Hazardous Waste Section

File Room Document Transmittal Sheet

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EPA ID:	NCR000147280
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Document Type:	Groundwater Monitoring Report (GMR)
Description:	Received December 2014 Report of October 2014 gw sampling
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December 15, 2014

Ms. Alicia Mooney, Environmental Engineer
Piedmont Natural Gas
PO Box 33068
Charlotte, North Carolina 28233

Subject: **Report of Monitored Natural Attenuation Groundwater Sampling**
Piedmont Natural Gas LNG Plant
11001 McCoy Road
Huntersville, North Carolina
AMEC Project: 6228-14-0220

Dear Ms. Mooney:

AMEC Environment & Infrastructure, Inc. (AMEC) is pleased to provide this Report of Monitored Natural Attenuation Groundwater Sampling for the subject site. The activities described below were conducted in general accordance with the requirements of the Administrative Order on Consent (AOC Docket #2009-059) negotiated between the North Carolina Department of Environment and Natural Resources (NCDENR) and Piedmont Natural Gas (Piedmont), effective April 11, 2012, and the contents of subsequent electronic mail and telephone conversations between the NCDENR and AMEC on September 19, 2014. In addition, the assessment activities were conducted in general accordance with the Statement of Work (SOW) #14 issued by Piedmont on October 7, 2014.

Project Information

The Site is located at 11001 McCoy Road in Huntersville, Mecklenburg County, North Carolina (Figure 1). The Site is currently owned by Piedmont and used as a Liquid Natural Gas (LNG) facility to store natural gas for use during peak shaving times. The purpose of this Report of Monitored Natural Attenuation (MNA) Groundwater Sampling Report is to present the results of groundwater assessment activities conducted at the Piedmont LNG Plant in Huntersville, North Carolina in October 2014. The activities were conducted to monitor natural attenuation of groundwater contamination at the Site with regard to historic disposal of molecular sieve filter material in an area southwest of the LNG tank.

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In the Groundwater Remedial Strategy and Monitoring Plan dated July 15, 2014, AMEC proposed groundwater monitoring with quarterly sampling of select wells at the Site for one year, while sampling the remaining wells on a semi-annual basis in year one. Then, in year two, semi-annual sampling of all groundwater monitoring wells at the Site. On September 19, 2014, the NCDENR approved the sampling plan with the addition of analyzing the groundwater sample from well MW-4S for 1,4-dioxane. AMEC conducted the first quarterly groundwater monitoring event in October 2014 and the results of the activities are discussed below.

Field Activities

Between October 15 and 21, 2014, AMEC personnel mobilized to the subject property to collect groundwater samples from the 15 groundwater monitoring wells at the subject property, collect an effluent sample from the water supply well at the subject property and to abandon the historically dry monitoring well MW-7S. On October 16, 2014, our well abandonment contractor, Geologic Exploration, Inc., mobilized to the subject property to abandon monitoring well MW-7S. The monitoring well was abandoned by filling the well casing with a Portland cement and bentonite mixture via a tremie pipe. The protective steel, stickup casing and concrete pad were removed following the filling of the well casing. The Well Abandonment Record for MW-7S is included in **Attachement A**.

The wells were sampled by low-flow purging techniques, to the extent possible, in general accordance with the USEPA guidance document “Low Stress (low flow) Purging and Sampling Procedure for the Collection of Ground Water Samples from Monitoring Wells”, dated July 30, 1996. During purging, groundwater field parameters were collected using a Horiba U-52 water quality meter with commercially manufactured flow cell and an HFS MicroTPI turbidity meter. Groundwater field parameters collected through the flow cell included pH, specific conductivity, dissolved oxygen, temperature and oxidation reduction potential. Turbidity was collected prior to the groundwater entering the flow cell. Following completion of purging, groundwater samples were collected from the monitoring wells, placed in laboratory provided containers, placed in coolers on ice and delivered to Pace Analytical Services, Inc. (Pace) in Huntersville, North Carolina for laboratory analysis. The samples were analyzed for volatile organic compounds (VOCs) via EPA Method 8260 for comparison to North Carolina Groundwater Standards presented in North Carolina

Administrative Code Title 15A Subchapter 2L (NC 2L Standards). In addition, the samples were analyzed for the following natural attenuation parameters: methane, ethane, and ethene via RSK-175, arsenic and manganese via EPA Method 6010, total alkalinity via SM 2320B, ferrous iron via SM 2500-Fe B, sulfate via EPA Method 300.0, nitrate via EPA Method 353.2, chloride via SM 4500-Cl E and total organic carbon via SM 5310B. The samples were maintained under a chain-of-custody protocol. Water from purging the monitoring wells was containerized and placed into a labeled, 55-gallon drum and staged on-site pending characterization. Following characterization, the drum was transported from the site for disposal. The monitoring well sampling sheets are included in **Attachment B**.

On October 21, 2014, AMEC personnel collected an effluent sample from the water supply well located at the subject property. The sample was placed in laboratory provided containers, placed in coolers on ice and delivered to Pace for laboratory analysis. The sample was analyzed for VOCs via EPA Method 8260. In addition, the sample was analyzed for the following natural attenuation parameters: methane, ethane, and ethene via RSK-175, arsenic and manganese via EPA Method 6010, total alkalinity via SM 2320B, ferrous iron via SM 2500-Fe B, sulfate via EPA Method 300.0, nitrate via EPA Method 353.2, chloride via SM 4500-Cl E and total organic carbon via SM 5310B. The sample was maintained under a chain-of-custody protocol.

Analytical Results

The results of the groundwater laboratory analysis identified concentrations of trichloroethene (TCE) above the laboratory reporting limits in the samples collected from MW-4S, MW-4D, MW-6D and MW-7D.

- TCE was identified in monitoring well MW-4S (103 µg/L) at a concentration which exceeded the North Carolina Administrative Code, Title 15A, Subchapter 2L, Groundwater Quality Standard (2L Standard) for TCE of 3.0 µg/L. However, this concentration represents a decrease from the concentration (146 µg/L) identified during the previous sampling event in February 2014;

- TCE was identified in monitoring well MW-4D (86.5 µg/L) at a concentration which exceeded the 2L Standard for TCE of 3.0 µg/L. However, this

concentration represents a decrease from the concentration (90.6 µg/L) identified during the previous sampling event in February 2014;

- TCE was identified in monitoring well MW-6D (1.2 µg/L) at a concentration which did not exceed the 2L Standard for TCE of 3.0 µg/L. In addition, this concentration represents a decrease from the concentration (2.3 µg/L) identified during the previous sampling event in February 2014; and

- TCE was identified in monitoring well MW-7D (1.6 µg/L) at a concentration which did not exceed the 2L Standard for TCE of 3.0 µg/L. However, this concentration represents an increase from previous sampling event in February 2014. During the February 2014 sampling event the concentration of TCE in well MW-7D did not exceed the laboratory reporting limit (<1.0 µg/L).

In addition, TCE was not identified in monitoring well MW-1D above the laboratory reporting limit (<1.0 µg/L). In addition, this represents a decrease from the concentration (22.9 µg/L) previously identified during the February 2014 sampling event. Concentrations of 1,1-dichloroethane, 1,1-dichloroethene, cis-1,2-dichoroethene and 1,1,1-trichloroethane were also identified above their respective laboratory reporting limits. However, the concentrations identified did not exceed their respective 2L Standards.

The laboratory analytical reports and chain-of-custody forms are included in **Attachment C**. A summary of monitoring well construction and groundwater elevation data is included in **Table 1**. A summary of the current and historical detected constituents is included in **Table 2**.

Dissolved Oxygen

It is generally accepted that dissolved oxygen (DO) is one of the most thermodynamically favored electron acceptors used by microbes for the degradation of organic carbon. DO concentrations of less than 5 milligrams per liter (mg/L) are considered acceptable for reductive dechlorination while concentrations of less than 2 mg/L are considered more favorable. DO values ranged from 0.00 to 8.75 mg/L across the site.

Oxidation Reduction Potential

Oxidation reduction potential (ORP) is a measure of electrical potential in groundwater, which can favor either oxidation or reduction and influences rates of both biological and abiotic degradation. Biological reduction of chlorinated compounds can be achieved by various anaerobic bacteria over a wide range of ORP (+50 millivolts [mV] to -400 mV);

however, for complete dechlorination to ethane or ethene, the ideal ORP range is between -100 and -225 mV. ORP values ranged from -182 to 275 mV across the site.

pH

A pH range of 6 to 9 is considered to be optimum for reductive dechlorination, while a pH below 5 tends to inhibit dechlorination. pH ranged from 5.90 to 10.29 across the site.

Indicators of Reducing Conditions

In general, anaerobic microbial activity utilizes the following compounds in preferential order as electron acceptors in lieu of oxygen: nitrate, manganese, ferric iron, sulfate, and carbon dioxide. The following constituents were analyzed as indicator compounds: nitrate, manganese, ferrous iron, sulfate and methane.

Low levels of nitrate, less than 1 mg/L, are favorable for dechlorination. Nitrate concentrations were generally low across the site with only MW-2S exceeding 1 mg/L.

Dissolved manganese and ferric iron are electron acceptors that can be used in preference to chlorine. The presence of manganese and ferrous iron at concentrations above 1 mg/L indicates suitable reducing conditions. Manganese concentrations range from 0.0093 mg/L to 5.85 mg/L with the highest concentration in well MW-1D adjacent to the former filter media disposal area that has been excavated. Similarly, ferrous iron concentrations range from less than 0.5 mg/L to 5.90 mg/L with the highest concentration detected in well MW-1D.

Low levels of sulfate (< 20 mg/L) indicate that it has little potential to compete with dechlorinating processes. Sulfate concentrations ranged from less than 2 mg/L to 34.7 mg/L, only exceeding 20 mg/L at well DW-1.

Finally, under highly reducing conditions, methane is produced as a result of methanogenesis (i.e., when carbon dioxide is used as an electron acceptor and methane is produced). Methane concentrations ranged from less than 0.0066 mg/L to 0.517 mg/L. The data does not indicate a clear trend between background and other impacted areas to suggest biological activity producing methane in the groundwater.

Additional MNA Parameters

Additional MNA parameters were analyzed to assist with evaluating biological activity and potential impacts of reducing conditions.

Alkalinity increases relative to background when increased microbial respiration produces carbon dioxide, carbonate, and bicarbonate. Therefore, increases in alkalinity within a plume relative to areas outside the plume may indicate increased microbial activity. Alkalinity is also an indication of the aquifer's ability to absorb acidic byproducts of respiration without experiencing a decrease in pH. Alkalinity ranged from 14.3 mg/L to 437 mg/L with well MW-3D exhibiting the highest concentration.

Chloride ions generally increase as reductive dechlorination proceeds. So, increases in chloride relative to background can indicate reductive dechlorination is occurring. Chloride concentrations ranged from 1.2 mg/L to 7.4 mg/L with the background well MW-5D exhibiting the highest concentration. Since the background chloride concentration is higher than the CVOC concentrations chloride will likely not be a meaningful indicator of dechlorination at this Site.

Similarly, ethanes and ethenes are expected to increase as parent compounds are completely dechlorinated. Therefore, these compounds are monitored to assess for complete reductive dechlorination as a pathway of reducing chlorinated solvent mass in the groundwater versus other natural attenuation processes such as dilution and dispersion. Ethanes and ethenes were not detected in the groundwater samples. CVOC concentrations are generally too low at the Site to generate detectable levels of ethene or ethane.

Total organic carbon (TOC) provides an indication of electron donor availability in the groundwater environment for biological activity. This data can be used to evaluate potential enhancements to MNA as well as estimate impacts on groundwater transport as high TOC values may retard organic constituent migration in groundwater. TOC concentrations ranged from 4.1 mg/L to 217 mg/L in the groundwater samples.

Arsenic is also analyzed as an MNA parameter as the metal can become mobilized under reducing conditions and increases in pH. Arsenic was not detected in the groundwater samples.

Specific conductivity, turbidity and temperature field measurements are included for relative comparisons over time and during purging activities. Ideally, turbidity will be less than 10 NTUs for groundwater sampling. Also, temperatures greater than 20 degrees Celsius,

although not required for biodegradation, are reported to accelerate biological activity. A summary of the current and previous MNA parameters is included in **Table 3**.

Conclusions

Based on the results of the assessment activities, AMEC offers the following conclusions:

- Based on groundwater elevations measured during the October 2014 sampling event groundwater flow was generally uniform toward the south;
- No VOC concentrations were identified in the effluent sample collected from the water supply well which exceeded their respective laboratory reporting limits;
- The October 2014 constituent concentrations are generally similar to or less than the concentrations observed during the previous sampling event in February 2014. TCE concentrations decreased to below the laboratory detection limit (1.0 µg/L) in well MW-1D near the former filter media disposal area that was excavated. In addition, the TCE daughter compound cis-1,2-dichloroethene (cis-1,2-DCE) was detected at this location indicating reductive dechlorination is occurring within the source area. In addition, the TCE concentrations in wells MW-4D and MW-4S showed an approximate 4.5% and 29.5% reduction since the February 2014 sampling event, respectively; and
- The MNA results provide an indication of localized reducing conditions within the plume area, namely in the vicinity of the MW-1D and MW-4D wells. These locations exhibit low DOs and negative ORPs. Well MW-1D also exhibits relatively higher concentrations of manganese and ferrous iron than the background well MW-5D that are indicative of mid-range anaerobic conditions conducive for reductive dechlorination. In addition, this location is also where the TCE daughter compound cis-1,2-DCE is detected suggesting a reductive dechlorination pathway in this portion of the plume.

Closing

AMEC appreciates this opportunity to assist you on this project. If you have questions, please contact us.

Sincerely,

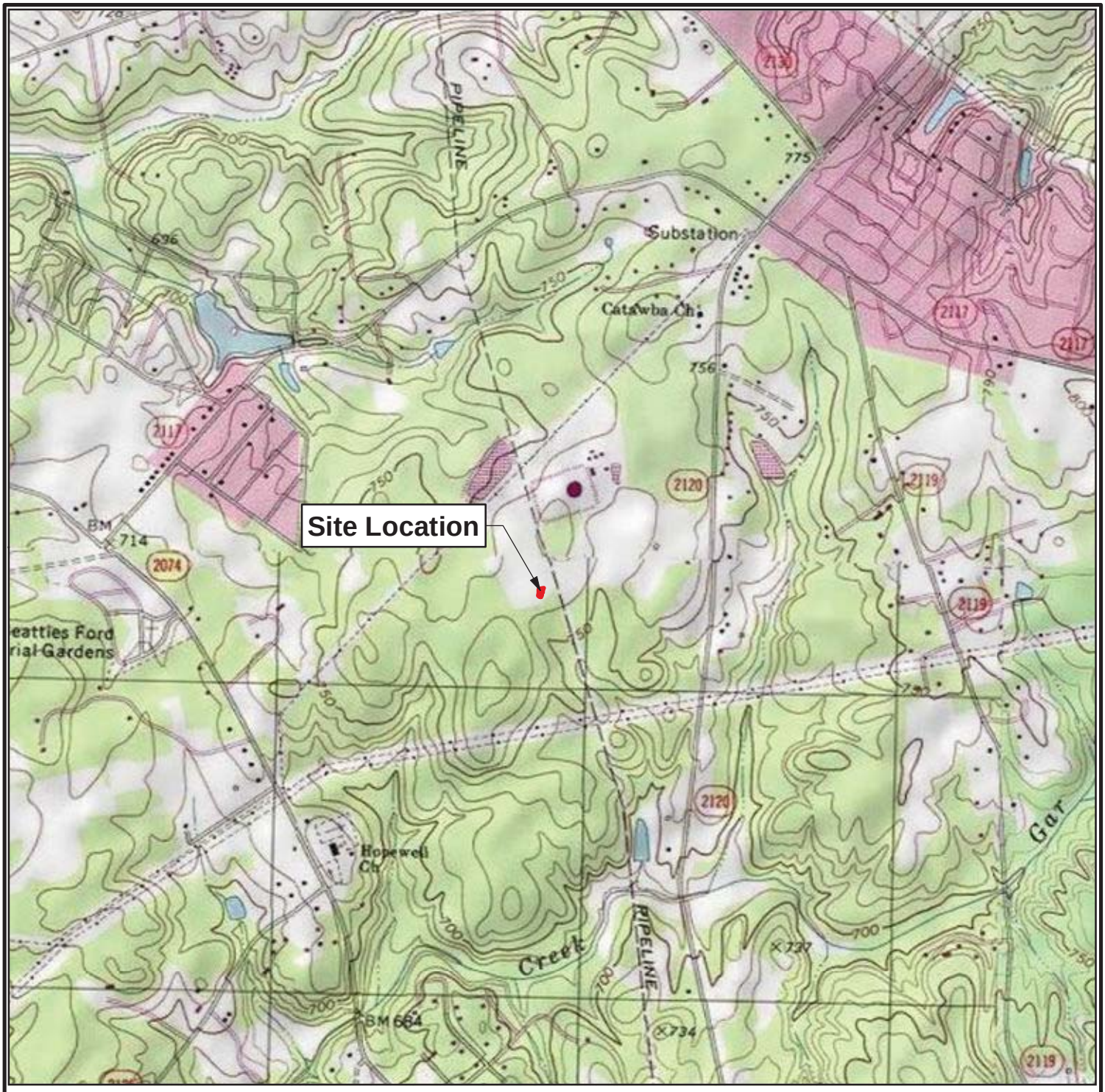
AMEC Environment & Infrastructure, Inc.

