maximum** | 20.32 | 149.31 | 169.63 | 20.9 | 410 | 5.5 | 6.81 | 1610 | 800 | Very |
| SW-1 | - | - | - | 20.3 | NR | NR | 7.03 | 410 | 200 | Clear |
| SW-2 | - | - | - | 20.1 | NR | NR | 7.03 | 380 | 160 | Clear |
| SW-ByMW-2 | - | - | - | 20.9 | NR | NR | 7.05 | 310 | 150 | Clear |
| SW-3 | - | - | - | 19.8 | NR | NR | 7.04 | 400 | 180 | Clear |
| **Minimum** | - | - | - | 19.8 | NR | NR | 7.03 | 310 | 150 | Clear |
| **Average** | - | - | - | 20.3 | NR | NR | 7.04 | 375 | 173 | Clear |
| **Maximum** | - | - | - | 20.9 | NR | NR | 7.05 | 410 | 200 | Clear |

**Table 4**
**Sampling and Analysis Summary**
**August 26-27, 2014**

| | | App. I | | App II | | Field Parameter | | | | | | | MNA | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Reason Not Sampled | VOCs | Total Metals | VOCs | Mercury | Dissolved Oxygen (DO) | Oxidation Reduction Potential (ORP) | Temperature | Conductivity | Total Dissolved Solids (TDS) | pH | Turbidity | VFA | Hydrogen | Methane/Ethene/Ethane | Dissolved CO2 | Alkalinity | Sulfate | Sulfide | Chloride | TOC | COD | BOD | Iron, total | Nitrate |
| | | Lab EPA 8260B | Lab EPA 6000/7000 | Lab EPA 8260B | Lab EPA 7470 | Field Meter | Field Meter | Field Meter | Field Meter | Field Meter | Field Meter | Field Meter | AM23G | AM20GAX | AM20GAX | Field Hach Kit | EPA 310.2 | EPA 300.0 | Lab SM18 4500-S D | EPA 300.0 | SM 5310B | SM 5220D | SM5210B | Lab EPA 8270D | Lab EPA 9014 |
| MW-1R | | x | x | | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| MW-2 | | x | x | | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| MW-3 | | x | x | | | | | x | x | x | x | | | | | | | | | | | | | | |
| MW-4 | | x | x | | | | | x | x | x | x | | | | | | | | | | | | | | |
| MW-5 | | x | x | | | | | x | x | x | x | | | | | | | | | | | | | | |
| MW-6 | | x | x | | | | | x | x | x | x | | | | | | | | | | | | | | |
| MW-7 | | x | x | | | | | x | x | x | x | | | | | | | | | | | | | | |
| MW-8 | | x | x | | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| MW-9 | | x | x | | | | | x | x | x | x | | | | | | | | | | | | | | |
| MW-10 | | x | x | | | | | x | x | x | x | | | | | | | | | | | | | | |
| MW-11 | | x | x | | | | | x | x | x | x | | | | | | | | | | | | | | |
| SW-1 | | x | x | | x | | | x | x | x | x | | | | | | | | | | | | | | |
| SW-2 | Dry | | | | x | | | | | | | | | | | | | | | | | | | | |
| SW-2 (shared) | | x | x | | | | | x | x | x | x | | | | | | | | | | | | | | |
| SW-ByMW-2 | | | | x | | | | x | x | x | x | | | | | | | | | | | | | | |
| SW-3 (shared) | | x | x | | x | | | x | x | x | x | | | | | | | | | | | | | | |
| SW-3 | Dry | | | | | | | | | | | | | | | | | | | | | | | | |
| EB | | x | x | | | | | | | | | | | | | | | | | | | | | | |
| FB | | x | x | | | | | | | | | | | | | | | | | | | | | | |
| TB | | x | | | | | | | | | | | | | | | | | | | | | | | |

App I & II = Appendix I & II List from current 40 CFR 258

**Table 5**
**Detections in Water Samples above SWSL, GWP, 2L or 2B (Appendix I)**
**August 26-27, 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-1R | Vanadium, total | 8/27/14 | 10.4 j | ug/L | 5 | 25 | | | **3.5** | NE | |
| MW-2 | 1,4-Dichlorobenzene | 8/27/14 | 3.7 | ug/L | 0.33 | 1 | 6 | | | 75 | |
| MW-2 | Benzene | 8/27/14 | 1.6 | ug/L | 0.25 | 1 | **1** | | | 5 | L &/or LFG |
| MW-2 | Arsenic, total | 8/27/14 | 14.5 | ug/L | 5 | 10 | **10** | | | **10** | N |
| MW-2 | Barium, total | 8/27/14 | 173 | ug/L | 5 | 100 | 700 | | | 2000 | |
| MW-2 | Chlorobenzene | 8/27/14 | 18.2 | ug/L | 0.23 | 3 | 50 | | | 100 | |
| MW-2 | Selenium, total | 8/27/14 | 11.5 | ug/L | 10 | 10 | 20 | | | NE | |
| MW-3 | Vanadium, total | 8/26/14 | 7 j | ug/L | 5 | 25 | | | **3.5** | NE | |
| MW-3 | Cadmium, total | 8/26/14 | 4.8 | ug/L | 1 | 1 | **1.75** | | | 5 | |
| MW-4 | Cadmium, total | 8/26/14 | 1.1 | ug/L | 1 | 1 | 1.75 | | | 5 | |
| MW-5 | Zinc, total | 8/26/14 | 10.6 | ug/L | 10 | 10 | 1050 | | | 5000 | |
| MW-10 | Zinc, total | 8/26/14 | 38.2 | ug/L | 10 | 10 | 1050 | | | 5000 | |
| MW-10 | Barium, total | 8/26/14 | 426 | ug/L | 5 | 100 | 700 | | | 2000 | |
| MW-11 | Vanadium, total | 8/26/14 | 12.9 j | ug/L | 5 | 25 | | | **3.5** | NE | |
| MW-11 | Barium, total | 8/26/14 | 126 | ug/L | 5 | 100 | 700 | | | 2000 | |
| MW-11 | Cadmium, total | 8/26/14 | 2.8 | ug/L | 1 | 1 | **1.75** | | | 5 | N |

[1] Table contains constituents detected at or above SWSL, GWP, 2L, or 2B
[2] MDL = Method Detection Limit
[3] SWSL = Solid Waste Section Reporting Limit
[4] 2L = North Carolina 15A NCAC 2L Groundwater Quality Standard
[5] 2B = North Carolina 15 NCAC 2B Surface Water Quality Standard for this Specific Stream Classification
[6] GWP = Groundwater Protection Standard
[7] MCL = Primary Drinking Water Standard (not currently applicable for regulatory comparisons)
[8] Preliminary Cause = Refers to a preliminary analysis of the cause and/or source of a detection over the respective 2L/2B Standard.
A definitive source of the detection was not determined as part of this report. Preliminary cause only listed pursuant to instructions
j =The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL),
adjusted for actual sample preparation data and moisture content, where applicable
N = Natural originating from erosion of natural deposits. Source not anthropogenic.
L = Leachate
LFG = Landfill Gas
**BOLD =** Concentration > 2L, 2B or MCL Standard

**Table 6**
**MNA Parameter Data Summary**
**August 27, 2014**

| Parameters | Method | MDL* | Units | MW-1R | MW-2 | MW-8 |
|---|---|---|---|---|---|---|
| | | | | 08/27/14 | 08/27/14 | 08/27/14 |
| VFA – Acetic Acid | AM23G | 8 | ug/L | 64 | 120 | 45 |
| VFA – Butyric Acid | AM23G | 7 | ug/L | 70 | 95 | 92 |
| VFA – Hexanoic Acid | AM23G | NS | ug/L | NS | NS | NS |
| VFA – i-Hexanoic Acid | AM23G | NS | ug/L | NS | NS | NS |
| VFA – i-Pentanoic Acid | AM23G | NS | ug/L | NS | NS | NS |
| VFA – Lactic Acid | AM23G | 12 | ug/L | 59 | 77 | 35 |
| VFA – Pentaonic Acid | AM23G | NS | ug/L | NS | NS | NS |
| VFA – Propionic Acid | AM23G | 11 | ug/L | <11 | <11 | <11 |
| VFA – Pyruvic Acid | AM23G | 9 | ug/L | <9 | <9 | <9 |
| Hydrogen | AM20GAX | 0.13 | nM | 1.4 | 2.1 | 210 [5] |
| Methane | AM20GAX | 0.01 | ug/L | 0.06 | 6600 | 0.24 |
| Ethene | AM20GAX | 0.01 | ug/L | <0.008 | <0.008 | 0.17 |
| Ethane | AM20GAX | 0 | ug/L | <0.001 | 2.8 | 0.01 |
| CO2-Dissolved | Field Hach Kit | 0 | mg/L | 40 | >100 | 90 |
| Alkalinity | SM 2320B | 1000 | ug/L | <1000 | 597000 | <1000 |
| Sulfate | EPA 300.0 | 1000 | ug/L | 1120 | 17500 | 2570 |
| Sulfide | SM 4500-S2D | 50 | ug/L | <50 | <50 | <50 |
| Chloride | SM 4500-Cl-E | 500 | ug/L | 1810 | 70800 | 4950 |
| TOC | SM 5310B | 500 | ug/L | 1940 | 41200 | 3350 |
| COD | SM 5220D | 12500 | ug/L | <12500 | 76000 | <12500 |
| BOD | SM 5210B | 2000 | ug/L | <2000 | 7140 | <2000 |
| Nitrate | EPA 353.2 | 10 | ug/L | 22.1 | <10 | 1080 |
| Temperature | Field Instrument | 0 | Degrees C | 16.9 | 20.3 | 17.4 |
| ORP | Field Instrument | -900 | mV | 410 | -47 | 281 |
| DO | Field Instrument | 0 | ug/L | 5.5 | 0.9 | 2.6 |
| pH | Field Instrument | 0.00 | SU | 6.12 | 6.81 | 5.10 |
| Specific Conductance | Field Instrument | 0 | uMhos | 0 | 1640 | 20 |
| Turbidity | Field Instrument | 1.00 | NTU | 300 | 220 | 74 |

**Notes:**

VFA = Volatile Fatty Acids

MDL* = Lowest Method Detection Limit for Lab Parameters or Lowest Field Measurement Possible

>100 = CO2 Concentration Exceeds Maximum capability of Method Used

Constituents Below Quantization Limit are shown as <MDL value

NS = Not Sampled as not required during this specific event.

[5X] Hydrogen in MW-8 analyzed under 5x dilution (mdl=0.65) Value is anomalous high but laboratory offered no explanation

**Table 7**
**Hydrologic Properties at Monitoring Well Locations**
**August 26-27, 2014**

| Monitoring Well | Hydraulic Conductivity (cm/sec) | Effective Porosity (%) | Hydraulic Gradient (ft/ft) | Linear Velocity (ft/yr) | Flow Direction | Depth to Groundwater (ft btoc) | Groundwater Potentiometric Elevation (ft amsl) |
|---|---|---|---|---|---|---|---|
| MW-1R | na | 20 | 0.012 | na | N53W | 20.32 | 149.32 |
| MW-2 | 3.00E-04 | 20 | 0.010 | 15 | N57W | 5.08 | 129.44 |
| MW-3 | 6.40E-03 | 20 | 0.020 | 654 | N44W | 0.00 | 134.81 |
| MW-4 | 9.90E-04 | 20 | 0.004 | 22 | N43W | 7.57 | 142.63 |
| MW-5 | 3.10E-05 | 20 | 0.021 | 3 | N42W | 2.61 | 122.17 |
| MW-6 | 1.60E-04 | 20 | 0.006 | 5 | N60W | 5.41 | 140.12 |
| MW-7 | 7.30E-05 | 20 | 0.008 | 3 | N55W | 6.25 | 137.34 |
| MW-8 | 3.40E-04 | 20 | 0.025 | 45 | N12E | 18.21 | 143.67 |
| **Minimum** | 3.10E-05 | 20 | 0.004 | 3 | - | 0.00 | 122.17 |
| **Average** | 1.18E-03 | 20 | 0.013 | 107 | - | 8.18 | 137.44 |
| **Maximum** | 6.40E-03 | 20 | 0.025 | 654 | - | 20.32 | 149.32 |

NOTE: Data for conductivities and effective porosity obtained from GAI Consultants' Water Sampling Report (January, 1995).

Hydrologic Gradient from groundwater elevations recorded on August 26-27, 2014.

Linear Velocity (Q) is defined by modified Darcy's equation:

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

*K* = hydraulic conductivity

*ne* = effective porosity

*dh* = head difference

*dl* = horizontal distance

# Appendix A
# Laboratory Analysis Reports
# Chains of Custody

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

September 09, 2014

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

RE: Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

Dear Mr. Pfohl:
Enclosed are the analytical results for sample(s) received by the laboratory on August 28, 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



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# CERTIFICATIONS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

**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



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

## SAMPLE SUMMARY

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| **92215324001** | **MW-1R** | Water | 08/27/14 15:20 | 08/28/14 14:48 |
| **92215324002** | **MW-2** | Water | 08/27/14 17:00 | 08/28/14 14:48 |
| **92215324003** | **MW-3** | Water | 08/26/14 14:00 | 08/28/14 14:48 |
| **92215324004** | **MW-4** | Water | 08/26/14 14:45 | 08/28/14 14:48 |
| **92215324005** | **MW-5** | Water | 08/26/14 12:00 | 08/28/14 14:48 |
| **92215324006** | **MW-6** | Water | 08/27/14 09:10 | 08/28/14 14:48 |
| **92215324007** | **MW-7** | Water | 08/27/14 10:00 | 08/28/14 14:48 |
| **92215324008** | **MW-8** | Water | 08/27/14 16:00 | 08/28/14 14:48 |
| **92215324009** | **MW-9** | Water | 08/26/14 15:45 | 08/28/14 14:48 |
| **92215324010** | **MW-10** | Water | 08/26/14 16:50 | 08/28/14 14:48 |
| **92215324011** | **MW-11** | Water | 08/26/14 12:30 | 08/28/14 14:48 |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

## SAMPLE ANALYTE COUNT

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **92215324001** | **MW-1R** | EPA 6010 | SH1 | 15 | PASI-A |
| | | EPA 8260 | MCK | 51 | PASI-C |
| **92215324002** | **MW-2** | EPA 6010 | SH1 | 15 | PASI-A |
| | | EPA 8260 | MCK | 51 | PASI-C |
| **92215324003** | **MW-3** | EPA 6010 | SH1 | 15 | PASI-A |
| | | EPA 8260 | MCK | 51 | PASI-C |
| **92215324004** | **MW-4** | EPA 6010 | SH1 | 15 | PASI-A |
| | | EPA 8260 | MCK | 51 | PASI-C |
| **92215324005** | **MW-5** | EPA 6010 | SH1 | 15 | PASI-A |
| | | EPA 8260 | MCK | 51 | PASI-C |
| **92215324006** | **MW-6** | EPA 6010 | SH1 | 15 | PASI-A |
| | | EPA 8260 | MCK | 51 | PASI-C |
| **92215324007** | **MW-7** | EPA 6010 | SH1 | 15 | PASI-A |
| | | EPA 8260 | MCK | 51 | PASI-C |
| **92215324008** | **MW-8** | EPA 6010 | SH1 | 15 | PASI-A |
| | | EPA 8260 | MCK | 51 | PASI-C |
| **92215324009** | **MW-9** | EPA 6010 | SH1 | 15 | PASI-A |
| | | EPA 8260 | MCK | 51 | PASI-C |
| **92215324010** | **MW-10** | EPA 6010 | SH1 | 15 | PASI-A |
| | | EPA 8260 | MCK | 51 | PASI-C |
| **92215324011** | **MW-11** | EPA 6010 | SH1 | 15 | PASI-A |
| | | EPA 8260 | MCK | 51 | PASI-C |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

**Sample: MW-1R** **Lab ID: 92215324001** Collected: 08/27/14 15:20 Received: 08/28/14 14:48 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 | 08/29/14 16:20 | 09/09/14 01:11 | 7440-36-0 | |
| Arsenic | **5.5J** | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:11 | 7440-38-2 | |
| Barium | **13.2J** | ug/L | 100 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:11 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 16:20 | 09/09/14 01:11 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 16:20 | 09/09/14 01:11 | 7440-43-9 | |
| Chromium | **7.0J** | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:11 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:11 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:11 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:11 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:11 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 16:20 | 09/09/14 01:11 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:11 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 08/29/14 16:20 | 09/09/14 01:11 | 7440-28-0 | |
| Vanadium | **10.4J** | ug/L | 25.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:11 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 16:20 | 09/09/14 01:11 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 08/30/14 03:58 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 08/30/14 03:58 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 08/30/14 03:58 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 08/30/14 03:58 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 08/30/14 03:58 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 08/30/14 03:58 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 08/30/14 03:58 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 08/30/14 03:58 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 08/30/14 03:58 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 08/30/14 03:58 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 08/30/14 03:58 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 08/30/14 03:58 | 75-00-3 | |
| Chloroform | **0.62J** | ug/L | 5.0 | 0.14 | 1 | | 08/30/14 03:58 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 08/30/14 03:58 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 08/30/14 03:58 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 08/30/14 03:58 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 08/30/14 03:58 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 08/30/14 03:58 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 08/30/14 03:58 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 08/30/14 03:58 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 08/30/14 03:58 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 08/30/14 03:58 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 08/30/14 03:58 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 08/30/14 03:58 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 08/30/14 03:58 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 08/30/14 03:58 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 08/30/14 03:58 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 08/30/14 03:58 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 08/30/14 03:58 | 10061-01-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

**Sample: MW-1R** **Lab ID: 92215324001** Collected: 08/27/14 15:20 Received: 08/28/14 14:48 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 | | 08/30/14 03:58 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 08/30/14 03:58 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 08/30/14 03:58 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 08/30/14 03:58 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 08/30/14 03:58 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 08/30/14 03:58 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/30/14 03:58 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 08/30/14 03:58 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 08/30/14 03:58 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 08/30/14 03:58 | 127-18-4 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/30/14 03:58 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 08/30/14 03:58 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 08/30/14 03:58 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 08/30/14 03:58 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 08/30/14 03:58 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 08/30/14 03:58 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 08/30/14 03:58 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 08/30/14 03:58 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 08/30/14 03:58 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 99 | % | 70-130 | | 1 | | 08/30/14 03:58 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 112 | % | 70-130 | | 1 | | 08/30/14 03:58 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 08/30/14 03:58 | 2037-26-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

**Sample: MW-2** **Lab ID: 92215324002** Collected: 08/27/14 17:00 Received: 08/28/14 14:48 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 | 08/29/14 16:20 | 09/09/14 01:14 | 7440-36-0 | |
| Arsenic | **14.5** | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:14 | 7440-38-2 | |
| Barium | **173** | ug/L | 100 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:14 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 16:20 | 09/09/14 01:14 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 16:20 | 09/09/14 01:14 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:14 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:14 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:14 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:14 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:14 | 7440-02-0 | |
| Selenium | **11.5** | ug/L | 10.0 | 10.0 | 1 | 08/29/14 16:20 | 09/09/14 01:14 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:14 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 08/29/14 16:20 | 09/09/14 01:14 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:14 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 16:20 | 09/09/14 01:14 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 08/30/14 04:14 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 08/30/14 04:14 | 107-13-1 | |
| Benzene | **1.6** | ug/L | 1.0 | 0.25 | 1 | | 08/30/14 04:14 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 08/30/14 04:14 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 08/30/14 04:14 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 08/30/14 04:14 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 08/30/14 04:14 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 08/30/14 04:14 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 08/30/14 04:14 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 08/30/14 04:14 | 56-23-5 | |
| Chlorobenzene | **18.2** | ug/L | 3.0 | 0.23 | 1 | | 08/30/14 04:14 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 08/30/14 04:14 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 08/30/14 04:14 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 08/30/14 04:14 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 08/30/14 04:14 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 08/30/14 04:14 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 08/30/14 04:14 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 08/30/14 04:14 | 74-95-3 | |
| 1,2-Dichlorobenzene | **0.45J** | ug/L | 5.0 | 0.30 | 1 | | 08/30/14 04:14 | 95-50-1 | |
| 1,4-Dichlorobenzene | **3.7** | ug/L | 1.0 | 0.33 | 1 | | 08/30/14 04:14 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 08/30/14 04:14 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 08/30/14 04:14 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 08/30/14 04:14 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 08/30/14 04:14 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 08/30/14 04:14 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 08/30/14 04:14 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 08/30/14 04:14 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 08/30/14 04:14 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 08/30/14 04:14 | 10061-01-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

**Sample: MW-2** **Lab ID: 92215324002** Collected: 08/27/14 17:00 Received: 08/28/14 14:48 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 | | 08/30/14 04:14 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 08/30/14 04:14 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 08/30/14 04:14 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 08/30/14 04:14 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 08/30/14 04:14 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 08/30/14 04:14 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/30/14 04:14 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 08/30/14 04:14 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 08/30/14 04:14 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 08/30/14 04:14 | 127-18-4 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/30/14 04:14 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 08/30/14 04:14 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 08/30/14 04:14 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 08/30/14 04:14 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 08/30/14 04:14 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 08/30/14 04:14 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 08/30/14 04:14 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 08/30/14 04:14 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 08/30/14 04:14 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 98 | % | 70-130 | | 1 | | 08/30/14 04:14 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 111 | % | 70-130 | | 1 | | 08/30/14 04:14 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 08/30/14 04:14 | 2037-26-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

**Sample: MW-3** **Lab ID: 92215324003** Collected: 08/26/14 14:00 Received: 08/28/14 14:48 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 | 08/29/14 16:20 | 09/09/14 01:19 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:19 | 7440-38-2 | |
| Barium | **17.2J** | ug/L | 100 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:19 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 16:20 | 09/09/14 01:19 | 7440-41-7 | |
| Cadmium | **4.8** | ug/L | 1.0 | 1.0 | 1 | 08/29/14 16:20 | 09/09/14 01:19 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:19 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:19 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:19 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:19 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:19 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 16:20 | 09/09/14 01:19 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:19 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 08/29/14 16:20 | 09/09/14 01:19 | 7440-28-0 | |
| Vanadium | **7.0J** | ug/L | 25.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:19 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 16:20 | 09/09/14 01:19 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 08/30/14 04:29 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 08/30/14 04:29 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 08/30/14 04:29 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 08/30/14 04:29 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 08/30/14 04:29 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 08/30/14 04:29 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 08/30/14 04:29 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 08/30/14 04:29 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 08/30/14 04:29 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 08/30/14 04:29 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 08/30/14 04:29 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 08/30/14 04:29 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 08/30/14 04:29 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 08/30/14 04:29 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 08/30/14 04:29 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 08/30/14 04:29 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 08/30/14 04:29 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 08/30/14 04:29 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 08/30/14 04:29 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 08/30/14 04:29 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 08/30/14 04:29 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 08/30/14 04:29 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 08/30/14 04:29 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 08/30/14 04:29 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 08/30/14 04:29 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 08/30/14 04:29 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 08/30/14 04:29 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 08/30/14 04:29 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 08/30/14 04:29 | 10061-01-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

**Sample: MW-3** **Lab ID: 92215324003** Collected: 08/26/14 14:00 Received: 08/28/14 14:48 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 | | 08/30/14 04:29 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 08/30/14 04:29 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 08/30/14 04:29 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 08/30/14 04:29 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 08/30/14 04:29 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 08/30/14 04:29 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/30/14 04:29 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 08/30/14 04:29 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 08/30/14 04:29 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 08/30/14 04:29 | 127-18-4 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/30/14 04:29 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 08/30/14 04:29 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 08/30/14 04:29 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 08/30/14 04:29 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 08/30/14 04:29 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 08/30/14 04:29 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 08/30/14 04:29 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 08/30/14 04:29 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 08/30/14 04:29 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 99 | % | 70-130 | | 1 | | 08/30/14 04:29 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 112 | % | 70-130 | | 1 | | 08/30/14 04:29 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 08/30/14 04:29 | 2037-26-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

**Sample: MW-4** **Lab ID: 92215324004** Collected: 08/26/14 14:45 Received: 08/28/14 14:48 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 | 08/29/14 16:20 | 09/09/14 01:22 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:22 | 7440-38-2 | |
| Barium | **24.5J** | ug/L | 100 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:22 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 16:20 | 09/09/14 01:22 | 7440-41-7 | |
| Cadmium | **1.1** | ug/L | 1.0 | 1.0 | 1 | 08/29/14 16:20 | 09/09/14 01:22 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:22 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:22 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:22 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:22 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:22 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 16:20 | 09/09/14 01:22 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:22 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 08/29/14 16:20 | 09/09/14 01:22 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:22 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 16:20 | 09/09/14 01:22 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 08/30/14 04:45 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 08/30/14 04:45 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 08/30/14 04:45 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 08/30/14 04:45 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 08/30/14 04:45 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 08/30/14 04:45 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 08/30/14 04:45 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 08/30/14 04:45 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 08/30/14 04:45 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 08/30/14 04:45 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 08/30/14 04:45 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 08/30/14 04:45 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 08/30/14 04:45 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 08/30/14 04:45 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 08/30/14 04:45 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 08/30/14 04:45 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 08/30/14 04:45 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 08/30/14 04:45 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 08/30/14 04:45 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 08/30/14 04:45 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 08/30/14 04:45 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 08/30/14 04:45 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 08/30/14 04:45 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 08/30/14 04:45 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 08/30/14 04:45 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 08/30/14 04:45 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 08/30/14 04:45 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 08/30/14 04:45 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 08/30/14 04:45 | 10061-01-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

**Sample: MW-4** **Lab ID: 92215324004** Collected: 08/26/14 14:45 Received: 08/28/14 14:48 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 | | 08/30/14 04:45 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 08/30/14 04:45 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 08/30/14 04:45 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 08/30/14 04:45 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 08/30/14 04:45 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 08/30/14 04:45 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/30/14 04:45 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 08/30/14 04:45 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 08/30/14 04:45 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 08/30/14 04:45 | 127-18-4 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/30/14 04:45 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 08/30/14 04:45 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 08/30/14 04:45 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 08/30/14 04:45 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 08/30/14 04:45 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 08/30/14 04:45 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 08/30/14 04:45 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 08/30/14 04:45 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 08/30/14 04:45 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 99 | % | 70-130 | | 1 | | 08/30/14 04:45 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 111 | % | 70-130 | | 1 | | 08/30/14 04:45 | 17060-07-0 | |
| Toluene-d8 (S) | 101 | % | 70-130 | | 1 | | 08/30/14 04:45 | 2037-26-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

**Sample: MW-5** **Lab ID: 92215324005** Collected: 08/26/14 12:00 Received: 08/28/14 14:48 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 | 08/29/14 16:20 | 09/09/14 01:25 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:25 | 7440-38-2 | |
| Barium | **33.3J** | ug/L | 100 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:25 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 16:20 | 09/09/14 01:25 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 16:20 | 09/09/14 01:25 | 7440-43-9 | |
| Chromium | **6.2J** | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:25 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:25 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:25 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:25 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:25 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 16:20 | 09/09/14 01:25 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:25 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 08/29/14 16:20 | 09/09/14 01:25 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:25 | 7440-62-2 | |
| Zinc | **10.6** | ug/L | 10.0 | 10.0 | 1 | 08/29/14 16:20 | 09/09/14 01:25 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 08/30/14 05:01 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 08/30/14 05:01 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 08/30/14 05:01 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 08/30/14 05:01 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 08/30/14 05:01 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 08/30/14 05:01 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 08/30/14 05:01 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 08/30/14 05:01 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 08/30/14 05:01 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 08/30/14 05:01 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 08/30/14 05:01 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 08/30/14 05:01 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 08/30/14 05:01 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 08/30/14 05:01 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 08/30/14 05:01 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 08/30/14 05:01 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 08/30/14 05:01 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 08/30/14 05:01 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 08/30/14 05:01 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 08/30/14 05:01 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 08/30/14 05:01 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 08/30/14 05:01 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 08/30/14 05:01 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 08/30/14 05:01 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 08/30/14 05:01 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 08/30/14 05:01 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 08/30/14 05:01 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 08/30/14 05:01 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 08/30/14 05:01 | 10061-01-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