Andrew J. Frantz, AEP
Project Scientist

Greg Mackin, PE
Associate Engineer

Attachments

FIGURES



Source: USDA NRCS Digital Raster Graphic Mosaic for Mecklenburg County, North Carolina, dated 2005.

Site Location

N

0 1,500 3,000 4,500 6,000 Feet

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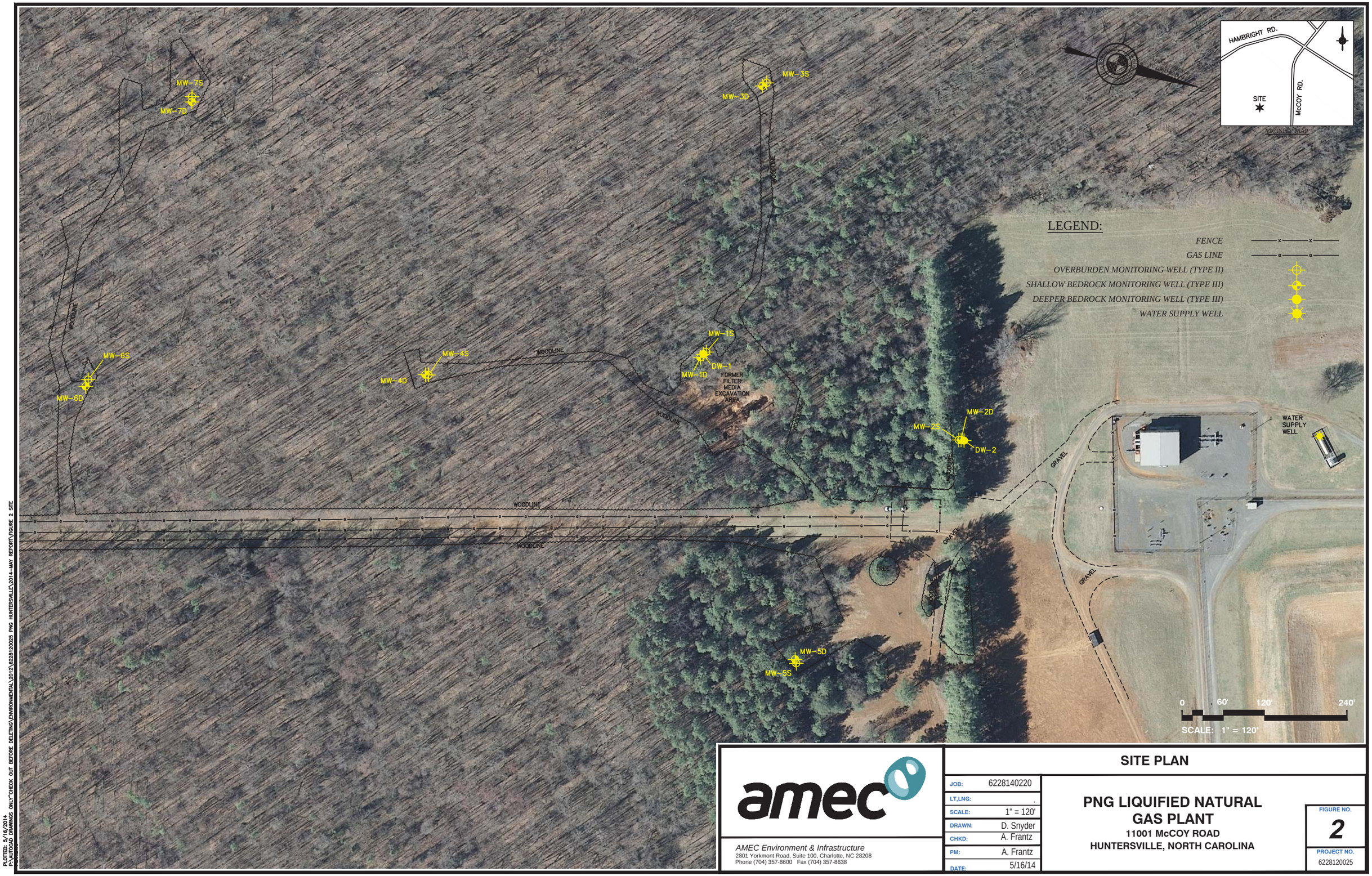
SITE LOCATION MAP
PNG - LIQUEFIED NATURAL GAS PLANT
11001 MCCOY ROAD
HUNTERSVILLE, NORTH CAROLINA

PREPARED BY	DATE	CHECKED BY	DATE	JOB NUMBER	FIGURE
AJF	12/4/14	MTM	12/4/14	6228140220	1



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SITE PLAN

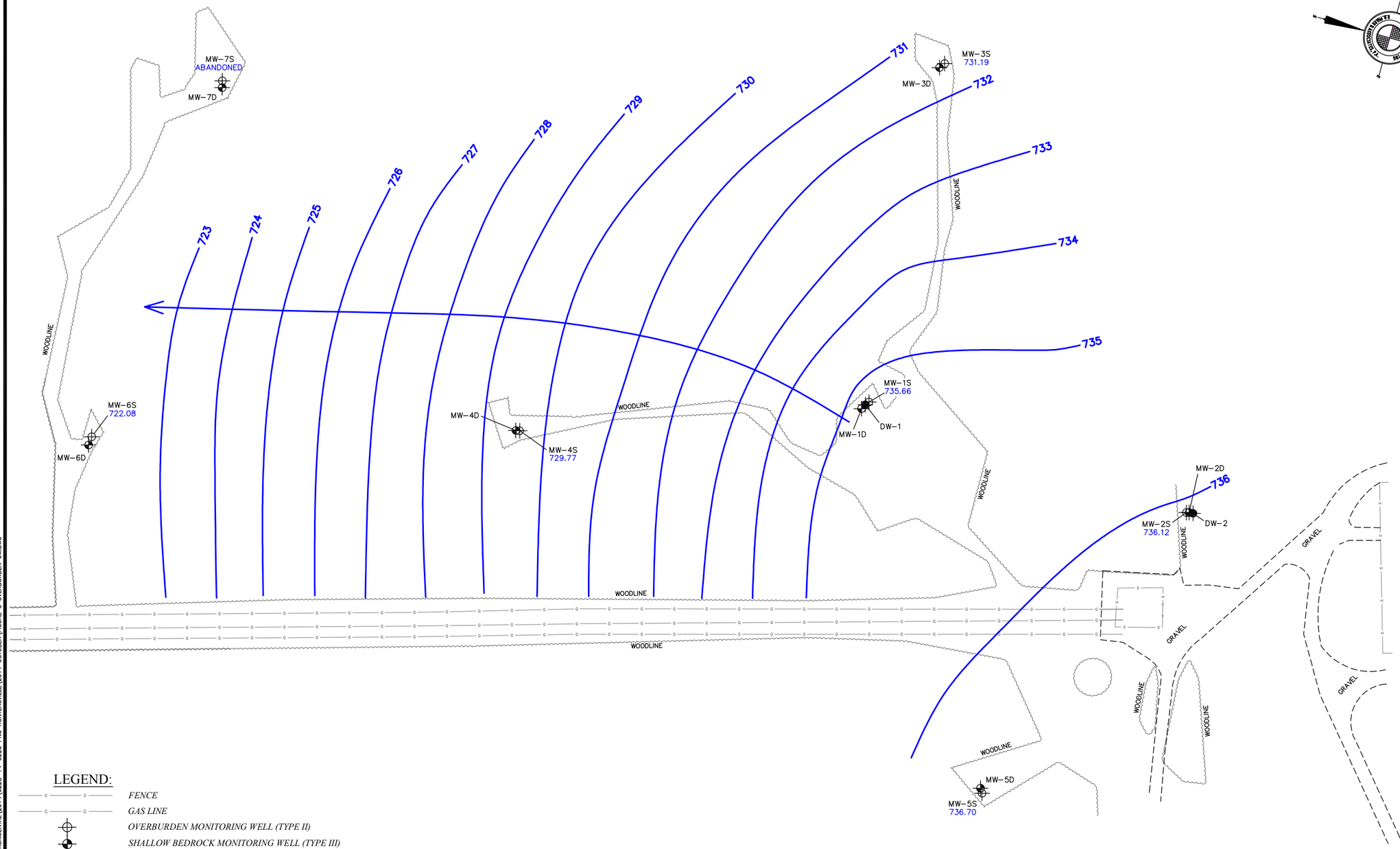
JOB:	6228140220
LT,LNG:	.
SCALE:	1" = 120'
DRAWN:	D. Snyder
CHKD:	A. Frantz
PM:	A. Frantz
DATE:	5/16/14

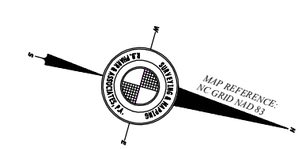
PNG LIQUIFIED NATURAL GAS PLANT
11001 McCOY ROAD
HUNTERSVILLE, NORTH CAROLINA

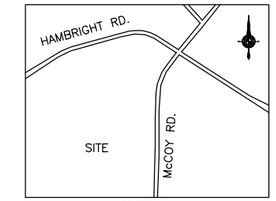
FIGURE NO.
2

PROJECT NO.
6228120025

PLOTTED: 5/16/2014
P:\AUTOCAD DRAWINGS ONLY"CHECK OUT BEFORE DELETING\ENVIRONMENTAL\2012\6228120025 PNG HUNTERSVILLE\2014-MAY REPORT\FIGURE 2 SITE







VICINITY MAP
NOT TO SCALE

WATER SUPPLY WELL

LEGEND:

- FENCE
- GAS LINE
- OVERBURDEN MONITORING WELL (TYPE II)
- SHALLOW BEDROCK MONITORING WELL (TYPE III)
- DEEPER BEDROCK MONITORING WELL (TYPE III)
- WATER SUPPLY WELL
- 730.68 — GROUNDWATER ELEVATION
- 726 — GROUNDWATER CONTOUR LINE (ft. msl)
- INFERRED GROUNDWATER FLOW DIRECTION)

NOTES:

1. WELLS WITH A "S" IDENTIFIER WERE INSTALLED WITH A SCREENED INTERVAL SET IN THE OVERBURDEN AQUIFER; WELLS WITH A "D" IDENTIFIER WERE INSTALLED WITH A SCREEN SET IN THE UPPER BEDROCK AQUIFER.

2. GROUNDWATER ELEVATIONS MEASURED OCTOBER 2014.

0 60' 120' 240'

SCALE: 1" = 120'

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OVERBURDEN GROUNDWATER CONTOUR MAP, OCTOBER 2014

JOB:	6228140220
LT,LNG:	.
SCALE:	1" = 120'
DRAWN:	D. Snyder
CHKD:	A. Frantz
PM:	A. Frantz
DATE:	12/05/14

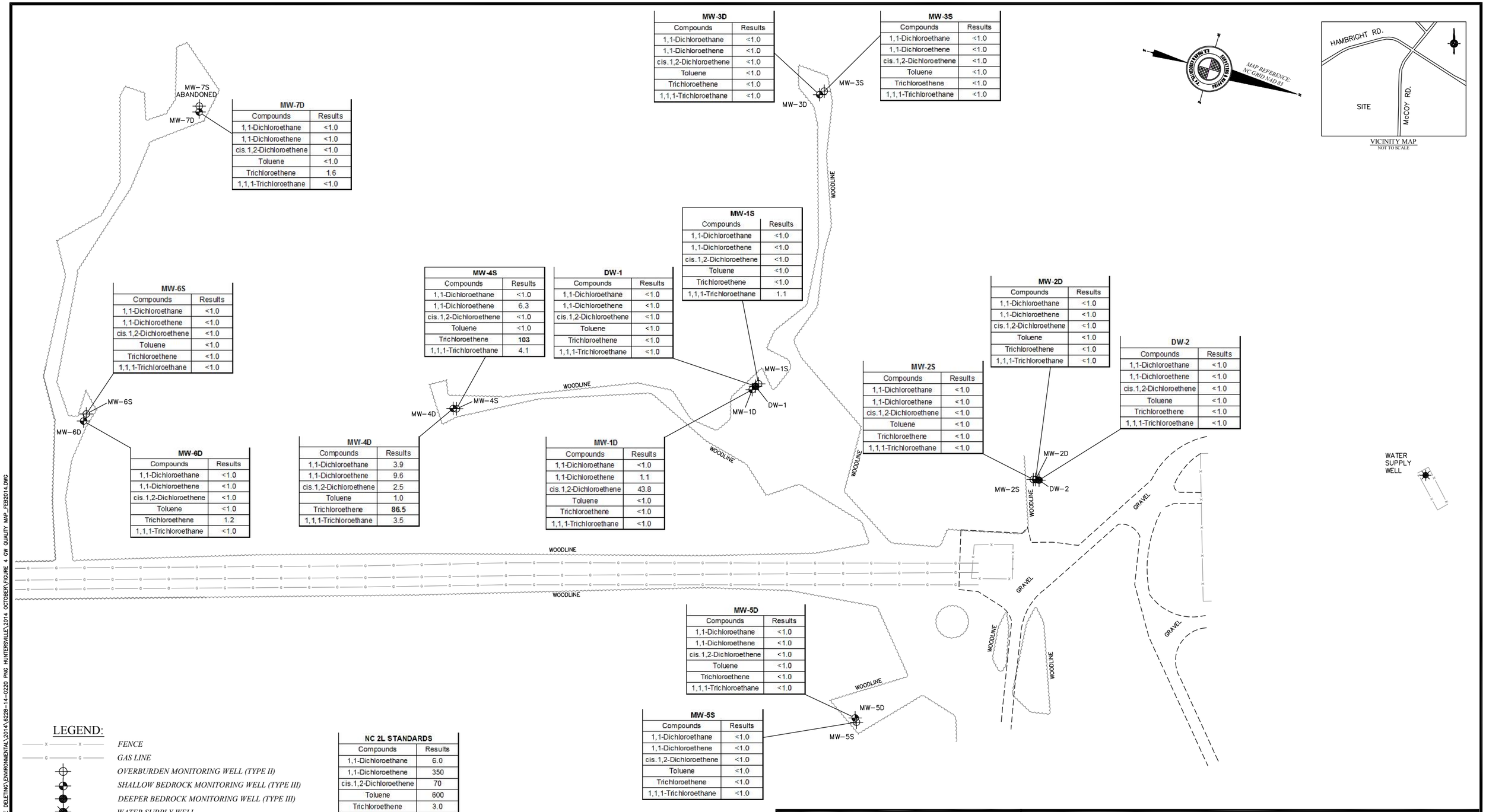
PNG LIQUIFIED NATURAL GAS PLANT

11001 McCOY ROAD
HUNTERSVILLE, NORTH CAROLINA

FIGURE NO.
3

PROJECT NO.
6228140220

PLOTTED: 12/5/2014
P:\AUTOCAD DRAWINGS ONLY"CHECK OUT BEFORE DELETING"\ENVIRONMENTAL\2014\6228-14-0220 PNG HUNTERSVILLE\2014 OCTOBER\FIGURE 3 OVERBURDEN GW.DWG



MW-7D

Compounds	Results
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
cis.1,2-Dichloroethene	<1.0
Toluene	<1.0
Trichloroethene	1.6
1,1,1-Trichloroethane	<1.0

MW-3D

Compounds	Results
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
cis.1,2-Dichloroethene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
1,1,1-Trichloroethane	<1.0

MW-3S

Compounds	Results
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
cis.1,2-Dichloroethene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
1,1,1-Trichloroethane	<1.0