**Sample: MW-5** **Lab ID: 92215324005** Collected: 08/26/14 12:00 Received: 08/28/14 14:48 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 | | 08/30/14 05:01 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 08/30/14 05:01 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 08/30/14 05:01 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 08/30/14 05:01 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 08/30/14 05:01 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 08/30/14 05:01 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/30/14 05:01 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 08/30/14 05:01 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 08/30/14 05:01 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 08/30/14 05:01 | 127-18-4 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/30/14 05:01 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 08/30/14 05:01 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 08/30/14 05:01 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 08/30/14 05:01 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 08/30/14 05:01 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 08/30/14 05:01 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 08/30/14 05:01 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 08/30/14 05:01 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 08/30/14 05:01 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 98 | % | 70-130 | | 1 | | 08/30/14 05:01 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 111 | % | 70-130 | | 1 | | 08/30/14 05:01 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 08/30/14 05:01 | 2037-26-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

**Sample: MW-6** **Lab ID: 92215324006** Collected: 08/27/14 09:10 Received: 08/28/14 14:48 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 | 08/29/14 16:20 | 09/09/14 01:28 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:28 | 7440-38-2 | |
| Barium | **81.5J** | ug/L | 100 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:28 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 16:20 | 09/09/14 01:28 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 16:20 | 09/09/14 01:28 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:28 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:28 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:28 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:28 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:28 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 16:20 | 09/09/14 01:28 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:28 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 08/29/14 16:20 | 09/09/14 01:28 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:28 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 16:20 | 09/09/14 01:28 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 08/30/14 05:16 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 08/30/14 05:16 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 08/30/14 05:16 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 08/30/14 05:16 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 08/30/14 05:16 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 08/30/14 05:16 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 08/30/14 05:16 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 08/30/14 05:16 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 08/30/14 05:16 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 08/30/14 05:16 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 08/30/14 05:16 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 08/30/14 05:16 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 08/30/14 05:16 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 08/30/14 05:16 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 08/30/14 05:16 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 08/30/14 05:16 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 08/30/14 05:16 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 08/30/14 05:16 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 08/30/14 05:16 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 08/30/14 05:16 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 08/30/14 05:16 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 08/30/14 05:16 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 08/30/14 05:16 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 08/30/14 05:16 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 08/30/14 05:16 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 08/30/14 05:16 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 08/30/14 05:16 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 08/30/14 05:16 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 08/30/14 05:16 | 10061-01-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

**Sample: MW-6** **Lab ID: 92215324006** Collected: 08/27/14 09:10 Received: 08/28/14 14:48 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 | | 08/30/14 05:16 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 08/30/14 05:16 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 08/30/14 05:16 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 08/30/14 05:16 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 08/30/14 05:16 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 08/30/14 05:16 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/30/14 05:16 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 08/30/14 05:16 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 08/30/14 05:16 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 08/30/14 05:16 | 127-18-4 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/30/14 05:16 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 08/30/14 05:16 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 08/30/14 05:16 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 08/30/14 05:16 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 08/30/14 05:16 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 08/30/14 05:16 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 08/30/14 05:16 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 08/30/14 05:16 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 08/30/14 05:16 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 99 | % | 70-130 | | 1 | | 08/30/14 05:16 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 110 | % | 70-130 | | 1 | | 08/30/14 05:16 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 08/30/14 05:16 | 2037-26-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

**Sample: MW-7** **Lab ID: 92215324007** Collected: 08/27/14 10:00 Received: 08/28/14 14:48 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 | 08/29/14 16:20 | 09/09/14 01:41 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:41 | 7440-38-2 | |
| Barium | **30.7J** | ug/L | 100 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:41 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 16:20 | 09/09/14 01:41 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 16:20 | 09/09/14 01:41 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:41 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:41 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:41 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:41 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:41 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 16:20 | 09/09/14 01:41 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:41 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 08/29/14 16:20 | 09/09/14 01:41 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:41 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 16:20 | 09/09/14 01:41 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 08/30/14 05:32 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 08/30/14 05:32 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 08/30/14 05:32 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 08/30/14 05:32 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 08/30/14 05:32 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 08/30/14 05:32 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 08/30/14 05:32 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 08/30/14 05:32 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 08/30/14 05:32 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 08/30/14 05:32 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 08/30/14 05:32 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 08/30/14 05:32 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 08/30/14 05:32 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 08/30/14 05:32 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 08/30/14 05:32 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 08/30/14 05:32 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 08/30/14 05:32 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 08/30/14 05:32 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 08/30/14 05:32 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 08/30/14 05:32 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 08/30/14 05:32 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 08/30/14 05:32 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 08/30/14 05:32 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 08/30/14 05:32 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 08/30/14 05:32 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 08/30/14 05:32 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 08/30/14 05:32 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 08/30/14 05:32 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 08/30/14 05:32 | 10061-01-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

**Sample: MW-7** **Lab ID: 92215324007** Collected: 08/27/14 10:00 Received: 08/28/14 14:48 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 | | 08/30/14 05:32 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 08/30/14 05:32 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 08/30/14 05:32 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 08/30/14 05:32 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 08/30/14 05:32 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 08/30/14 05:32 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/30/14 05:32 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 08/30/14 05:32 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 08/30/14 05:32 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 08/30/14 05:32 | 127-18-4 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/30/14 05:32 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 08/30/14 05:32 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 08/30/14 05:32 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 08/30/14 05:32 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 08/30/14 05:32 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 08/30/14 05:32 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 08/30/14 05:32 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 08/30/14 05:32 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 08/30/14 05:32 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 98 | % | 70-130 | | 1 | | 08/30/14 05:32 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 111 | % | 70-130 | | 1 | | 08/30/14 05:32 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 08/30/14 05:32 | 2037-26-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

**Sample: MW-8** **Lab ID: 92215324008** Collected: 08/27/14 16:00 Received: 08/28/14 14:48 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 | 08/29/14 16:20 | 09/09/14 01:44 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:44 | 7440-38-2 | |
| Barium | **75.7J** | ug/L | 100 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:44 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 16:20 | 09/09/14 01:44 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 16:20 | 09/09/14 01:44 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:44 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:44 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:44 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:44 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:44 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 16:20 | 09/09/14 01:44 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:44 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 08/29/14 16:20 | 09/09/14 01:44 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:44 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 16:20 | 09/09/14 01:44 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 08/30/14 05:48 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 08/30/14 05:48 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 08/30/14 05:48 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 08/30/14 05:48 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 08/30/14 05:48 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 08/30/14 05:48 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 08/30/14 05:48 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 08/30/14 05:48 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 08/30/14 05:48 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 08/30/14 05:48 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 08/30/14 05:48 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 08/30/14 05:48 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 08/30/14 05:48 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 08/30/14 05:48 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 08/30/14 05:48 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 08/30/14 05:48 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 08/30/14 05:48 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 08/30/14 05:48 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 08/30/14 05:48 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 08/30/14 05:48 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 08/30/14 05:48 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 08/30/14 05:48 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 08/30/14 05:48 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 08/30/14 05:48 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 08/30/14 05:48 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 08/30/14 05:48 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 08/30/14 05:48 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 08/30/14 05:48 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 08/30/14 05:48 | 10061-01-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

**Sample: MW-8** **Lab ID: 92215324008** Collected: 08/27/14 16:00 Received: 08/28/14 14:48 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 | | 08/30/14 05:48 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 08/30/14 05:48 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 08/30/14 05:48 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 08/30/14 05:48 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 08/30/14 05:48 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 08/30/14 05:48 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/30/14 05:48 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 08/30/14 05:48 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 08/30/14 05:48 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 08/30/14 05:48 | 127-18-4 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/30/14 05:48 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 08/30/14 05:48 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 08/30/14 05:48 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 08/30/14 05:48 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 08/30/14 05:48 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 08/30/14 05:48 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 08/30/14 05:48 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 08/30/14 05:48 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 08/30/14 05:48 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 99 | % | 70-130 | | 1 | | 08/30/14 05:48 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 112 | % | 70-130 | | 1 | | 08/30/14 05:48 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 08/30/14 05:48 | 2037-26-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

**Sample: MW-9** **Lab ID: 92215324009** Collected: 08/26/14 15:45 Received: 08/28/14 14:48 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 | 08/29/14 16:20 | 09/09/14 01:48 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:48 | 7440-38-2 | |
| Barium | **22.9J** | ug/L | 100 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:48 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 16:20 | 09/09/14 01:48 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 16:20 | 09/09/14 01:48 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:48 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:48 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:48 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:48 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:48 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 16:20 | 09/09/14 01:48 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:48 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 08/29/14 16:20 | 09/09/14 01:48 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:48 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 16:20 | 09/09/14 01:48 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 08/30/14 06:03 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 08/30/14 06:03 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 08/30/14 06:03 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 08/30/14 06:03 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 08/30/14 06:03 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 08/30/14 06:03 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 08/30/14 06:03 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 08/30/14 06:03 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 08/30/14 06:03 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 08/30/14 06:03 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 08/30/14 06:03 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 08/30/14 06:03 | 75-00-3 | |
| Chloroform | **0.87J** | ug/L | 5.0 | 0.14 | 1 | | 08/30/14 06:03 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 08/30/14 06:03 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 08/30/14 06:03 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 08/30/14 06:03 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 08/30/14 06:03 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 08/30/14 06:03 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 08/30/14 06:03 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 08/30/14 06:03 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 08/30/14 06:03 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 08/30/14 06:03 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 08/30/14 06:03 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 08/30/14 06:03 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 08/30/14 06:03 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 08/30/14 06:03 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 08/30/14 06:03 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 08/30/14 06:03 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 08/30/14 06:03 | 10061-01-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

**Sample: MW-9** **Lab ID: 92215324009** Collected: 08/26/14 15:45 Received: 08/28/14 14:48 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 | | 08/30/14 06:03 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 08/30/14 06:03 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 08/30/14 06:03 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 08/30/14 06:03 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 08/30/14 06:03 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 08/30/14 06:03 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/30/14 06:03 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 08/30/14 06:03 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 08/30/14 06:03 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 08/30/14 06:03 | 127-18-4 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/30/14 06:03 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 08/30/14 06:03 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 08/30/14 06:03 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 08/30/14 06:03 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 08/30/14 06:03 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 08/30/14 06:03 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 08/30/14 06:03 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 08/30/14 06:03 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 08/30/14 06:03 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 100 | % | 70-130 | | 1 | | 08/30/14 06:03 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 112 | % | 70-130 | | 1 | | 08/30/14 06:03 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 08/30/14 06:03 | 2037-26-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

**Sample: MW-10** **Lab ID: 92215324010** Collected: 08/26/14 16:50 Received: 08/28/14 14:48 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 | 08/29/14 16:20 | 09/09/14 01:51 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:51 | 7440-38-2 | |
| Barium | **426** | ug/L | 100 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:51 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 16:20 | 09/09/14 01:51 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 16:20 | 09/09/14 01:51 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:51 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:51 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:51 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:51 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:51 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 16:20 | 09/09/14 01:51 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:51 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 08/29/14 16:20 | 09/09/14 01:51 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:51 | 7440-62-2 | |
| Zinc | **38.2** | ug/L | 10.0 | 10.0 | 1 | 08/29/14 16:20 | 09/09/14 01:51 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 08/30/14 06:19 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 08/30/14 06:19 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 08/30/14 06:19 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 08/30/14 06:19 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 08/30/14 06:19 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 08/30/14 06:19 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 08/30/14 06:19 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 08/30/14 06:19 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 08/30/14 06:19 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 08/30/14 06:19 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 08/30/14 06:19 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 08/30/14 06:19 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 08/30/14 06:19 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 08/30/14 06:19 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 08/30/14 06:19 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 08/30/14 06:19 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 08/30/14 06:19 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 08/30/14 06:19 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 08/30/14 06:19 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 08/30/14 06:19 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 08/30/14 06:19 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 08/30/14 06:19 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 08/30/14 06:19 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 08/30/14 06:19 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 08/30/14 06:19 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 08/30/14 06:19 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 08/30/14 06:19 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 08/30/14 06:19 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 08/30/14 06:19 | 10061-01-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

**Sample: MW-10** **Lab ID: 92215324010** Collected: 08/26/14 16:50 Received: 08/28/14 14:48 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 | | 08/30/14 06:19 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 08/30/14 06:19 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 08/30/14 06:19 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 08/30/14 06:19 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 08/30/14 06:19 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 08/30/14 06:19 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/30/14 06:19 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 08/30/14 06:19 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 08/30/14 06:19 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 08/30/14 06:19 | 127-18-4 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/30/14 06:19 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 08/30/14 06:19 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 08/30/14 06:19 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 08/30/14 06:19 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 08/30/14 06:19 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 08/30/14 06:19 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 08/30/14 06:19 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 08/30/14 06:19 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 08/30/14 06:19 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 99 | % | 70-130 | | 1 | | 08/30/14 06:19 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 112 | % | 70-130 | | 1 | | 08/30/14 06:19 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 08/30/14 06:19 | 2037-26-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

**Sample: MW-11** **Lab ID: 92215324011** Collected: 08/26/14 12:30 Received: 08/28/14 14:48 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 | 08/29/14 16:20 | 09/09/14 01:54 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:54 | 7440-38-2 | |
| Barium | **126** | ug/L | 100 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:54 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 16:20 | 09/09/14 01:54 | 7440-41-7 | |
| Cadmium | **2.8** | ug/L | 1.0 | 1.0 | 1 | 08/29/14 16:20 | 09/09/14 01:54 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:54 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:54 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:54 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:54 | 7439-92-1 | |
| Nickel | **7.1J** | ug/L | 50.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:54 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 16:20 | 09/09/14 01:54 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:54 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 08/29/14 16:20 | 09/09/14 01:54 | 7440-28-0 | |
| Vanadium | **12.9J** | ug/L | 25.0 | 5.0 | 1 | 08/29/14 16:20 | 09/09/14 01:54 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 16:20 | 09/09/14 01:54 | 7440-66-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 08/30/14 06:34 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 08/30/14 06:34 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 08/30/14 06:34 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 08/30/14 06:34 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 08/30/14 06:34 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 08/30/14 06:34 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 08/30/14 06:34 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 08/30/14 06:34 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 08/30/14 06:34 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 08/30/14 06:34 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 08/30/14 06:34 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 08/30/14 06:34 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 08/30/14 06:34 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 08/30/14 06:34 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 08/30/14 06:34 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 08/30/14 06:34 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 08/30/14 06:34 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 08/30/14 06:34 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 08/30/14 06:34 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 08/30/14 06:34 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 08/30/14 06:34 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 08/30/14 06:34 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 08/30/14 06:34 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 08/30/14 06:34 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 08/30/14 06:34 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 08/30/14 06:34 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 08/30/14 06:34 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 08/30/14 06:34 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 08/30/14 06:34 | 10061-01-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

**Sample: MW-11** **Lab ID: 92215324011** Collected: 08/26/14 12:30 Received: 08/28/14 14:48 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 | | 08/30/14 06:34 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 08/30/14 06:34 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 08/30/14 06:34 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 08/30/14 06:34 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 08/30/14 06:34 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 08/30/14 06:34 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/30/14 06:34 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 08/30/14 06:34 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 08/30/14 06:34 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 08/30/14 06:34 | 127-18-4 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/30/14 06:34 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 08/30/14 06:34 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 08/30/14 06:34 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 08/30/14 06:34 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 08/30/14 06:34 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 08/30/14 06:34 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 08/30/14 06:34 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 08/30/14 06:34 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 08/30/14 06:34 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 98 | % | 70-130 | | 1 | | 08/30/14 06:34 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 112 | % | 70-130 | | 1 | | 08/30/14 06:34 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 08/30/14 06:34 | 2037-26-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

QC Batch: MPRP/16796 — Analysis Method: EPA 6010
QC Batch Method: EPA 3010 — Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92215324001, 92215324002, 92215324003, 92215324004, 92215324005, 92215324006, 92215324007, 92215324008, 92215324009, 92215324010, 92215324011

METHOD BLANK: 1275602 — Matrix: Water
Associated Lab Samples: 92215324001, 92215324002, 92215324003, 92215324004, 92215324005, 92215324006, 92215324007, 92215324008, 92215324009, 92215324010, 92215324011

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Antimony | ug/L | ND | 6.0 | 09/09/14 00:22 | |
| Arsenic | ug/L | ND | 10.0 | 09/09/14 00:22 | |
| Barium | ug/L | ND | 100 | 09/09/14 00:22 | |
| Beryllium | ug/L | ND | 1.0 | 09/09/14 00:22 | |
| Cadmium | ug/L | ND | 1.0 | 09/09/14 00:22 | |
| Chromium | ug/L | ND | 10.0 | 09/09/14 00:22 | |
| Cobalt | ug/L | ND | 10.0 | 09/09/14 00:22 | |
| Copper | ug/L | ND | 10.0 | 09/09/14 00:22 | |
| Lead | ug/L | ND | 10.0 | 09/09/14 00:22 | |
| Nickel | ug/L | ND | 50.0 | 09/09/14 00:22 | |
| Selenium | ug/L | ND | 10.0 | 09/09/14 00:22 | |
| Silver | ug/L | ND | 10.0 | 09/09/14 00:22 | |
| Thallium | ug/L | ND | 5.5 | 09/09/14 00:22 | |
| Vanadium | ug/L | ND | 25.0 | 09/09/14 00:22 | |
| Zinc | ug/L | ND | 10.0 | 09/09/14 00:22 | |

LABORATORY CONTROL SAMPLE: 1275603

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Antimony | ug/L | 500 | 467 | 93 | 80-120 | |
| Arsenic | ug/L | 500 | 468 | 94 | 80-120 | |
| Barium | ug/L | 500 | 485 | 97 | 80-120 | |
| Beryllium | ug/L | 500 | 484 | 97 | 80-120 | |
| Cadmium | ug/L | 500 | 478 | 96 | 80-120 | |
| Chromium | ug/L | 500 | 485 | 97 | 80-120 | |
| Cobalt | ug/L | 500 | 478 | 96 | 80-120 | |
| Copper | ug/L | 500 | 477 | 95 | 80-120 | |
| Lead | ug/L | 500 | 474 | 95 | 80-120 | |
| Nickel | ug/L | 500 | 478 | 96 | 80-120 | |
| Selenium | ug/L | 500 | 463 | 93 | 80-120 | |
| Silver | ug/L | 250 | 230 | 92 | 80-120 | |
| Thallium | ug/L | 500 | 462 | 92 | 80-120 | |
| Vanadium | ug/L | 500 | 483 | 97 | 80-120 | |
| Zinc | ug/L | 500 | 468 | 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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1275604 1275605

| Parameter | Units | 92215311001 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 | 338 | 340 | 67 | 68 | 75-125 | 1 | 25 | M1 |
| Arsenic | ug/L | 5.4J | 500 | 500 | 459 | 454 | 91 | 90 | 75-125 | 1 | 25 | |
| Barium | ug/L | 113 | 500 | 500 | 580 | 582 | 93 | 94 | 75-125 | 0 | 25 | |
| Beryllium | ug/L | 1.1 | 500 | 500 | 477 | 478 | 95 | 95 | 75-125 | 0 | 25 | |
| Cadmium | ug/L | ND | 500 | 500 | 463 | 465 | 92 | 93 | 75-125 | 0 | 25 | |
| Chromium | ug/L | 19.5 | 500 | 500 | 500 | 502 | 96 | 96 | 75-125 | 0 | 25 | |
| Cobalt | ug/L | ND | 500 | 500 | 473 | 474 | 94 | 94 | 75-125 | 0 | 25 | |
| Copper | ug/L | ND | 500 | 500 | 487 | 489 | 96 | 97 | 75-125 | 0 | 25 | |
| Lead | ug/L | 10.7 | 500 | 500 | 460 | 462 | 90 | 90 | 75-125 | 0 | 25 | |
| Nickel | ug/L | ND | 500 | 500 | 462 | 464 | 92 | 92 | 75-125 | 0 | 25 | |
| Selenium | ug/L | ND | 500 | 500 | 454 | 456 | 90 | 90 | 75-125 | 0 | 25 | |
| Silver | ug/L | ND | 250 | 250 | 224 | 225 | 90 | 90 | 75-125 | 0 | 25 | |
| Thallium | ug/L | ND | 500 | 500 | 440 | 445 | 88 | 89 | 75-125 | 1 | 25 | |
| Vanadium | ug/L | 50.7 | 500 | 500 | 529 | 531 | 96 | 96 | 75-125 | 0 | 25 | |
| Zinc | ug/L | 17.7 | 500 | 500 | 474 | 477 | 91 | 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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

QC Batch: MSV/28137 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92215324001, 92215324002, 92215324003, 92215324004, 92215324005, 92215324006, 92215324007, 92215324008, 92215324009, 92215324010, 92215324011

METHOD BLANK: 1275241 Matrix: Water
Associated Lab Samples: 92215324001, 92215324002, 92215324003, 92215324004, 92215324005, 92215324006, 92215324007, 92215324008, 92215324009, 92215324010, 92215324011

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | ND | 5.0 | 08/30/14 03:42 | |
| 1,1,1-Trichloroethane | ug/L | ND | 1.0 | 08/30/14 03:42 | |
| 1,1,2,2-Tetrachloroethane | ug/L | ND | 3.0 | 08/30/14 03:42 | |
| 1,1,2-Trichloroethane | ug/L | ND | 1.0 | 08/30/14 03:42 | |
| 1,1-Dichloroethane | ug/L | ND | 5.0 | 08/30/14 03:42 | |
| 1,1-Dichloroethene | ug/L | ND | 5.0 | 08/30/14 03:42 | |
| 1,2,3-Trichloropropane | ug/L | ND | 1.0 | 08/30/14 03:42 | |
| 1,2-Dibromo-3-chloropropane | ug/L | ND | 13.0 | 08/30/14 03:42 | |
| 1,2-Dibromoethane (EDB) | ug/L | ND | 1.0 | 08/30/14 03:42 | |
| 1,2-Dichlorobenzene | ug/L | ND | 5.0 | 08/30/14 03:42 | |
| 1,2-Dichloroethane | ug/L | ND | 1.0 | 08/30/14 03:42 | |
| 1,2-Dichloropropane | ug/L | ND | 1.0 | 08/30/14 03:42 | |
| 1,3-Dichloropropane | ug/L | ND | 1.0 | 08/30/14 03:42 | |
| 1,4-Dichlorobenzene | ug/L | ND | 1.0 | 08/30/14 03:42 | |
| 2-Butanone (MEK) | ug/L | ND | 100 | 08/30/14 03:42 | |
| 2-Hexanone | ug/L | ND | 50.0 | 08/30/14 03:42 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | ND | 100 | 08/30/14 03:42 | |
| Acetone | ug/L | ND | 100 | 08/30/14 03:42 | |
| Acrylonitrile | ug/L | ND | 200 | 08/30/14 03:42 | |
| Benzene | ug/L | ND | 1.0 | 08/30/14 03:42 | |
| Bromochloromethane | ug/L | ND | 3.0 | 08/30/14 03:42 | |
| Bromodichloromethane | ug/L | ND | 1.0 | 08/30/14 03:42 | |
| Bromoform | ug/L | ND | 3.0 | 08/30/14 03:42 | |
| Bromomethane | ug/L | ND | 10.0 | 08/30/14 03:42 | |
| Carbon disulfide | ug/L | ND | 100 | 08/30/14 03:42 | |
| Carbon tetrachloride | ug/L | ND | 1.0 | 08/30/14 03:42 | |
| Chlorobenzene | ug/L | ND | 3.0 | 08/30/14 03:42 | |
| Chloroethane | ug/L | ND | 10.0 | 08/30/14 03:42 | |
| Chloroform | ug/L | ND | 5.0 | 08/30/14 03:42 | |
| Chloromethane | ug/L | ND | 1.0 | 08/30/14 03:42 | |
| cis-1,2-Dichloroethene | ug/L | ND | 5.0 | 08/30/14 03:42 | |
| cis-1,3-Dichloropropene | ug/L | ND | 1.0 | 08/30/14 03:42 | |
| Dibromochloromethane | ug/L | ND | 3.0 | 08/30/14 03:42 | |
| Dibromomethane | ug/L | ND | 10.0 | 08/30/14 03:42 | |
| Ethylbenzene | ug/L | ND | 1.0 | 08/30/14 03:42 | |
| Iodomethane | ug/L | ND | 10.0 | 08/30/14 03:42 | |
| Methylene Chloride | ug/L | ND | 1.0 | 08/30/14 03:42 | |
| Styrene | ug/L | ND | 1.0 | 08/30/14 03:42 | |
| Tetrachloroethene | ug/L | ND | 1.0 | 08/30/14 03:42 | |
| Toluene | ug/L | ND | 1.0 | 08/30/14 03:42 | |

**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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

METHOD BLANK: 1275241 Matrix: Water

Associated Lab Samples: 92215324001, 92215324002, 92215324003, 92215324004, 92215324005, 92215324006, 92215324007, 92215324008, 92215324009, 92215324010, 92215324011

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| trans-1,2-Dichloroethene | ug/L | ND | 5.0 | 08/30/14 03:42 | |
| trans-1,3-Dichloropropene | ug/L | ND | 1.0 | 08/30/14 03:42 | |
| trans-1,4-Dichloro-2-butene | ug/L | ND | 100 | 08/30/14 03:42 | |
| Trichloroethene | ug/L | ND | 1.0 | 08/30/14 03:42 | |
| Trichlorofluoromethane | ug/L | ND | 1.0 | 08/30/14 03:42 | |
| Vinyl acetate | ug/L | ND | 50.0 | 08/30/14 03:42 | |
| Vinyl chloride | ug/L | ND | 1.0 | 08/30/14 03:42 | |
| Xylene (Total) | ug/L | ND | 5.0 | 08/30/14 03:42 | |
| 1,2-Dichloroethane-d4 (S) | % | 110 | 70-130 | 08/30/14 03:42 | |
| 4-Bromofluorobenzene (S) | % | 99 | 70-130 | 08/30/14 03:42 | |
| Toluene-d8 (S) | % | 100 | 70-130 | 08/30/14 03:42 | |

LABORATORY CONTROL SAMPLE: 1275242

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | 50 | 49.9 | 100 | 80-125 | |
| 1,1,1-Trichloroethane | ug/L | 50 | 51.6 | 103 | 71-129 | |
| 1,1,2,2-Tetrachloroethane | ug/L | 50 | 48.5 | 97 | 79-124 | |
| 1,1,2-Trichloroethane | ug/L | 50 | 50.0 | 100 | 85-125 | |
| 1,1-Dichloroethane | ug/L | 50 | 51.7 | 103 | 73-126 | |
| 1,1-Dichloroethene | ug/L | 50 | 49.8 | 100 | 66-135 | |
| 1,2,3-Trichloropropane | ug/L | 50 | 51.7 | 103 | 75-130 | |
| 1,2-Dibromo-3-chloropropane | ug/L | 50 | 48.9 | 98 | 71-133 | |
| 1,2-Dibromoethane (EDB) | ug/L | 50 | 50.8 | 102 | 83-124 | |
| 1,2-Dichlorobenzene | ug/L | 50 | 48.7 | 97 | 80-133 | |
| 1,2-Dichloroethane | ug/L | 50 | 52.6 | 105 | 67-128 | |
| 1,2-Dichloropropane | ug/L | 50 | 47.9 | 96 | 75-132 | |
| 1,3-Dichloropropane | ug/L | 50 | 48.7 | 97 | 76-131 | |
| 1,4-Dichlorobenzene | ug/L | 50 | 48.3 | 97 | 78-130 | |
| 2-Butanone (MEK) | ug/L | 100 | 99.7J | 100 | 61-144 | |
| 2-Hexanone | ug/L | 100 | 101 | 101 | 68-143 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | 100 | 100 | 100 | 72-135 | |
| Acetone | ug/L | 100 | 99.0J | 99 | 48-146 | |
| Acrylonitrile | ug/L | 250 | 240 | 96 | 40-160 | |
| Benzene | ug/L | 50 | 47.1 | 94 | 80-125 | |
| Bromochloromethane | ug/L | 50 | 48.9 | 98 | 71-125 | |
| Bromodichloromethane | ug/L | 50 | 55.4 | 111 | 78-124 | |
| Bromoform | ug/L | 50 | 53.2 | 106 | 71-128 | |
| Bromomethane | ug/L | 50 | 42.8 | 86 | 40-160 | |
| Carbon disulfide | ug/L | 50 | 42.4J | 85 | 50-160 | |
| Carbon tetrachloride | ug/L | 50 | 52.6 | 105 | 69-131 | |
| Chlorobenzene | ug/L | 50 | 48.2 | 96 | 81-122 | |
| Chloroethane | ug/L | 50 | 49.9 | 100 | 39-148 | |

**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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

LABORATORY CONTROL SAMPLE: 1275242

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Chloroform | ug/L | 50 | 53.6 | 107 | 73-127 | |
| Chloromethane | ug/L | 50 | 51.1 | 102 | 44-146 | |
| cis-1,2-Dichloroethene | ug/L | 50 | 52.2 | 104 | 74-124 | |
| cis-1,3-Dichloropropene | ug/L | 50 | 48.9 | 98 | 72-132 | |
| Dibromochloromethane | ug/L | 50 | 57.0 | 114 | 78-125 | |
| Dibromomethane | ug/L | 50 | 49.8 | 100 | 82-120 | |
| Ethylbenzene | ug/L | 50 | 49.0 | 98 | 79-121 | |
| Iodomethane | ug/L | 100 | 75.8 | 76 | 39-154 | |
| Methylene Chloride | ug/L | 50 | 49.2 | 98 | 64-133 | |
| Styrene | ug/L | 50 | 50.6 | 101 | 84-126 | |
| Tetrachloroethene | ug/L | 50 | 51.0 | 102 | 78-122 | |
| Toluene | ug/L | 50 | 47.8 | 96 | 80-121 | |
| trans-1,2-Dichloroethene | ug/L | 50 | 50.8 | 102 | 71-127 | |
| trans-1,3-Dichloropropene | ug/L | 50 | 49.9 | 100 | 69-141 | |
| trans-1,4-Dichloro-2-butene | ug/L | 50 | 48.7J | 97 | 40-160 | |
| Trichloroethene | ug/L | 50 | 49.7 | 99 | 78-122 | |
| Trichlorofluoromethane | ug/L | 50 | 48.7 | 97 | 53-137 | |
| Vinyl acetate | ug/L | 100 | 121 | 121 | 40-160 | |
| Vinyl chloride | ug/L | 50 | 50.4 | 101 | 58-137 | |
| Xylene (Total) | ug/L | 150 | 146 | 97 | 81-126 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 106 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 102 | 70-130 | |
| Toluene-d8 (S) | % | | | 101 | 70-130 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1275243 1275244

| Parameter | Units | 92215324011 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | ND | 20 | 20 | 21.4 | 20.8 | 107 | 104 | 70-130 | 3 | 30 | |
| 1,1,1-Trichloroethane | ug/L | ND | 20 | 20 | 23.1 | 22.7 | 115 | 113 | 70-130 | 2 | 30 | |
| 1,1,2,2-Tetrachloroethane | ug/L | ND | 20 | 20 | 20.7 | 20.3 | 103 | 102 | 70-130 | 2 | 30 | |
| 1,1,2-Trichloroethane | ug/L | ND | 20 | 20 | 21.3 | 21.1 | 107 | 106 | 70-130 | 1 | 30 | |
| 1,1-Dichloroethane | ug/L | ND | 20 | 20 | 22.6 | 22.2 | 113 | 111 | 70-130 | 1 | 30 | |
| 1,1-Dichloroethene | ug/L | ND | 20 | 20 | 22.6 | 21.9 | 113 | 109 | 70-166 | 3 | 30 | |
| 1,2,3-Trichloropropane | ug/L | ND | 20 | 20 | 21.2 | 20.9 | 106 | 105 | 70-130 | 1 | 30 | |
| 1,2-Dibromo-3-chloropropane | ug/L | ND | 20 | 20 | 20.7 | 21.4 | 104 | 107 | 70-130 | 3 | 30 | |
| 1,2-Dibromoethane (EDB) | ug/L | ND | 20 | 20 | 21.5 | 20.7 | 108 | 103 | 70-130 | 4 | 30 | |
| 1,2-Dichlorobenzene | ug/L | ND | 20 | 20 | 20.5 | 20.2 | 102 | 101 | 70-130 | 1 | 30 | |
| 1,2-Dichloroethane | ug/L | ND | 20 | 20 | 22.7 | 22.4 | 114 | 112 | 70-130 | 1 | 30 | |
| 1,2-Dichloropropane | ug/L | ND | 20 | 20 | 20.5 | 20.0 | 102 | 100 | 70-130 | 2 | 30 | |
| 1,3-Dichloropropane | ug/L | ND | 20 | 20 | 21.1 | 20.5 | 106 | 103 | 70-130 | 3 | 30 | |
| 1,4-Dichlorobenzene | ug/L | ND | 20 | 20 | 20.5 | 20.1 | 102 | 100 | 70-130 | 2 | 30 | |
| 2-Butanone (MEK) | ug/L | ND | 40 | 40 | 38.6J | 40.3J | 97 | 101 | 70-130 | 4 | 30 | |
| 2-Hexanone | ug/L | ND | 40 | 40 | 43.1J | 42.7J | 108 | 107 | 70-130 | 1 | 30 | |

**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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1275243 1275244

| Parameter | Units | 92215324011 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone (MIBK) | ug/L | ND | 40 | 40 | 42.8J | 42.9J | 107 | 107 | 70-130 | 0 | 30 | |
| Acetone | ug/L | ND | 40 | 40 | 43.4J | 43.5J | 103 | 103 | 70-130 | 0 | 30 | |
| Acrylonitrile | ug/L | ND | 100 | 100 | 104J | 98.4J | 104 | 98 | 70-130 | 5 | 30 | |
| Benzene | ug/L | ND | 20 | 20 | 20.5 | 20.2 | 103 | 101 | 70-148 | 2 | 30 | |
| Bromochloromethane | ug/L | ND | 20 | 20 | 21.0 | 20.2 | 105 | 101 | 70-130 | 4 | 30 | |
| Bromodichloromethane | ug/L | ND | 20 | 20 | 23.8 | 23.3 | 119 | 116 | 70-130 | 2 | 30 | |
| Bromoform | ug/L | ND | 20 | 20 | 22.1 | 21.5 | 110 | 108 | 70-130 | 3 | 30 | |
| Bromomethane | ug/L | ND | 20 | 20 | 20.8 | 20.2 | 104 | 101 | 70-130 | 3 | 30 | |
| Carbon disulfide | ug/L | ND | 20 | 20 | 19.3J | 18.7J | 97 | 93 | 70-130 | 3 | 30 | |
| Carbon tetrachloride | ug/L | ND | 20 | 20 | 23.8 | 23.2 | 119 | 116 | 70-130 | 3 | 30 | |
| Chlorobenzene | ug/L | ND | 20 | 20 | 21.1 | 20.5 | 105 | 103 | 70-146 | 3 | 30 | |
| Chloroethane | ug/L | ND | 20 | 20 | 22.5 | 22.5 | 112 | 112 | 70-130 | 0 | 30 | |
| Chloroform | ug/L | ND | 20 | 20 | 23.9 | 23.5 | 119 | 118 | 70-130 | 1 | 30 | |
| Chloromethane | ug/L | ND | 20 | 20 | 22.5 | 22.2 | 112 | 111 | 70-130 | 1 | 30 | |
| cis-1,2-Dichloroethene | ug/L | ND | 20 | 20 | 22.9 | 22.4 | 114 | 112 | 70-130 | 2 | 30 | |
| cis-1,3-Dichloropropene | ug/L | ND | 20 | 20 | 20.8 | 20.3 | 104 | 101 | 70-130 | 3 | 30 | |
| Dibromochloromethane | ug/L | ND | 20 | 20 | 23.9 | 22.9 | 120 | 115 | 70-130 | 4 | 30 | |
| Dibromomethane | ug/L | ND | 20 | 20 | 20.7 | 20.6 | 103 | 103 | 70-130 | 0 | 30 | |
| Ethylbenzene | ug/L | ND | 20 | 20 | 21.5 | 20.6 | 108 | 103 | 70-130 | 4 | 30 | |
| Iodomethane | ug/L | ND | 40 | 40 | 31.6 | 31.3 | 79 | 78 | 70-130 | 1 | 30 | |
| Methylene Chloride | ug/L | ND | 20 | 20 | 19.6 | 18.8 | 98 | 94 | 70-130 | 4 | 30 | |
| Styrene | ug/L | ND | 20 | 20 | 21.2 | 20.6 | 106 | 103 | 70-130 | 3 | 30 | |
| Tetrachloroethene | ug/L | ND | 20 | 20 | 22.9 | 21.8 | 114 | 109 | 70-130 | 5 | 30 | |
| Toluene | ug/L | ND | 20 | 20 | 20.9 | 20.4 | 104 | 102 | 70-155 | 2 | 30 | |
| trans-1,2-Dichloroethene | ug/L | ND | 20 | 20 | 22.6 | 22.4 | 113 | 112 | 70-130 | 1 | 30 | |
| trans-1,3-Dichloropropene | ug/L | ND | 20 | 20 | 21.0 | 20.6 | 105 | 103 | 70-130 | 2 | 30 | |
| trans-1,4-Dichloro-2-butene | ug/L | ND | 20 | 20 | 22.0J | 21.9J | 110 | 109 | 70-130 | 1 | 30 | |
| Trichloroethene | ug/L | ND | 20 | 20 | 21.6 | 21.1 | 108 | 106 | 69-151 | 2 | 30 | |
| Trichlorofluoromethane | ug/L | ND | 20 | 20 | 23.0 | 22.7 | 115 | 113 | 70-130 | 1 | 30 | |
| Vinyl acetate | ug/L | ND | 40 | 40 | 46.3J | 46.2J | 116 | 115 | 70-130 | 0 | 30 | |
| Vinyl chloride | ug/L | ND | 20 | 20 | 23.1 | 22.3 | 116 | 112 | 70-130 | 4 | 30 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | | | 108 | 107 | 70-130 | | | |
| 4-Bromofluorobenzene (S) | % | | | | | | 101 | 100 | 70-130 | | | |
| Toluene-d8 (S) | % | | | | | | 100 | 101 | 70-130 | | | |

**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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALIFIERS

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

## 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

| | |
|---|---|
| M1 | Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery. |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WAYNE CLOSED MSWLF (DUDLEY)
Pace Project No.: 92215324

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **92215324001** | **MW-1R** | EPA 3010 | MPRP/16796 | EPA 6010 | ICP/15161 |
| **92215324002** | **MW-2** | EPA 3010 | MPRP/16796 | EPA 6010 | ICP/15161 |
| **92215324003** | **MW-3** | EPA 3010 | MPRP/16796 | EPA 6010 | ICP/15161 |
| **92215324004** | **MW-4** | EPA 3010 | MPRP/16796 | EPA 6010 | ICP/15161 |
| **92215324005** | **MW-5** | EPA 3010 | MPRP/16796 | EPA 6010 | ICP/15161 |
| **92215324006** | **MW-6** | EPA 3010 | MPRP/16796 | EPA 6010 | ICP/15161 |
| **92215324007** | **MW-7** | EPA 3010 | MPRP/16796 | EPA 6010 | ICP/15161 |
| **92215324008** | **MW-8** | EPA 3010 | MPRP/16796 | EPA 6010 | ICP/15161 |
| **92215324009** | **MW-9** | EPA 3010 | MPRP/16796 | EPA 6010 | ICP/15161 |
| **92215324010** | **MW-10** | EPA 3010 | MPRP/16796 | EPA 6010 | ICP/15161 |
| **92215324011** | **MW-11** | EPA 3010 | MPRP/16796 | EPA 6010 | ICP/15161 |
| **92215324001** | **MW-1R** | EPA 8260 | MSV/28137 | | |
| **92215324002** | **MW-2** | EPA 8260 | MSV/28137 | | |
| **92215324003** | **MW-3** | EPA 8260 | MSV/28137 | | |
| **92215324004** | **MW-4** | EPA 8260 | MSV/28137 | | |
| **92215324005** | **MW-5** | EPA 8260 | MSV/28137 | | |
| **92215324006** | **MW-6** | EPA 8260 | MSV/28137 | | |
| **92215324007** | **MW-7** | EPA 8260 | MSV/28137 | | |
| **92215324008** | **MW-8** | EPA 8260 | MSV/28137 | | |
| **92215324009** | **MW-9** | EPA 8260 | MSV/28137 | | |
| **92215324010** | **MW-10** | EPA 8260 | MSV/28137 | | |
| **92215324011** | **MW-11** | EPA 8260 | MSV/28137 | | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

| 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 Eng.

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

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

Optional
Proj. Due Date:
Proj. Name:

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

**Thermometer Used: IR Gun 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.:** 2.2 °C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

**Date and Initials of person examining contents:** 8/28/14

**Comments:**

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

| | | | |
|---|---|---|---|
| **SCURF Review:** | SDB | Date: | 8/28/14 |
| **SRF Review:** | [illegible] | Date: | 8/29/14 |

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#: 92215324

92215324

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: | Wayne Closed MSWLF (Dudley) |
| 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 1 | Total Metals-App 1 | 9221532 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | N | N | |
| 1 | MW-1R | WT | G | | | 8/27/14 | 3:20 | | | | | 1 | 3 | | | | | | x | x | 001 |
| 2 | MW-2 | WT | G | | | 8/27/14 | 5:00 | | | | | 1 | 3 | | | | | | x | x | 002 |
| 3 | MW-3 | WT | G | | | 8/26 | 2:00 | | | | | 1 | 3 | | | | | | x | x | 003 |
| 4 | MW-4 | WT | G | | | 8/26 | 2:45 | | | | | 1 | 3 | | | | | | x | x | 004 |
| 5 | MW-5 | WT | G | | | 8/26 | 12:00 | | | | | 1 | 3 | | | | | | x | x | 005 |
| 6 | MW-6 | WT | G | | | 8/27 | 9:10 | | | | | 1 | 3 | | | | | | x | x | 006 |
| 7 | MW-7 | WT | G | | | 8/27 | 10:00 | | | | | 1 | 3 | | | | | | x | x | 007 |
| 8 | MW-8 | WT | G | | | 8/27 | 4:00 | | | | | 1 | 3 | | | | | | x | x | 008 |
| 9 | MW-9 | WT | G | | | 8/26 | 3:45 | | | | | 1 | 3 | | | | | | x | x | 009 |
| 10 | MW-10 | WT | G | | | 8/26 | 4:50 | | | | | 1 | 3 | | | | | | x | x | 010 |
| 11 | MW-11 | WT | G | | | 8/26 | 12:30 | | | | | 1 | 3 | | | | | | x | x | 011 |
| 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 |
|---|---|---|---|---|---|---|
| | [signature] / MESCO | 8/27/14 | 6:30PM | [signature] PACE | 8-27-14 | 0875 |
| | Left | | | [signature] PACE | 8/28/14 | 1448 |
| | Locked Office | | | | | |
| | [signature] PACE | 8-27-14 | 1448 | | | |

SAMPLE CONDITIONS

| TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |
|---|---|---|---|
| 2.2 | Y | N | Y |
| 2.2 | | | |

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jonathan Pfohl

SIGNATURE of SAMPLER: [signature] DATE Signed: 8/27/14

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

September 17, 2014

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

RE: Project: WAYNE CLOSED MNA
Pace Project No.: 92215327

Dear Mr. Pfohl:
Enclosed are the analytical results for sample(s) received by the laboratory on August 28, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

## CERTIFICATIONS

| | |
|---|---|
| Project: | WAYNE CLOSED MNA |
| Pace Project No.: | 92215327 |

**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



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

## SAMPLE SUMMARY

Project: WAYNE CLOSED MNA
Pace Project No.: 92215327

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| **92215327001** | **MW-1** | Water | 08/27/14 15:20 | 08/28/14 14:48 |
| **92215327002** | **MW-2** | Water | 08/27/14 17:00 | 08/28/14 14:48 |
| **92215327003** | **MW-8** | Water | 08/27/14 16:00 | 08/28/14 14:48 |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# SAMPLE ANALYTE COUNT

Project: WAYNE CLOSED MNA
Pace Project No.: 92215327

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **92215327001** | **MW-1** | EPA 6010 | SH1 | 1 | PASI-A |
| | | SM 2320B | MDW | 1 | PASI-A |
| | | SM 4500-S2D | SAE | 1 | PASI-A |
| | | SM 5210B | JTJ | 1 | PASI-A |
| | | EPA 300.0 | SAE | 1 | PASI-A |
| | | EPA 353.2 | DMN | 1 | PASI-A |
| | | SM 4500-Cl-E | SMW | 1 | PASI-A |
| | | SM 5220D | MAB | 1 | PASI-A |
| | | SM 5310B | SAE | 1 | PASI-A |
| **92215327002** | **MW-2** | EPA 6010 | SH1 | 1 | PASI-A |
| | | SM 2320B | MDW | 1 | PASI-A |
| | | SM 4500-S2D | SAE | 1 | PASI-A |
| | | SM 5210B | JTJ | 1 | PASI-A |
| | | EPA 300.0 | SAE | 1 | PASI-A |
| | | EPA 353.2 | DMN | 1 | PASI-A |
| | | SM 4500-Cl-E | SMW | 1 | PASI-A |
| | | SM 5220D | MAB | 1 | PASI-A |
| | | SM 5310B | SAE | 1 | PASI-A |
| **92215327003** | **MW-8** | EPA 6010 | SH1 | 1 | PASI-A |
| | | SM 2320B | MDW | 1 | PASI-A |
| | | SM 4500-S2D | SAE | 1 | PASI-A |
| | | SM 5210B | JTJ | 1 | PASI-A |
| | | EPA 300.0 | SAE | 1 | PASI-A |
| | | EPA 353.2 | DMN | 1 | PASI-A |
| | | SM 4500-Cl-E | SMW | 1 | PASI-A |
| | | SM 5220D | MAB | 1 | PASI-A |
| | | SM 5310B | SAE | 1 | PASI-A |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MNA
Pace Project No.: 92215327

**Sample: MW-1** **Lab ID: 92215327001** Collected: 08/27/14 15:20 Received: 08/28/14 14:48 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 | | | | | | | | |
| Iron | **2720** | ug/L | 300 | 50.0 | 1 | 08/29/14 16:20 | 09/09/14 01:58 | 7439-89-6 | |
| **2320B Alkalinity** | Analytical Method: SM 2320B | | | | | | | | |
| Alkalinity, Total as CaCO3 | ND | ug/L | 5000 | 1000 | 1 | | 09/10/14 10:29 | | |
| **4500S2D Sulfide Water** | Analytical Method: SM 4500-S2D | | | | | | | | |
| Sulfide | ND | ug/L | 1000 | 50.0 | 1 | | 09/03/14 15:51 | 18496-25-8 | |
| **5210B BOD, 5 day** | Analytical Method: SM 5210B | | | | | | | | |
| BOD, 5 day | ND | ug/L | 2000 | 2000 | 1 | 08/29/14 13:37 | 09/03/14 11:32 | | |
| **300.0 IC Anions 28 Days** | Analytical Method: EPA 300.0 | | | | | | | | |
| Sulfate | **1120J** | ug/L | 250000 | 1000 | 1 | | 09/09/14 12:51 | 14808-79-8 | |
| **353.2 Nitrogen, NO2/NO3 unpres** | Analytical Method: EPA 353.2 | | | | | | | | |
| Nitrogen, Nitrate | **22.1J** | ug/L | 10000 | 10.0 | 1 | | 08/28/14 23:23 | | |
| **4500 Chloride** | Analytical Method: SM 4500-Cl-E | | | | | | | | |
| Chloride | **1810** | ug/L | 1000 | 500 | 1 | | 09/09/14 21:01 | 16887-00-6 | |
| **5220D COD** | Analytical Method: SM 5220D | | | | | | | | |
| Chemical Oxygen Demand | ND | ug/L | 25000 | 12500 | 1 | | 09/08/14 20:51 | | |
| **5310B TOC** | Analytical Method: SM 5310B | | | | | | | | |
| Total Organic Carbon | **1940** | ug/L | 1000 | 500 | 1 | | 09/10/14 17:37 | 7440-44-0 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MNA
Pace Project No.: 92215327

**Sample: MW-2** **Lab ID: 92215327002** Collected: 08/27/14 17:00 Received: 08/28/14 14:48 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 | | | | | | | | |
| Iron | **39300** | ug/L | 300 | 50.0 | 1 | 08/29/14 16:20 | 09/09/14 02:01 | 7439-89-6 | |
| **2320B Alkalinity** | Analytical Method: SM 2320B | | | | | | | | |
| Alkalinity, Total as CaCO3 | **597000** | ug/L | 5000 | 1000 | 1 | | 09/10/14 10:57 | | |
| **4500S2D Sulfide Water** | Analytical Method: SM 4500-S2D | | | | | | | | |
| Sulfide | ND | ug/L | 1000 | 50.0 | 1 | | 09/03/14 15:51 | 18496-25-8 | |
| **5210B BOD, 5 day** | Analytical Method: SM 5210B | | | | | | | | |
| BOD, 5 day | **7140** | ug/L | 2000 | 2000 | 1 | 08/29/14 10:37 | 09/03/14 10:45 | | |
| **300.0 IC Anions 28 Days** | Analytical Method: EPA 300.0 | | | | | | | | |
| Sulfate | **17500J** | ug/L | 250000 | 1000 | 1 | | 09/09/14 13:05 | 14808-79-8 | |
| **353.2 Nitrogen, NO2/NO3 unpres** | Analytical Method: EPA 353.2 | | | | | | | | |
| Nitrogen, Nitrate | ND | ug/L | 10000 | 10.0 | 1 | | 08/28/14 23:30 | | |
| **4500 Chloride** | Analytical Method: SM 4500-Cl-E | | | | | | | | |
| Chloride | **70800** | ug/L | 5000 | 2500 | 5 | | 09/09/14 21:02 | 16887-00-6 | |
| **5220D COD** | Analytical Method: SM 5220D | | | | | | | | |
| Chemical Oxygen Demand | **76000** | ug/L | 25000 | 12500 | 1 | | 09/08/14 20:51 | | |
| **5310B TOC** | Analytical Method: SM 5310B | | | | | | | | |
| Total Organic Carbon | **41200** | ug/L | 1000 | 500 | 1 | | 09/10/14 17:50 | 7440-44-0 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MNA
Pace Project No.: 92215327

**Sample: MW-8** **Lab ID: 92215327003** Collected: 08/27/14 16:00 Received: 08/28/14 14:48 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 | | | | | | | | |
| Iron | **125J** | ug/L | 300 | 50.0 | 1 | 09/02/14 15:25 | 09/05/14 23:42 | 7439-89-6 | |
| **2320B Alkalinity** | Analytical Method: SM 2320B | | | | | | | | |
| Alkalinity, Total as CaCO3 | ND | ug/L | 5000 | 1000 | 1 | | 09/10/14 11:21 | | |
| **4500S2D Sulfide Water** | Analytical Method: SM 4500-S2D | | | | | | | | |
| Sulfide | ND | ug/L | 1000 | 50.0 | 1 | | 09/03/14 15:51 | 18496-25-8 | |
| **5210B BOD, 5 day** | Analytical Method: SM 5210B | | | | | | | | |
| BOD, 5 day | ND | ug/L | 2000 | 2000 | 1 | 08/29/14 13:37 | 09/03/14 11:32 | | |
| **300.0 IC Anions 28 Days** | Analytical Method: EPA 300.0 | | | | | | | | |
| Sulfate | **2570J** | ug/L | 250000 | 1000 | 1 | | 09/10/14 13:58 | 14808-79-8 | |
| **353.2 Nitrogen, NO2/NO3 unpres** | Analytical Method: EPA 353.2 | | | | | | | | |
| Nitrogen, Nitrate | **1080J** | ug/L | 10000 | 10.0 | 1 | | 08/28/14 23:28 | | |
| **4500 Chloride** | Analytical Method: SM 4500-Cl-E | | | | | | | | |
| Chloride | **4950** | ug/L | 3000 | 1500 | 3 | | 09/09/14 21:03 | 16887-00-6 | M1,R1 |
| **5220D COD** | Analytical Method: SM 5220D | | | | | | | | |
| Chemical Oxygen Demand | ND | ug/L | 25000 | 12500 | 1 | | 09/08/14 20:51 | | |
| **5310B TOC** | Analytical Method: SM 5310B | | | | | | | | |
| Total Organic Carbon | **3350** | ug/L | 1000 | 500 | 1 | | 09/10/14 18:05 | 7440-44-0 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE CLOSED MNA
Pace Project No.: 92215327

QC Batch: MPRP/16796
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92215327001, 92215327002

METHOD BLANK: 1275602
Matrix: Water
Associated Lab Samples: 92215327001, 92215327002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Iron | ug/L | ND | 300 | 09/09/14 00:22 | |

LABORATORY CONTROL SAMPLE: 1275603

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Iron | ug/L | 5000 | 4820 | 96 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1275604 1275605

| Parameter | Units | 92215311001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | ug/L | 11500 | 5000 | 5000 | 17300 | 17400 | 117 | 119 | 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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE CLOSED MNA
Pace Project No.: 92215327

QC Batch: MPRP/16803
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92215327003

METHOD BLANK: 1276476
Matrix: Water
Associated Lab Samples: 92215327003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Iron | ug/L | ND | 300 | 09/05/14 23:27 | |

LABORATORY CONTROL SAMPLE: 1276477

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Iron | ug/L | 5000 | 4790 | 96 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1276478 1276479

| Parameter | Units | 92215327003 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | ug/L | 125J | 5000 | 5000 | 4970 | 5000 | 97 | 98 | 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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE CLOSED MNA
Pace Project No.: 92215327

QC Batch: WET/33084 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 92215327001, 92215327002, 92215327003

METHOD BLANK: 1281933 Matrix: Water
Associated Lab Samples: 92215327001, 92215327002, 92215327003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Alkalinity, Total as CaCO3 | ug/L | ND | 5000 | 09/10/14 10:11 | |

LABORATORY CONTROL SAMPLE: 1281934

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Alkalinity, Total as CaCO3 | ug/L | 50000 | 49500 | 99 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1281935 1281936

| Parameter | Units | 92215327001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total as CaCO3 | ug/L | ND | 50000 | 50000 | 50000 | 49700 | 100 | 99 | 90-110 | 1 | 4 | |

**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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE CLOSED MNA
Pace Project No.: 92215327