MW-1S

Compounds	Results
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
cis.1,2-Dichloroethene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
1,1,1-Trichloroethane	1.1

MW-4S

Compounds	Results
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	6.3
cis.1,2-Dichloroethene	<1.0
Toluene	<1.0
Trichloroethene	**103**
1,1,1-Trichloroethane	4.1

DW-1

Compounds	Results
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
cis.1,2-Dichloroethene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
1,1,1-Trichloroethane	<1.0

MW-6S

Compounds	Results
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
cis.1,2-Dichloroethene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
1,1,1-Trichloroethane	<1.0

MW-2D

Compounds	Results
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
cis.1,2-Dichloroethene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
1,1,1-Trichloroethane	<1.0

MW-2S

Compounds	Results
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
cis.1,2-Dichloroethene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
1,1,1-Trichloroethane	<1.0

DW-2

Compounds	Results
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
cis.1,2-Dichloroethene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
1,1,1-Trichloroethane	<1.0

MW-6D

Compounds	Results
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
cis.1,2-Dichloroethene	<1.0
Toluene	<1.0
Trichloroethene	1.2
1,1,1-Trichloroethane	<1.0

MW-4D

Compounds	Results
1,1-Dichloroethane	3.9
1,1-Dichloroethene	9.6
cis.1,2-Dichloroethene	2.5
Toluene	1.0
Trichloroethene	**86.5**
1,1,1-Trichloroethane	3.5

MW-1D

Compounds	Results
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	1.1
cis.1,2-Dichloroethene	43.8
Toluene	<1.0
Trichloroethene	<1.0
1,1,1-Trichloroethane	<1.0

MW-5D

Compounds	Results
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
cis.1,2-Dichloroethene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
1,1,1-Trichloroethane	<1.0

MW-5S

Compounds	Results
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
cis.1,2-Dichloroethene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
1,1,1-Trichloroethane	<1.0

LEGEND:

- *FENCE*
- *GAS LINE*
- *OVERBURDEN MONITORING WELL (TYPE II)*
- *SHALLOW BEDROCK MONITORING WELL (TYPE III)*
- *DEEPER BEDROCK MONITORING WELL (TYPE III)*
- *WATER SUPPLY WELL*

NC 2L STANDARDS

Compounds	Results
1,1-Dichloroethane	6.0
1,1-Dichloroethene	350
cis.1,2-Dichloroethene	70
Toluene	600
Trichloroethene	3.0
1,1,1-Trichloroethane	200

NOTES:

1. *WELLS WITH A "S" IDENTIFIER WERE INSTALLED WITH A SCREENED INTERVAL SET IN THE OVERBURDEN AQUIFER; WELLS WITH A "D" IDENTIFIER WERE INSTALLED WITH A SCREEN SET IN THE UPPER BEDROCK AQUIFER.*
2. *CONCENTRATIONS IN BOLD -FACE TYPE EXCEEDED THE 2L STANDARD ESTABLISHED IN 15A NCAC 2L.0202.*
3. *ONLY THOSE COMPOUNDS THAT EXCEEDED THE LABORATORY REPORTING LIMIT ARE SHOWN ON THIS FIGURE.*
4. *MW-7S HISTORICALLY DRY, ABANDONED ON OCTOBER 16, 2014*

0 60' 120' 240'

SCALE: 1" = 120'

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Phone (704) 357-8600 Fax (704) 357-8638

GROUNDWATER QUALITY MAP, OCTOBER 2014

JOB:	6228120025
LT,LNG:	.
SCALE:	1" = 120'
DRAWN:	D. Snyder
CHKD:	A.Frantz
PM:	A. Frantz
DATE:	12/05/14

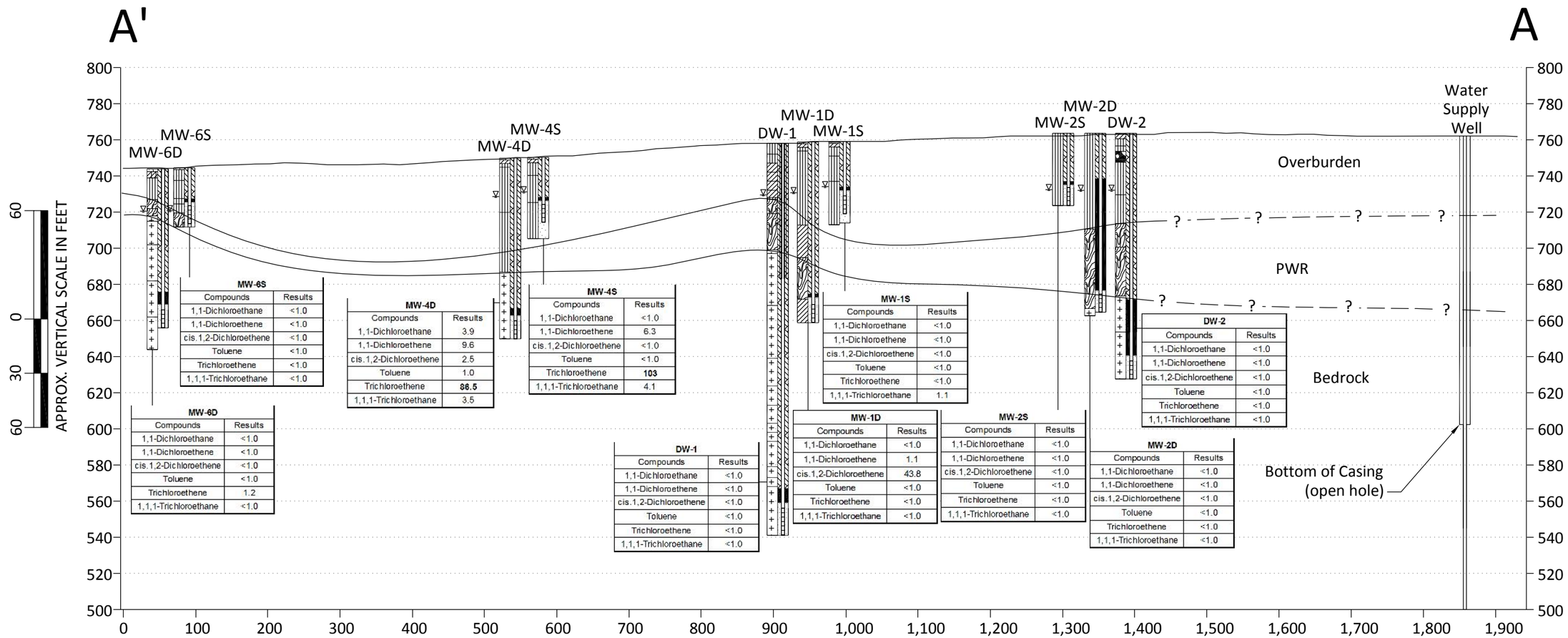
PNG LIQUIFIED NATURAL GAS PLANT

11001 McCOY ROAD
HUNTERSVILLE, NORTH CAROLINA

FIGURE NO. **4**

PROJECT NO. 6228140220

PLOTTED: 12/5/2014
P:\AUTOCAD DRAWINGS ONLY\CHECK OUT BEFORE DELETING\ENVIRONMENTAL\2014\6228-14-0220 PNG HUNTERSVILLE\2014 OCTOBER\FIGURE 4 GW QUALITY MAP_FEB2014.DWG



MW-6S

Compounds	Results
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
cis.1,2-Dichloroethene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
1,1,1-Trichloroethane	<1.0

MW-6D

Compounds	Results
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
cis.1,2-Dichloroethene	<1.0
Toluene	<1.0
Trichloroethene	1.2
1,1,1-Trichloroethane	<1.0

MW-4D

Compounds	Results
1,1-Dichloroethane	3.9
1,1-Dichloroethene	9.6
cis.1,2-Dichloroethene	2.5
Toluene	1.0
Trichloroethene	**86.5**
1,1,1-Trichloroethane	3.5

MW-4S

Compounds	Results
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	6.3
cis.1,2-Dichloroethene	<1.0
Toluene	<1.0
Trichloroethene	**103**
1,1,1-Trichloroethane	4.1

DW-1

Compounds	Results
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
cis.1,2-Dichloroethene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
1,1,1-Trichloroethane	<1.0

MW-1S

Compounds	Results
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
cis.1,2-Dichloroethene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
1,1,1-Trichloroethane	1.1

MW-1D

Compounds	Results
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	1.1
cis.1,2-Dichloroethene	43.8
Toluene	<1.0
Trichloroethene	<1.0
1,1,1-Trichloroethane	<1.0

MW-2S

Compounds	Results
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
cis.1,2-Dichloroethene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
1,1,1-Trichloroethane	<1.0

DW-2

Compounds	Results
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
cis.1,2-Dichloroethene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
1,1,1-Trichloroethane	<1.0

MW-2D

Compounds	Results
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
cis.1,2-Dichloroethene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
1,1,1-Trichloroethane	<1.0

LEGEND:

GROUNDWATER ELEVATION, OCTOBER 2014

OCTOBER 2014 RESULTS, ug/L

NC 2L STANDARDS

Compounds	Results
1,1-Dichloroethane	6.0
1,1-Dichloroethene	350
cis.1,2-Dichloroethene	70
Toluene	600
Trichloroethene	3.0
1,1,1-Trichloroethane	200

NOTES:

1. *WELLS WITH A "S" IDENTIFIER WERE INSTALLED WITH A SCREENED INTERVAL SET IN THE OVERBURDEN AQUIFER; WELLS WITH A "D" IDENTIFIER WERE INSTALLED WITH A SCREEN SET IN THE UPPER BEDROCK AQUIFER.*
2. *CONCENTRATIONS IN BOLD-FACE TYPE EXCEEDED THE 2L STANDARD ESTABLISHED IN 15A NCAC 2L.0202.*
3. *ONLY THOSE COMPOUNDS THAT EXCEEDED THE LABORATORY REPORTING LIMIT ARE SHOWN ON THIS FIGURE.*
4. *OVERBURDEN = SOILS.*
5. *PWR = PARTIALLY WEATHERED ROCK*
6. *BEDROCK = METAMORPHOSED QUARTZ DIORITE HIGHLY FRACTURED.*

amec

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2801 Yorkmont Road, Suite 100, Charlotte, NC 28208
Phone (704) 357-8600 Fax (704) 357-8638

CROSS SECTION A - A'

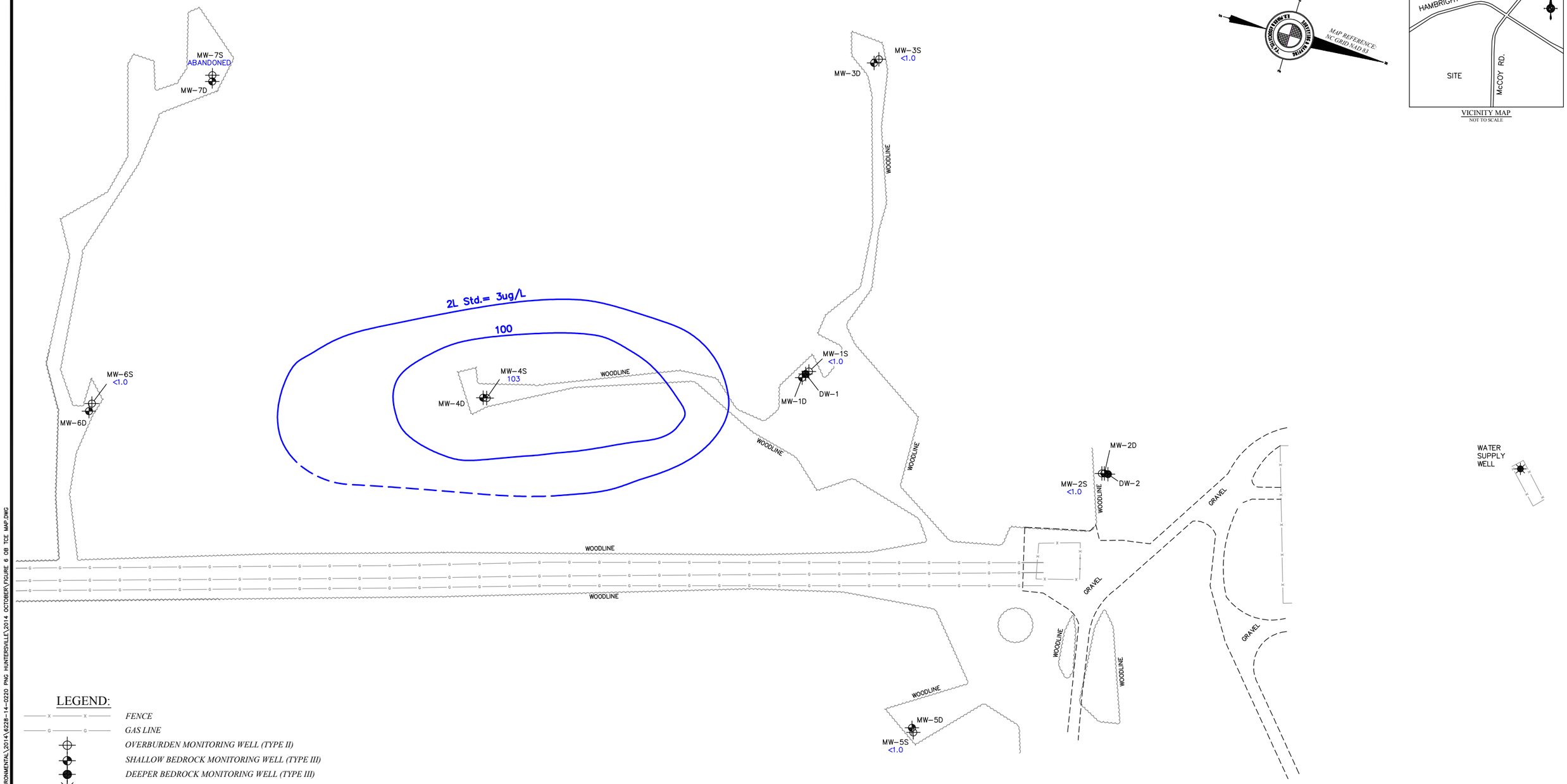
JOB:	6228140220
LT,LNG:	.
SCALE:	AS SHOWN
DRAWN:	D. Snyder
CHKD:	A. Frantz
PM:	A. Frantz
DATE:	12/05/14

PNG LIQUIFIED NATURAL GAS PLANT
11001 MCCOY ROAD
HUNTERSVILLE, NORTH CAROLINA

FIGURE NO. **5**

PROJECT NO. 6228140220

Path: P:\AutoCAD Drawings Only ^ CHECK OUT BEFORE DELETING\Environmental\2014\6228-14-0220 PNG Huntersville\2014 October\FIGURE 5 Cross-section.dwg [Profiles A & B]
Date: December 05, 2014 - 2:42pm By: dwain.snyder



LEGEND:

- FENCE
- GAS LINE
- OVERBURDEN MONITORING WELL (TYPE II)
- SHALLOW BEDROCK MONITORING WELL (TYPE III)
- DEEPER BEDROCK MONITORING WELL (TYPE III)
- WATER SUPPLY WELL
- 146 — TCE CONCENTRATION IN ug/L
- <1.0 — LESS THAN LABORATORY REPORTING LIMIT
- INFERRED ISO-CONCENTRATION CONTOUR

NOTES:

1. WELLS WITH A "S" IDENTIFIER WERE INSTALLED WITH A SCREENED INTERVAL SET IN THE OVERBURDEN AQUIFER; WELLS WITH A "D" IDENTIFIER WERE INSTALLED WITH A SCREEN SET IN THE UPPER BEDROCK AQUIFER.
2. CONCENTRATIONS REPORTED IN ug/L
3. 2L STD.= GROUNDWATER QUALITY STANDARD AS ESTABLISHED IN 15A NCAC 2L.0202
4. ALL WELLS SAMPLED OCTOBER 2014.
5. MW-7S HISTORICALLY DRY, ABANDONED ON OCTOBER 16, 2014.

0 60' 120' 240'

SCALE: 1" = 120'

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OVERBURDEN TCE ISO-CONCENTRATION MAP, OCTOBER 2014

JOB:	6228140220
LT,LNG:	.
SCALE:	1" = 120'
DRAWN:	D. Snyder
CHKD:	A. Frantz
PM:	A. Frantz
DATE:	12/05/14

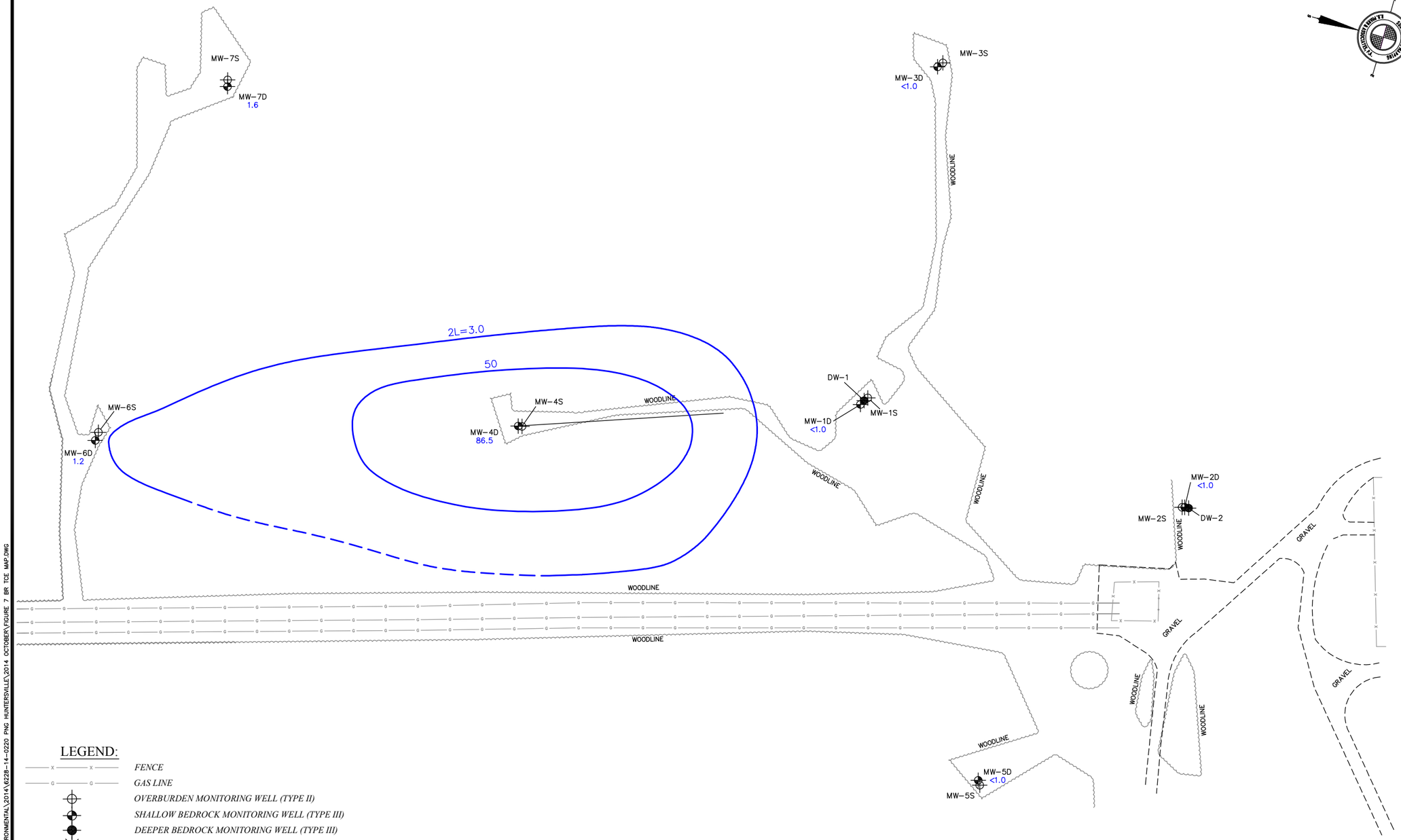
PNG LIQUIFIED NATURAL GAS PLANT

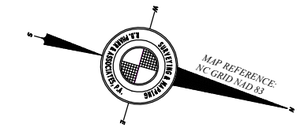
11001 McCOY ROAD
HUNTERSVILLE, NORTH CAROLINA

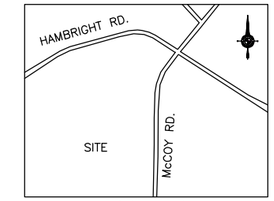
FIGURE NO. 6

PROJECT NO. 6228140220

PLOTTED: 12/5/2014
P:\AUTOCAD DRAWINGS ONLY"CHECK OUT BEFORE DELETING\ENVIRONMENTAL\2014\6228-14-0220 PNG HUNTERSVILLE\2014 OCTOBER\FIGURE 6 OB TCE MAP.DWG







VICINITY MAP
NOT TO SCALE

LEGEND:

- FENCE
- GAS LINE
- OVERBURDEN MONITORING WELL (TYPE II)
- SHALLOW BEDROCK MONITORING WELL (TYPE III)
- DEEPER BEDROCK MONITORING WELL (TYPE III)
- WATER SUPPLY WELL
- 90.6 — TCE CONCENTRATION IN ug/L
- <1.0 — LESS THAN LABORATORY REPORTING LIMIT
- INFERRED ISO-CONCENTRATION CONTOUR

NOTES:

1. *WELLS WITH A "S" IDENTIFIER WERE INSTALLED WITH A SCREENED INTERVAL SET IN THE OVERBURDEN AQUIFER; WELLS WITH A "D" IDENTIFIER WERE INSTALLED WITH A SCREEN SET IN THE UPPER BEDROCK AQUIFER.*
2. *CONCENTRATIONS REPORTED IN ug/L*
3. *2L STD.= GROUNDWATER QUALITY STANDARD AS ESTABLISHED IN 15A NCAC 2L.0202*
4. *ALL WELLS SAMPLED OCTOBERY 2014.*

0 60' 120' 240'

SCALE: 1" = 120'

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Phone (704) 357-8600 Fax (704) 357-8638

UPPER BEDROCK TCE ISO-CONCENTRATION MAP, OCTOBER 2014

JOB:	6228140220
LT,LNG:	.
SCALE:	1" = 120'
DRAWN:	D. Snyder
CHKD:	A. Frantz
PM:	A. Frantz
DATE:	12/05/14

PNG LIQUIFIED NATURAL GAS PLANT
11001 McCOY ROAD
HUNTERSVILLE, NORTH CAROLINA

FIGURE NO. **7**

PROJECT NO. 6228140220

PLOTTED: 12/5/2014
P:\AUTOCAD DRAWINGS ONLY"CHECK OUT BEFORE DELETING\ENVIRONMENTAL\2014\6228-14-0220 PNG HUNTERSVILLE\2014 OCTOBER\FIGURE 7 BR TCE MAP.DWG

TABLES

Table 1: Summary of Monitoring Well Construction and Groundwater Elevation Data
Piedmont Natural Gas - Liquified Natural Gas Plant
11001 McCoy Road, Huntersville, North Carolina
AMEC Project: 6228-14-0220

	Well Construction Details							Well Gauging Details		
Well	Installation Date	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	TOC Elevation (ft above MSL)	Surficial Casing (ft bgs)	Screened Interval (ft bgs)	Constructed Well Depth (ft bgs)	Date Measured	Depth to Water (ft below TOC)	Groundwater Elevation (ft above MSL)
DW-1	10/8/2012	35.373801164	-80.891408776	761.04	0-75 (10"), 0-116.5 (6")	202-217	217	4/8/2012	33.23	727.81
								7/19/2013	29.12	731.92
								2/3/2014	30.70	730.34
								10/15/2014	27.39	733.65
DW-2	11/20/2012	35.374895977	-80.891379351	765.55	0-110 (8")	126-136	136	4/8/2012	35.39	730.16
								7/19/2013	31.76	733.79
								2/4/2014	33.49	732.06
								10/16/2014	30.2	735.35
MW-1S	10/25/2012	35.373809626	-80.891422726	761.14	--	30-40	40	4/8/2012	30.46	730.68
								7/19/2013	27.31	733.83
								2/5/2014	27.08	734.06
								10/16/2014	25.48	735.66
MW-1D	10/25/2012	35.373793338	-80.891389663	760.91	--	90-100	100	4/8/2012	33.81	727.10
								7/19/2013	29.37	731.54
								2/5/2014	30.73	730.18
								10/15/2014	27.64	733.27
MW-2S	10/23/2012	35.374875193	-80.891374731	765.54	--	30-40	40	4/8/2012	35.37	730.17
								7/19/2013	31.86	733.68
								2/6/2014	33.11	732.43
								10/16/2014	29.42	736.12
MW-2D	10/23/2012	35.374883419	-80.891377866	765.49	--	89-99	99	4/8/2012	35.38	730.11
								7/19/2013	31.75	733.74
								2/4/2014	33.45	732.04
								10/16/2014	30.12	735.37
MW-3S	10/25/2012	35.373724393	-80.892761850	763.09	--	32-42	42	4/8/2012	38.77	724.32
								7/19/2013	34.65	728.44
								2/6/2014	35.90	727.19
								10/17/2014	31.90	731.19
MW-3D	10/29/2012	35.373712035	-80.892740878	762.94	--	90-100	100	4/8/2012	38.85	724.09
								7/19/2013	34.98	727.96
								2/6/2014	34.95	727.99
								10/20/2014	32.31	730.63
MW-4S	10/30/2012	35.372777499	-80.890919036	752.39	--	26-36	36	4/8/2012	26.10	726.29
								7/19/2013	18.91	733.48
								2/7/2014	21.17	731.22
								10/21/2014	22.62	729.77
MW-4D	10/31/2012	35.372765596	-80.890915930	752.41	--	90-100	100	4/8/2012	26.65	725.76
								7/19/2013	21.29	731.12
								2/6/2014	23.21	729.20
								10/21/2014	22.69	729.72
MW-5S	11/2/2012	35.374516886	-80.890103244	761.64	--	27-37	37	4/8/2012	31.29	730.35
								7/19/2013	27.40	734.24
								2/6/2014	28.58	733.06
								10/12/2014	24.94	736.70
MW-5D	11/2/2012	35.374507783	-80.890119939	761.55	--	90-100	100	4/8/2012	30.45	731.10
								7/19/2013	26.60	734.95
								2/4/2014	28.16	733.39
								10/17/2014	25.45	736.10
MW-6S	3/22/2013	35.371486000	-80.890414000	747.28	--	21-31	31	4/8/2012	30.52	716.76
								7/19/2013	26.10	721.18
								2/7/2014	26.52	720.76
								10/20/2014	25.20	722.08
MW-6D	3/27/2013	35.371483000	-80.890378000	746.81	0-42 (6")	78-88	88	4/8/2012	30.15	716.66
								7/19/2013	25.65	721.16
								2/7/2014	26.35	720.46
								10/20/2014	24.91	721.90
MW-7D	3/27/2013	35.371558000	-80.891853000	772.51	0-52 (6")	92-102	102	4/8/2012	54.91	717.60
								7/19/2013	51.39	721.12
								2/7/2014	51.98	720.53
								10/20/2014	49.00	723.51

Notes:
1. bgs = Below ground surface
2. TOC = Top of casing
3. MSL = Mean sea level
4. -- = Not Applicable
5. MW-7S historically dry, abandoned on October 16, 2014

Prepared By/Date: AJF 12/10/14

Checked By/Date: BH 12/10/14

Table 2: Detected Constituents in Groundwater
Piedmont Natural Gas - Liquified Natural Gas Plant
11001 McCoy Road, Huntersville, North Carolina
AMEC Project 6228140220

Well ID	Date Sampled	Acetone	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	p-Isopropyltoluene	Toluene	Trichloroethene	1,1,1-Trichloroethane
DW-1	11/30/2012	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/3/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/15/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
DW-2	11/29/2012	290	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/4/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/16/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-1D	11/30/2012	<25.0	<1.0	1.0	<1.0	8.6	4.7	**50.5**	<1.0
	2/5/2014	<25.0	<1.0	1.9	48.1	<1.0	<1.0	**22.9**	<1.0
	10/15/2014	<25.0	<1.0	1.1	43.8	<1.0	<1.0	<1.0	<1.0
MW-1S	12/4/2012	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/5/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.3
	10/16/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.1
MW-2D	11/30/2012	<25.0	<1.0	<1.0	<1.0	<1.0	7.4	<1.0	<1.0
	2/4/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/16/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-2S	12/3/2012	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/6/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/16/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-3D	11/27/2012	<25.0	<1.0	<1.0	<1.0	<1.0	5.8	<1.0	<1.0
	2/6/2014	<25.0	<1.0	<1.0	<1.0	<1.0	1.3	<1.0	<1.0
	10/20/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-3S	12/3/2012	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/6/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/17/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-4D	11/28/2012	<25.0	<1.0	8.4	<1.0	<1.0	1.0	**91.2**	10.4
	2/6/2014	<25.0	4.0	7.6	<1.0	<1.0	1.0	**90.6**	3.2
	10/21/2014	<25.0	3.9	9.2	2.5	<1.0	<1.0	**86.5**	3.5
MW-4S	12/3/2012	<25.0	<1.0	7.1	<1.0	<1.0	<1.0	**157**	7.1
	2/7/2014	<25.0	<1.0	7.9	<1.0	<1.0	<1.0	**146**	5.5
	10/21/2014	<25.0	<1.0	6.3	<1.0	<1.0	<1.0	**103**	4.1
MW-5D	11/29/2012	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/4/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/17/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-5S	12/3/2012	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/6/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/17/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-6D	4/8/2013	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.8	<1.0
	2/7/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.3	<1.0
	10/20/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.2	<1.0
MW-6S	4/8/2013	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/7/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/20/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-7D	4/8/2013	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/7/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/20/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.6	<1.0
WSW	10/21/2014	<25.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
NC 2L Standard		**6,000**	**6.0**	**350**	**70.0**	**NS**	**600**	**3.0**	**200**

Notes:

1. Concentrations shown in ug/L
2. NC 2L Standard = North Carolina Administravtive Code, Title 15A, Subchapter 2L, Groundwater Quality Standards
3. NS = No Standard established by NCDENR
4. Bold values exceed NCAC 2L Standard
5. MW-7S historically dry, abandoned on October 16, 2014

Prepared By/Date: AJF 12/10/14

Checked By/Date: BH 12/10/14

Table 3: Summary of MNA Parameters
Piedmont Natural Gas - Liquified Natural Gas Plant
11001 McCoy Road, Huntersville, North Carolina
AMEC Project: 6228-14-0220