QC Batch: WET/32969 Analysis Method: SM 4500-S2D
QC Batch Method: SM 4500-S2D Analysis Description: 4500S2D Sulfide Water
Associated Lab Samples: 92215327001, 92215327002, 92215327003

METHOD BLANK: 1276879 Matrix: Water
Associated Lab Samples: 92215327001, 92215327002, 92215327003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Sulfide | ug/L | ND | 1000 | 09/03/14 15:51 | |

LABORATORY CONTROL SAMPLE: 1276880

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Sulfide | ug/L | 500 | 526J | 105 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1276881 1276882

| Parameter | Units | 92215069002 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfide | ug/L | ND | 500 | 500 | 534J | 534J | 107 | 107 | 90-110 | 0 | 10 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1276883 1276884

| Parameter | Units | 92215327002 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfide | ug/L | ND | 500 | 500 | 473J | 473J | 95 | 95 | 90-110 | 0 | 10 | |

**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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE CLOSED MNA
Pace Project No.: 92215327

QC Batch: WET/32920 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 92215327002

METHOD BLANK: 1274874 | Matrix: Water
Associated Lab Samples: 92215327002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| BOD, 5 day | ug/L | ND | 2000 | 09/03/14 10:45 | |

LABORATORY CONTROL SAMPLE: 1274875

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| BOD, 5 day | ug/L | 198000 | 196000 | 99 | 84.5-115.4 | |

SAMPLE DUPLICATE: 1274876

| Parameter | Units | 92215327002 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| BOD, 5 day | ug/L | 7140 | 7140 | 0 | 10 | |

**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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE CLOSED MNA
Pace Project No.: 92215327

QC Batch: WET/32930 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 92215327001, 92215327003

METHOD BLANK: 1275157 | Matrix: Water
Associated Lab Samples: 92215327001, 92215327003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| BOD, 5 day | ug/L | ND | 2000 | 09/03/14 11:32 | |

LABORATORY CONTROL SAMPLE: 1275158

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| BOD, 5 day | ug/L | 198000 | 197000 | 99 | 84.5-115.4 | |

SAMPLE DUPLICATE: 1275159

| Parameter | Units | 92215327001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| BOD, 5 day | ug/L | ND | ND | | 10 | |

**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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE CLOSED MNA
Pace Project No.: 92215327

QC Batch: WETA/20167 | Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 | Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92215327001, 92215327002

METHOD BLANK: 1280219 | Matrix: Water
Associated Lab Samples: 92215327001, 92215327002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Sulfate | ug/L | ND | 250000 | 09/09/14 01:49 | |

LABORATORY CONTROL SAMPLE: 1280220

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Sulfate | ug/L | 20000 | 18900J | 94 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1280221 1280222

| Parameter | Units | 92215745001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | ug/L | 19.3 mg/L | 20000 | 20000 | 42500J | 41800J | 116 | 112 | 90-110 | 2 | 10 | M1 |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1280223 1280224

| Parameter | Units | 92215760001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | ug/L | 2410 mg/L | 20000 | 20000 | 2370000 J | 2390000 J | -176 | -88 | 90-110 | 1 | 10 | M6 |

**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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE CLOSED MNA
Pace Project No.: 92215327

QC Batch: WETA/20184 | Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 | Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92215327003

METHOD BLANK: 1280914 | Matrix: Water
Associated Lab Samples: 92215327003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Sulfate | ug/L | ND | 250000 | 09/10/14 13:31 | |

LABORATORY CONTROL SAMPLE: 1280915

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Sulfate | ug/L | 20000 | 18700J | 94 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1280916 1280917

| Parameter | Units | 92215327003 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | ug/L | 2570J | 20000 | 20000 | 22300J | 22200J | 98 | 98 | 90-110 | 0 | 10 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1280918 1280919

| Parameter | Units | 92216352004 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | ug/L | 3.4 mg/L | 20000 | 20000 | 22100J | 21900J | 93 | 92 | 90-110 | 1 | 10 | |

**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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE CLOSED MNA
Pace Project No.: 92215327

QC Batch: WETA/20083 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92215327001, 92215327002, 92215327003

METHOD BLANK: 1274782 Matrix: Water
Associated Lab Samples: 92215327001, 92215327002, 92215327003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Nitrogen, Nitrate | ug/L | ND | 20.0 | 08/28/14 23:19 | |

LABORATORY CONTROL SAMPLE: 1274783

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Nitrogen, Nitrate | ug/L | 2500 | 2620 | 105 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1274784 1274785

| Parameter | Units | 92215327001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrogen, Nitrate | ug/L | 22.1J | 2500 | 2500 | 2740 | 2730 | 109 | 108 | 90-110 | 0 | 10 | |

**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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE CLOSED MNA
Pace Project No.: 92215327

QC Batch: WETA/20194 Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E Analysis Description: 4500 Chloride
Associated Lab Samples: 92215327001, 92215327002, 92215327003

METHOD BLANK: 1281756 Matrix: Water
Associated Lab Samples: 92215327001, 92215327002, 92215327003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Chloride | ug/L | ND | 1000 | 09/09/14 20:51 | |

LABORATORY CONTROL SAMPLE: 1281757

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Chloride | ug/L | 20000 | 20600 | 103 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1281758 1281759

| Parameter | Units | 92214934001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ug/L | 2270 mg/L | 2000000 | 2000000 | 3530000 | 3490000 | 63 | 61 | 90-110 | 1 | 10 | M6 |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1281760 1281761

| Parameter | Units | 92215327003 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ug/L | 4950 | 60000 | 60000 | 12900 | 10600 | 13 | 9 | 90-110 | 19 | 10 | M1,R1 |

**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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE CLOSED MNA
Pace Project No.: 92215327

QC Batch: WETA/20172 Analysis Method: SM 5220D
QC Batch Method: SM 5220D Analysis Description: 5220D COD
Associated Lab Samples: 92215327001, 92215327002, 92215327003

METHOD BLANK: 1280339 Matrix: Water
Associated Lab Samples: 92215327001, 92215327002, 92215327003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Chemical Oxygen Demand | ug/L | ND | 25000 | 09/08/14 20:51 | |

LABORATORY CONTROL SAMPLE: 1280340

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Chemical Oxygen Demand | ug/L | 750000 | 754000 | 101 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1280341 1280342

| Parameter | Units | 92215989002 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chemical Oxygen Demand | ug/L | 1970 mg/L | 750000 | 750000 | 5240000 | 5220000 | 437 | 434 | 90-110 | 0 | 3 | M1 |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1280343 1280344

| Parameter | Units | 92216012002 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chemical Oxygen Demand | ug/L | 602 mg/L | 750000 | 750000 | 982000 | 990000 | 51 | 52 | 90-110 | 1 | 3 | M1 |

**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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE CLOSED MNA
Pace Project No.: 92215327

QC Batch: WETA/20197 Analysis Method: SM 5310B
QC Batch Method: SM 5310B Analysis Description: 5310B TOC
Associated Lab Samples: 92215327001, 92215327002, 92215327003

METHOD BLANK: 1281923 Matrix: Water
Associated Lab Samples: 92215327001, 92215327002, 92215327003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Total Organic Carbon | ug/L | ND | 1000 | 09/10/14 15:43 | |

LABORATORY CONTROL SAMPLE: 1281924

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Total Organic Carbon | ug/L | 25000 | 23800 | 95 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1281925 1281926

| Parameter | Units | 92215760001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Organic Carbon | ug/L | 7.1 mg/L | 25000 | 25000 | 16600 | 17900 | 38 | 43 | 90-110 | 7 | 5 | M1,R1 |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1281927 1281928

| Parameter | Units | 92216322003 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Organic Carbon | ug/L | 17.0 mg/L | 25000 | 25000 | 42100 | 41700 | 101 | 99 | 90-110 | 1 | 5 | |

**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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALIFIERS

Project: WAYNE CLOSED MNA
Pace Project No.: 92215327

## 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 |

## ANALYTE QUALIFIERS

| | |
|---|---|
| M1 | Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery. |
| M6 | Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution. |
| R1 | RPD value was outside control limits. |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WAYNE CLOSED MNA
Pace Project No.: 92215327

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **92215327001** | **MW-1** | EPA 3010 | MPRP/16796 | EPA 6010 | ICP/15161 |
| **92215327002** | **MW-2** | EPA 3010 | MPRP/16796 | EPA 6010 | ICP/15161 |
| **92215327003** | **MW-8** | EPA 3010 | MPRP/16803 | EPA 6010 | ICP/15167 |
| **92215327001** | **MW-1** | SM 2320B | WET/33084 | | |
| **92215327002** | **MW-2** | SM 2320B | WET/33084 | | |
| **92215327003** | **MW-8** | SM 2320B | WET/33084 | | |
| **92215327001** | **MW-1** | SM 4500-S2D | WET/32969 | | |
| **92215327002** | **MW-2** | SM 4500-S2D | WET/32969 | | |
| **92215327003** | **MW-8** | SM 4500-S2D | WET/32969 | | |
| **92215327001** | **MW-1** | SM 5210B | WET/32930 | SM 5210B | WET/32932 |
| **92215327002** | **MW-2** | SM 5210B | WET/32920 | SM 5210B | WET/32926 |
| **92215327003** | **MW-8** | SM 5210B | WET/32930 | SM 5210B | WET/32932 |
| **92215327001** | **MW-1** | EPA 300.0 | WETA/20167 | | |
| **92215327002** | **MW-2** | EPA 300.0 | WETA/20167 | | |
| **92215327003** | **MW-8** | EPA 300.0 | WETA/20184 | | |
| **92215327001** | **MW-1** | EPA 353.2 | WETA/20083 | | |
| **92215327002** | **MW-2** | EPA 353.2 | WETA/20083 | | |
| **92215327003** | **MW-8** | EPA 353.2 | WETA/20083 | | |
| **92215327001** | **MW-1** | SM 4500-Cl-E | WETA/20194 | | |
| **92215327002** | **MW-2** | SM 4500-Cl-E | WETA/20194 | | |
| **92215327003** | **MW-8** | SM 4500-Cl-E | WETA/20194 | | |
| **92215327001** | **MW-1** | SM 5220D | WETA/20172 | | |
| **92215327002** | **MW-2** | SM 5220D | WETA/20172 | | |
| **92215327003** | **MW-8** | SM 5220D | WETA/20172 | | |
| **92215327001** | **MW-1** | SM 5310B | WETA/20197 | | |
| **92215327002** | **MW-2** | SM 5310B | WETA/20197 | | |
| **92215327003** | **MW-8** | SM 5310B | WETA/20197 | | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

| 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 Eng.

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

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

Optional
Proj. Due Date:
Proj. Name:

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

**Thermometer Used:** IR Gun 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.:** 2.2 °C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

**Date and Initials of person examining contents:** @ 8/28/14

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

**SCURF Review:** JDS Date: 8/28/14

**SRF Review:** [illegible] Date: 8/29/14

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# : 92215327**

92215327

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: | Wayne Closed MNA | 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 | Hydrogen (AM20GAX) | Ethene/Ethane/Methane (AM20GAX) | VFA (AM23G) | Alkalinity | Chloride | Sulfate | Sulfide | TOC | COD | BOD | Iron | Nitrate | Use Microseeps for AM20GAX & AM23G) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | N | N | N | N | N | N | N | N | N | N | N | N | 92215307 |
| 1 | MW-1 | WT | G | | | 8/27/14 | 3:20 | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | X | X | 001 |
| 2 | MW-2 | WT | G | | | ↓ | 5:00 | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | X | X | 002 |
| 3 | MW-8 | WT | G | | | ↓ | 4:00 | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | 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 | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | /MESCO cooler @ office | 8/27/14 | 6:30PM | PACE | 8-27-14 | 0849 | | | | |
| | PACE | 8-27-14 | 1448 | PACE | 8/27/14 | 1448 | 2.2 | Y | N | Y |
| | | | | | | | TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jonathan Pfohl

SIGNATURE of SAMPLER: DATE Signed: 8/27/14

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

September 10, 2014

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

RE: **WAYNE CLOSED MNA / 92215327**

*Microseeps Workorder: 13183*

Dear Kevin Godwin:

Enclosed are the analytical results for sample(s) received by the laboratory on Tuesday, September 02, 2014. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Robbin Robl 09/10/2014
rrobl@microseeps.com

Customer Service Representative

Enclosures

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

Total Number of Pages 15



**CERTIFICATE OF ANALYSIS**

This report shall not be reproduced, except in full,
without the written consent of Microseeps/Pace Analytical Energy Services, LLC.

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

# LABORATORY ACCREDITATIONS & CERTIFICATIONS

| | |
|---|---|
| **Accreditor:** | Pennsylvania Department of Environmental Protection, Bureau of Laboratories |
| **Accreditation ID:** | 02-00538 |
| **Scope:** | NELAP Non-Potable Water and Solid & Hazardous Waste |
| **Accreditor:** | South Carolina Department of Health and Environmental Control, Office of Environmental Laboratory Certification |
| **Accreditation ID:** | 89009003 |
| **Scope:** | Clean Water Act (CWA); Resource Conservation and Recovery Act (RCRA) |
| **Accreditor:** | NELAP: State of Louisiana, Department of Environmental Quality |
| **Accreditation ID:** | 04104 |
| **Scope:** | Solid and Chemical Materials; Non-Potable Water |
| **Accreditor:** | NELAP: New Jersey, Department of Environmental Protection |
| **Accreditation ID:** | PA026 |
| **Scope:** | Non-Potable Water; Solid and Chemical Materials |
| **Accreditor:** | NELAP: New York, Department of Health Wadsworth Center |
| **Accreditation ID:** | 11815 |
| **Scope:** | Non-Potable Water; Solid and Hazardous Waste |
| **Accreditor:** | State of Connecticut, Department of Public Health, Division of Environmental Health |
| **Accreditation ID:** | PH-0263 |
| **Scope:** | Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA) |
| **Accreditor:** | NELAP: Texas, Commission on Environmental Quality |
| **Accreditation ID:** | T104704453-09-TX |
| **Scope:** | Non-Potable Water |
| **Accreditor:** | State of New Hampshire |
| **Accreditation ID:** | 299409 |
| **Scope:** | Non-potable water |
| **Accreditor:** | State of Georgia |
| **Accreditation ID:** | Chapter 391-3-26 |
| **Scope:** | As per the Georgia EPD Rules and Regulations for Commercial Laboratories, Microseeps is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC). |





This report shall not be reproduced, except in full,
without the written consent of Microseeps/Pace Analytical Energy Services, LLC.

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

## SAMPLE SUMMARY

Workorder: 13183 WAYNE CLOSED MNA / 92215327

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| 131830001 | MW-1 | Water | 8/27/2014 15:20 | 9/2/2014 11:30 |
| 131830002 | MW-1 | Bubble Strip | 8/27/2014 15:20 | 9/2/2014 11:30 |
| 131830003 | MW-2 | Water | 8/27/2014 17:00 | 9/2/2014 11:30 |
| 131830004 | MW-2 | Bubble Strip | 8/27/2014 17:00 | 9/2/2014 11:30 |
| 131830005 | MW-8 | Water | 8/27/2014 16:00 | 9/2/2014 11:30 |
| 131830006 | MW-8 | Bubble Strip | 8/27/2014 16:00 | 9/2/2014 11:30 |



CERTIFICATE OF ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Microseeps/Pace Analytical Energy Services, LLC

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

# ANALYTICAL RESULTS

Workorder: 13183 WAYNE CLOSED MNA / 92215327

Lab ID: **131830001** Date Received: 9/2/2014 11:30 Matrix: Water

Sample ID: **MW-1** Date Collected: 8/27/2014 15:20

| Parameters | Results | Units | PQL | MDL | DF | Prepared | By | Analyzed | By | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| **EDonors - MICR** | | | | | | | | | | |
| Analysis Desc: AM23G | | | Analytical Method: AM23G | | | | | | | |
| Lactic Acid | **0.059J** | mg/l | 0.10 | 0.012 | 1 | | | 9/5/2014 11:14 | KB | |
| Acetic Acid | **0.064J** | mg/l | 0.070 | 0.0080 | 1 | | | 9/5/2014 11:14 | KB | |
| Propionic Acid | **0.011U** | mg/l | 0.050 | 0.011 | 1 | | | 9/5/2014 11:14 | KB | |
| Butyric Acid | **0.070** | mg/l | 0.050 | 0.0070 | 1 | | | 9/5/2014 11:14 | KB | |
| Pyruvic Acid | **0.0090U** | mg/l | 0.15 | 0.0090 | 1 | | | 9/5/2014 11:14 | KB | |



CERTIFICATE OF ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Microseeps/Pace Analytical Energy Services, LLC

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

# ANALYTICAL RESULTS

Workorder: 13183 WAYNE CLOSED MNA / 92215327

Lab ID: **131830002** Date Received: 9/2/2014 11:30 Matrix: Bubble Strip

Sample ID: **MW-1** Date Collected: 8/27/2014 15:20

| Parameters | Results | Units | PQL | MDL | DF | Prepared | By | Analyzed | By | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| **RISK - MICR** | | | | | | | | | | |
| Analysis Desc: AM20GAX | | | Analytical Method: AM20GAX | | | | | | | |
| Methane | **0.056** | ug/l | 0.015 | 0.0060 | 1 | | | 9/6/2014 11:52 | TD | |
| Ethane | **0.0010U** | ug/l | 0.010 | 0.0010 | 1 | | | 9/6/2014 11:52 | TD | |
| Ethene | **0.0080U** | ug/l | 0.010 | 0.0080 | 1 | | | 9/6/2014 11:52 | TD | |
| Hydrogen | **1.4** | nM | 0.60 | 0.13 | 1 | | | 9/6/2014 11:52 | TD | |



CERTIFICATE OF ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Microseeps/Pace Analytical Energy Services, LLC.

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

# ANALYTICAL RESULTS

Workorder: 13183 WAYNE CLOSED MNA / 92215327

Lab ID: **131830003** Date Received: 9/2/2014 11:30 Matrix: Water

Sample ID: **MW-2** Date Collected: 8/27/2014 17:00

| Parameters | Results | Units | PQL | MDL | DF | Prepared | By | Analyzed | By | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| **EDonors - MICR** | | | | | | | | | | |
| Analysis Desc: AM23G | | | Analytical Method: AM23G | | | | | | | |
| Lactic Acid | **0.077J** | mg/l | 0.10 | 0.012 | 1 | | | 9/5/2014 13:32 | KB | |
| Acetic Acid | **0.12** | mg/l | 0.070 | 0.0080 | 1 | | | 9/5/2014 13:32 | KB | |
| Propionic Acid | **0.011U** | mg/l | 0.050 | 0.011 | 1 | | | 9/5/2014 13:32 | KB | |
| Butyric Acid | **0.095** | mg/l | 0.050 | 0.0070 | 1 | | | 9/5/2014 13:32 | KB | |
| Pyruvic Acid | **0.0090U** | mg/l | 0.15 | 0.0090 | 1 | | | 9/5/2014 13:32 | KB | |



**CERTIFICATE OF ANALYSIS**

This report shall not be reproduced, except in full,
without the written consent of Microseeps/Pace Analytical Energy Services, LLC

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

# ANALYTICAL RESULTS

Workorder: 13183 WAYNE CLOSED MNA / 92215327

Lab ID: **131830004** Date Received: 9/2/2014 11:30 Matrix: Bubble Strip

Sample ID: **MW-2** Date Collected: 8/27/2014 17:00

| Parameters | Results | Units | PQL | MDL | DF | Prepared | By | Analyzed | By | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| **RISK - MICR** | | | | | | | | | | |
| Analysis Desc: AM20GAX | | | Analytical Method: AM20GAX | | | | | | | |
| Methane | **6600** | ug/l | 0.015 | 0.0060 | 1 | | | 9/6/2014 12:05 | TD | |
| Ethane | **2.8** | ug/l | 0.010 | 0.0010 | 1 | | | 9/6/2014 12:05 | TD | |
| Ethene | **0.0080U** | ug/l | 0.010 | 0.0080 | 1 | | | 9/6/2014 12:05 | TD | |
| Hydrogen | **2.1** | nM | 0.60 | 0.13 | 1 | | | 9/6/2014 12:05 | TD | |



CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Microseeps/Pace Analytical Energy Services, LLC.

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

# ANALYTICAL RESULTS

Workorder: 13183 WAYNE CLOSED MNA / 92215327

Lab ID: **131830005** Date Received: 9/2/2014 11:30 Matrix: Water

Sample ID: **MW-8** Date Collected: 8/27/2014 16:00

| Parameters | Results | Units | PQL | MDL | DF | Prepared | By | Analyzed | By | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| **EDonors - MICR** | | | | | | | | | | |
| Analysis Desc: AM23G | | | Analytical Method: AM23G | | | | | | | |
| Lactic Acid | **0.035J** | mg/l | 0.10 | 0.012 | 1 | | | 9/5/2014 14:18 | KB | |
| Acetic Acid | **0.045J** | mg/l | 0.070 | 0.0080 | 1 | | | 9/5/2014 14:18 | KB | |
| Propionic Acid | **0.011U** | mg/l | 0.050 | 0.011 | 1 | | | 9/5/2014 14:18 | KB | |
| Butyric Acid | **0.092** | mg/l | 0.050 | 0.0070 | 1 | | | 9/5/2014 14:18 | KB | |
| Pyruvic Acid | **0.0090U** | mg/l | 0.15 | 0.0090 | 1 | | | 9/5/2014 14:18 | KB | |



CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Microseeps/Pace Analytical Energy Services, LLC

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

# ANALYTICAL RESULTS

Workorder: 13183 WAYNE CLOSED MNA / 92215327

Lab ID: **131830006** Date Received: 9/2/2014 11:30 Matrix: Bubble Strip

Sample ID: **MW-8** Date Collected: 8/27/2014 16:00

| Parameters | Results | Units | PQL | MDL | DF | Prepared | By | Analyzed | By | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| **RISK - MICR** | | | | | | | | | | |
| Analysis Desc: AM20GAX | | | Analytical Method: AM20GAX | | | | | | | |
| Methane | **0.24** | ug/l | 0.015 | 0.0060 | 1 | | | 9/6/2014 12:17 | TD | |
| Ethane | **0.013** | ug/l | 0.010 | 0.0010 | 1 | | | 9/6/2014 12:17 | TD | |
| Ethene | **0.17** | ug/l | 0.010 | 0.0080 | 1 | | | 9/6/2014 12:17 | TD | |
| Hydrogen | **210** | nM | 30 | 6.5 | 50 | | | 9/6/2014 12:45 | TD | |



CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Microseeps/Pace Analytical Energy Services, LLC

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

# ANALYTICAL RESULTS QUALIFIERS

Workorder: 13183 WAYNE CLOSED MNA / 92215327

## DEFINITIONS/QUALIFIERS

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

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



CERTIFICATE OF ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Microseeps/Pace Analytical Energy Services, LLC

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

# QUALITY CONTROL DATA

Workorder: 13183 WAYNE CLOSED MNA / 92215327

QC Batch: EDON/2241 Analysis Method: AM23G

QC Batch Method: AM23G

Associated Lab Samples: 131830001, 131830003, 131830005

METHOD BLANK: 30065

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---|---|---|---|---|
| EDonors | | | | |
| Lactic Acid | mg/l | 0.012U | 0.012 | |
| Acetic Acid | mg/l | 0.051J | 0.0080 | |
| Propionic Acid | mg/l | 0.011U | 0.011 | |
| Butyric Acid | mg/l | 0.0070U | 0.0070 | |
| Pyruvic Acid | mg/l | 0.0090U | 0.0090 | |

LABORATORY CONTROL SAMPLE: 30066

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| EDonors | | | | | | |
| Lactic Acid | mg/l | 2 | 2.1 | 105 | 70-130 | |
| Acetic Acid | mg/l | 2 | 2.1 | 107 | 70-130 | |
| Propionic Acid | mg/l | 2 | 2.2 | 108 | 70-130 | |
| Butyric Acid | mg/l | 2 | 2.2 | 108 | 70-130 | |
| Pyruvic Acid | mg/l | 2 | 2.1 | 105 | 70-130 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 30067 30068 Original: 131830001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EDonors | | | | | | | | | | | |
| Lactic Acid | mg/l | 0.059 | 2 | 2.1 | 2.1 | 101 | 104 | 70-130 | 2.9 | 30 | |
| Acetic Acid | mg/l | 0.064 | 2 | 2.1 | 2.2 | 104 | 105 | 70-130 | 0.96 | 30 | |
| Propionic Acid | mg/l | 0.0025 | 2 | 2.2 | 2.2 | 108 | 109 | 70-130 | 0.92 | 30 | |
| Butyric Acid | mg/l | 0.07 | 2 | 2.0 | 2.1 | 99 | 102 | 70-130 | 3 | 30 | |
| Pyruvic Acid | mg/l | 0 | 2 | 2.0 | 2.2 | 103 | 109 | 70-130 | 5.7 | 30 | |



CERTIFICATE OF ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Microseeps/Pace Analytical Energy Services, LLC

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

# QUALITY CONTROL DATA

Workorder: 13183 WAYNE CLOSED MNA / 92215327

QC Batch: DISG/4017 Analysis Method: AM20GAX

QC Batch Method: AM20GAX

Associated Lab Samples: 131830002, 131830004, 131830006

METHOD BLANK: 30084

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---|---|---|---|---|
| RISK | | | | |
| Methane | ug/l | 0.0060U | 0.0060 | |
| Ethane | ug/l | 0.0010U | 0.0010 | |
| Ethene | ug/l | 0.0080U | 0.0080 | |

METHOD BLANK: 30086

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---|---|---|---|---|
| RISK | | | | |
| Hydrogen | nM | 0.13U | 0.13 | |

LABORATORY CONTROL SAMPLE & LCSD: 30087 30090

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| RISK | | | | | | | | | | |
| Methane | ug/l | 8.3 | 8.1 | 8.0 | 98 | 97 | 80-120 | 1 | 20 | |
| Ethane | ug/l | 6.5 | 6.3 | 6.3 | 98 | 97 | 80-120 | 1 | 20 | |
| Ethene | ug/l | 16 | 16 | 16 | 96 | 96 | 80-120 | 0 | 20 | |

LABORATORY CONTROL SAMPLE & LCSD: 30089 30092

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| RISK | | | | | | | | | | |
| Hydrogen | nM | 24 | 24 | 23 | 97 | 96 | 80-120 | 1 | 20 | |



CERTIFICATE OF ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Microseeps/Pace Analytical Energy Services, LLC

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

# QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 13183 WAYNE CLOSED MNA / 92215327

| Lab ID | Sample ID | Prep Method | Prep Batch | Analysis Method | Analysis Batch |
|---|---|---|---|---|---|
| 131830001 | MW-1 | | | AM23G | EDON/2241 |
| 131830003 | MW-2 | | | AM23G | EDON/2241 |
| 131830005 | MW-8 | | | AM23G | EDON/2241 |
| | | | | | |
| 131830002 | MW-1 | | | AM20GAX | DISG/4017 |
| 131830004 | MW-2 | | | AM20GAX | DISG/4017 |
| 131830006 | MW-8 | | | AM20GAX | DISG/4017 |



CERTIFICATE OF ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Microseeps/Pace Analytical Energy Services, LLC

# Chain of Custody

Pace Analytical®
www.pacelabs.com

13183

**Workorder:** 92215327 **Workorder Name:** WAYNE CLOSED MNA **Results Requested** 9/12/2014

**Report / Invoice To**

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

**Subcontract To**

MICROSEEPS P.O. KRG 13865

| Item | Sample ID | Collect Date/Time | Lab ID | Matrix | Preserved Containers: Unpreserved | Requested Analysis: Hydrogen | MEE | VFA | LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-1 | 8/27/2014 15:20 | 92215327001 | Water | S | X | X | X | |
| 2 | MW-2 | 8/27/2014 17:00 | 92215327002 | Water | S | X | X | X | |
| 3 | MW-8 | 8/27/2014 16:00 | 92215327003 | Water | S | X | X | X | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |

| Transfers | Released By | Date/Time | Received By | Date/Time |
|---|---|---|---|---|
| 1 | | | [illegible] PACS | 9.2.14 |
| 2 | | | | |
| 3 | | | | |