Well ID	Date Sampled	Dissolved Oxygen	ORP (mV)	pH	Nitrogen/Nitrate	Manganese	Ferrous Iron	Sulfate	Methane	Alkalinity (total) as $CaCO_3$	Chloride	Ethane	Ethene	Arsenic	TOC	Specific Conductivity (mS/cm)	Turbidity (NTU)	Temperature (°C)
DW-1	2/3/2014	0.00	42	7.93	0.54	0.0147	<0.50	56.7	<0.0066	96.9	2.3	<0.0062	<0.0062	<0.0100	3.2	0.313	4.20	18.24
	10/15/2014	0.00	120	7.76	0.64	0.0180	<0.50	34.7	<0.0066	95.1	2.2	<0.0062	<0.0062	<0.0100	9.4	0.285	5.87	17.98
DW-2	2/4/2014	8.85	73	9.16	0.17	<0.0050	<0.50	2.8	<0.0066	57.8	1.4	<0.0062	<0.0062	<0.0100	9.1	0.142	4.00	12.92
	10/16/2014	8.22	33	10.28	0.26	0.0093	<0.50	2.7	<0.0066	70.9	1.6	<0.0062	<0.0062	<0.0100	4.1	0.170	9.40	17.96
MW-1D	2/5/2014	0.45	-83	7.24	<0.020	6.02	7.30	2.1	0.0367	283	<1.0	<0.0062	<0.0062	<0.0100	139	0.516	60.01	13.12
	10/15/2014	0.00	-182	8.17	0.13	5.85	5.90	5.2	0.2170	387	5.6	<0.0062	<0.0062	<0.0100	207	0.365	61.10	18.65
MW-1S	2/5/2014	1.18	158	5.65	0.82	0.0091	<0.50	<2.0	<0.0066	10.6	2.2	<0.0062	<0.0062	<0.0100	2.7	0.048	2.22	14.26
	10/16/2014	1.80	240	5.97	0.64	0.0116	<0.50	<2.0	<0.0066	14.3	1.8	<0.0062	<0.0062	<0.0100	15.4	0.048	6.50	14.73
MW-2D	2/4/2014	7.48	15	9.97	0.021	0.7270	2.50	3.3	<0.0066	76.6	2.3	<0.0062	<0.0062	<0.0100	2.3	0.179	30.80	10.94
	10/16/2014	1.86	-35	10.12	<0.020	1.01	1.00	2.6	0.0111	62.6	3.5	<0.0062	<0.0062	<0.0100	5.2	0.135	35.10	16.84
MW-2S	2/6/2014	7.16	240	5.22	1.30	0.0311	<0.50	<2.0	<0.0066	<5.0	<1.0	<0.0062	<0.0062	<0.0100	1.7	0.035	1.87	11.08
	10/16/2014	5.99	262	5.9	1.90	0.0218	<0.50	7.0	<0.0066	21.5	1.8	<0.0062	<0.0062	<0.0100	8.7	0.082	9.80	15.44
MW-3D	2/6/2014	2.41	-219	7.39	<0.020	3.50	1.70	2.2	0.0631	581	7.2	<0.0062	<0.0062	<0.0100	346	0.896	42.09	12.76
	10/20/2014	1.94	-122	7.22	<0.020	3.03	1.90	2.5	0.2400	437	6.6	<0.0062	<0.0062	<0.0100	217	0.768	9.82	13.07
MW-3S	2/6/2014	7.49	182	6.25	0.056	0.0234	<0.50	<2.0	<0.0066	71.5	2.3	<0.0062	<0.0062	<0.0100	2.9	0.135	9.91	12.44
	10/17/2014	8.75	201	6.39	0.033	0.0257	<0.50	3.1	<0.0066	57.5	2.7	<0.0062	<0.0062	<0.0100	14.4	0.126	8.80	15.70
MW-4D	2/6/2014	2.41	-168	10.52	<0.020	0.5540	2.80	4.7	0.0322	223	4.1	<0.0062	<0.0062	<0.0100	41.2	0.258	93.26	12.33
	10/21/2014	1.22	-170	10.29	<0.020	0.2830	<0.50	5.4	0.0247	148	1.9	<0.0062	<0.0062	<0.0100	44.5	0.198	72.00	20.95
MW-4S	2/7/2014	4.55	126	7.94	0.52	<0.0050	<0.50	<2.0	0.0080	54.8	1.6	<0.0062	<0.0062	<0.0100	1.5	0.128	8.99	9.67
	10/21/2014	5.42	96	9.17	0.44	0.0097	<0.50	<2.0	0.0103	46.5	1.2	<0.0062	<0.0062	<0.0100	4.5	0.095	9.53	16.11
MW-5D	2/4/2014	4.83	-108	9.10	<0.020	0.5790	1.60	<2.0	0.4940	324	12.8	<0.0062	<0.0062	<0.0100	141	0.598	51.40	10.16
	10/17/2014	1.22	-148	8.33	<0.020	0.3200	<0.50	6.2	0.5170	252	7.4	<0.0062	<0.0062	<0.0100	76.7	0.482	49.90	15.55
MW-5S	2/6/2014	8.27	220	5.87	0.70	0.0123	<0.50	<2.0	<0.0066	27.8	1.2	<0.0062	<0.0062	<0.0100	14.2	0.066	7.28	11.99
	10/17/2014	7.87	275	5.95	0.80	0.0100	<0.50	6.6	<0.0066	20.2	1.2	<0.0062	<0.0062	<0.0100	8.4	0.059	9.96	14.17
MW-6D	2/7/2014	2.11	-82	11.68	0.14	0.0197	<0.50	10.1	0.0090	230	2.0	<0.0062	<0.0062	<0.0100	1.2	0.887	9.12	14.33
	10/20/2014	6.27	4	10.13	0.11	0.0206	<0.50	12.0	<0.0066	101	2.0	<0.0062	<0.0062	<0.0100	6.8	0.215	7.91	16.1
MW-6S	2/7/2014	1.54	100	6.95	<0.020	1.74	<0.50	9.8	<0.0066	221	6.1	<0.0062	<0.0062	<0.0100	1.6	0.447	9.99	10.42
	10/20/2014	3.12	199	6.33	<0.020	0.0492	<0.50	3.6	<0.0066	149	4.2	<0.0062	<0.0062	<0.0100	25.5	0.293	8.75	16.68
MW-7D	2/7/2014	4.31	105	7.95	0.23	0.0225	<0.50	<2.0	<0.0066	108	2.4	<0.0062	<0.0062	<0.0100	2.5	0.203	7.79	14.74
	10/20/2014	6.36	133	7.57	0.25	0.0569	<0.50	<2.0	<0.0066	97.6	1.3	<0.0062	<0.0062	<0.0100	10.6	0.193	7.98	16.73

Notes:

1. Monitored Natural Attenuation (MNA) parameters shown in milligrams per liter (mg/L) unless otherwise noted
2. ORP = Oxidation Reduction Potential, shown in millivolts (mV)
3. $CaCO_3$ = Calcium carbonate
4. mS/cm = milli-siemens per centimeter
5. NTU = Nephelometric Turbidity Units
6. °C = degrees Celcius
7. MW-7S historically dry, abandoned on October 16, 2014

Prepared By/Date: AJF 12/10/14

Checked By/Date: BH 12/10/14

ATTACHMENT A

MONITORING WELL MW-7S ABANDONMENT RECORD

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

STEPHEN SLOAN

Well Contractor Name (or well owner personally abandoning well on his/her property)

A - 2854

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☐Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☑Monitoring	☐Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 10/16/14

5a. Well location:

PIEDMONT NATURAL GAS

Facility/Owner Name — Facility ID# (if applicable)

11001 MCCOY ROAD HUNTERSVILLE 28078

Physical Address, City, and Zip

MECKLENBURG

County — Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 22' 39.57" N 80° 53' 22.21" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: MW-7S

6b. Total well depth: 39.0 **(ft.)**

6c. Borehole diameter: 2.0 **(in.)**

6d. Water level below ground surface: _____ **(ft.)**

6e. Outer casing length (if known): _____ **(ft.)**

6f. Inner casing/tubing length (if known): _____ **(ft.)**

6g. Screen length (if known): _____ **(ft.)**

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): _____ **(gal.)**

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

☑ Neat Cement Grout	☐ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☐ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

6.5 GALLONS

7g. Provide a brief description of the abandonment procedure:

WELL ABANDONED VIA TREMIE PIPE WITH PORTLAND BENTONITE SLURRY

8. Certification: Stephen B Sloan — 11/03/14

Signature of Certified Well Contractor or Well Owner — Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

ATTACHMENT B

MONITORING WELL SAMPLING FORMS

AMEC ENVIRONMENT & INFRASTRUCTURE, INC.

MONITORING WELL LOW-FLOW SAMPLING FIELD DATA WORKSHEET

AMEC PROJECT NUMBER 62128-14-0220 MONITORING WELL NUMBER MW-15

SITE NAME PNG Huntersville DATE 10-16-14 TIME OF SAMPLE 950

FIELD PERSONNEL Troy L. Holzschuh WEATHER CONDITIONS Cloudy 55°

TOTAL WELL DEPTH (TWD) 25.40 FT. (measured / well tag / drillers log / previous report - circle one)

SCREENED INTERVAL 30-40 MEASURING POINT FOR DEPTH TOC

DEPTH TO GROUNDWATER (DGW) 25.48

LENGTH OF WATER COLUMN (LWC) = TWD – DGW = 14.52

CASING DIAMETER 2 IN.

ONE STANDING WELL VOLUME = 2.38 gal.

(NOTE ½" = 0.0102G/FT: ¾" = 0.023 G/FT: 1"= 0.041G/FT: 1.5" = 0.1 G/FT: 2" = 0.163 G/FT: 4" = 0.653 G/FT: 6" = 1.46 G/FT)

THREE STANDING WELL VOLUMES = 7.14 gal. FIVE STANDING WELL VOLUMES = 11.9 gal.

METHOD OF WELL EVACUATION: Submersible/Bladder TYPE Geo

TOTAL VOLUME OF WATER REMOVED: 2000 mL FLOW RATE 100 mL/min

WELL TYPE: FLUSH MOUNT / ABOVE GRADE COMMENTS

LOCKING CAP YES ✓ NO

PROTECTIVE POST/ABUTMENT YES ✓ NO

NONPOTABLE LABEL YES ✓ NO

ID PLATE YES ✓ NO

WELL INTEGRITY SATISFACTORY YES ✓ NO

WELL YIELD LOW MODERATE ✓ HIGH

Elapsed Purge Time (in minutes)	Depth to Groundwater	pH	Cond. (mS/cm)	Turbidity (NTU)	Dis. O_2 (mg/L)	Temp (°C)	ORP (mV)	Notes
928 Initial Reading (0 min)	26.30	7.00	0.054	49.2	3.40	14.85	182	
5	26.37	6.21	0.051	13.1	1.88	14.69	228	
10	26.45	5.99	0.049	6.7	1.84	14.72	234	
15	26.45	5.97	0.049	6.2	1.80	14.75	239	
20	26.45	5.97	0.048	6.5	1.80	14.73	240	

AMEC ENVIRONMENT & INFRASTRUCTURE, INC.

MONITORING WELL LOW-FLOW SAMPLING FIELD DATA WORKSHEET

AMEC PROJECT NUMBER 62128-14-0220 MONITORING WELL NUMBER MW-1D

SITE NAME PNG Huntersville DATE 10-15-14 TIME OF SAMPLE 1630

FIELD PERSONNEL Troy L. Holzschuh WEATHER CONDITIONS Sunny 70

TOTAL WELL DEPTH (TWD) 100 FT. (measured / well tag / drillers log / previous report – circle one)

SCREENED INTERVAL 90 - 100 MEASURING POINT FOR DEPTH TOC

DEPTH TO GROUNDWATER (DGW) 27.64

LENGTH OF WATER COLUMN (LWC) = TWD – DGW = 72.36

CASING DIAMETER 2 IN.

ONE STANDING WELL VOLUME = 11.86 gal.

(NOTE ½" = 0.0102G/FT: ¾" = 0.023 G/FT: 1"= 0.041G/FT: 1.5" = 0.1 G/FT: 2" = 0.163 G/FT: 4" = 0.653 G/FT: 6" = 1.46 G/FT)

THREE STANDING WELL VOLUMES = 35.58 gal. FIVE STANDING WELL VOLUMES = 57.8 gal.

METHOD OF WELL EVACUATION: Submersible TYPE Bladder

TOTAL VOLUME OF WATER REMOVED: 22,500 mL FLOW RATE 125 mL/min

WELL TYPE: FLUSH MOUNT ABOVE GRADE COMMENTS

LOCKING CAP YES ✓ NO

PROTECTIVE POST/ABUTMENT YES ✓ NO

NONPOTABLE LABEL YES ✓ NO

ID PLATE YES ✓ NO

WELL INTEGRITY SATISFACTORY YES ✓ NO

WELL YIELD LOW ✓ MODERATE HIGH

Elapsed Purge Time (in minutes)	Depth to Groundwater	pH	Cond. (mS/cm)	Turbidity (NTU)	Dis. O_2 (mg/L)	Temp (°C)	ORP (mV)	Notes
1339 Initial Reading (0 min)	26.44	9.69	0.333	176	2.20	21.21	-171	
10	27.08	9.05	0.337	259	1.24	20.15	-175	
20	27.50	8.18	0.340	179	0.72	20.44	-152	
30	27.78	7.99	0.354	222	0.61	21.12	-122	
40	28.12	7.53	0.352	206	0.48	20.87	-104	
50	28.72	7.44	0.350	158	0.21	20.56	-97	
60	28.81	7.78	0.342	151	0.09	20.10	-112	
70	28.85	8.13	0.341	143	0.0	19.63	-110	
80	28.86	8.30	0.345	135	0.0	19.42	-155	
90	28.86	8.36	0.351	126	0.0	19.10	-170	
100	28.86	8.34	0.358	116	0.0	18.93	-179	

	Min	DTW	PH	Cond	Turb	DO	Temp	ORP
	110	28.86	8.32	0.358	105	0.0	18.98	-185
	120	28.86	8.16	0.365	96.3	0.0	18.81	-177
(1539)	130	28.86	8.11	0.367	85.4	0.0	18.77	-174
	140	28.86	8.10	0.368	77.9	0.0	18.75	-171
	150	28.86	8.08	0.367	72.9	0.0	18.70	-172
	160	28.86	8.12	0.367	67.2	0.0	18.79	-175
	170	28.86	8.15	0.366	64.8	0.0	18.75	-177
	175	28.86	8.16	0.366	60.7	0.0	18.69	-179
(1629)	180	28.86	8.17	0.365	61.1	0.0	18.65	-182

AMEC ENVIRONMENT & INFRASTRUCTURE, INC.

MONITORING WELL LOW-FLOW SAMPLING FIELD DATA WORKSHEET

AMEC PROJECT NUMBER 62128-14-0220 MONITORING WELL NUMBER DW-1

SITE NAME PNG Huntersville DATE 10-15-14 TIME OF SAMPLE 1207

FIELD PERSONNEL Troy L. Holzschuh WEATHER CONDITIONS Sunny 60°

TOTAL WELL DEPTH (TWD) 217 FT. (measured / well tag / drillers log / previous report - circle one)

SCREENED INTERVAL 202-217 MEASURING POINT FOR DEPTH TOC

DEPTH TO GROUNDWATER (DGW) 27.39

LENGTH OF WATER COLUMN (LWC) = TWD – DGW = 189.61

CASING DIAMETER 2 IN.

ONE STANDING WELL VOLUME = 31.1 gal.

(NOTE ½" = 0.0102G/FT: ¾" = 0.023 G/FT: 1"= 0.041G/FT: 1.5" = 0.1 G/FT: 2" = 0.163 G/FT: 4" = 0.653 G/FT: 6" = 1.46 G/FT)

THREE STANDING WELL VOLUMES = 93.3 gal. FIVE STANDING WELL VOLUMES = 155.5 gal.

METHOD OF WELL EVACUATION: Submersible TYPE Grundfos

TOTAL VOLUME OF WATER REMOVED: 9600 mL FLOW RATE 80 mL/min

WELL TYPE: FLUSH MOUNT / ABOVE GRADE COMMENTS

LOCKING CAP YES ✓ NO

PROTECTIVE POST/ABUTMENT YES ✓ NO

NONPOTABLE LABEL YES ✓ NO

ID PLATE YES ✓ NO

WELL INTEGRITY SATISFACTORY YES ✓ NO

WELL YIELD LOW ✓ MODERATE HIGH

Elapsed Purge Time (in minutes)	Depth to Groundwater	pH	Cond. (mS/cm)	Turbidity (NTU)	Dis. O_2 (mg/L)	Temp (°C)	ORP (mV)	Notes
1007 Initial Reading (0 min)	26.90	6.91	0.271	3.9	2.80	16.39	163	
10	29.11	7.38	0.283	1.38	1.41	15.91	160	
20	29.22	7.80	0.327	1.40	1.08	16.10	141	
30	34.58	7.49	0.297	1.23	0.53	16.04	145	
40	35.02	7.38	0.291	1.31	0.42	16.02	148	35.02 ATW
50	37.99	7.35	0.287	1.29	0.46	16.10	145	
60	40.28	7.26	0.285	4.21	0.36	16.10	120	
70	40.30	7.66	0.285	4.98	0.09	16.20	119	
80	40.32	7.75	0.285	7.50	0.09	17.04	114	
90	40.32	7.73	0.285	6.70	0.0	17.98	117	
100	40.32	7.75	0.285	6.72	0.0	17.97	118	

Continued on back

Min	DTW	PH	Cond	Turb	DO	Temp	ORP
110	40.32	7.75	0.285	6.59	0.0	17.99	118
115	40.32	7.75	0.285	5.85	0.0	18.02	119
120	40.32	7.76	0.285	5.87	0.0	17.98	120

AMEC ENVIRONMENT & INFRASTRUCTURE, INC.

MONITORING WELL LOW-FLOW SAMPLING FIELD DATA WORKSHEET

AMEC PROJECT NUMBER 62128-14-0220 MONITORING WELL NUMBER MW-25

SITE NAME PNG Huntersville DATE 10-16-14 TIME OF SAMPLE 1145

FIELD PERSONNEL Troy L. Holzschuh WEATHER CONDITIONS Partly Cloudy 61°

TOTAL WELL DEPTH (TWD) 40 FT. (measured / well tag / drillers log / previous report – **circle one**)

SCREENED INTERVAL 30-40 MEASURING POINT FOR DEPTH TOC

DEPTH TO GROUNDWATER (DGW) 29.42

LENGTH OF WATER COLUMN (LWC) = TWD – DGW = 10.58

CASING DIAMETER 2 IN.

ONE STANDING WELL VOLUME = 1.74 gal.

(NOTE ½" = 0.0102G/FT: ¾" = 0.023 G/FT: 1"= 0.041G/FT: 1.5" = 0.1 G/FT: 2" = 0.163 G/FT: 4" = 0.653 G/FT: 6" = 1.46 G/FT)

THREE STANDING WELL VOLUMES = 5.22 gal. FIVE STANDING WELL VOLUMES = 8.7 gal.

METHOD OF WELL EVACUATION: Sub/Bladder TYPE Geo

TOTAL VOLUME OF WATER REMOVED: 1250 mL FLOW RATE 100/75 mL/min

WELL TYPE: FLUSH MOUNT / ABOVE GRADE COMMENTS

LOCKING CAP YES ✓ NO

PROTECTIVE POST/ABUTMENT YES ✓ NO

NONPOTABLE LABEL YES ✓ NO

ID PLATE YES ✓ NO

WELL INTEGRITY SATISFACTORY YES ✓ NO

WELL YIELD LOW ✓ MODERATE HIGH

Elapsed Purge Time (in minutes)	Depth to Groundwater	pH	Cond. (mS/cm)	Turbidity (NTU)	Dis. O_2 (mg/L)	Temp (°C)	ORP (mV)	Notes
1122 Initial Reading (0 min)	30.38	5.90	0.075	77.2	6.83	15.54	236	Flow 100
5	30.73	5.86	0.074	46.6	6.67	15.49	250	↓
10	30.82	5.90	0.081	25.8	6.13	15.38	259	Lower Flow 75
15	30.82	5.89	0.082	14.7	6.09	15.41	261	
20	30.82	5.90	0.082	9.8	5.99	15.44	262	

AMEC ENVIRONMENT & INFRASTRUCTURE, INC.

MONITORING WELL LOW-FLOW SAMPLING FIELD DATA WORKSHEET

AMEC PROJECT NUMBER 62128-14-0220 MONITORING WELL NUMBER MW-2D

SITE NAME PNG Huntersville DATE 10-16-14 TIME OF SAMPLE 1445

FIELD PERSONNEL Troy L. Holzschuh WEATHER CONDITIONS Cloudy 68°

TOTAL WELL DEPTH (TWD) 98 FT. (measured / well tag / drillers log / previous report – **circle one**)

SCREENED INTERVAL 88-98 MEASURING POINT FOR DEPTH TOC

DEPTH TO GROUNDWATER (DGW) 30.12

LENGTH OF WATER COLUMN (LWC) = TWD – DGW = 67.88

CASING DIAMETER 2 IN.

ONE STANDING WELL VOLUME = 11.13 gal.

(NOTE ½" = 0.0102G/FT: ¾" = 0.023 G/FT: 1"= 0.041G/FT: 1.5" = 0.1 G/FT: 2" = 0.163 G/FT: 4" = 0.653 G/FT: 6" = 1.46 G/FT)

THREE STANDING WELL VOLUMES = 33.39 gal. FIVE STANDING WELL VOLUMES = 55.65 gal.

METHOD OF WELL EVACUATION: Submersible/Bladder TYPE Geo

TOTAL VOLUME OF WATER REMOVED: 11,250 mL FLOW RATE 125 mL/min

WELL TYPE: FLUSH MOUNT / ABOVE GRADE COMMENTS

LOCKING CAP YES ✓ NO

PROTECTIVE POST/ABUTMENT YES ✓ NO

NONPOTABLE LABEL YES ✓ NO

ID PLATE YES ✓ NO

WELL INTEGRITY SATISFACTORY YES ✓ NO

WELL YIELD LOW MODERATE ✓ HIGH

	Elapsed Purge Time (in minutes)	Depth to Groundwater	pH	Cond. (mS/cm)	Turbidity (NTU)	Dis. O_2 (mg/L)	Temp (°C)	ORP (mV)	Notes
13.10	Initial Reading (0 min)	30.30	10.83	0.244	266	6.35	17.63	-7	
	10	30.38	10.84	0.229	NR	2.83	17.08	-30	
	20	30.30	10.81	0.201	NR	2.21	16.88	-37	
	30	30.30	10.98	0.162	406	2.04	16.59	-58	
	40	30.30	10.31	0.143	NR	1.66	16.43	-22	empty flow cell
1400	50	30.30	9.40	0.133	297	1.88	16.83	46	& recharge
	60	30.30	10.15	0.134	30.5	1.90	16.85	-28	
	70	30.30	10.18	0.134	43.6	1.94	16.83	-35	
	80	30.30	10.15	0.134	35.1	1.92	16.82	-36	
	85	30.30	10.12	0.135	34.8	1.88	16.85	-37	
	90	30.30	10.12	0.135	35.1	1.86	16.84	-35	

AMEC ENVIRONMENT & INFRASTRUCTURE, INC.

MONITORING WELL LOW-FLOW SAMPLING FIELD DATA WORKSHEET

AMEC PROJECT NUMBER 62128-14-0220 MONITORING WELL NUMBER DW-2

SITE NAME PNG Huntersville DATE 10-16-14 TIME OF SAMPLE 1550

FIELD PERSONNEL Troy L. Holzschuh WEATHER CONDITIONS Partly Cloudy 68

TOTAL WELL DEPTH (TWD) 138.35 FT. (measured / well tag / drillers log / previous report – **circle one**)

SCREENED INTERVAL 126-136 MEASURING POINT FOR DEPTH TOC

DEPTH TO GROUNDWATER (DGW) 30.2

LENGTH OF WATER COLUMN (LWC) = TWD – DGW = 108.15

CASING DIAMETER 2 IN.

ONE STANDING WELL VOLUME = 17.74 gal.

(NOTE ½" = 0.0102G/FT: ¾" = 0.023 G/FT: 1"= 0.041G/FT: 1.5" = 0.1 G/FT: 2" = 0.163 G/FT: 4" = 0.653 G/FT: 6" = 1.46 G/FT)

THREE STANDING WELL VOLUMES = 53.22 gal. FIVE STANDING WELL VOLUMES = 88.7 gal.

METHOD OF WELL EVACUATION: Sub/Bladder TYPE Geo

TOTAL VOLUME OF WATER REMOVED: 2000 mL FLOW RATE 100 mL/min

WELL TYPE: FLUSH MOUNT / ABOVE GRADE COMMENTS

LOCKING CAP YES ✓ NO

PROTECTIVE POST/ABUTMENT YES ✓ NO

NONPOTABLE LABEL YES ✓ NO

ID PLATE YES ✓ NO

WELL INTEGRITY SATISFACTORY YES ✓ NO

WELL YIELD LOW ✓ MODERATE HIGH

Elapsed Purge Time (in minutes)	Depth to Groundwater	pH	Cond. (mS/cm)	Turbidity (NTU)	Dis. O_2 (mg/L)	Temp (°C)	ORP (mV)	Notes
1525 ~~1500~~ Initial Reading (0 min)	30.20	9.12	0.134	219	4.92	18.08	96	
5	30.20	9.16	0.140	61.3	6.12	17.90	92	
10	30.20	10.31	0.168	18.9	8.17	17.94	30	
15	30.20	10.29	0.169	11.6	8.21	17.98	32	
20	30.20	10.28	0.170	9.4	8.22	17.96	33	

AMEC ENVIRONMENT & INFRASTRUCTURE, INC.

MONITORING WELL LOW-FLOW SAMPLING FIELD DATA WORKSHEET

AMEC PROJECT NUMBER 62128-14-0220 MONITORING WELL NUMBER MW-35

SITE NAME PNG Huntersville DATE 10-17-14 TIME OF SAMPLE 1420

FIELD PERSONNEL Troy L. Holzschuh WEATHER CONDITIONS Clear 65

TOTAL WELL DEPTH (TWD) 42 FT. (measured / well tag / drillers log / previous report – **circle one**)

SCREENED INTERVAL 32-42 MEASURING POINT FOR DEPTH TOC

DEPTH TO GROUNDWATER (DGW) 31.90

LENGTH OF WATER COLUMN (LWC) = TWD – DGW = 10.1

CASING DIAMETER 2 IN.

ONE STANDING WELL VOLUME = 1.65 gal.

(NOTE ½" = 0.0102G/FT: ¾" = 0.023 G/FT: 1"= 0.041G/FT: 1.5" = 0.1 G/FT: 2" = 0.163 G/FT: 4" = 0.653 G/FT: 6" = 1.46 G/FT)

THREE STANDING WELL VOLUMES = 4.95 gal. FIVE STANDING WELL VOLUMES = 8.25 gal.

METHOD OF WELL EVACUATION: Sub/Bladder TYPE Geo

TOTAL VOLUME OF WATER REMOVED: 3,500 mL FLOW RATE 175 mL/min

WELL TYPE: FLUSH MOUNT / ABOVE GRADE COMMENTS

LOCKING CAP YES ✓ NO

PROTECTIVE POST/ABUTMENT YES ✓ NO

NONPOTABLE LABEL YES ✓ NO

ID PLATE YES ✓ NO

WELL INTEGRITY SATISFACTORY YES ✓ NO

WELL YIELD LOW MODERATE ✓ HIGH

	Elapsed Purge Time (in minutes)	Depth to Groundwater	pH	Cond. (mS/cm)	Turbidity (NTU)	Dis. O_2 (mg/L)	Temp (°C)	ORP (mV)	Notes
1355	Initial Reading (0 min)	32.48	6.63	0.126	111	10.53	15.77	187	
	10	32.48	6.44	0.126	26.0	8.84	15.70	196	
	15	32.48	6.41	0.126	15.3	8.79	15.69	199	
	20	32.48	6.39	0.126	8.8	8.75	15.70	201	

AMEC ENVIRONMENT & INFRASTRUCTURE, INC.

MONITORING WELL LOW-FLOW SAMPLING FIELD DATA WORKSHEET

AMEC PROJECT NUMBER 62128-14-0220 MONITORING WELL NUMBER MW-30

SITE NAME PNG Huntersville DATE 10-20-14 TIME OF SAMPLE 1020

FIELD PERSONNEL Troy L. Holzschuh WEATHER CONDITIONS Partly Cloudy 44°

TOTAL WELL DEPTH (TWD) 100 FT. (measured / well tag / drillers log / previous report - **circle one**)

SCREENED INTERVAL 90-100 MEASURING POINT FOR DEPTH TOC

DEPTH TO GROUNDWATER (DGW) 32.31

LENGTH OF WATER COLUMN (LWC) = TWD – DGW = 67.7

CASING DIAMETER 2 IN.

ONE STANDING WELL VOLUME = 11.1 gal.

(NOTE ½" = 0.0102G/FT: ¾" = 0.023 G/FT: 1"= 0.041G/FT: 1.5" = 0.1 G/FT: 2" = 0.163 G/FT: 4" = 0.653 G/FT: 6" = 1.46 G/FT)

THREE STANDING WELL VOLUMES = 33.3 gal. FIVE STANDING WELL VOLUMES = 55.5 gal.

METHOD OF WELL EVACUATION: Sub/Bladder TYPE 600

TOTAL VOLUME OF WATER REMOVED: 9,625 mL FLOW RATE 175 mL/min

WELL TYPE: FLUSH MOUNT / ABOVE GRADE

COMMENTS Black hue but not turbid

LOCKING CAP YES ✓ NO

PROTECTIVE POST/ABUTMENT YES ✓ NO

NONPOTABLE LABEL YES ✓ NO

ID PLATE YES ✓ NO

WELL INTEGRITY SATISFACTORY YES ✓ NO

WELL YIELD LOW ✓ MODERATE HIGH

Elapsed Purge Time (in minutes)	Depth to Groundwater	pH	Cond. (mS/cm)	Turbidity (NTU)	Dis. O_2 (mg/L)	Temp (°C)	ORP (mV)	Notes
920 Initial Reading (0 min)	31.68	7.37	0.801	30.2	2.16	12.07	-119	
10	34.85	7.40	0.733	23.6	2.07	13.14	-138	
20	37.25	7.39	0.783	24.2	1.99	13.08	-143	
30	37.42	7.31	0.775	16.7	2.06	12.97	-128	
40	37.42	7.30	0.769	13.9	1.99	13.01	-126	
45	37.42	7.29	0.768	12.1	1.98	13.02	-125	
50	37.42	7.28	0.767	10.5	1.95	13.05	-124	
55	37.42	7.28	0.768	9.82	1.94	13.07	-122	

AMEC ENVIRONMENT & INFRASTRUCTURE, INC.

MONITORING WELL LOW-FLOW SAMPLING FIELD DATA WORKSHEET

AMEC PROJECT NUMBER 62128-14-0220 MONITORING WELL NUMBER MW-4 J

SITE NAME PNG Huntersville DATE 10-21-14 TIME OF SAMPLE 1050

FIELD PERSONNEL Troy L. Holzschuh WEATHER CONDITIONS Sunny 51°

TOTAL WELL DEPTH (TWD) 36 FT. (measured / well tag / drillers log / previous report – **circle one**)

SCREENED INTERVAL 26-36 MEASURING POINT FOR DEPTH TOC

DEPTH TO GROUNDWATER (DGW) 22.62

LENGTH OF WATER COLUMN (LWC) = TWD – DGW = 13.38

CASING DIAMETER 2 IN.

ONE STANDING WELL VOLUME = 2.19 gal.

(NOTE ½" = 0.0102G/FT: ¾" = 0.023 G/FT: 1"= 0.041G/FT: 1.5" = 0.1 G/FT: 2" = 0.163 G/FT: 4" = 0.653 G/FT: 6" = 1.46 G/FT)

THREE STANDING WELL VOLUMES = 6.58 gal. FIVE STANDING WELL VOLUMES = 10.95 gal.

METHOD OF WELL EVACUATION: Sub/Bladder TYPE GCO

TOTAL VOLUME OF WATER REMOVED: 6000 mL FLOW RATE 100 mL/min

WELL TYPE: FLUSH MOUNT / ABOVE GRADE COMMENTS

LOCKING CAP YES ✓ NO

PROTECTIVE POST/ABUTMENT YES ✓ NO

NONPOTABLE LABEL YES ✓ NO

ID PLATE YES ✓ NO

WELL INTEGRITY SATISFACTORY YES ✓ NO

WELL YIELD LOW ✓ MODERATE HIGH

Elapsed Purge Time (in minutes)	Depth to Groundwater	pH	Cond. (mS/cm)	Turbidity (NTU)	Dis. O_2 (mg/L)	Temp (°C)	ORP (mV)	Notes
937 Initial Reading (0 min)	23.39	5.39	0.105	374	7.79	13.96	344	
10	24.85	8.90	0.110	148	5.86	13.94	144	
20	25.48	9.67	0.109	102	5.78	14.41	85	
30	25.48	9.42	0.102	56.5	5.77	14.43	87	
40	25.48	9.17	0.098	28.1	5.75	15.82	89	
50	25.48	9.17	0.096	11.1	5.48	16.07	92	
55	25.48	9.17	0.095	9.86	5.43	16.10	95	
60	25.48	9.17	0.095	9.53	5.42	16.11	96	

AMEC ENVIRONMENT & INFRASTRUCTURE, INC.

MONITORING WELL LOW-FLOW SAMPLING FIELD DATA WORKSHEET

AMEC PROJECT NUMBER 62128-14-0220 MONITORING WELL NUMBER MW-4D

SITE NAME PNG Huntersville DATE 10-21-14 TIME OF SAMPLE 1340

FIELD PERSONNEL Troy L. Holzschuh WEATHER CONDITIONS Sunny

TOTAL WELL DEPTH (TWD) 100 FT. (measured / well tag / drillers log / previous report – **circle one**)

SCREENED INTERVAL 90-100 MEASURING POINT FOR DEPTH TOC

DEPTH TO GROUNDWATER (DGW) 22.69

LENGTH OF WATER COLUMN (LWC) = TWD – DGW = 77.31

CASING DIAMETER 2 IN.

ONE STANDING WELL VOLUME = 12.67 gal.

(NOTE ½" = 0.0102G/FT: ¾" = 0.023 G/FT: 1"= 0.041G/FT: 1.5" = 0.1 G/FT: 2" = 0.163 G/FT: 4" = 0.653 G/FT: 6" = 1.46 G/FT)

THREE STANDING WELL VOLUMES = 38.01 gal. FIVE STANDING WELL VOLUMES = 63.4 gal.