**Comments**

1130

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

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

# Cooler Receipt Form

Client Name: Pace-H Project: Wayne / 92215327 Lab Work Order: 1318

A. Shipping/Container Information (circle appropriate response)

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

Tracking Number: 435213239967

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

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

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

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

Comments:_____

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

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

Comments:_____

Cooler contents examined/received by: LJ Date: 9.2.14

Project Manager Review: AK Date: 9/2/14

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

September 08, 2014

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

RE: Project: WAYNE MSWLF - SWS
Pace Project No.: 92215310

Dear Mr. Pfohl:
Enclosed are the analytical results for sample(s) received by the laboratory on August 28, 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



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

## CERTIFICATIONS

Project: WAYNE MSWLF - SWS
Pace Project No.: 92215310

**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



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

## SAMPLE SUMMARY

Project: WAYNE MSWLF - SWS
Pace Project No.: 92215310

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| **92215310001** | **SW-2** | Water | 08/27/14 11:30 | 08/28/14 14:48 |
| **92215310002** | **SW-3** | Water | 08/27/14 16:15 | 08/28/14 14:48 |
| **92215310003** | **SW-1** | Water | 08/27/14 13:35 | 08/28/14 14:48 |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

## SAMPLE ANALYTE COUNT

Project: WAYNE MSWLF - SWS
Pace Project No.: 92215310

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **92215310001** | **SW-2** | EPA 6010 | SH1 | 15 | PASI-A |
| | | EPA 7470 | HVK | 1 | PASI-A |
| | | EPA 8260 | MCK | 51 | PASI-C |
| **92215310002** | **SW-3** | EPA 6010 | SH1 | 15 | PASI-A |
| | | EPA 7470 | HVK | 1 | PASI-A |
| | | EPA 8260 | MCK | 51 | PASI-C |
| **92215310003** | **SW-1** | EPA 6010 | SH1 | 15 | PASI-A |
| | | EPA 7470 | HVK | 1 | PASI-A |
| | | EPA 8260 | MCK | 51 | PASI-C |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE MSWLF - SWS
Pace Project No.: 92215310

**Sample: SW-2** **Lab ID: 92215310001** Collected: 08/27/14 11:30 Received: 08/28/14 14:48 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 | 08/29/14 15:40 | 09/06/14 01:16 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:16 | 7440-38-2 | |
| Barium | **51.3J** | ug/L | 100 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:16 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 15:40 | 09/06/14 01:16 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 15:40 | 09/06/14 01:16 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:16 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:16 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:16 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:16 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:16 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 15:40 | 09/06/14 01:16 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:16 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 08/29/14 15:40 | 09/06/14 01:16 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:16 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 15:40 | 09/06/14 01:16 | 7440-66-6 | |
| **7470 Mercury** | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | | |
| Mercury | ND | ug/L | 0.20 | 0.10 | 1 | 09/03/14 12:30 | 09/04/14 16:30 | 7439-97-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 08/29/14 20:56 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 08/29/14 20:56 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 08/29/14 20:56 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 08/29/14 20:56 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 08/29/14 20:56 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 08/29/14 20:56 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 08/29/14 20:56 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 08/29/14 20:56 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 08/29/14 20:56 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 08/29/14 20:56 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 08/29/14 20:56 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 08/29/14 20:56 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 08/29/14 20:56 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 08/29/14 20:56 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 08/29/14 20:56 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 08/29/14 20:56 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 08/29/14 20:56 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 08/29/14 20:56 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 08/29/14 20:56 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 08/29/14 20:56 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 08/29/14 20:56 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 08/29/14 20:56 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 08/29/14 20:56 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 08/29/14 20:56 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 08/29/14 20:56 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 08/29/14 20:56 | 156-60-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE MSWLF - SWS
Pace Project No.: 92215310

**Sample: SW-2** **Lab ID: 92215310001** Collected: 08/27/14 11:30 Received: 08/28/14 14:48 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 08/29/14 20:56 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 08/29/14 20:56 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 08/29/14 20:56 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/29/14 20:56 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 08/29/14 20:56 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 08/29/14 20:56 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 08/29/14 20:56 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 08/29/14 20:56 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 08/29/14 20:56 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/29/14 20:56 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 08/29/14 20:56 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 08/29/14 20:56 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 08/29/14 20:56 | 127-18-4 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/29/14 20:56 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 08/29/14 20:56 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 08/29/14 20:56 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 08/29/14 20:56 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 08/29/14 20:56 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 08/29/14 20:56 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 08/29/14 20:56 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 08/29/14 20:56 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 08/29/14 20:56 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 99 | % | 70-130 | | 1 | | 08/29/14 20:56 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 112 | % | 70-130 | | 1 | | 08/29/14 20:56 | 17060-07-0 | |
| Toluene-d8 (S) | 101 | % | 70-130 | | 1 | | 08/29/14 20:56 | 2037-26-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE MSWLF - SWS
Pace Project No.: 92215310

**Sample: SW-3** **Lab ID: 92215310002** Collected: 08/27/14 16:15 Received: 08/28/14 14:48 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 | 08/29/14 15:40 | 09/06/14 01:20 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:20 | 7440-38-2 | |
| Barium | **99.1J** | ug/L | 100 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:20 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 15:40 | 09/06/14 01:20 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 15:40 | 09/06/14 01:20 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:20 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:20 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:20 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:20 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:20 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 15:40 | 09/06/14 01:20 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:20 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 08/29/14 15:40 | 09/06/14 01:20 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:20 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 15:40 | 09/06/14 01:20 | 7440-66-6 | |
| **7470 Mercury** | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | | |
| Mercury | ND | ug/L | 0.20 | 0.10 | 1 | 09/03/14 12:30 | 09/04/14 16:33 | 7439-97-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 08/29/14 21:12 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 08/29/14 21:12 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 08/29/14 21:12 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 08/29/14 21:12 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 08/29/14 21:12 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 08/29/14 21:12 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 08/29/14 21:12 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 08/29/14 21:12 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 08/29/14 21:12 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 08/29/14 21:12 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 08/29/14 21:12 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 08/29/14 21:12 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 08/29/14 21:12 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 08/29/14 21:12 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 08/29/14 21:12 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 08/29/14 21:12 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 08/29/14 21:12 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 08/29/14 21:12 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 08/29/14 21:12 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 08/29/14 21:12 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 08/29/14 21:12 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 08/29/14 21:12 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 08/29/14 21:12 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 08/29/14 21:12 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 08/29/14 21:12 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 08/29/14 21:12 | 156-60-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE MSWLF - SWS
Pace Project No.: 92215310

**Sample: SW-3** **Lab ID: 92215310002** Collected: 08/27/14 16:15 Received: 08/28/14 14:48 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 08/29/14 21:12 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 08/29/14 21:12 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 08/29/14 21:12 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/29/14 21:12 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 08/29/14 21:12 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 08/29/14 21:12 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 08/29/14 21:12 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 08/29/14 21:12 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 08/29/14 21:12 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/29/14 21:12 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 08/29/14 21:12 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 08/29/14 21:12 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 08/29/14 21:12 | 127-18-4 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/29/14 21:12 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 08/29/14 21:12 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 08/29/14 21:12 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 08/29/14 21:12 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 08/29/14 21:12 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 08/29/14 21:12 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 08/29/14 21:12 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 08/29/14 21:12 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 08/29/14 21:12 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 100 | % | 70-130 | | 1 | | 08/29/14 21:12 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 110 | % | 70-130 | | 1 | | 08/29/14 21:12 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 08/29/14 21:12 | 2037-26-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE MSWLF - SWS
Pace Project No.: 92215310

**Sample: SW-1** **Lab ID: 92215310003** Collected: 08/27/14 13:35 Received: 08/28/14 14:48 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 | 08/29/14 15:40 | 09/06/14 01:23 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:23 | 7440-38-2 | |
| Barium | **96.0J** | ug/L | 100 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:23 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 15:40 | 09/06/14 01:23 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 15:40 | 09/06/14 01:23 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:23 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:23 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:23 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:23 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:23 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 15:40 | 09/06/14 01:23 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:23 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 08/29/14 15:40 | 09/06/14 01:23 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:23 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 15:40 | 09/06/14 01:23 | 7440-66-6 | |
| **7470 Mercury** | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | | |
| Mercury | ND | ug/L | 0.20 | 0.10 | 1 | 09/03/14 12:30 | 09/04/14 16:35 | 7439-97-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | ND | ug/L | 100 | 10.0 | 1 | | 08/29/14 21:27 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 08/29/14 21:27 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 08/29/14 21:27 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 08/29/14 21:27 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 08/29/14 21:27 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 08/29/14 21:27 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 08/29/14 21:27 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 08/29/14 21:27 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 08/29/14 21:27 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 08/29/14 21:27 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 08/29/14 21:27 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 08/29/14 21:27 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 08/29/14 21:27 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 08/29/14 21:27 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 08/29/14 21:27 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 08/29/14 21:27 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 08/29/14 21:27 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 08/29/14 21:27 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 08/29/14 21:27 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 08/29/14 21:27 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 08/29/14 21:27 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 08/29/14 21:27 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 08/29/14 21:27 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 08/29/14 21:27 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 08/29/14 21:27 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 08/29/14 21:27 | 156-60-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE MSWLF - SWS
Pace Project No.: 92215310

**Sample: SW-1** **Lab ID: 92215310003** Collected: 08/27/14 13:35 Received: 08/28/14 14:48 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 08/29/14 21:27 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 08/29/14 21:27 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 08/29/14 21:27 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/29/14 21:27 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 08/29/14 21:27 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 08/29/14 21:27 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 08/29/14 21:27 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 08/29/14 21:27 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 08/29/14 21:27 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/29/14 21:27 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 08/29/14 21:27 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 08/29/14 21:27 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 08/29/14 21:27 | 127-18-4 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/29/14 21:27 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 08/29/14 21:27 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 08/29/14 21:27 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 08/29/14 21:27 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 08/29/14 21:27 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 08/29/14 21:27 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 08/29/14 21:27 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 08/29/14 21:27 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 08/29/14 21:27 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 99 | % | 70-130 | | 1 | | 08/29/14 21:27 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 112 | % | 70-130 | | 1 | | 08/29/14 21:27 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 08/29/14 21:27 | 2037-26-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE MSWLF - SWS
Pace Project No.: 92215310

QC Batch: MERP/7039 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 92215310001, 92215310002, 92215310003

METHOD BLANK: 1276945 Matrix: Water
Associated Lab Samples: 92215310001, 92215310002, 92215310003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Mercury | ug/L | ND | 0.20 | 09/04/14 15:48 | |

LABORATORY CONTROL SAMPLE: 1276946

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Mercury | ug/L | 2.5 | 2.4 | 95 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1276947 1276948

| Parameter | Units | 92215514017 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | ug/L | ND | 2.5 | 2.5 | 1.4 | 1.2 | 55 | 48 | 75-125 | 15 | 25 | M1 |

**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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE MSWLF - SWS
Pace Project No.: 92215310

QC Batch: MPRP/16792 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92215310001, 92215310002, 92215310003

METHOD BLANK: 1275409 Matrix: Water
Associated Lab Samples: 92215310001, 92215310002, 92215310003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Antimony | ug/L | ND | 6.0 | 09/06/14 00:39 | |
| Arsenic | ug/L | ND | 10.0 | 09/06/14 00:39 | |
| Barium | ug/L | ND | 100 | 09/06/14 00:39 | |
| Beryllium | ug/L | ND | 1.0 | 09/06/14 00:39 | |
| Cadmium | ug/L | ND | 1.0 | 09/06/14 00:39 | |
| Chromium | ug/L | ND | 10.0 | 09/06/14 00:39 | |
| Cobalt | ug/L | ND | 10.0 | 09/06/14 00:39 | |
| Copper | ug/L | ND | 10.0 | 09/06/14 00:39 | |
| Lead | ug/L | ND | 10.0 | 09/06/14 00:39 | |
| Nickel | ug/L | ND | 50.0 | 09/06/14 00:39 | |
| Selenium | ug/L | ND | 10.0 | 09/06/14 00:39 | |
| Silver | ug/L | ND | 10.0 | 09/06/14 00:39 | |
| Thallium | ug/L | ND | 5.5 | 09/06/14 00:39 | |
| Vanadium | ug/L | ND | 25.0 | 09/06/14 00:39 | |
| Zinc | ug/L | ND | 10.0 | 09/06/14 00:39 | |

LABORATORY CONTROL SAMPLE: 1275410

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Antimony | ug/L | 500 | 494 | 99 | 80-120 | |
| Arsenic | ug/L | 500 | 484 | 97 | 80-120 | |
| Barium | ug/L | 500 | 499 | 100 | 80-120 | |
| Beryllium | ug/L | 500 | 513 | 103 | 80-120 | |
| Cadmium | ug/L | 500 | 506 | 101 | 80-120 | |
| Chromium | ug/L | 500 | 512 | 102 | 80-120 | |
| Cobalt | ug/L | 500 | 501 | 100 | 80-120 | |
| Copper | ug/L | 500 | 501 | 100 | 80-120 | |
| Lead | ug/L | 500 | 497 | 99 | 80-120 | |
| Nickel | ug/L | 500 | 504 | 101 | 80-120 | |
| Selenium | ug/L | 500 | 494 | 99 | 80-120 | |
| Silver | ug/L | 250 | 242 | 97 | 80-120 | |
| Thallium | ug/L | 500 | 481 | 96 | 80-120 | |
| Vanadium | ug/L | 500 | 510 | 102 | 80-120 | |
| Zinc | ug/L | 500 | 498 | 100 | 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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE MSWLF - SWS
Pace Project No.: 92215310

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1275411 1275412

| Parameter | Units | 92214653018 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 | 486 | 496 | 97 | 99 | 75-125 | 2 | 25 | |
| Arsenic | ug/L | ND | 500 | 500 | 481 | 479 | 96 | 96 | 75-125 | 0 | 25 | |
| Barium | ug/L | 160 | 500 | 500 | 646 | 643 | 97 | 97 | 75-125 | 0 | 25 | |
| Beryllium | ug/L | 0.54J | 500 | 500 | 500 | 502 | 100 | 100 | 75-125 | 0 | 25 | |
| Cadmium | ug/L | ND | 500 | 500 | 489 | 492 | 98 | 98 | 75-125 | 1 | 25 | |
| Chromium | ug/L | 0.85J | 500 | 500 | 498 | 500 | 99 | 100 | 75-125 | 0 | 25 | |
| Cobalt | ug/L | 5.0J | 500 | 500 | 489 | 490 | 97 | 97 | 75-125 | 0 | 25 | |
| Copper | ug/L | 1.3J | 500 | 500 | 496 | 499 | 99 | 100 | 75-125 | 1 | 25 | |
| Lead | ug/L | ND | 500 | 500 | 481 | 482 | 96 | 96 | 75-125 | 0 | 25 | |
| Nickel | ug/L | 2.8J | 500 | 500 | 487 | 489 | 97 | 97 | 75-125 | 0 | 25 | |
| Selenium | ug/L | 5.8J | 500 | 500 | 486 | 491 | 96 | 97 | 75-125 | 1 | 25 | |
| Silver | ug/L | 0.31J | 250 | 250 | 237 | 238 | 95 | 95 | 75-125 | 0 | 25 | |
| Thallium | ug/L | 5.2J | 500 | 500 | 464 | 469 | 92 | 93 | 75-125 | 1 | 25 | |
| Vanadium | ug/L | 3.4J | 500 | 500 | 506 | 506 | 101 | 101 | 75-125 | 0 | 25 | |
| Zinc | ug/L | 5.7J | 500 | 500 | 490 | 490 | 97 | 97 | 75-125 | 0 | 25 | |

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



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE MSWLF - SWS
Pace Project No.: 92215310

QC Batch: MSV/28136 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92215310001, 92215310002, 92215310003

METHOD BLANK: 1275227 Matrix: Water
Associated Lab Samples: 92215310001, 92215310002, 92215310003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | ND | 5.0 | 08/29/14 14:21 | |
| 1,1,1-Trichloroethane | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| 1,1,2,2-Tetrachloroethane | ug/L | ND | 3.0 | 08/29/14 14:21 | |
| 1,1,2-Trichloroethane | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| 1,1-Dichloroethane | ug/L | ND | 5.0 | 08/29/14 14:21 | |
| 1,1-Dichloroethene | ug/L | ND | 5.0 | 08/29/14 14:21 | |
| 1,2,3-Trichloropropane | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| 1,2-Dibromo-3-chloropropane | ug/L | ND | 13.0 | 08/29/14 14:21 | |
| 1,2-Dibromoethane (EDB) | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| 1,2-Dichlorobenzene | ug/L | ND | 5.0 | 08/29/14 14:21 | |
| 1,2-Dichloroethane | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| 1,2-Dichloropropane | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| 1,3-Dichloropropane | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| 1,4-Dichlorobenzene | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| 2-Butanone (MEK) | ug/L | ND | 100 | 08/29/14 14:21 | |
| 2-Hexanone | ug/L | ND | 50.0 | 08/29/14 14:21 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | ND | 100 | 08/29/14 14:21 | |
| Acetone | ug/L | ND | 100 | 08/29/14 14:21 | |
| Acrylonitrile | ug/L | ND | 200 | 08/29/14 14:21 | |
| Benzene | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| Bromochloromethane | ug/L | ND | 3.0 | 08/29/14 14:21 | |
| Bromodichloromethane | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| Bromoform | ug/L | ND | 3.0 | 08/29/14 14:21 | |
| Bromomethane | ug/L | ND | 10.0 | 08/29/14 14:21 | |
| Carbon disulfide | ug/L | ND | 100 | 08/29/14 14:21 | |
| Carbon tetrachloride | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| Chlorobenzene | ug/L | ND | 3.0 | 08/29/14 14:21 | |
| Chloroethane | ug/L | ND | 10.0 | 08/29/14 14:21 | |
| Chloroform | ug/L | ND | 5.0 | 08/29/14 14:21 | |
| Chloromethane | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| cis-1,2-Dichloroethene | ug/L | ND | 5.0 | 08/29/14 14:21 | |
| cis-1,3-Dichloropropene | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| Dibromochloromethane | ug/L | ND | 3.0 | 08/29/14 14:21 | |
| Dibromomethane | ug/L | ND | 10.0 | 08/29/14 14:21 | |
| Ethylbenzene | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| Iodomethane | ug/L | ND | 10.0 | 08/29/14 14:21 | |
| Methylene Chloride | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| Styrene | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| Tetrachloroethene | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| Toluene | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| trans-1,2-Dichloroethene | ug/L | ND | 5.0 | 08/29/14 14:21 | |

**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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE MSWLF - SWS
Pace Project No.: 92215310

METHOD BLANK: 1275227 Matrix: Water
Associated Lab Samples: 92215310001, 92215310002, 92215310003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| trans-1,3-Dichloropropene | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| trans-1,4-Dichloro-2-butene | ug/L | ND | 100 | 08/29/14 14:21 | |
| Trichloroethene | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| Trichlorofluoromethane | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| Vinyl acetate | ug/L | ND | 50.0 | 08/29/14 14:21 | |
| Vinyl chloride | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| Xylene (Total) | ug/L | ND | 5.0 | 08/29/14 14:21 | |
| 1,2-Dichloroethane-d4 (S) | % | 108 | 70-130 | 08/29/14 14:21 | |
| 4-Bromofluorobenzene (S) | % | 100 | 70-130 | 08/29/14 14:21 | |
| Toluene-d8 (S) | % | 99 | 70-130 | 08/29/14 14:21 | |

LABORATORY CONTROL SAMPLE: 1275228

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | 50 | 51.8 | 104 | 80-125 | |
| 1,1,1-Trichloroethane | ug/L | 50 | 53.8 | 108 | 71-129 | |
| 1,1,2,2-Tetrachloroethane | ug/L | 50 | 50.5 | 101 | 79-124 | |
| 1,1,2-Trichloroethane | ug/L | 50 | 52.5 | 105 | 85-125 | |
| 1,1-Dichloroethane | ug/L | 50 | 53.6 | 107 | 73-126 | |
| 1,1-Dichloroethene | ug/L | 50 | 53.1 | 106 | 66-135 | |
| 1,2,3-Trichloropropane | ug/L | 50 | 54.2 | 108 | 75-130 | |
| 1,2-Dibromo-3-chloropropane | ug/L | 50 | 50.7 | 101 | 71-133 | |
| 1,2-Dibromoethane (EDB) | ug/L | 50 | 52.4 | 105 | 83-124 | |
| 1,2-Dichlorobenzene | ug/L | 50 | 50.9 | 102 | 80-133 | |
| 1,2-Dichloroethane | ug/L | 50 | 53.2 | 106 | 67-128 | |
| 1,2-Dichloropropane | ug/L | 50 | 50.4 | 101 | 75-132 | |
| 1,3-Dichloropropane | ug/L | 50 | 50.8 | 102 | 76-131 | |
| 1,4-Dichlorobenzene | ug/L | 50 | 51.1 | 102 | 78-130 | |
| 2-Butanone (MEK) | ug/L | 100 | 107 | 107 | 61-144 | |
| 2-Hexanone | ug/L | 100 | 105 | 105 | 68-143 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | 100 | 106 | 106 | 72-135 | |
| Acetone | ug/L | 100 | 105 | 105 | 48-146 | |
| Acrylonitrile | ug/L | 250 | 260 | 104 | 40-160 | |
| Benzene | ug/L | 50 | 49.6 | 99 | 80-125 | |
| Bromochloromethane | ug/L | 50 | 50.8 | 102 | 71-125 | |
| Bromodichloromethane | ug/L | 50 | 57.2 | 114 | 78-124 | |
| Bromoform | ug/L | 50 | 55.0 | 110 | 71-128 | |
| Bromomethane | ug/L | 50 | 50.6 | 101 | 40-160 | |
| Carbon disulfide | ug/L | 50 | 48.3J | 97 | 50-160 | |
| Carbon tetrachloride | ug/L | 50 | 53.0 | 106 | 69-131 | |
| Chlorobenzene | ug/L | 50 | 50.9 | 102 | 81-122 | |
| Chloroethane | ug/L | 50 | 53.2 | 106 | 39-148 | |
| Chloroform | ug/L | 50 | 56.7 | 113 | 73-127 | |
| Chloromethane | ug/L | 50 | 52.5 | 105 | 44-146 | |

**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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE MSWLF - SWS
Pace Project No.: 92215310

LABORATORY CONTROL SAMPLE: 1275228

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | ug/L | 50 | 54.7 | 109 | 74-124 | |
| cis-1,3-Dichloropropene | ug/L | 50 | 52.8 | 106 | 72-132 | |
| Dibromochloromethane | ug/L | 50 | 58.0 | 116 | 78-125 | |
| Dibromomethane | ug/L | 50 | 52.3 | 105 | 82-120 | |
| Ethylbenzene | ug/L | 50 | 51.1 | 102 | 79-121 | |
| Iodomethane | ug/L | 100 | 84.4 | 84 | 39-154 | |
| Methylene Chloride | ug/L | 50 | 51.6 | 103 | 64-133 | |
| Styrene | ug/L | 50 | 52.8 | 106 | 84-126 | |
| Tetrachloroethene | ug/L | 50 | 54.6 | 109 | 78-122 | |
| Toluene | ug/L | 50 | 50.5 | 101 | 80-121 | |
| trans-1,2-Dichloroethene | ug/L | 50 | 54.9 | 110 | 71-127 | |
| trans-1,3-Dichloropropene | ug/L | 50 | 53.0 | 106 | 69-141 | |
| trans-1,4-Dichloro-2-butene | ug/L | 50 | 48.1J | 96 | 40-160 | |
| Trichloroethene | ug/L | 50 | 52.4 | 105 | 78-122 | |
| Trichlorofluoromethane | ug/L | 50 | 52.3 | 105 | 53-137 | |
| Vinyl acetate | ug/L | 100 | 134 | 134 | 40-160 | |
| Vinyl chloride | ug/L | 50 | 55.3 | 111 | 58-137 | |
| Xylene (Total) | ug/L | 150 | 152 | 102 | 81-126 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 105 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 100 | 70-130 | |
| Toluene-d8 (S) | % | | | 101 | 70-130 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1275229 1275230

| Parameter | Units | 92215310001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | ND | 20 | 20 | 21.4 | 23.0 | 107 | 115 | 70-130 | 7 | 30 | |
| 1,1,1-Trichloroethane | ug/L | ND | 20 | 20 | 23.2 | 25.6 | 116 | 128 | 70-130 | 10 | 30 | |
| 1,1,2,2-Tetrachloroethane | ug/L | ND | 20 | 20 | 20.2 | 22.4 | 101 | 112 | 70-130 | 10 | 30 | |
| 1,1,2-Trichloroethane | ug/L | ND | 20 | 20 | 21.0 | 23.2 | 105 | 116 | 70-130 | 10 | 30 | |
| 1,1-Dichloroethane | ug/L | ND | 20 | 20 | 22.5 | 24.6 | 113 | 123 | 70-130 | 9 | 30 | |
| 1,1-Dichloroethene | ug/L | ND | 20 | 20 | 22.3 | 24.3 | 111 | 121 | 70-166 | 9 | 30 | |
| 1,2,3-Trichloropropane | ug/L | ND | 20 | 20 | 21.0 | 23.0 | 105 | 115 | 70-130 | 9 | 30 | |
| 1,2-Dibromo-3-chloropropane | ug/L | ND | 20 | 20 | 20.4 | 22.0 | 102 | 110 | 70-130 | 7 | 30 | |
| 1,2-Dibromoethane (EDB) | ug/L | ND | 20 | 20 | 21.1 | 22.8 | 105 | 114 | 70-130 | 8 | 30 | |
| 1,2-Dichlorobenzene | ug/L | ND | 20 | 20 | 20.7 | 21.9 | 103 | 109 | 70-130 | 6 | 30 | |
| 1,2-Dichloroethane | ug/L | ND | 20 | 20 | 22.6 | 25.2 | 113 | 126 | 70-130 | 11 | 30 | |
| 1,2-Dichloropropane | ug/L | ND | 20 | 20 | 20.6 | 22.6 | 103 | 113 | 70-130 | 9 | 30 | |
| 1,3-Dichloropropane | ug/L | ND | 20 | 20 | 21.0 | 22.4 | 105 | 112 | 70-130 | 7 | 30 | |
| 1,4-Dichlorobenzene | ug/L | ND | 20 | 20 | 20.9 | 21.7 | 104 | 109 | 70-130 | 4 | 30 | |
| 2-Butanone (MEK) | ug/L | ND | 40 | 40 | 38.1J | 42.4J | 95 | 106 | 70-130 | 11 | 30 | |
| 2-Hexanone | ug/L | ND | 40 | 40 | 42.3J | 47.0J | 106 | 118 | 70-130 | 11 | 30 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | ND | 40 | 40 | 42.4J | 47.5J | 106 | 119 | 70-130 | 11 | 30 | |
| Acetone | ug/L | ND | 40 | 40 | 44.4J | 47.5J | 93 | 101 | 70-130 | 7 | 30 | |

**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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE MSWLF - SWS
Pace Project No.: 92215310

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1275229 1275230

| Parameter | Units | 92215310001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Acrylonitrile | ug/L | ND | 100 | 100 | 102J | 108J | 102 | 108 | 70-130 | 6 | 30 | |
| Benzene | ug/L | ND | 20 | 20 | 20.5 | 22.5 | 102 | 113 | 70-148 | 10 | 30 | |
| Bromochloromethane | ug/L | ND | 20 | 20 | 21.1 | 22.4 | 106 | 112 | 70-130 | 6 | 30 | |
| Bromodichloromethane | ug/L | ND | 20 | 20 | 23.7 | 25.8 | 119 | 129 | 70-130 | 8 | 30 | |
| Bromoform | ug/L | ND | 20 | 20 | 21.5 | 23.4 | 107 | 117 | 70-130 | 9 | 30 | |
| Bromomethane | ug/L | ND | 20 | 20 | 19.6 | 21.4 | 98 | 107 | 70-130 | 9 | 30 | |
| Carbon disulfide | ug/L | ND | 20 | 20 | 19.4J | 20.8J | 97 | 104 | 70-130 | 7 | 30 | |
| Carbon tetrachloride | ug/L | ND | 20 | 20 | 23.9 | 25.9 | 119 | 129 | 70-130 | 8 | 30 | |
| Chlorobenzene | ug/L | ND | 20 | 20 | 21.3 | 22.1 | 106 | 111 | 70-146 | 4 | 30 | |
| Chloroethane | ug/L | ND | 20 | 20 | 23.1 | 25.0 | 115 | 125 | 70-130 | 8 | 30 | |
| Chloroform | ug/L | ND | 20 | 20 | 23.3 | 26.3 | 117 | 131 | 70-130 | 12 | 30 | M0 |
| Chloromethane | ug/L | ND | 20 | 20 | 21.6 | 23.1 | 108 | 116 | 70-130 | 7 | 30 | |
| cis-1,2-Dichloroethene | ug/L | ND | 20 | 20 | 23.3 | 25.1 | 116 | 125 | 70-130 | 8 | 30 | |
| cis-1,3-Dichloropropene | ug/L | ND | 20 | 20 | 20.7 | 22.5 | 103 | 113 | 70-130 | 9 | 30 | |
| Dibromochloromethane | ug/L | ND | 20 | 20 | 23.5 | 25.2 | 117 | 126 | 70-130 | 7 | 30 | |
| Dibromomethane | ug/L | ND | 20 | 20 | 20.9 | 22.9 | 104 | 115 | 70-130 | 9 | 30 | |
| Ethylbenzene | ug/L | ND | 20 | 20 | 21.4 | 22.4 | 107 | 112 | 70-130 | 5 | 30 | |
| Iodomethane | ug/L | ND | 40 | 40 | 31.3 | 34.2 | 78 | 85 | 70-130 | 9 | 30 | |
| Methylene Chloride | ug/L | ND | 20 | 20 | 19.5 | 21.6 | 97 | 108 | 70-130 | 11 | 30 | |
| Styrene | ug/L | ND | 20 | 20 | 20.9 | 22.3 | 105 | 112 | 70-130 | 7 | 30 | |
| Tetrachloroethene | ug/L | ND | 20 | 20 | 22.9 | 23.5 | 115 | 118 | 70-130 | 3 | 30 | |
| Toluene | ug/L | ND | 20 | 20 | 20.8 | 22.6 | 103 | 112 | 70-155 | 8 | 30 | |
| trans-1,2-Dichloroethene | ug/L | ND | 20 | 20 | 22.6 | 24.8 | 113 | 124 | 70-130 | 9 | 30 | |
| trans-1,3-Dichloropropene | ug/L | ND | 20 | 20 | 20.7 | 23.1 | 104 | 115 | 70-130 | 11 | 30 | |
| trans-1,4-Dichloro-2-butene | ug/L | ND | 20 | 20 | 18.8J | 22.2J | 94 | 111 | 70-130 | 17 | 30 | |
| Trichloroethene | ug/L | ND | 20 | 20 | 21.8 | 23.7 | 109 | 119 | 69-151 | 9 | 30 | |
| Trichlorofluoromethane | ug/L | ND | 20 | 20 | 23.0 | 24.8 | 115 | 124 | 70-130 | 8 | 30 | |
| Vinyl acetate | ug/L | ND | 40 | 40 | 47.7J | 53.3 | 119 | 133 | 70-130 | 11 | 30 | M0 |
| Vinyl chloride | ug/L | ND | 20 | 20 | 22.9 | 24.9 | 115 | 125 | 70-130 | 8 | 30 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | | | 108 | 107 | 70-130 | | | |
| 4-Bromofluorobenzene (S) | % | | | | | | 101 | 99 | 70-130 | | | |
| Toluene-d8 (S) | % | | | | | | 101 | 101 | 70-130 | | | |

**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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALIFIERS

Project: WAYNE MSWLF - SWS
Pace Project No.: 92215310

## 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

| | |
|---|---|
| M0 | Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits. |
| M1 | Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery. |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WAYNE MSWLF - SWS
Pace Project No.: 92215310

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **92215310001** | **SW-2** | EPA 3010 | MPRP/16792 | EPA 6010 | ICP/15158 |
| **92215310002** | **SW-3** | EPA 3010 | MPRP/16792 | EPA 6010 | ICP/15158 |
| **92215310003** | **SW-1** | EPA 3010 | MPRP/16792 | EPA 6010 | ICP/15158 |
| **92215310001** | **SW-2** | EPA 7470 | MERP/7039 | EPA 7470 | MERC/6776 |
| **92215310002** | **SW-3** | EPA 7470 | MERP/7039 | EPA 7470 | MERC/6776 |
| **92215310003** | **SW-1** | EPA 7470 | MERP/7039 | EPA 7470 | MERC/6776 |
| **92215310001** | **SW-2** | EPA 8260 | MSV/28136 | | |
| **92215310002** | **SW-3** | EPA 8260 | MSV/28136 | | |
| **92215310003** | **SW-1** | EPA 8260 | MSV/28136 | | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

| 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 Eng

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

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

Optional
Proj. Due Date:
Proj. Name:

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

**Thermometer Used: IR Gun 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

**Date and Initials of person examining contents:** 8/28/14

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

**SCURF Review:** _____ **Date:** _____

**SRF Review:** _____ **Date:** _____

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#: 92215310

92215310

(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: | Wayne MSWLF-SWs |
| Container Order Number: | |

**Section C** Invoice Information:

| | |
|---|---|
| Attention: | Municipal Engineering Services |
| Company Name: | |
| Address: | |
| Pace Quote Reference: | |
| Pace Project Manager: | Kevin Godwin |
| Pace Profile #: | 2103 – 3 |

| 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 1 (N) | Total Metals-App 1 (N) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SW-2 | WT | G | | | 8/27/14 | 11:30 | | 4 | | | 1 | 3 | | | | | | | | x | x | | | | | | | | | | | 001 |
| 2 | SW-3 | WT | G | | | 8/27/14 | 4:15 | | 4 | | | 1 | 3 | | | | | | | | x | x | | | | | | | | | | | 002 |
| 3 | SW-1 | WT | G | | | 8/27 | 1:35 | | 4 | | | 1 | 3 | | | | | | | | X | X | | | | | | | | | | | 003 |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

0828153 10
0828153 10 8/28/14

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SW-2 Lined Mid stream near access road | / MESCO Left @ office | 8/27/14 | 6:30 | PACE | 8/27/14 | 0839 | | | | |
| SW-3 Shared downsrtream of SW-2 & upstream of SW-1 | | | | | | | | | | |
| SW-1 ~~[illegible]~~ Downstream of SW-2 (closed) & SW-3 (shared) | PACE | 8/27/14 | 1448 | PACE | 8/28/14 | 1448 | 1.8 | 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: [signature] DATE Signed: 8/27/14

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

September 04, 2014

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

RE: Project: WAYNE CLOSED MSWLF SW-B/MW-2
Pace Project No.: 92215323

Dear Mr. Pfohl:
Enclosed are the analytical results for sample(s) received by the laboratory on August 28, 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



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

## CERTIFICATIONS

| | |
|---|---|
| Project: | WAYNE CLOSED MSWLF SW-B/MW-2 |
| Pace Project No.: | 92215323 |

**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



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

## SAMPLE SUMMARY

Project: WAYNE CLOSED MSWLF SW-B/MW-2
Pace Project No.: 92215323

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| **92215323001** | **SW-BYMW-2** | Water | 08/27/14 17:15 | 08/28/14 14:48 |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

## SAMPLE ANALYTE COUNT

Project: WAYNE CLOSED MSWLF SW-B/MW-2
Pace Project No.: 92215323

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **92215323001** | **SW-BYMW-2** | EPA 8260 | MCK | 67 | PASI-C |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF SW-B/MW-2
Pace Project No.: 92215323

**Sample: SW-BYMW-2** **Lab ID: 92215323001** Collected: 08/27/14 17:15 Received: 08/28/14 14:48 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 | | 08/29/14 19:53 | 67-64-1 | |
| Acetonitrile | ND | ug/L | 55.0 | 2.2 | 1 | | 08/29/14 19:53 | 75-05-8 | |
| Acrolein | ND | ug/L | 53.0 | 1.6 | 1 | | 08/29/14 19:53 | 107-02-8 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 08/29/14 19:53 | 107-13-1 | |
| Allyl chloride | ND | ug/L | 10.0 | 1.5 | 1 | | 08/29/14 19:53 | 107-05-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 08/29/14 19:53 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 08/29/14 19:53 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 08/29/14 19:53 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 08/29/14 19:53 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 08/29/14 19:53 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 08/29/14 19:53 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 08/29/14 19:53 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 08/29/14 19:53 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 08/29/14 19:53 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 08/29/14 19:53 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 08/29/14 19:53 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 08/29/14 19:53 | 74-87-3 | |
| Chloroprene | ND | ug/L | 20.0 | 0.27 | 1 | | 08/29/14 19:53 | 126-99-8 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 08/29/14 19:53 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 08/29/14 19:53 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 08/29/14 19:53 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 08/29/14 19:53 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 08/29/14 19:53 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/L | 5.0 | 0.24 | 1 | | 08/29/14 19:53 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 08/29/14 19:53 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 08/29/14 19:53 | 110-57-6 | |
| Dichlorodifluoromethane | ND | ug/L | 5.0 | 0.21 | 1 | | 08/29/14 19:53 | 75-71-8 | M1 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 08/29/14 19:53 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 08/29/14 19:53 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 08/29/14 19:53 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 08/29/14 19:53 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 08/29/14 19:53 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 08/29/14 19:53 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 08/29/14 19:53 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/L | 15.0 | 0.13 | 1 | | 08/29/14 19:53 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/L | 5.0 | 0.49 | 1 | | 08/29/14 19:53 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 08/29/14 19:53 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/29/14 19:53 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 08/29/14 19:53 | 100-41-4 | M1,R1 |
| Ethyl methacrylate | ND | ug/L | 10.0 | 0.20 | 1 | | 08/29/14 19:53 | 97-63-2 | |
| Hexachloro-1,3-butadiene | ND | ug/L | 10.0 | 0.71 | 1 | | 08/29/14 19:53 | 87-68-3 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 08/29/14 19:53 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 08/29/14 19:53 | 74-88-4 | |
| Isobutanol | ND | ug/L | 100 | 35.0 | 1 | | 08/29/14 19:53 | 78-83-1 | |
| Methacrylonitrile | ND | ug/L | 100 | 0.93 | 1 | | 08/29/14 19:53 | 126-98-7 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 08/29/14 19:53 | 75-09-2 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE CLOSED MSWLF SW-B/MW-2
Pace Project No.: 92215323

**Sample: SW-BYMW-2** **Lab ID: 92215323001** Collected: 08/27/14 17:15 Received: 08/28/14 14:48 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Methyl methacrylate | ND | ug/L | 30.0 | 2.0 | 1 | | 08/29/14 19:53 | 80-62-6 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 08/29/14 19:53 | 108-10-1 | |
| Naphthalene | ND | ug/L | 10.0 | 0.24 | 1 | | 08/29/14 19:53 | 91-20-3 | M1,R1 |
| Propionitrile | ND | ug/L | 150 | 3.6 | 1 | | 08/29/14 19:53 | 107-12-0 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/29/14 19:53 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 08/29/14 19:53 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 08/29/14 19:53 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 08/29/14 19:53 | 127-18-4 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/29/14 19:53 | 108-88-3 | |
| 1,2,4-Trichlorobenzene | ND | ug/L | 10.0 | 0.35 | 1 | | 08/29/14 19:53 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 08/29/14 19:53 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 08/29/14 19:53 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 08/29/14 19:53 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 08/29/14 19:53 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 08/29/14 19:53 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 08/29/14 19:53 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 08/29/14 19:53 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 08/29/14 19:53 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 98 | % | 70-130 | | 1 | | 08/29/14 19:53 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 110 | % | 70-130 | | 1 | | 08/29/14 19:53 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 08/29/14 19:53 | 2037-26-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE CLOSED MSWLF SW-B/MW-2
Pace Project No.: 92215323

QC Batch: MSV/28135 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92215323001

METHOD BLANK: 1275213 | Matrix: Water
Associated Lab Samples: 92215323001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | ND | 5.0 | 08/29/14 14:37 | |
| 1,1,1-Trichloroethane | ug/L | ND | 1.0 | 08/29/14 14:37 | |
| 1,1,2,2-Tetrachloroethane | ug/L | ND | 3.0 | 08/29/14 14:37 | |
| 1,1,2-Trichloroethane | ug/L | ND | 1.0 | 08/29/14 14:37 | |
| 1,1-Dichloroethane | ug/L | ND | 5.0 | 08/29/14 14:37 | |
| 1,1-Dichloroethene | ug/L | ND | 5.0 | 08/29/14 14:37 | |
| 1,1-Dichloropropene | ug/L | ND | 5.0 | 08/29/14 14:37 | |
| 1,2,3-Trichloropropane | ug/L | ND | 1.0 | 08/29/14 14:37 | |
| 1,2,4-Trichlorobenzene | ug/L | ND | 10.0 | 08/29/14 14:37 | |
| 1,2-Dibromo-3-chloropropane | ug/L | ND | 13.0 | 08/29/14 14:37 | |
| 1,2-Dibromoethane (EDB) | ug/L | ND | 1.0 | 08/29/14 14:37 | |
| 1,2-Dichlorobenzene | ug/L | ND | 5.0 | 08/29/14 14:37 | |
| 1,2-Dichloroethane | ug/L | ND | 1.0 | 08/29/14 14:37 | |
| 1,2-Dichloropropane | ug/L | ND | 1.0 | 08/29/14 14:37 | |
| 1,3-Dichlorobenzene | ug/L | ND | 5.0 | 08/29/14 14:37 | |
| 1,3-Dichloropropane | ug/L | ND | 1.0 | 08/29/14 14:37 | |
| 1,4-Dichlorobenzene | ug/L | ND | 1.0 | 08/29/14 14:37 | |
| 2,2-Dichloropropane | ug/L | ND | 15.0 | 08/29/14 14:37 | |
| 2-Butanone (MEK) | ug/L | ND | 100 | 08/29/14 14:37 | |
| 2-Hexanone | ug/L | ND | 50.0 | 08/29/14 14:37 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | ND | 100 | 08/29/14 14:37 | |
| Acetone | ug/L | ND | 100 | 08/29/14 14:37 | |
| Acetonitrile | ug/L | ND | 55.0 | 08/29/14 14:37 | |
| Acrolein | ug/L | ND | 53.0 | 08/29/14 14:37 | |
| Acrylonitrile | ug/L | ND | 200 | 08/29/14 14:37 | |
| Allyl chloride | ug/L | ND | 10.0 | 08/29/14 14:37 | |
| Benzene | ug/L | ND | 1.0 | 08/29/14 14:37 | |
| Bromochloromethane | ug/L | ND | 3.0 | 08/29/14 14:37 | |
| Bromodichloromethane | ug/L | ND | 1.0 | 08/29/14 14:37 | |
| Bromoform | ug/L | ND | 3.0 | 08/29/14 14:37 | |
| Bromomethane | ug/L | ND | 10.0 | 08/29/14 14:37 | |
| Carbon disulfide | ug/L | ND | 100 | 08/29/14 14:37 | |
| Carbon tetrachloride | ug/L | ND | 1.0 | 08/29/14 14:37 | |
| Chlorobenzene | ug/L | ND | 3.0 | 08/29/14 14:37 | |
| Chloroethane | ug/L | ND | 10.0 | 08/29/14 14:37 | |
| Chloroform | ug/L | ND | 5.0 | 08/29/14 14:37 | |
| Chloromethane | ug/L | ND | 1.0 | 08/29/14 14:37 | |
| Chloroprene | ug/L | ND | 20.0 | 08/29/14 14:37 | |
| cis-1,2-Dichloroethene | ug/L | ND | 5.0 | 08/29/14 14:37 | |
| cis-1,3-Dichloropropene | ug/L | ND | 1.0 | 08/29/14 14:37 | |
| Dibromochloromethane | ug/L | ND | 3.0 | 08/29/14 14:37 | |

**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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE CLOSED MSWLF SW-B/MW-2
Pace Project No.: 92215323

METHOD BLANK: 1275213 Matrix: Water
Associated Lab Samples: 92215323001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Dibromomethane | ug/L | ND | 10.0 | 08/29/14 14:37 | |
| Dichlorodifluoromethane | ug/L | ND | 5.0 | 08/29/14 14:37 | |
| Ethyl methacrylate | ug/L | ND | 10.0 | 08/29/14 14:37 | |
| Ethylbenzene | ug/L | ND | 1.0 | 08/29/14 14:37 | |
| Hexachloro-1,3-butadiene | ug/L | ND | 10.0 | 08/29/14 14:37 | |
| Iodomethane | ug/L | ND | 10.0 | 08/29/14 14:37 | |
| Isobutanol | ug/L | ND | 100 | 08/29/14 14:37 | |
| Methacrylonitrile | ug/L | ND | 100 | 08/29/14 14:37 | |
| Methyl methacrylate | ug/L | ND | 30.0 | 08/29/14 14:37 | |
| Methylene Chloride | ug/L | ND | 1.0 | 08/29/14 14:37 | |
| Naphthalene | ug/L | ND | 10.0 | 08/29/14 14:37 | |
| Propionitrile | ug/L | ND | 150 | 08/29/14 14:37 | |
| Styrene | ug/L | ND | 1.0 | 08/29/14 14:37 | |
| Tetrachloroethene | ug/L | ND | 1.0 | 08/29/14 14:37 | |
| Toluene | ug/L | ND | 1.0 | 08/29/14 14:37 | |
| trans-1,2-Dichloroethene | ug/L | ND | 5.0 | 08/29/14 14:37 | |
| trans-1,3-Dichloropropene | ug/L | ND | 1.0 | 08/29/14 14:37 | |
| trans-1,4-Dichloro-2-butene | ug/L | ND | 100 | 08/29/14 14:37 | |
| Trichloroethene | ug/L | ND | 1.0 | 08/29/14 14:37 | |
| Trichlorofluoromethane | ug/L | ND | 1.0 | 08/29/14 14:37 | |
| Vinyl acetate | ug/L | ND | 50.0 | 08/29/14 14:37 | |
| Vinyl chloride | ug/L | ND | 1.0 | 08/29/14 14:37 | |
| Xylene (Total) | ug/L | ND | 5.0 | 08/29/14 14:37 | |
| 1,2-Dichloroethane-d4 (S) | % | 108 | 70-130 | 08/29/14 14:37 | |
| 4-Bromofluorobenzene (S) | % | 100 | 70-130 | 08/29/14 14:37 | |
| Toluene-d8 (S) | % | 100 | 70-130 | 08/29/14 14:37 | |

LABORATORY CONTROL SAMPLE: 1275214

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | 50 | 50.6 | 101 | 80-125 | |
| 1,1,1-Trichloroethane | ug/L | 50 | 52.6 | 105 | 71-129 | |
| 1,1,2,2-Tetrachloroethane | ug/L | 50 | 48.8 | 98 | 79-124 | |
| 1,1,2-Trichloroethane | ug/L | 50 | 50.8 | 102 | 85-125 | |
| 1,1-Dichloroethane | ug/L | 50 | 52.7 | 105 | 73-126 | |
| 1,1-Dichloroethene | ug/L | 50 | 51.7 | 103 | 66-135 | |
| 1,1-Dichloropropene | ug/L | 50 | 52.8 | 106 | 74-135 | |
| 1,2,3-Trichloropropane | ug/L | 50 | 51.6 | 103 | 75-130 | |
| 1,2,4-Trichlorobenzene | ug/L | 50 | 50.4 | 101 | 75-134 | |
| 1,2-Dibromo-3-chloropropane | ug/L | 50 | 47.6 | 95 | 71-133 | |
| 1,2-Dibromoethane (EDB) | ug/L | 50 | 51.1 | 102 | 83-124 | |
| 1,2-Dichlorobenzene | ug/L | 50 | 49.4 | 99 | 80-133 | |
| 1,2-Dichloroethane | ug/L | 50 | 52.3 | 105 | 67-128 | |
| 1,2-Dichloropropane | ug/L | 50 | 49.2 | 98 | 75-132 | |

**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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE CLOSED MSWLF SW-B/MW-2
Pace Project No.: 92215323

LABORATORY CONTROL SAMPLE: 1275214

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,3-Dichlorobenzene | ug/L | 50 | 48.8 | 98 | 77-130 | |
| 1,3-Dichloropropane | ug/L | 50 | 50.5 | 101 | 76-131 | |
| 1,4-Dichlorobenzene | ug/L | 50 | 49.5 | 99 | 78-130 | |
| 2,2-Dichloropropane | ug/L | 50 | 62.0 | 124 | 40-160 | |
| 2-Butanone (MEK) | ug/L | 100 | 101 | 101 | 61-144 | |
| 2-Hexanone | ug/L | 100 | 101 | 101 | 68-143 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | 100 | 101 | 101 | 72-135 | |
| Acetone | ug/L | 100 | 101 | 101 | 48-146 | |
| Acetonitrile | ug/L | 500 | 472 | 94 | 62-150 | |
| Acrolein | ug/L | 250 | 262 | 105 | 24-160 | |
| Acrylonitrile | ug/L | 250 | 249 | 100 | 40-160 | |
| Allyl chloride | ug/L | 50 | 46.4 | 93 | 66-137 | |
| Benzene | ug/L | 50 | 47.9 | 96 | 80-125 | |
| Bromochloromethane | ug/L | 50 | 50.6 | 101 | 71-125 | |
| Bromodichloromethane | ug/L | 50 | 55.6 | 111 | 78-124 | |
| Bromoform | ug/L | 50 | 53.4 | 107 | 71-128 | |
| Bromomethane | ug/L | 50 | 50.8 | 102 | 40-160 | |
| Carbon disulfide | ug/L | 50 | 46.5J | 93 | 50-160 | |
| Carbon tetrachloride | ug/L | 50 | 52.4 | 105 | 69-131 | |
| Chlorobenzene | ug/L | 50 | 49.2 | 98 | 81-122 | |
| Chloroethane | ug/L | 50 | 51.7 | 103 | 39-148 | |
| Chloroform | ug/L | 50 | 55.2 | 110 | 73-127 | |
| Chloromethane | ug/L | 50 | 50.7 | 101 | 44-146 | |
| Chloroprene | ug/L | 50 | 51.7 | 103 | 75-145 | |
| cis-1,2-Dichloroethene | ug/L | 50 | 53.3 | 107 | 74-124 | |
| cis-1,3-Dichloropropene | ug/L | 50 | 51.3 | 103 | 72-132 | |
| Dibromochloromethane | ug/L | 50 | 57.8 | 116 | 78-125 | |
| Dibromomethane | ug/L | 50 | 50.1 | 100 | 82-120 | |
| Dichlorodifluoromethane | ug/L | 50 | 69.7 | 139 | 34-157 | |
| Ethyl methacrylate | ug/L | 50 | 53.5 | 107 | 82-121 | |
| Ethylbenzene | ug/L | 50 | 50.3 | 101 | 79-121 | |
| Hexachloro-1,3-butadiene | ug/L | 50 | 52.2 | 104 | 72-131 | |
| Iodomethane | ug/L | 100 | 80.1 | 80 | 39-154 | |
| Isobutanol | ug/L | 1000 | 948 | 95 | 34-160 | |
| Methacrylonitrile | ug/L | 500 | 502 | 100 | 74-134 | |
| Methyl methacrylate | ug/L | 50 | 52.1 | 104 | 84-124 | |
| Methylene Chloride | ug/L | 50 | 49.8 | 100 | 64-133 | |
| Naphthalene | ug/L | 50 | 49.1 | 98 | 73-133 | |
| Propionitrile | ug/L | 500 | 491 | 98 | 73-140 | |
| Styrene | ug/L | 50 | 51.8 | 104 | 84-126 | |
| Tetrachloroethene | ug/L | 50 | 53.8 | 108 | 78-122 | |
| Toluene | ug/L | 50 | 48.5 | 97 | 80-121 | |
| trans-1,2-Dichloroethene | ug/L | 50 | 53.2 | 106 | 71-127 | |
| trans-1,3-Dichloropropene | ug/L | 50 | 51.8 | 104 | 69-141 | |
| trans-1,4-Dichloro-2-butene | ug/L | 50 | 47.2J | 94 | 40-160 | |
| Trichloroethene | ug/L | 50 | 50.1 | 100 | 78-122 | |
| Trichlorofluoromethane | ug/L | 50 | 51.3 | 103 | 53-137 | |

**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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE CLOSED MSWLF SW-B/MW-2
Pace Project No.: 92215323