METHOD OF WELL EVACUATION: Sub/Bladder TYPE Geo

TOTAL VOLUME OF WATER REMOVED: _____ mL FLOW RATE 125 mL/min

WELL TYPE: FLUSH MOUNT / ~~ABOVE GRADE~~ COMMENTS _____

LOCKING CAP ~~YES~~ ✓ NO _____ Gray hue

PROTECTIVE POST/ABUTMENT YES ✓ NO _____

NONPOTABLE LABEL YES ✓ NO _____

ID PLATE YES ✓ NO _____

WELL INTEGRITY SATISFACTORY YES ✓ NO _____

WELL YIELD LOW _____ MODERATE ✓ HIGH _____

	Elapsed Purge Time (in minutes)	Depth to Groundwater	pH	Cond. (mS/cm)	Turbidity (NTU)	Dis. O_2 (mg/L)	Temp (°C)	ORP (mV)	Notes
1120	Initial Reading (0 min)	22.12	8.45	0.285	4.30	10.61	20.21	-29	
	10	24.68	11.03	0.305	232	9.05	18.94	-186	
	20	24.98	11.03	0.308	223	8.89	19.42	-190	
	30	24.98	11.05	0.299	183	8.01	19.31	-192	
	40	24.98	10.97	0.269	176	1.13	19.34	-192	
	50	24.98	10.76	0.252	1.21	1.14	19.97	-183	
1220	60	24.98	10.66	0.238	118	1.04	20.16	-180	
	70	24.98	10.66	0.226	98.8	0.96	20.69	-182	
	80	24.98	10.48	0.223	93.3	1.03	20.84	-176	
	90	24.98	10.29	0.205	74.9	1.18	20.92	-168	
	100	24.98	10.34	0.202	68.1	1.21	20.89	-173	

	Time	DTW	pH	cond	Turb	DO	Temp	ORP
	110	24.98	10.31	0.198	70.2	1.23	20.91	-172
1320	120	24.98	10.29	0.196	69.7	1.25	20.93	-168
	125	24.98	10.27	0.198	71.3	1.22	20.98	-169
	130	24.98	10.29	0.198	72.0	1.22	20.95	-170

AMEC ENVIRONMENT & INFRASTRUCTURE, INC.

MONITORING WELL LOW-FLOW SAMPLING FIELD DATA WORKSHEET

AMEC PROJECT NUMBER 62128-14-0220 MONITORING WELL NUMBER MW-5S

SITE NAME PNG Huntersville DATE 10-17-14 TIME OF SAMPLE 1005

FIELD PERSONNEL Troy L. Holzschuh WEATHER CONDITIONS Clear 50

TOTAL WELL DEPTH (TWD) 37 FT. (measured / well tag / drillers log / previous report - circle one)

SCREENED INTERVAL 27-37 MEASURING POINT FOR DEPTH TOC

DEPTH TO GROUNDWATER (DGW) 24.94

LENGTH OF WATER COLUMN (LWC) = TWD – DGW = 12.06

CASING DIAMETER 2 IN.

ONE STANDING WELL VOLUME = 1.98 gal.

(NOTE ½" = 0.0102G/FT: ¾" = 0.023 G/FT: 1"= 0.041G/FT: 1.5" = 0.1 G/FT: 2" = 0.163 G/FT: 4" = 0.653 G/FT: 6" = 1.46 G/FT)

THREE STANDING WELL VOLUMES = 5.94 gal. FIVE STANDING WELL VOLUMES = 9.75 gal.

METHOD OF WELL EVACUATION: Sub/Bladder TYPE Geo

TOTAL VOLUME OF WATER REMOVED: _____ mL FLOW RATE 175 mL/min

WELL TYPE: FLUSH MOUNT / ABOVE GRADE COMMENTS _____

LOCKING CAP YES ✓ NO _____

PROTECTIVE POST/ABUTMENT YES ✓ NO _____

NONPOTABLE LABEL YES ✓ NO _____

ID PLATE YES ✓ NO _____

WELL INTEGRITY SATISFACTORY YES ✓ NO _____

WELL YIELD LOW _____ MODERATE ✓ HIGH _____

Elapsed Purge Time (in minutes)	Depth to Groundwater	pH	Cond. (mS/cm)	Turbidity (NTU)	Dis. O_2 (mg/L)	Temp (°C)	ORP (mV)	Notes
920 Initial Reading (0 min)	25.56	7.97	0.059	NR	8.29	13.56	199	
10	25.68	6.73	0.062	284	8.10	13.67	254	
20	25.68	6.33	0.060	83.2	7.90	13.81	258	
25	25.68	6.23	0.060	31.5	7.93	13.95	258	
30	25.68	6.09	0.059	17.3	7.83	14.11	268	
35	25.68	5.99	0.059	13.2	7.85	14.15	272	
40	25.68	5.95	0.059	9.96	7.87	14.17	275	

AMEC ENVIRONMENT & INFRASTRUCTURE, INC.

MONITORING WELL LOW-FLOW SAMPLING FIELD DATA WORKSHEET

AMEC PROJECT NUMBER 62128-14-0220 MONITORING WELL NUMBER MW-5D

SITE NAME PNG Huntersville DATE 10-17-14 TIME OF SAMPLE 1235

FIELD PERSONNEL Troy L. Holzschuh WEATHER CONDITIONS Clear 50°

TOTAL WELL DEPTH (TWD) 100 FT. (measured / well tag / drillers log / previous report – **circle one**)

SCREENED INTERVAL 90-100 MEASURING POINT FOR DEPTH TOC

DEPTH TO GROUNDWATER (DGW) 25.45

LENGTH OF WATER COLUMN (LWC) = TWD – DGW = 74.55

CASING DIAMETER 2 IN.

ONE STANDING WELL VOLUME = 12.22 gal.

(NOTE ½" = 0.0102G/FT: ¾" = 0.023 G/FT: 1"= 0.041G/FT: 1.5" = 0.1 G/FT: 2" = 0.163 G/FT: 4" = 0.653 G/FT: 6" = 1.46 G/FT)

THREE STANDING WELL VOLUMES = 36.67 gal. FIVE STANDING WELL VOLUMES = 61.1 gal.

METHOD OF WELL EVACUATION: Sub/Bladder TYPE Geo

TOTAL VOLUME OF WATER REMOVED: 4600 mL FLOW RATE 40 mL/min

WELL TYPE: FLUSH MOUNT / ABOVE GRADE COMMENTS

LOCKING CAP YES ✓ NO

PROTECTIVE POST/ABUTMENT YES ✓ NO

NONPOTABLE LABEL YES ✓ NO

ID PLATE YES ✓ NO

WELL INTEGRITY SATISFACTORY YES ✓ NO

WELL YIELD LOW ✓ MODERATE HIGH

	Elapsed Purge Time (in minutes)	Depth to Groundwater	pH	Cond. (mS/cm)	Turbidity (NTU)	Dis. O_2 (mg/L)	Temp (°C)	ORP (mV)	Notes
1035	Initial Reading (0 min)	25.23	5.98	0.535	182	5.64	14.27	-63	
	10	25.48	8.10	0.536	120	5.13	13.99	-64	
	20	25.48	8.24	0.532	94.7	2.36	14.97	-63	
	30	25.48	8.25	0.534	61.1	1.92	14.95	-90	
	40	25.48	8.25	0.534	55.8	1.23	15.01	-99	
	50	25.48	8.33	0.523	54.9	1.15	15.29	-138	
1135	60	25.48	8.34	0.509	54.2	1.11	15.36	-144	
	70	25.48	8.33	0.489	51.8	1.15	15.40	-147	
	80	25.48	8.33	0.485	49.0	1.18	15.42	-148	
	90	25.48	8.33	0.483	48.7	1.20	15.45	-148	
	100	25.48	8.33	0.482	49.2	1.21	15.50	-148	

Continue on Back

Time	DTW	pH	Cond	Turb	DO	Temp	ORP
105	25.48	8.32	0.482	49.4	1.22	15.53	-150
110	25.48	8.33	0.482	49.8	1.23	15.52	-148
115	25.48	8.33	0.482	49.9	1.22	15.55	-148

AMEC ENVIRONMENT & INFRASTRUCTURE, INC.

MONITORING WELL LOW-FLOW SAMPLING FIELD DATA WORKSHEET

AMEC PROJECT NUMBER 62128-14-0220 MONITORING WELL NUMBER MW-65

SITE NAME PNG Huntersville DATE 10-20-14 TIME OF SAMPLE 1415

FIELD PERSONNEL Troy L. Holzschuh WEATHER CONDITIONS Sunny 70°

TOTAL WELL DEPTH (TWD) 31 FT. (measured / well tag / drillers log/ previous report – **circle one**)

SCREENED INTERVAL 21-31 MEASURING POINT FOR DEPTH TOC

DEPTH TO GROUNDWATER (DGW) 25.20

LENGTH OF WATER COLUMN (LWC) = TWD – DGW = ~~25.20~~ 5.8

CASING DIAMETER 2 IN.

ONE STANDING WELL VOLUME = 0.95 gal.

(NOTE ½" = 0.0102G/FT: ¾" = 0.023 G/FT: 1"= 0.041G/FT: 1.5" = 0.1 G/FT: 2" = 0.163 G/FT: 4" = 0.653 G/FT: 6" = 1.46 G/FT)

THREE STANDING WELL VOLUMES = 2.85 gal. FIVE STANDING WELL VOLUMES = 4.75 gal.

METHOD OF WELL EVACUATION: Sub/Bladder TYPE Geo

TOTAL VOLUME OF WATER REMOVED: 4500 mL FLOW RATE 90 mL/min

WELL TYPE: FLUSH MOUNT / ABOVE GRADE COMMENTS

LOCKING CAP YES ✓ NO

PROTECTIVE POST/ABUTMENT YES ✓ NO

NONPOTABLE LABEL YES ✓ NO

ID PLATE YES ✓ NO

WELL INTEGRITY SATISFACTORY YES ✓ NO

WELL YIELD LOW ✓ MODERATE HIGH

	Elapsed Purge Time (in minutes)	Depth to Groundwater	pH	Cond. (mS/cm)	Turbidity (NTU)	Dis. O_2 (mg/L)	Temp (°C)	ORP (mV)	Notes
1320	Initial Reading (0 min)	25.50	4.46	0.285	422	7.09	17.23	292	
	10	25.72	5.95	0.232	140	4.95	16.56	214	
	20	25.82	6.33	0.285	66.3	4.25	16.41	193	
	30	25.82	6.33	0.291	28.3	3.34	16.62	194	
1400	40	25.82	6.33	0.293	20.2	3.20	16.65	196	
	45	25.82	6.33	0.293	12.6	3.16	16.67	198	
	50	25.82	6.33	0.293	8.75	3.12	16.68	199	

AMEC ENVIRONMENT & INFRASTRUCTURE, INC.

MONITORING WELL LOW-FLOW SAMPLING FIELD DATA WORKSHEET

AMEC PROJECT NUMBER 62128-14-0220 MONITORING WELL NUMBER MW-6D

SITE NAME PNG Huntersville DATE 10-20-14 TIME OF SAMPLE 1535

FIELD PERSONNEL Troy L. Holzschuh WEATHER CONDITIONS 70 Partly Cloudy

TOTAL WELL DEPTH (TWD) 88 FT. (measured / well tag / drillers log/ previous report – **circle one**)

SCREENED INTERVAL 78-88 MEASURING POINT FOR DEPTH TOC

DEPTH TO GROUNDWATER (DGW) 24.91

LENGTH OF WATER COLUMN (LWC) = TWD – DGW = 63.09

CASING DIAMETER 2 IN.

ONE STANDING WELL VOLUME = 10.34 gal.

(NOTE ½" = 0.0102G/FT: ¾" = 0.023 G/FT: 1"= 0.041G/FT: 1.5" = 0.1 G/FT: 2" = 0.163 G/FT: 4" = 0.653 G/FT: 6" = 1.46 G/FT)

THREE STANDING WELL VOLUMES = 31.02 gal. FIVE STANDING WELL VOLUMES = 51.7 gal.

METHOD OF WELL EVACUATION: Sub/Bladder TYPE Geo

TOTAL VOLUME OF WATER REMOVED: _____ mL FLOW RATE 300 mL/min

WELL TYPE: FLUSH MOUNT / ABOVE GRADE COMMENTS _____

LOCKING CAP YES ✓ NO _____

PROTECTIVE POST/ABUTMENT YES ✓ NO _____

NONPOTABLE LABEL YES ✓ NO _____

ID PLATE YES ✓ NO _____

WELL INTEGRITY SATISFACTORY YES ✓ NO _____

WELL YIELD LOW _____ MODERATE _____ HIGH ✓

Elapsed Purge Time (in minutes)	Depth to Groundwater	pH	Cond. (mS/cm)	Turbidity (NTU)	Dis. O_2 (mg/L)	Temp (°C)	ORP (mV)	Notes
1450 Initial Reading (0 min)	25.00	7.20	0.451	157	10.70	16.80	148	
10	24.95	10.57	0.243	51.0	8.27	16.45	-18	
20	24.95	10.36	0.239	32.7	7.31	16.43	-24	
30	24.95	10.22	0.219	15.9	6.32	16.15	0	
35	24.95	10.17	0.217	11.3	6.29	16.12	2	
40	24.95	10.13	0.215	7.91	6.27	16.10	4	

AMEC ENVIRONMENT & INFRASTRUCTURE, INC.

MONITORING WELL LOW-FLOW SAMPLING FIELD DATA WORKSHEET

AMEC PROJECT NUMBER 62128-14-0220 MONITORING WELL NUMBER MW-7D

SITE NAME PNG Huntersville DATE 10-20-14 TIME OF SAMPLE 1200

FIELD PERSONNEL Troy L. Holzschuh WEATHER CONDITIONS 50 Clear/Sunny

TOTAL WELL DEPTH (TWD) 102 FT. (measured / well tag / drillers log/ previous report – **circle one**)

SCREENED INTERVAL 92-102 MEASURING POINT FOR DEPTH TOC

DEPTH TO GROUNDWATER (DGW) 49

LENGTH OF WATER COLUMN (LWC) = TWD – DGW = 53

CASING DIAMETER 2 IN.

ONE STANDING WELL VOLUME = 8.7 gal.

(NOTE ½" = 0.0102G/FT: ¾" = 0.023 G/FT: 1"= 0.041G/FT: 1.5" = 0.1 G/FT: 2" = 0.163 G/FT: 4" = 0.653 G/FT: 6" = 1.46 G/FT)

THREE STANDING WELL VOLUMES = 26.1 gal. FIVE STANDING WELL VOLUMES = 43.5 gal.