LABORATORY CONTROL SAMPLE: 1275214

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Vinyl acetate | ug/L | 100 | 129 | 129 | 40-160 | |
| Vinyl chloride | ug/L | 50 | 53.1 | 106 | 58-137 | |
| Xylene (Total) | ug/L | 150 | 150 | 100 | 81-126 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 103 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 102 | 70-130 | |
| Toluene-d8 (S) | % | | | 101 | 70-130 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1275215 1275216

| Parameter | Units | 92215323001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | ND | 20 | 20 | 21.5 | 20.9 | 108 | 104 | 70-130 | 3 | 30 | |
| 1,1,1-Trichloroethane | ug/L | ND | 20 | 20 | 23.5 | 23.5 | 118 | 117 | 70-130 | 0 | 30 | |
| 1,1,2,2-Tetrachloroethane | ug/L | ND | 20 | 20 | 20.8 | 19.9 | 104 | 99 | 70-130 | 4 | 30 | |
| 1,1,2-Trichloroethane | ug/L | ND | 20 | 20 | 21.0 | 21.1 | 105 | 105 | 70-130 | 0 | 30 | |
| 1,1-Dichloroethane | ug/L | ND | 20 | 20 | 23.2 | 23.0 | 116 | 115 | 70-130 | 1 | 30 | |
| 1,1-Dichloroethene | ug/L | ND | 20 | 20 | 22.5 | 22.7 | 113 | 113 | 70-166 | 1 | 30 | |
| 1,1-Dichloropropene | ug/L | ND | 20 | 20 | 23.2 | 22.8 | 116 | 114 | 70-130 | 2 | 30 | |
| 1,2,3-Trichloropropane | ug/L | ND | 20 | 20 | 20.8 | 20.7 | 104 | 103 | 70-130 | 1 | 30 | |
| 1,2,4-Trichlorobenzene | ug/L | ND | 20 | 20 | 19.0 | 18.3 | 95 | 92 | 70-130 | 4 | 30 | |
| 1,2-Dibromo-3-chloropropane | ug/L | ND | 20 | 20 | 20.5 | 19.9 | 103 | 99 | 70-130 | 3 | 30 | |
| 1,2-Dibromoethane (EDB) | ug/L | ND | 20 | 20 | 21.2 | 20.7 | 106 | 103 | 70-130 | 2 | 30 | |
| 1,2-Dichlorobenzene | ug/L | ND | 20 | 20 | 20.1 | 19.7 | 101 | 99 | 70-130 | 2 | 30 | |
| 1,2-Dichloroethane | ug/L | ND | 20 | 20 | 23.5 | 22.7 | 117 | 114 | 70-130 | 3 | 30 | |
| 1,2-Dichloropropane | ug/L | ND | 20 | 20 | 21.7 | 21.4 | 108 | 107 | 70-130 | 1 | 30 | |
| 1,3-Dichlorobenzene | ug/L | ND | 20 | 20 | 19.9 | 19.5 | 100 | 97 | 70-130 | 2 | 30 | |
| 1,3-Dichloropropane | ug/L | ND | 20 | 20 | 21.4 | 20.5 | 107 | 102 | 70-130 | 4 | 30 | |
| 1,4-Dichlorobenzene | ug/L | ND | 20 | 20 | 20.4 | 19.6 | 102 | 98 | 70-130 | 4 | 30 | |
| 2,2-Dichloropropane | ug/L | ND | 20 | 20 | 24.3 | 23.9 | 121 | 119 | 70-130 | 1 | 30 | |
| 2-Butanone (MEK) | ug/L | ND | 40 | 40 | 46.3J | 42.1J | 116 | 105 | 70-130 | 9 | 30 | |
| 2-Hexanone | ug/L | ND | 40 | 40 | 40.8J | 38.3J | 102 | 96 | 70-130 | 6 | 30 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | ND | 40 | 40 | 44.9J | 42.9J | 112 | 107 | 70-130 | 5 | 30 | |
| Acetone | ug/L | ND | 40 | 40 | 51.7J | 47.5J | 123 | 113 | 70-130 | 8 | 30 | |
| Acetonitrile | ug/L | ND | 200 | 200 | 192 | 191 | 96 | 95 | 70-130 | 1 | 30 | |
| Acrolein | ug/L | ND | 100 | 100 | 99.1 | 92.3 | 99 | 92 | 70-130 | 7 | 30 | |
| Acrylonitrile | ug/L | ND | 100 | 100 | 99.7J | 99.8J | 100 | 100 | 70-130 | 0 | 30 | |
| Allyl chloride | ug/L | ND | 20 | 20 | 18.8 | 18.8 | 94 | 94 | 70-130 | 0 | 30 | |
| Benzene | ug/L | ND | 20 | 20 | 22.1 | 22.4 | 111 | 112 | 70-148 | 1 | 30 | |
| Bromochloromethane | ug/L | ND | 20 | 20 | 21.6 | 21.2 | 108 | 106 | 70-130 | 2 | 30 | |
| Bromodichloromethane | ug/L | ND | 20 | 20 | 24.4 | 23.7 | 122 | 118 | 70-130 | 3 | 30 | |
| Bromoform | ug/L | ND | 20 | 20 | 21.7 | 20.4 | 108 | 102 | 70-130 | 6 | 30 | |
| Bromomethane | ug/L | ND | 20 | 20 | 20.7 | 20.7 | 104 | 104 | 70-130 | 0 | 30 | |
| Carbon disulfide | ug/L | ND | 20 | 20 | 19.4J | 19.4J | 97 | 97 | 70-130 | 0 | 30 | |
| Carbon tetrachloride | ug/L | ND | 20 | 20 | 24.0 | 23.7 | 120 | 118 | 70-130 | 1 | 30 | |

**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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE CLOSED MSWLF SW-B/MW-2
Pace Project No.: 92215323

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1275215 1275216

| Parameter | Units | 92215323001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chlorobenzene | ug/L | ND | 20 | 20 | 21.3 | 20.7 | 106 | 103 | 70-146 | 3 | 30 | |
| Chloroethane | ug/L | ND | 20 | 20 | 22.2 | 22.5 | 111 | 112 | 70-130 | 1 | 30 | |
| Chloroform | ug/L | ND | 20 | 20 | 24.0 | 24.1 | 120 | 121 | 70-130 | 0 | 30 | |
| Chloromethane | ug/L | ND | 20 | 20 | 21.6 | 22.9 | 108 | 114 | 70-130 | 6 | 30 | |
| Chloroprene | ug/L | ND | 20 | 20 | 23.0 | 22.9 | 115 | 114 | 70-130 | 0 | 30 | |
| cis-1,2-Dichloroethene | ug/L | ND | 20 | 20 | 23.4 | 23.1 | 117 | 115 | 70-130 | 1 | 30 | |
| cis-1,3-Dichloropropene | ug/L | ND | 20 | 20 | 21.4 | 20.7 | 107 | 103 | 70-130 | 3 | 30 | |
| Dibromochloromethane | ug/L | ND | 20 | 20 | 24.2 | 23.1 | 121 | 115 | 70-130 | 5 | 30 | |
| Dibromomethane | ug/L | ND | 20 | 20 | 21.4 | 20.6 | 107 | 103 | 70-130 | 4 | 30 | |
| Dichlorodifluoromethane | ug/L | ND | 20 | 20 | 31.4 | 31.2 | 157 | 156 | 70-130 | 1 | 30 | M1 |
| Ethyl methacrylate | ug/L | ND | 20 | 20 | 23.1 | 22.2 | 115 | 111 | 70-130 | 4 | 30 | |
| Ethylbenzene | ug/L | ND | 20 | 20 | 29.2 | 46.5 | 146 | 233 | 70-130 | 46 | 30 | M1,R1 |
| Hexachloro-1,3-butadiene | ug/L | ND | 20 | 20 | 19.6 | 19.3 | 98 | 96 | 70-130 | 2 | 30 | |
| Iodomethane | ug/L | ND | 40 | 40 | 32.7 | 31.7 | 82 | 79 | 70-130 | 3 | 30 | |
| Isobutanol | ug/L | ND | 400 | 400 | 395 | 356 | 99 | 89 | 70-130 | 10 | 30 | |
| Methacrylonitrile | ug/L | ND | 200 | 200 | 211 | 203 | 105 | 101 | 70-130 | 4 | 30 | |
| Methyl methacrylate | ug/L | ND | 20 | 20 | 22.9J | 22.1J | 115 | 110 | 70-130 | 4 | 30 | |
| Methylene Chloride | ug/L | ND | 20 | 20 | 19.7 | 19.7 | 99 | 98 | 70-130 | 0 | 30 | |
| Naphthalene | ug/L | ND | 20 | 20 | 26.6 | 40.6 | 133 | 203 | 70-130 | 42 | 30 | M1,R1 |
| Propionitrile | ug/L | ND | 200 | 200 | 206 | 194 | 103 | 97 | 70-130 | 6 | 30 | |
| Styrene | ug/L | ND | 20 | 20 | 21.1 | 20.8 | 105 | 104 | 70-130 | 1 | 30 | |
| Tetrachloroethene | ug/L | ND | 20 | 20 | 22.6 | 22.4 | 113 | 112 | 70-130 | 1 | 30 | |
| Toluene | ug/L | ND | 20 | 20 | 23.1 | 23.5 | 115 | 118 | 70-155 | 2 | 30 | |
| trans-1,2-Dichloroethene | ug/L | ND | 20 | 20 | 23.2 | 22.8 | 116 | 114 | 70-130 | 2 | 30 | |
| trans-1,3-Dichloropropene | ug/L | ND | 20 | 20 | 21.3 | 20.7 | 106 | 104 | 70-130 | 3 | 30 | |
| trans-1,4-Dichloro-2-butene | ug/L | ND | 20 | 20 | 19.4J | 20.2J | 97 | 101 | 70-130 | 4 | 30 | |
| Trichloroethene | ug/L | ND | 20 | 20 | 21.9 | 22.0 | 110 | 110 | 69-151 | 0 | 30 | |
| Trichlorofluoromethane | ug/L | ND | 20 | 20 | 23.2 | 23.1 | 116 | 116 | 70-130 | 0 | 30 | |
| Vinyl acetate | ug/L | ND | 40 | 40 | 45.0J | 44.4J | 113 | 111 | 70-130 | 1 | 30 | |
| Vinyl chloride | ug/L | ND | 20 | 20 | 23.3 | 23.4 | 117 | 117 | 70-130 | 0 | 30 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | | | 109 | 109 | 70-130 | | | |
| 4-Bromofluorobenzene (S) | % | | | | | | 100 | 99 | 70-130 | | | |
| Toluene-d8 (S) | % | | | | | | 100 | 101 | 70-130 | | | |

**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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALIFIERS

Project: WAYNE CLOSED MSWLF SW-B/MW-2
Pace Project No.: 92215323

## 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-C | Pace Analytical Services - Charlotte |

## ANALYTE QUALIFIERS

| | |
|---|---|
| M1 | Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery. |
| R1 | RPD value was outside control limits. |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WAYNE CLOSED MSWLF SW-B/MW-2
Pace Project No.: 92215323

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **92215323001** | **SW-BYMW-2** | EPA 8260 | MSV/28135 | | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

| 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 Eng.

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

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

Optional
Proj. Due Date:
Proj. Name:

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

**Thermometer Used: IR Gun 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.:** 2.2 °C **Biological Tissue is Frozen:** Yes No N/A

**Date and Initials of person examining contents:** 8/28/14

Temp should be above freezing to 6°C

| | | | | Comments: |
|---|---|---|---|---|
| Chain of Custody Present: | ☑Yes | ☐No | ☐N/A | 1. |
| Chain of Custody Filled Out: | ☑Yes | ☐No | ☐N/A | 2. |
| Chain of Custody Relinquished: | ☑Yes | ☐No | ☐N/A | 3. |
| Sampler Name & Signature on COC: | ☑Yes | ☐No | ☐N/A | 4. |
| Samples Arrived within Hold Time: | ☑Yes | ☐No | ☐N/A | 5. |
| **Short Hold Time Analysis (<72hr):** | ☐Yes | ☑No | ☐N/A | 6. |
| **Rush Turn Around Time Requested:** | ☐Yes | ☑No | ☐N/A | 7. |
| Sufficient Volume: | ☑Yes | ☐No | ☐N/A | 8. |
| Correct Containers Used: | ☑Yes | ☐No | ☐N/A | 9. |
| -Pace Containers Used: | ☑Yes | ☐No | ☐N/A | |
| Containers Intact: | ☑Yes | ☐No | ☐N/A | 10. |
| Filtered volume received for Dissolved tests | ☐Yes | ☐No | ☑N/A | 11. |
| Sample Labels match COC: | ☑Yes | ☐No | ☐N/A | 12. |
| -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:** | JDB | **Date:** | 8/28/14 |
| **SRF Review:** | KKH | **Date:** | 8/29/14 |

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# : 92215323**

92215323

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: | Wayne Closed MSWLF SW-ByMW-2 |
| Container Order Number: | |

**Section C** — Invoice Information:

| | |
|---|---|
| Attention: | Municipal Engineering Services |
| Company Name: | |
| Address: | |
| Pace Quote Reference: | |
| Pace Project Manager: | Kevin Godwin |
| Pace Profile #: | 2103-2 |

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

Requested Analysis Filtered (Y/N)

| ITEM# | SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique) | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED START DATE | COLLECTED START TIME | COLLECTED END DATE | COLLECTED END TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Unpreserved | H2SO4 | HNO3 | HCl | NaOH | Na2S2O3 | Methanol | Other | Analyses Test Y/N | VOCs (Appendix II) | N | N | N | N | N | N | N | N | N | N | N | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SW-ByMW-2 | WT | G | | 8/27/14 | 5:15 | | | | | | | 3 | | | | | | X | | | | | | | | | | | | 9821533 |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 001 |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | MESCO | 8/27/14 | 6:00PM | PACE | 8-27-14 | 0845 | | | | |
| | Left in office Locked | | | | | | | | | |
| | PACE | 8-27-14 | 1448 | PACE | 8/28/14 | 1448 | 2.2 | Y | N | Y |
| | | | | | | | 2.2 4/0x | | | |
| | | | | | | | 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: 8/27/14

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

September 08, 2014

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

RE: Project: WAYNE MSWLF BLANKS
Pace Project No.: 92215309

Dear Mr. Pfohl:
Enclosed are the analytical results for sample(s) received by the laboratory on August 28, 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



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# CERTIFICATIONS

Project: WAYNE MSWLF BLANKS
Pace Project No.: 92215309

**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



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

## SAMPLE SUMMARY

Project: WAYNE MSWLF BLANKS
Pace Project No.: 92215309

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| **92215309001** | **EB** | Water | 08/27/14 17:10 | 08/28/14 14:48 |
| **92215309002** | **FB** | Water | 08/27/14 17:05 | 08/28/14 14:48 |
| **92215309003** | **TB** | Water | 08/27/14 00:00 | 08/28/14 14:48 |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

## SAMPLE ANALYTE COUNT

Project: WAYNE MSWLF BLANKS
Pace Project No.: 92215309

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **92215309001** | **EB** | EPA 6010 | SH1 | 15 | PASI-A |
| | | EPA 7470 | HVK | 1 | PASI-A |
| | | EPA 8260 | MCK | 51 | PASI-C |
| **92215309002** | **FB** | EPA 6010 | SH1 | 15 | PASI-A |
| | | EPA 7470 | HVK | 1 | PASI-A |
| | | EPA 8260 | MCK | 51 | PASI-C |
| **92215309003** | **TB** | EPA 8260 | MCK | 51 | PASI-C |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE MSWLF BLANKS
Pace Project No.: 92215309

**Sample: EB** **Lab ID: 92215309001** Collected: 08/27/14 17:10 Received: 08/28/14 14:48 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 | 08/29/14 15:40 | 09/06/14 01:10 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:10 | 7440-38-2 | |
| Barium | ND | ug/L | 100 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:10 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 15:40 | 09/06/14 01:10 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 15:40 | 09/06/14 01:10 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:10 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:10 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:10 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:10 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:10 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 15:40 | 09/06/14 01:10 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:10 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 08/29/14 15:40 | 09/06/14 01:10 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:10 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 15:40 | 09/06/14 01:10 | 7440-66-6 | |
| **7470 Mercury** | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | | |
| Mercury | ND | ug/L | 0.20 | 0.10 | 1 | 08/29/14 12:30 | 08/30/14 16:30 | 7439-97-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | **10.3J** | ug/L | 100 | 10.0 | 1 | | 08/29/14 20:09 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 08/29/14 20:09 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 08/29/14 20:09 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 08/29/14 20:09 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 08/29/14 20:09 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 08/29/14 20:09 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 08/29/14 20:09 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 08/29/14 20:09 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 08/29/14 20:09 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 08/29/14 20:09 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 08/29/14 20:09 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 08/29/14 20:09 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 08/29/14 20:09 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 08/29/14 20:09 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 08/29/14 20:09 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 08/29/14 20:09 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 08/29/14 20:09 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 08/29/14 20:09 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 08/29/14 20:09 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 08/29/14 20:09 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 08/29/14 20:09 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 08/29/14 20:09 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 08/29/14 20:09 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 08/29/14 20:09 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 08/29/14 20:09 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 08/29/14 20:09 | 156-60-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE MSWLF BLANKS
Pace Project No.: 92215309

**Sample: EB** **Lab ID: 92215309001** Collected: 08/27/14 17:10 Received: 08/28/14 14:48 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 08/29/14 20:09 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 08/29/14 20:09 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 08/29/14 20:09 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/29/14 20:09 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 08/29/14 20:09 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 08/29/14 20:09 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 08/29/14 20:09 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 08/29/14 20:09 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 08/29/14 20:09 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/29/14 20:09 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 08/29/14 20:09 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 08/29/14 20:09 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 08/29/14 20:09 | 127-18-4 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/29/14 20:09 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 08/29/14 20:09 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 08/29/14 20:09 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 08/29/14 20:09 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 08/29/14 20:09 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 08/29/14 20:09 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 08/29/14 20:09 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 08/29/14 20:09 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 08/29/14 20:09 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 99 | % | 70-130 | | 1 | | 08/29/14 20:09 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 112 | % | 70-130 | | 1 | | 08/29/14 20:09 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 08/29/14 20:09 | 2037-26-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE MSWLF BLANKS
Pace Project No.: 92215309

**Sample: FB** **Lab ID: 92215309002** Collected: 08/27/14 17:05 Received: 08/28/14 14:48 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 | 08/29/14 15:40 | 09/06/14 01:13 | 7440-36-0 | |
| Arsenic | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:13 | 7440-38-2 | |
| Barium | ND | ug/L | 100 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:13 | 7440-39-3 | |
| Beryllium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 15:40 | 09/06/14 01:13 | 7440-41-7 | |
| Cadmium | ND | ug/L | 1.0 | 1.0 | 1 | 08/29/14 15:40 | 09/06/14 01:13 | 7440-43-9 | |
| Chromium | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:13 | 7440-47-3 | |
| Cobalt | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:13 | 7440-48-4 | |
| Copper | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:13 | 7440-50-8 | |
| Lead | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:13 | 7439-92-1 | |
| Nickel | ND | ug/L | 50.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:13 | 7440-02-0 | |
| Selenium | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 15:40 | 09/06/14 01:13 | 7782-49-2 | |
| Silver | ND | ug/L | 10.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:13 | 7440-22-4 | |
| Thallium | ND | ug/L | 5.5 | 5.4 | 1 | 08/29/14 15:40 | 09/06/14 01:13 | 7440-28-0 | |
| Vanadium | ND | ug/L | 25.0 | 5.0 | 1 | 08/29/14 15:40 | 09/06/14 01:13 | 7440-62-2 | |
| Zinc | ND | ug/L | 10.0 | 10.0 | 1 | 08/29/14 15:40 | 09/06/14 01:13 | 7440-66-6 | |
| **7470 Mercury** | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | | |
| Mercury | ND | ug/L | 0.20 | 0.10 | 1 | 08/29/14 12:30 | 08/30/14 16:33 | 7439-97-6 | |
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | **10.2J** | ug/L | 100 | 10.0 | 1 | | 08/29/14 20:24 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 08/29/14 20:24 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 08/29/14 20:24 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 08/29/14 20:24 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 08/29/14 20:24 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 08/29/14 20:24 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 08/29/14 20:24 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 08/29/14 20:24 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 08/29/14 20:24 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 08/29/14 20:24 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 08/29/14 20:24 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 08/29/14 20:24 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 08/29/14 20:24 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 08/29/14 20:24 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 08/29/14 20:24 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 08/29/14 20:24 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 08/29/14 20:24 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 08/29/14 20:24 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 08/29/14 20:24 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 08/29/14 20:24 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 08/29/14 20:24 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 08/29/14 20:24 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 08/29/14 20:24 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 08/29/14 20:24 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 08/29/14 20:24 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 08/29/14 20:24 | 156-60-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE MSWLF BLANKS
Pace Project No.: 92215309

**Sample: FB** **Lab ID: 92215309002** Collected: 08/27/14 17:05 Received: 08/28/14 14:48 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 08/29/14 20:24 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 08/29/14 20:24 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 08/29/14 20:24 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/29/14 20:24 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 08/29/14 20:24 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 08/29/14 20:24 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 08/29/14 20:24 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 08/29/14 20:24 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 08/29/14 20:24 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/29/14 20:24 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 08/29/14 20:24 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 08/29/14 20:24 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 08/29/14 20:24 | 127-18-4 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/29/14 20:24 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 08/29/14 20:24 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 08/29/14 20:24 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 08/29/14 20:24 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 08/29/14 20:24 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 08/29/14 20:24 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 08/29/14 20:24 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 08/29/14 20:24 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 08/29/14 20:24 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 100 | % | 70-130 | | 1 | | 08/29/14 20:24 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 112 | % | 70-130 | | 1 | | 08/29/14 20:24 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 08/29/14 20:24 | 2037-26-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE MSWLF BLANKS
Pace Project No.: 92215309

**Sample: TB** **Lab ID: 92215309003** Collected: 08/27/14 00:00 Received: 08/28/14 14:48 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Acetone | **16.5J** | ug/L | 100 | 10.0 | 1 | | 08/29/14 20:40 | 67-64-1 | |
| Acrylonitrile | ND | ug/L | 200 | 1.9 | 1 | | 08/29/14 20:40 | 107-13-1 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 08/29/14 20:40 | 71-43-2 | |
| Bromochloromethane | ND | ug/L | 3.0 | 0.17 | 1 | | 08/29/14 20:40 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 0.18 | 1 | | 08/29/14 20:40 | 75-27-4 | |
| Bromoform | ND | ug/L | 3.0 | 0.26 | 1 | | 08/29/14 20:40 | 75-25-2 | |
| Bromomethane | ND | ug/L | 10.0 | 0.29 | 1 | | 08/29/14 20:40 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 100 | 0.96 | 1 | | 08/29/14 20:40 | 78-93-3 | |
| Carbon disulfide | ND | ug/L | 100 | 1.2 | 1 | | 08/29/14 20:40 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 0.25 | 1 | | 08/29/14 20:40 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 3.0 | 0.23 | 1 | | 08/29/14 20:40 | 108-90-7 | |
| Chloroethane | ND | ug/L | 10.0 | 0.54 | 1 | | 08/29/14 20:40 | 75-00-3 | |
| Chloroform | ND | ug/L | 5.0 | 0.14 | 1 | | 08/29/14 20:40 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 0.11 | 1 | | 08/29/14 20:40 | 74-87-3 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 13.0 | 2.0 | 1 | | 08/29/14 20:40 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 3.0 | 0.21 | 1 | | 08/29/14 20:40 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 0.27 | 1 | | 08/29/14 20:40 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 10.0 | 0.21 | 1 | | 08/29/14 20:40 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 5.0 | 0.30 | 1 | | 08/29/14 20:40 | 95-50-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 0.33 | 1 | | 08/29/14 20:40 | 106-46-7 | |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 100 | 1.0 | 1 | | 08/29/14 20:40 | 110-57-6 | |
| 1,1-Dichloroethane | ND | ug/L | 5.0 | 0.32 | 1 | | 08/29/14 20:40 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 08/29/14 20:40 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 5.0 | 0.56 | 1 | | 08/29/14 20:40 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.19 | 1 | | 08/29/14 20:40 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 5.0 | 0.49 | 1 | | 08/29/14 20:40 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 0.27 | 1 | | 08/29/14 20:40 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 0.28 | 1 | | 08/29/14 20:40 | 142-28-9 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.13 | 1 | | 08/29/14 20:40 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/29/14 20:40 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 08/29/14 20:40 | 100-41-4 | |
| 2-Hexanone | ND | ug/L | 50.0 | 0.46 | 1 | | 08/29/14 20:40 | 591-78-6 | |
| Iodomethane | ND | ug/L | 10.0 | 0.32 | 1 | | 08/29/14 20:40 | 74-88-4 | |
| Methylene Chloride | ND | ug/L | 1.0 | 0.97 | 1 | | 08/29/14 20:40 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 100 | 0.33 | 1 | | 08/29/14 20:40 | 108-10-1 | |
| Styrene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/29/14 20:40 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 | 0.33 | 1 | | 08/29/14 20:40 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 3.0 | 0.40 | 1 | | 08/29/14 20:40 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 0.46 | 1 | | 08/29/14 20:40 | 127-18-4 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 08/29/14 20:40 | 108-88-3 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 0.48 | 1 | | 08/29/14 20:40 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 0.29 | 1 | | 08/29/14 20:40 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 0.47 | 1 | | 08/29/14 20:40 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 0.20 | 1 | | 08/29/14 20:40 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 0.41 | 1 | | 08/29/14 20:40 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 50.0 | 0.35 | 1 | | 08/29/14 20:40 | 108-05-4 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# ANALYTICAL RESULTS

Project: WAYNE MSWLF BLANKS
Pace Project No.: 92215309

**Sample: TB** **Lab ID: 92215309003** Collected: 08/27/14 00:00 Received: 08/28/14 14:48 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Low Level Landfill** | Analytical Method: EPA 8260 | | | | | | | | |
| Vinyl chloride | ND | ug/L | 1.0 | 0.62 | 1 | | 08/29/14 20:40 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 5.0 | 0.66 | 1 | | 08/29/14 20:40 | 1330-20-7 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 100 | % | 70-130 | | 1 | | 08/29/14 20:40 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 110 | % | 70-130 | | 1 | | 08/29/14 20:40 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 08/29/14 20:40 | 2037-26-5 | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE MSWLF BLANKS
Pace Project No.: 92215309

QC Batch: MERP/7028 | Analysis Method: EPA 7470
QC Batch Method: EPA 7470 | Analysis Description: 7470 Mercury
Associated Lab Samples: 92215309001, 92215309002

METHOD BLANK: 1275125 | Matrix: Water
Associated Lab Samples: 92215309001, 92215309002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Mercury | ug/L | ND | 0.20 | 08/30/14 15:22 | |

LABORATORY CONTROL SAMPLE: 1275126

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Mercury | ug/L | 2.5 | 2.4 | 96 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1275127 1275128

| Parameter | Units | 92214987001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | ug/L | ND | 2.5 | 2.5 | 2.4 | 2.4 | 95 | 94 | 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.**

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE MSWLF BLANKS
Pace Project No.: 92215309

QC Batch: MPRP/16792 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010 | Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92215309001, 92215309002

METHOD BLANK: 1275409 | Matrix: Water
Associated Lab Samples: 92215309001, 92215309002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Antimony | ug/L | ND | 6.0 | 09/06/14 00:39 | |
| Arsenic | ug/L | ND | 10.0 | 09/06/14 00:39 | |
| Barium | ug/L | ND | 100 | 09/06/14 00:39 | |
| Beryllium | ug/L | ND | 1.0 | 09/06/14 00:39 | |
| Cadmium | ug/L | ND | 1.0 | 09/06/14 00:39 | |
| Chromium | ug/L | ND | 10.0 | 09/06/14 00:39 | |
| Cobalt | ug/L | ND | 10.0 | 09/06/14 00:39 | |
| Copper | ug/L | ND | 10.0 | 09/06/14 00:39 | |
| Lead | ug/L | ND | 10.0 | 09/06/14 00:39 | |
| Nickel | ug/L | ND | 50.0 | 09/06/14 00:39 | |
| Selenium | ug/L | ND | 10.0 | 09/06/14 00:39 | |
| Silver | ug/L | ND | 10.0 | 09/06/14 00:39 | |
| Thallium | ug/L | ND | 5.5 | 09/06/14 00:39 | |
| Vanadium | ug/L | ND | 25.0 | 09/06/14 00:39 | |
| Zinc | ug/L | ND | 10.0 | 09/06/14 00:39 | |

LABORATORY CONTROL SAMPLE: 1275410

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Antimony | ug/L | 500 | 494 | 99 | 80-120 | |
| Arsenic | ug/L | 500 | 484 | 97 | 80-120 | |
| Barium | ug/L | 500 | 499 | 100 | 80-120 | |
| Beryllium | ug/L | 500 | 513 | 103 | 80-120 | |
| Cadmium | ug/L | 500 | 506 | 101 | 80-120 | |
| Chromium | ug/L | 500 | 512 | 102 | 80-120 | |
| Cobalt | ug/L | 500 | 501 | 100 | 80-120 | |
| Copper | ug/L | 500 | 501 | 100 | 80-120 | |
| Lead | ug/L | 500 | 497 | 99 | 80-120 | |
| Nickel | ug/L | 500 | 504 | 101 | 80-120 | |
| Selenium | ug/L | 500 | 494 | 99 | 80-120 | |
| Silver | ug/L | 250 | 242 | 97 | 80-120 | |
| Thallium | ug/L | 500 | 481 | 96 | 80-120 | |
| Vanadium | ug/L | 500 | 510 | 102 | 80-120 | |
| Zinc | ug/L | 500 | 498 | 100 | 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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE MSWLF BLANKS
Pace Project No.: 92215309

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1275411 1275412

| Parameter | Units | 92214653018 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 | 486 | 496 | 97 | 99 | 75-125 | 2 | 25 | |
| Arsenic | ug/L | ND | 500 | 500 | 481 | 479 | 96 | 96 | 75-125 | 0 | 25 | |
| Barium | ug/L | 160 | 500 | 500 | 646 | 643 | 97 | 97 | 75-125 | 0 | 25 | |
| Beryllium | ug/L | 0.54J | 500 | 500 | 500 | 502 | 100 | 100 | 75-125 | 0 | 25 | |
| Cadmium | ug/L | ND | 500 | 500 | 489 | 492 | 98 | 98 | 75-125 | 1 | 25 | |
| Chromium | ug/L | 0.85J | 500 | 500 | 498 | 500 | 99 | 100 | 75-125 | 0 | 25 | |
| Cobalt | ug/L | 5.0J | 500 | 500 | 489 | 490 | 97 | 97 | 75-125 | 0 | 25 | |
| Copper | ug/L | 1.3J | 500 | 500 | 496 | 499 | 99 | 100 | 75-125 | 1 | 25 | |
| Lead | ug/L | ND | 500 | 500 | 481 | 482 | 96 | 96 | 75-125 | 0 | 25 | |
| Nickel | ug/L | 2.8J | 500 | 500 | 487 | 489 | 97 | 97 | 75-125 | 0 | 25 | |
| Selenium | ug/L | 5.8J | 500 | 500 | 486 | 491 | 96 | 97 | 75-125 | 1 | 25 | |
| Silver | ug/L | 0.31J | 250 | 250 | 237 | 238 | 95 | 95 | 75-125 | 0 | 25 | |
| Thallium | ug/L | 5.2J | 500 | 500 | 464 | 469 | 92 | 93 | 75-125 | 1 | 25 | |
| Vanadium | ug/L | 3.4J | 500 | 500 | 506 | 506 | 101 | 101 | 75-125 | 0 | 25 | |
| Zinc | ug/L | 5.7J | 500 | 500 | 490 | 490 | 97 | 97 | 75-125 | 0 | 25 | |

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



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE MSWLF BLANKS
Pace Project No.: 92215309

QC Batch: MSV/28136 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92215309001, 92215309002, 92215309003

METHOD BLANK: 1275227 | Matrix: Water
Associated Lab Samples: 92215309001, 92215309002, 92215309003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | ND | 5.0 | 08/29/14 14:21 | |
| 1,1,1-Trichloroethane | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| 1,1,2,2-Tetrachloroethane | ug/L | ND | 3.0 | 08/29/14 14:21 | |
| 1,1,2-Trichloroethane | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| 1,1-Dichloroethane | ug/L | ND | 5.0 | 08/29/14 14:21 | |
| 1,1-Dichloroethene | ug/L | ND | 5.0 | 08/29/14 14:21 | |
| 1,2,3-Trichloropropane | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| 1,2-Dibromo-3-chloropropane | ug/L | ND | 13.0 | 08/29/14 14:21 | |
| 1,2-Dibromoethane (EDB) | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| 1,2-Dichlorobenzene | ug/L | ND | 5.0 | 08/29/14 14:21 | |
| 1,2-Dichloroethane | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| 1,2-Dichloropropane | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| 1,3-Dichloropropane | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| 1,4-Dichlorobenzene | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| 2-Butanone (MEK) | ug/L | ND | 100 | 08/29/14 14:21 | |
| 2-Hexanone | ug/L | ND | 50.0 | 08/29/14 14:21 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | ND | 100 | 08/29/14 14:21 | |
| Acetone | ug/L | ND | 100 | 08/29/14 14:21 | |
| Acrylonitrile | ug/L | ND | 200 | 08/29/14 14:21 | |
| Benzene | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| Bromochloromethane | ug/L | ND | 3.0 | 08/29/14 14:21 | |
| Bromodichloromethane | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| Bromoform | ug/L | ND | 3.0 | 08/29/14 14:21 | |
| Bromomethane | ug/L | ND | 10.0 | 08/29/14 14:21 | |
| Carbon disulfide | ug/L | ND | 100 | 08/29/14 14:21 | |
| Carbon tetrachloride | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| Chlorobenzene | ug/L | ND | 3.0 | 08/29/14 14:21 | |
| Chloroethane | ug/L | ND | 10.0 | 08/29/14 14:21 | |
| Chloroform | ug/L | ND | 5.0 | 08/29/14 14:21 | |
| Chloromethane | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| cis-1,2-Dichloroethene | ug/L | ND | 5.0 | 08/29/14 14:21 | |
| cis-1,3-Dichloropropene | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| Dibromochloromethane | ug/L | ND | 3.0 | 08/29/14 14:21 | |
| Dibromomethane | ug/L | ND | 10.0 | 08/29/14 14:21 | |
| Ethylbenzene | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| Iodomethane | ug/L | ND | 10.0 | 08/29/14 14:21 | |
| Methylene Chloride | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| Styrene | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| Tetrachloroethene | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| Toluene | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| trans-1,2-Dichloroethene | ug/L | ND | 5.0 | 08/29/14 14:21 | |

**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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE MSWLF BLANKS
Pace Project No.: 92215309

METHOD BLANK: 1275227 Matrix: Water
Associated Lab Samples: 92215309001, 92215309002, 92215309003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| trans-1,3-Dichloropropene | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| trans-1,4-Dichloro-2-butene | ug/L | ND | 100 | 08/29/14 14:21 | |
| Trichloroethene | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| Trichlorofluoromethane | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| Vinyl acetate | ug/L | ND | 50.0 | 08/29/14 14:21 | |
| Vinyl chloride | ug/L | ND | 1.0 | 08/29/14 14:21 | |
| Xylene (Total) | ug/L | ND | 5.0 | 08/29/14 14:21 | |
| 1,2-Dichloroethane-d4 (S) | % | 108 | 70-130 | 08/29/14 14:21 | |
| 4-Bromofluorobenzene (S) | % | 100 | 70-130 | 08/29/14 14:21 | |
| Toluene-d8 (S) | % | 99 | 70-130 | 08/29/14 14:21 | |

LABORATORY CONTROL SAMPLE: 1275228

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | 50 | 51.8 | 104 | 80-125 | |
| 1,1,1-Trichloroethane | ug/L | 50 | 53.8 | 108 | 71-129 | |
| 1,1,2,2-Tetrachloroethane | ug/L | 50 | 50.5 | 101 | 79-124 | |
| 1,1,2-Trichloroethane | ug/L | 50 | 52.5 | 105 | 85-125 | |
| 1,1-Dichloroethane | ug/L | 50 | 53.6 | 107 | 73-126 | |
| 1,1-Dichloroethene | ug/L | 50 | 53.1 | 106 | 66-135 | |
| 1,2,3-Trichloropropane | ug/L | 50 | 54.2 | 108 | 75-130 | |
| 1,2-Dibromo-3-chloropropane | ug/L | 50 | 50.7 | 101 | 71-133 | |
| 1,2-Dibromoethane (EDB) | ug/L | 50 | 52.4 | 105 | 83-124 | |
| 1,2-Dichlorobenzene | ug/L | 50 | 50.9 | 102 | 80-133 | |
| 1,2-Dichloroethane | ug/L | 50 | 53.2 | 106 | 67-128 | |
| 1,2-Dichloropropane | ug/L | 50 | 50.4 | 101 | 75-132 | |
| 1,3-Dichloropropane | ug/L | 50 | 50.8 | 102 | 76-131 | |
| 1,4-Dichlorobenzene | ug/L | 50 | 51.1 | 102 | 78-130 | |
| 2-Butanone (MEK) | ug/L | 100 | 107 | 107 | 61-144 | |
| 2-Hexanone | ug/L | 100 | 105 | 105 | 68-143 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | 100 | 106 | 106 | 72-135 | |
| Acetone | ug/L | 100 | 105 | 105 | 48-146 | |
| Acrylonitrile | ug/L | 250 | 260 | 104 | 40-160 | |
| Benzene | ug/L | 50 | 49.6 | 99 | 80-125 | |
| Bromochloromethane | ug/L | 50 | 50.8 | 102 | 71-125 | |
| Bromodichloromethane | ug/L | 50 | 57.2 | 114 | 78-124 | |
| Bromoform | ug/L | 50 | 55.0 | 110 | 71-128 | |
| Bromomethane | ug/L | 50 | 50.6 | 101 | 40-160 | |
| Carbon disulfide | ug/L | 50 | 48.3J | 97 | 50-160 | |
| Carbon tetrachloride | ug/L | 50 | 53.0 | 106 | 69-131 | |
| Chlorobenzene | ug/L | 50 | 50.9 | 102 | 81-122 | |
| Chloroethane | ug/L | 50 | 53.2 | 106 | 39-148 | |
| Chloroform | ug/L | 50 | 56.7 | 113 | 73-127 | |
| Chloromethane | ug/L | 50 | 52.5 | 105 | 44-146 | |

**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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE MSWLF BLANKS
Pace Project No.: 92215309

LABORATORY CONTROL SAMPLE: 1275228

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | ug/L | 50 | 54.7 | 109 | 74-124 | |
| cis-1,3-Dichloropropene | ug/L | 50 | 52.8 | 106 | 72-132 | |
| Dibromochloromethane | ug/L | 50 | 58.0 | 116 | 78-125 | |
| Dibromomethane | ug/L | 50 | 52.3 | 105 | 82-120 | |
| Ethylbenzene | ug/L | 50 | 51.1 | 102 | 79-121 | |
| Iodomethane | ug/L | 100 | 84.4 | 84 | 39-154 | |
| Methylene Chloride | ug/L | 50 | 51.6 | 103 | 64-133 | |
| Styrene | ug/L | 50 | 52.8 | 106 | 84-126 | |
| Tetrachloroethene | ug/L | 50 | 54.6 | 109 | 78-122 | |
| Toluene | ug/L | 50 | 50.5 | 101 | 80-121 | |
| trans-1,2-Dichloroethene | ug/L | 50 | 54.9 | 110 | 71-127 | |
| trans-1,3-Dichloropropene | ug/L | 50 | 53.0 | 106 | 69-141 | |
| trans-1,4-Dichloro-2-butene | ug/L | 50 | 48.1J | 96 | 40-160 | |
| Trichloroethene | ug/L | 50 | 52.4 | 105 | 78-122 | |
| Trichlorofluoromethane | ug/L | 50 | 52.3 | 105 | 53-137 | |
| Vinyl acetate | ug/L | 100 | 134 | 134 | 40-160 | |
| Vinyl chloride | ug/L | 50 | 55.3 | 111 | 58-137 | |
| Xylene (Total) | ug/L | 150 | 152 | 102 | 81-126 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 105 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 100 | 70-130 | |
| Toluene-d8 (S) | % | | | 101 | 70-130 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1275229 1275230

| Parameter | Units | 92215310001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | ND | 20 | 20 | 21.4 | 23.0 | 107 | 115 | 70-130 | 7 | 30 | |
| 1,1,1-Trichloroethane | ug/L | ND | 20 | 20 | 23.2 | 25.6 | 116 | 128 | 70-130 | 10 | 30 | |
| 1,1,2,2-Tetrachloroethane | ug/L | ND | 20 | 20 | 20.2 | 22.4 | 101 | 112 | 70-130 | 10 | 30 | |
| 1,1,2-Trichloroethane | ug/L | ND | 20 | 20 | 21.0 | 23.2 | 105 | 116 | 70-130 | 10 | 30 | |
| 1,1-Dichloroethane | ug/L | ND | 20 | 20 | 22.5 | 24.6 | 113 | 123 | 70-130 | 9 | 30 | |
| 1,1-Dichloroethene | ug/L | ND | 20 | 20 | 22.3 | 24.3 | 111 | 121 | 70-166 | 9 | 30 | |
| 1,2,3-Trichloropropane | ug/L | ND | 20 | 20 | 21.0 | 23.0 | 105 | 115 | 70-130 | 9 | 30 | |
| 1,2-Dibromo-3-chloropropane | ug/L | ND | 20 | 20 | 20.4 | 22.0 | 102 | 110 | 70-130 | 7 | 30 | |
| 1,2-Dibromoethane (EDB) | ug/L | ND | 20 | 20 | 21.1 | 22.8 | 105 | 114 | 70-130 | 8 | 30 | |
| 1,2-Dichlorobenzene | ug/L | ND | 20 | 20 | 20.7 | 21.9 | 103 | 109 | 70-130 | 6 | 30 | |
| 1,2-Dichloroethane | ug/L | ND | 20 | 20 | 22.6 | 25.2 | 113 | 126 | 70-130 | 11 | 30 | |
| 1,2-Dichloropropane | ug/L | ND | 20 | 20 | 20.6 | 22.6 | 103 | 113 | 70-130 | 9 | 30 | |
| 1,3-Dichloropropane | ug/L | ND | 20 | 20 | 21.0 | 22.4 | 105 | 112 | 70-130 | 7 | 30 | |
| 1,4-Dichlorobenzene | ug/L | ND | 20 | 20 | 20.9 | 21.7 | 104 | 109 | 70-130 | 4 | 30 | |
| 2-Butanone (MEK) | ug/L | ND | 40 | 40 | 38.1J | 42.4J | 95 | 106 | 70-130 | 11 | 30 | |
| 2-Hexanone | ug/L | ND | 40 | 40 | 42.3J | 47.0J | 106 | 118 | 70-130 | 11 | 30 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | ND | 40 | 40 | 42.4J | 47.5J | 106 | 119 | 70-130 | 11 | 30 | |
| Acetone | ug/L | ND | 40 | 40 | 44.4J | 47.5J | 93 | 101 | 70-130 | 7 | 30 | |

**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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA

Project: WAYNE MSWLF BLANKS
Pace Project No.: 92215309

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1275229 1275230

| Parameter | Units | 92215310001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Acrylonitrile | ug/L | ND | 100 | 100 | 102J | 108J | 102 | 108 | 70-130 | 6 | 30 | |
| Benzene | ug/L | ND | 20 | 20 | 20.5 | 22.5 | 102 | 113 | 70-148 | 10 | 30 | |
| Bromochloromethane | ug/L | ND | 20 | 20 | 21.1 | 22.4 | 106 | 112 | 70-130 | 6 | 30 | |
| Bromodichloromethane | ug/L | ND | 20 | 20 | 23.7 | 25.8 | 119 | 129 | 70-130 | 8 | 30 | |
| Bromoform | ug/L | ND | 20 | 20 | 21.5 | 23.4 | 107 | 117 | 70-130 | 9 | 30 | |
| Bromomethane | ug/L | ND | 20 | 20 | 19.6 | 21.4 | 98 | 107 | 70-130 | 9 | 30 | |
| Carbon disulfide | ug/L | ND | 20 | 20 | 19.4J | 20.8J | 97 | 104 | 70-130 | 7 | 30 | |
| Carbon tetrachloride | ug/L | ND | 20 | 20 | 23.9 | 25.9 | 119 | 129 | 70-130 | 8 | 30 | |
| Chlorobenzene | ug/L | ND | 20 | 20 | 21.3 | 22.1 | 106 | 111 | 70-146 | 4 | 30 | |
| Chloroethane | ug/L | ND | 20 | 20 | 23.1 | 25.0 | 115 | 125 | 70-130 | 8 | 30 | |
| Chloroform | ug/L | ND | 20 | 20 | 23.3 | 26.3 | 117 | 131 | 70-130 | 12 | 30 | M0 |
| Chloromethane | ug/L | ND | 20 | 20 | 21.6 | 23.1 | 108 | 116 | 70-130 | 7 | 30 | |
| cis-1,2-Dichloroethene | ug/L | ND | 20 | 20 | 23.3 | 25.1 | 116 | 125 | 70-130 | 8 | 30 | |
| cis-1,3-Dichloropropene | ug/L | ND | 20 | 20 | 20.7 | 22.5 | 103 | 113 | 70-130 | 9 | 30 | |
| Dibromochloromethane | ug/L | ND | 20 | 20 | 23.5 | 25.2 | 117 | 126 | 70-130 | 7 | 30 | |
| Dibromomethane | ug/L | ND | 20 | 20 | 20.9 | 22.9 | 104 | 115 | 70-130 | 9 | 30 | |
| Ethylbenzene | ug/L | ND | 20 | 20 | 21.4 | 22.4 | 107 | 112 | 70-130 | 5 | 30 | |
| Iodomethane | ug/L | ND | 40 | 40 | 31.3 | 34.2 | 78 | 85 | 70-130 | 9 | 30 | |
| Methylene Chloride | ug/L | ND | 20 | 20 | 19.5 | 21.6 | 97 | 108 | 70-130 | 11 | 30 | |
| Styrene | ug/L | ND | 20 | 20 | 20.9 | 22.3 | 105 | 112 | 70-130 | 7 | 30 | |
| Tetrachloroethene | ug/L | ND | 20 | 20 | 22.9 | 23.5 | 115 | 118 | 70-130 | 3 | 30 | |
| Toluene | ug/L | ND | 20 | 20 | 20.8 | 22.6 | 103 | 112 | 70-155 | 8 | 30 | |
| trans-1,2-Dichloroethene | ug/L | ND | 20 | 20 | 22.6 | 24.8 | 113 | 124 | 70-130 | 9 | 30 | |
| trans-1,3-Dichloropropene | ug/L | ND | 20 | 20 | 20.7 | 23.1 | 104 | 115 | 70-130 | 11 | 30 | |
| trans-1,4-Dichloro-2-butene | ug/L | ND | 20 | 20 | 18.8J | 22.2J | 94 | 111 | 70-130 | 17 | 30 | |
| Trichloroethene | ug/L | ND | 20 | 20 | 21.8 | 23.7 | 109 | 119 | 69-151 | 9 | 30 | |
| Trichlorofluoromethane | ug/L | ND | 20 | 20 | 23.0 | 24.8 | 115 | 124 | 70-130 | 8 | 30 | |
| Vinyl acetate | ug/L | ND | 40 | 40 | 47.7J | 53.3 | 119 | 133 | 70-130 | 11 | 30 | M0 |
| Vinyl chloride | ug/L | ND | 20 | 20 | 22.9 | 24.9 | 115 | 125 | 70-130 | 8 | 30 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | | | 108 | 107 | 70-130 | | | |
| 4-Bromofluorobenzene (S) | % | | | | | | 101 | 99 | 70-130 | | | |
| Toluene-d8 (S) | % | | | | | | 101 | 101 | 70-130 | | | |

**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.**



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALIFIERS

Project: WAYNE MSWLF BLANKS
Pace Project No.: 92215309

## 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

| | |
|---|---|
| M0 | Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits. |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

# QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WAYNE MSWLF BLANKS
Pace Project No.: 92215309

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **92215309001** | **EB** | EPA 3010 | MPRP/16792 | EPA 6010 | ICP/15158 |
| **92215309002** | **FB** | EPA 3010 | MPRP/16792 | EPA 6010 | ICP/15158 |
| **92215309001** | **EB** | EPA 7470 | MERP/7028 | EPA 7470 | MERC/6764 |
| **92215309002** | **FB** | EPA 7470 | MERP/7028 | EPA 7470 | MERC/6764 |
| **92215309001** | **EB** | EPA 8260 | MSV/28136 | | |
| **92215309002** | **FB** | EPA 8260 | MSV/28136 | | |
| **92215309003** | **TB** | EPA 8260 | MSV/28136 | | |



This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

| 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 Eng

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

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

Optional
Proj. Due Date:
Proj. Name:

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

**Thermometer Used: IR Gun 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

**Date and Initials of person examining contents:** 8/28/14

| | | **Comments:** |
|---|---|---|
| Chain of Custody Present: | ☑Yes ☐No ☐N/A | 1. |
| Chain of Custody Filled Out: | ☑Yes ☐No ☐N/A | 2. |
| Chain of Custody Relinquished: | ☑Yes ☐No ☐N/A | 3. |
| Sampler Name & Signature on COC: | ☑Yes ☐No ☐N/A | 4. |
| Samples Arrived within Hold Time: | ☑Yes ☐No ☐N/A | 5. |
| **Short Hold Time Analysis (<72hr):** | ☐Yes ☑No ☐N/A | 6. |
| **Rush Turn Around Time Requested:** | ☐Yes ☑No ☐N/A | 7. |
| Sufficient Volume: | ☑Yes ☐No ☐N/A | 8. |
| Correct Containers Used: | ☑Yes ☐No ☐N/A | 9. |
| -Pace Containers Used: | ☑Yes ☐No ☐N/A | |
| Containers Intact: | ☑Yes ☐No ☐N/A | 10. |
| Filtered volume received for Dissolved tests | ☐Yes ☐No ☑N/A | 11. |
| Sample Labels match COC: | ☑Yes ☐No ☐N/A | 12. |
| -Includes date/time/ID/Analysis Matrix:_____ | | |
| All containers needing preservation have been checked. | ☑Yes ☐No ☐N/A | 13. |
| All containers needing preservation are found to be in compliance with EPA recommendation. | ☑Yes ☐No ☐N/A | |
| exceptions: VOA, coliform, TOC, O&G, WI-DRO (water) | ☑Yes ☐No | |
| Samples checked for dechlorination: | ☐Yes ☐No ☑N/A | 14. |
| Headspace in VOA Vials ( >6mm): | ☐Yes ☑No ☐N/A | 15. |
| Trip Blank Present: | ☑Yes ☐No ☐N/A | 16. No Date/time on TB |
| 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:** | | **Date:** | |
| **SRF Review:** | TMD | **Date:** | 82814 |

WO# : 92215309

92215309

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: | Wayne MSWLF Blanks |
| Container Order Number: | |

**Section C**
**Invoice Information:**

| | |
|---|---|
| Attention: | Municipal Engineering Services |
| Company Name: | |
| Address: | |
| Pace Quote Reference: | |
| Pace Project Manager: | Kevin Godwin |
| Pace Profile #: | 2103-3 |

| 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 | | | 8260 App I VOCs N | Total Metals-App I N | | | | | | | | | Please include Sufficent DI water for Blanks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | EB | WT | G | | | 8/27 | 5:10 | | 5 | | | 1 | 3 | | | | | | | | X | X | | | | | | | | | |
| 2 | FB | WT | G | | 8/27/14 | | 5:05 | | 4 | | | 1 | 3 | | | | | | | | X | X | | | | | | | | | |
| 3 | TB | WT | G | | Pace Filled | | | | 2 | | | | 2 | | | | | | | | X | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 8/27 | 6:30 | | 8-27-14 | 0849 | | | | |
| | DACE | 8-27-14 | 1448 | DACE | 8/28/14 | 1448 | 1.8 | Y | N | Y |
| | | | | | | | | | | |
| | | | | | | | | | | |

| SAMPLER NAME AND SIGNATURE | | | |
|---|---|---|---|
| PRINT Name of SAMPLER: | Jonathan Pfohl | | |
| SIGNATURE of SAMPLER: | | DATE Signed: | 8/27/14 |

| 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: Wayne Co Closed MSWLF & Active C&D LF, Dudley

Samplers: J. Pfohl Page 1 of 1

Re-Transcribed as Field sheet illegible/Mud & water

| Monitoring Point | Sample Date | Sample Time | Sampling Parameters: Depth to Water (BTOP) Static | Lab Parameters to be analyzed for | Volume Purged (Gal) | Sample Type | Goes Dry During Purge | Notes | Total Depth | Water Quality Parameters: CO2 (mg/l) | DO (mg/L) | ORP | pH | Temp. © | Specific Cond. (us/cm | TDS (mg/L) | Turbidity | CH4 Gas Vapors (ppm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1R | 8/27/14 | 3:20 | 20.32 | MNA | 5 | P&DB | Y | Background well | 27.32 | 40 | 5.5 | 410 | 6.12 | 16.9 | 0 | 0 | 300 MT | NR |
| MW-2 | 8/27/14 | 5:00 | 5.08 | MNA | 8 | P&DB | Y Bcoly | | 15 | >100 | 0.9 | -47 | 6.81 | 20.3 | 1,610 | 800 | 220 ST | NR |
| MW-3 | 8/26/14 | 2:00 | 0.00 | DM | 11 | P&DB | N | Artesian Red Page water | 18 | NR | NR | NR | 5.31 | 18.8 | 20 | 10 | C | NR |
| MW-4 | 8/26/14 | 2:45 | 7.57 | DM | 5 | P&DB | N | | 15 | NR | NR | NR | 5.93 | 19.2 | 10 | 0 | C | NR |
| MW-5 | 8/26/14 | 12:00 | 2.61 | DM | 3 | P&DB | N | | 18 | NR | NR | NR | 5.56 | 19.4 | 60 | 20 | STC | NR |
| MW-6 | 8/27/14 | 9:10 | 5.41 | DM | 5 | P&DB | N | | 18.14 | NR | NR | NR | 5.34 | 20.9 | 90 | 40 | C | NR |
| MW-7 | 8/27/14 | 10:00 | 6.25 | DM | 8 | P&DB | N | | 19 | NR | NR | NR | 5.01 | 20.7 | 90 | 40 | C | NR |
| MW-8 | 8/27/14 | 4:00 | 18.21 | MNA | 9 | P&DB | N | | 29 | 90 | 2.6 | 281 | 5.10 | 17.4 | 20 | 0 | 74 C | NR |
| MW-9 | 8/26/14 | 3:45 | 18.41 | DM | 4 | P&DB | N | | 25 | NR | NR | NR | 5.14 | 18.4 | 80 | 30 | MT | NR |
| MW-10 | 8/26/14 | 4:50 | 16.11 | DM | 5 | P&DB | N | | 25 | NR | NR | NR | 5.81 | 18.5 | 80 | 30 | MT | NR |
| MW-11 | 8/26/14 | 12:30 | 2.33 | DM | 4 | P&DB | N | | 15 | NR | NR | NR | 5.76 | 19.5 | 1,210 | 600 | VT | NR |
| | | | | | | | | | | | | | | | | | | |
| SW By MW2 | 8/27/14 | 5:15PM | – | | | | | | – | NR | NR | NR | 7.05 | 20.9 | 310 | 150 | C | – |
| | | | | | | | | | | | | | | | | | | |
| SW-2 | NS | | DRY | | | | | By MW-7 | – | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |

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: Wayne Co MSWLF, Dudley- Shared Surface Waters

Samplers: J. Pfohl Page_____of_____

| Monitoring Point | Sample Date | Sample Time | Sampling Parameters: Lab Parameters to be analyzed for | Sample Type | Visual Gage Height | Visual Flow Rate | Notes | Water Quality Parameters: ~~DO (mg/L)~~ | ~~ORP~~ | pH | Temp. © | Specific Cond. (us/cm | TDS (mg/L) | Turbidity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW-1 | 8/27/14 | 1:35 | DM | Dip | Low | Low | Downstream of SW-2(Closed) & SW-3 (Shared) | | | 7.03 | 20.3 | 410 | 200 | C |
| SW-2 | 8/27/14 | 11:30 | DM | Dip | Low | Low | Lined near access rd (Mid stream) | | | 7.03 | 20.1 | 380 | 160 | C |
| SW-3 | NS | DRY | DM | — | — | — | Upstream-furthest East historically Closed | | | ~~7.03~~ | ~~20.1~~ | ~~380~~ | ~~160~~ | ~~C~~ |
| | | | | | | | | | | | | | | |
| SW-3 | 8/27/14 | | DM | Dip | Low | Low | Shared Downstream of SW-2 & upstream of SW-1 | | | 7.04 | 19.8 | 400 | 180 | 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