METHOD OF WELL EVACUATION: Sub/Bladder TYPE Geo

TOTAL VOLUME OF WATER REMOVED: 8750 mL FLOW RATE 250 mL/min

WELL TYPE: FLUSH MOUNT / ABOVE GRADE COMMENTS

LOCKING CAP YES ✓ NO

PROTECTIVE POST/ABUTMENT YES ✓ NO

NONPOTABLE LABEL YES ✓ NO

ID PLATE YES ✓ NO

WELL INTEGRITY SATISFACTORY YES ✓ NO

WELL YIELD LOW MODERATE HIGH ✓

Elapsed Purge Time (in minutes)	Depth to Groundwater	pH	Cond. (mS/cm)	Turbidity (NTU)	Dis. O_2 (mg/L)	Temp (°C)	ORP (mV)	Notes
1120 Initial Reading (0 min)	49.0	7.80	0.198	34.6	9.77	17.04	92	
10	49.15	7.79	0.196	28.8	6.56	16.80	108	
20	49.15	7.70	0.195	20.1	6.08	16.65	119	
25	49.15	7.62	0.195	15.2	5.29	16.68	126	
30	49.15	7.60	0.194	10.7	6.35	16.70	128	
35	49.15	7.57	0.193	7.98	6.36	16.73	133	

ATTACHMENT C

LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY FORMS

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

October 24, 2014

Ms. Alicia Mooney
Piedmont Natural Gas
P.O. Box 33068
Charlotte, NC 28233

Reviewed by AJF 10/24/14

RE: Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

Dear Ms. Mooney:
Enclosed are the analytical results for sample(s) received by the laboratory on October 15, 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

cc: Rob Foster, Amec
Mr. Andrew Frantz, Mactec

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Alabama Certification #40770
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: 8TMS-L
Florida/NELAP Certification #: E87605
Guam Certification #:14-008r
Georgia Certification #: 959
Georgia EPD #: Pace
Idaho Certification #: MN00064
Hawaii Certification #MN00064
Illinois Certification #: 200011
Indiana Certification#C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky Dept of Envi. Protection - DW #90062
Kentucky Dept of Envi. Protection - WW #:90062
Louisiana DEQ Certification #: 3086
Louisiana DHH #: LA140001
Maine Certification #: 2013011
Maryland Certification #: 322
Michigan DEPH Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Carolina State Public Health #: 27700
North Dakota Certification #: R-036
Ohio EPA #: 4150
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Saipan (CNMI) #:MP0003
South Carolina #:74003001
Texas Certification #: T104704192
Tennessee Certification #: 02818
Utah Certification #: MN000642013-4
Virginia DGS Certification #: 251
Virginia/VELAP Certification #: Pace
Washington Certification #: C486
West Virginia Certification #: 382
West Virginia DHHR #:9952C
Wisconsin Certification #: 999407970

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

Asheville Certification IDs

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

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SAMPLE SUMMARY

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92221594001	**DW-1**	Water	10/15/14 12:07	10/15/14 16:43
92221594002	**MW-1D**	Water	10/15/14 16:30	10/15/14 16:43

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SAMPLE ANALYTE COUNT

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92221594001	**DW-1**	RSK 175	JRB	3	PASI-M
		EPA 6010	JMW	2	PASI-A
		EPA 8260	JDW1	65	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 3500-Fe B	AES2	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92221594002	**MW-1D**	RSK 175	JRB	3	PASI-M
		EPA 6010	JMW	2	PASI-A
		EPA 8260	JDW1	65	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 3500-Fe B	AES2	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5310B	AES2	1	PASI-A

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

Sample: DW-1 **Lab ID: 92221594001** Collected: 10/15/14 12:07 Received: 10/15/14 16:43 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175							
Ethane	ND	ug/L	6.2	1		10/21/14 17:32	74-84-0	
Ethene	ND	ug/L	6.2	1		10/21/14 17:32	74-85-1	
Methane	ND	ug/L	6.6	1		10/21/14 17:32	74-82-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	10.0	1	10/16/14 16:00	10/17/14 14:19	7440-38-2	
Manganese	**18.0**	ug/L	5.0	1	10/16/14 16:00	10/17/14 14:19	7439-96-5	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/17/14 17:56	67-64-1	
Benzene	ND	ug/L	1.0	1		10/17/14 17:56	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/17/14 17:56	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/17/14 17:56	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/17/14 17:56	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/17/14 17:56	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/17/14 17:56	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/17/14 17:56	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		10/17/14 17:56	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/17/14 17:56	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/17/14 17:56	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/17/14 17:56	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/17/14 17:56	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/17/14 17:56	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/17/14 17:56	106-43-4	
Dibromochloromethane	ND	ug/L	1.0	1		10/17/14 17:56	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/17/14 17:56	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/17/14 17:56	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/17/14 17:56	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/17/14 17:56	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/17/14 17:56	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/17/14 17:56	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/17/14 17:56	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/17/14 17:56	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/17/14 17:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/17/14 17:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/17/14 17:56	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/17/14 17:56	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/17/14 17:56	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/17/14 17:56	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/17/14 17:56	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/17/14 17:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/17/14 17:56	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		10/17/14 17:56	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		10/17/14 17:56	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/17/14 17:56	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		10/17/14 17:56	591-78-6	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

Sample: DW-1 **Lab ID: 92221594001** Collected: 10/15/14 12:07 Received: 10/15/14 16:43 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/17/14 17:56	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		10/17/14 17:56	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		10/17/14 17:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/17/14 17:56	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/17/14 17:56	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		10/17/14 17:56	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/17/14 17:56	103-65-1	
Styrene	ND	ug/L	1.0	1		10/17/14 17:56	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/17/14 17:56	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/17/14 17:56	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/17/14 17:56	127-18-4	
Toluene	ND	ug/L	1.0	1		10/17/14 17:56	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/17/14 17:56	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/17/14 17:56	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/17/14 17:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/17/14 17:56	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/17/14 17:56	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/17/14 17:56	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/17/14 17:56	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/17/14 17:56	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/17/14 17:56	108-67-8	
Vinyl acetate	ND	ug/L	2.0	1		10/17/14 17:56	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/17/14 17:56	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		10/17/14 17:56	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/17/14 17:56	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	100	%	70-130	1		10/17/14 17:56	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130	1		10/17/14 17:56	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		10/17/14 17:56	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**95.1**	mg/L	5.0	1		10/20/14 13:29		
Iron, Ferrous	Analytical Method: SM 3500-Fe B							
Iron, Ferrous	ND	mg/L	0.50	1		10/21/14 14:44		H1,N2
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**34.7**	mg/L	2.0	1		10/18/14 11:24	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**0.64**	mg/L	0.020	1		10/16/14 02:25		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**2.2**	mg/L	1.0	1		10/23/14 17:23	16887-00-6	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

Sample: DW-1 **Lab ID: 92221594001** Collected: 10/15/14 12:07 Received: 10/15/14 16:43 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**9.4**	mg/L	1.0	1		10/16/14 21:45	7440-44-0	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

Sample: MW-1D **Lab ID: 92221594002** Collected: 10/15/14 16:30 Received: 10/15/14 16:43 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175							
Ethane	ND	ug/L	6.2	1		10/21/14 17:43	74-84-0	
Ethene	ND	ug/L	6.2	1		10/21/14 17:43	74-85-1	
Methane	**217**	ug/L	6.6	1		10/21/14 17:43	74-82-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	10.0	1	10/16/14 16:00	10/17/14 14:22	7440-38-2	
Manganese	**5850**	ug/L	5.0	1	10/16/14 16:00	10/17/14 14:22	7439-96-5	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/17/14 18:11	67-64-1	
Benzene	ND	ug/L	1.0	1		10/17/14 18:11	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/17/14 18:11	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/17/14 18:11	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/17/14 18:11	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/17/14 18:11	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/17/14 18:11	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/17/14 18:11	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		10/17/14 18:11	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/17/14 18:11	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/17/14 18:11	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/17/14 18:11	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/17/14 18:11	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/17/14 18:11	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/17/14 18:11	106-43-4	
Dibromochloromethane	ND	ug/L	1.0	1		10/17/14 18:11	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/17/14 18:11	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/17/14 18:11	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/17/14 18:11	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/17/14 18:11	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/17/14 18:11	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/17/14 18:11	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/17/14 18:11	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/17/14 18:11	107-06-2	
1,1-Dichloroethene	**1.1**	ug/L	1.0	1		10/17/14 18:11	75-35-4	
cis-1,2-Dichloroethene	**43.8**	ug/L	1.0	1		10/17/14 18:11	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/17/14 18:11	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/17/14 18:11	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/17/14 18:11	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/17/14 18:11	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/17/14 18:11	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/17/14 18:11	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/17/14 18:11	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		10/17/14 18:11	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		10/17/14 18:11	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/17/14 18:11	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		10/17/14 18:11	591-78-6	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

Sample: MW-1D **Lab ID: 92221594002** Collected: 10/15/14 16:30 Received: 10/15/14 16:43 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/17/14 18:11	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		10/17/14 18:11	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		10/17/14 18:11	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/17/14 18:11	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/17/14 18:11	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		10/17/14 18:11	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/17/14 18:11	103-65-1	
Styrene	ND	ug/L	1.0	1		10/17/14 18:11	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/17/14 18:11	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/17/14 18:11	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/17/14 18:11	127-18-4	
Toluene	ND	ug/L	1.0	1		10/17/14 18:11	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/17/14 18:11	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/17/14 18:11	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/17/14 18:11	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/17/14 18:11	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/17/14 18:11	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/17/14 18:11	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/17/14 18:11	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/17/14 18:11	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/17/14 18:11	108-67-8	
Vinyl acetate	ND	ug/L	2.0	1		10/17/14 18:11	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/17/14 18:11	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		10/17/14 18:11	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/17/14 18:11	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	98	%	70-130	1		10/17/14 18:11	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130	1		10/17/14 18:11	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		10/17/14 18:11	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**387**	mg/L	5.0	1		10/20/14 13:39		
Iron, Ferrous	Analytical Method: SM 3500-Fe B							
Iron, Ferrous	**5.9**	mg/L	1.0	2		10/21/14 15:14		H1,N2
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**5.2**	mg/L	2.0	1		10/17/14 23:46	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**0.13**	mg/L	0.020	1		10/16/14 02:36		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**5.6**	mg/L	1.0	1		10/23/14 17:24	16887-00-6	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

Sample: MW-1D **Lab ID: 92221594002** Collected: 10/15/14 16:30 Received: 10/15/14 16:43 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**207**	mg/L	5.0	5		10/17/14 10:46	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

QC Batch: AIR/21629 | Analysis Method: RSK 175
QC Batch Method: RSK 175 | Analysis Description: RSK 175 AIR HEADSPACE
Associated Lab Samples: 92221594001, 92221594002

METHOD BLANK: 1822911 | Matrix: Water
Associated Lab Samples: 92221594001, 92221594002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethane	ug/L	ND	6.2	10/21/14 12:52	
Ethene	ug/L	ND	6.2	10/21/14 12:52	
Methane	ug/L	ND	6.6	10/21/14 12:52	

LABORATORY CONTROL SAMPLE & LCSD: 1822912 1822913

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	119	119	105	105	85-115	0	20	
Ethene	ug/L	106	110	110	104	103	85-115	1	20	
Methane	ug/L	60.7	63.1	62.6	104	103	85-115	1	20	

SAMPLE DUPLICATE: 1822914

Parameter	Units	10285700001 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	ND	ND		20	
Ethene	ug/L	ND	ND		20	
Methane	ug/L	22.2	22.1	0	20	

SAMPLE DUPLICATE: 1822915

Parameter	Units	92221839001 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	ND	ND		20	
Ethene	ug/L	ND	ND		20	
Methane	ug/L	ND	ND		20	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

QC Batch: MPRP/17141 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010 | Analysis Description: 6010 MET
Associated Lab Samples: 92221594001, 92221594002

METHOD BLANK: 1308734 | Matrix: Water
Associated Lab Samples: 92221594001, 92221594002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	10.0	10/17/14 13:48	
Manganese	ug/L	ND	5.0	10/17/14 13:48	

LABORATORY CONTROL SAMPLE: 1308735

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	474	95	80-120	
Manganese	ug/L	500	470	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1308736 1308737

Parameter	Units	92221323005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	500	500	473	484	95	97	75-125	2	20	
Manganese	ug/L	12.8	500	500	477	486	93	95	75-125	2	20	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

QC Batch: MSV/28796 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92221594001, 92221594002

METHOD BLANK: 1309536 | Matrix: Water
Associated Lab Samples: 92221594001, 92221594002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	10/17/14 13:16	
1,1,1-Trichloroethane	ug/L	ND	1.0	10/17/14 13:16	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	10/17/14 13:16	
1,1,2-Trichloroethane	ug/L	ND	1.0	10/17/14 13:16	
1,1-Dichloroethane	ug/L	ND	1.0	10/17/14 13:16	
1,1-Dichloroethene	ug/L	ND	1.0	10/17/14 13:16	
1,1-Dichloropropene	ug/L	ND	1.0	10/17/14 13:16	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	10/17/14 13:16	
1,2,3-Trichloropropane	ug/L	ND	1.0	10/17/14 13:16	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	10/17/14 13:16	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	10/17/14 13:16	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	10/17/14 13:16	
1,2-Dichlorobenzene	ug/L	ND	1.0	10/17/14 13:16	
1,2-Dichloroethane	ug/L	ND	1.0	10/17/14 13:16	
1,2-Dichloropropane	ug/L	ND	1.0	10/17/14 13:16	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	10/17/14 13:16	
1,3-Dichlorobenzene	ug/L	ND	1.0	10/17/14 13:16	
1,3-Dichloropropane	ug/L	ND	1.0	10/17/14 13:16	
1,4-Dichlorobenzene	ug/L	ND	1.0	10/17/14 13:16	
2,2-Dichloropropane	ug/L	ND	1.0	10/17/14 13:16	
2-Butanone (MEK)	ug/L	ND	5.0	10/17/14 13:16	
2-Chlorotoluene	ug/L	ND	1.0	10/17/14 13:16	
2-Hexanone	ug/L	ND	5.0	10/17/14 13:16	
4-Chlorotoluene	ug/L	ND	1.0	10/17/14 13:16	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	10/17/14 13:16	
Acetone	ug/L	ND	25.0	10/17/14 13:16	
Benzene	ug/L	ND	1.0	10/17/14 13:16	
Bromobenzene	ug/L	ND	1.0	10/17/14 13:16	
Bromochloromethane	ug/L	ND	1.0	10/17/14 13:16	
Bromodichloromethane	ug/L	ND	1.0	10/17/14 13:16	
Bromoform	ug/L	ND	1.0	10/17/14 13:16	
Bromomethane	ug/L	ND	2.0	10/17/14 13:16	
Carbon tetrachloride	ug/L	ND	1.0	10/17/14 13:16	
Chlorobenzene	ug/L	ND	1.0	10/17/14 13:16	
Chloroethane	ug/L	ND	1.0	10/17/14 13:16	
Chloroform	ug/L	ND	1.0	10/17/14 13:16	
Chloromethane	ug/L	ND	1.0	10/17/14 13:16	
cis-1,2-Dichloroethene	ug/L	ND	1.0	10/17/14 13:16	
cis-1,3-Dichloropropene	ug/L	ND	1.0	10/17/14 13:16	
Dibromochloromethane	ug/L	ND	1.0	10/17/14 13:16	
Dibromomethane	ug/L	ND	1.0	10/17/14 13:16	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

METHOD BLANK: 1309536 Matrix: Water
Associated Lab Samples: 92221594001, 92221594002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/L	ND	1.0	10/17/14 13:16	
Diisopropyl ether	ug/L	ND	1.0	10/17/14 13:16	
Ethylbenzene	ug/L	ND	1.0	10/17/14 13:16	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	10/17/14 13:16	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	10/17/14 13:16	
m&p-Xylene	ug/L	ND	2.0	10/17/14 13:16	
Methyl-tert-butyl ether	ug/L	ND	1.0	10/17/14 13:16	
Methylene Chloride	ug/L	ND	2.0	10/17/14 13:16	
n-Propylbenzene	ug/L	ND	1.0	10/17/14 13:16	
Naphthalene	ug/L	ND	1.0	10/17/14 13:16	
o-Xylene	ug/L	ND	1.0	10/17/14 13:16	
p-Isopropyltoluene	ug/L	ND	1.0	10/17/14 13:16	
Styrene	ug/L	ND	1.0	10/17/14 13:16	
Tetrachloroethene	ug/L	ND	1.0	10/17/14 13:16	
Toluene	ug/L	ND	1.0	10/17/14 13:16	
trans-1,2-Dichloroethene	ug/L	ND	1.0	10/17/14 13:16	
trans-1,3-Dichloropropene	ug/L	ND	1.0	10/17/14 13:16	
Trichloroethene	ug/L	ND	1.0	10/17/14 13:16	
Trichlorofluoromethane	ug/L	ND	1.0	10/17/14 13:16	
Vinyl acetate	ug/L	ND	2.0	10/17/14 13:16	
Vinyl chloride	ug/L	ND	1.0	10/17/14 13:16	
1,2-Dichloroethane-d4 (S)	%	108	70-130	10/17/14 13:16	
4-Bromofluorobenzene (S)	%	98	70-130	10/17/14 13:16	
Toluene-d8 (S)	%	98	70-130	10/17/14 13:16	

LABORATORY CONTROL SAMPLE: 1309537

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	51.4	103	70-130	
1,1,1-Trichloroethane	ug/L	50	50.1	100	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	46.2	92	70-130	
1,1,2-Trichloroethane	ug/L	50	49.5	99	70-130	
1,1-Dichloroethane	ug/L	50	49.8	100	70-130	
1,1-Dichloroethene	ug/L	50	54.4	109	70-132	
1,1-Dichloropropene	ug/L	50	47.0	94	70-130	
1,2,3-Trichlorobenzene	ug/L	50	48.7	97	70-135	
1,2,3-Trichloropropane	ug/L	50	48.1	96	70-130	
1,2,4-Trichlorobenzene	ug/L	50	47.9	96	70-134	
1,2,4-Trimethylbenzene	ug/L	50	46.4	93	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	48.6	97	70-130	
1,2-Dichlorobenzene	ug/L	50	46.7	93	70-130	
1,2-Dichloroethane	ug/L	50	48.0	96	70-130	
1,2-Dichloropropane	ug/L	50	47.2	94	70-130	
1,3,5-Trimethylbenzene	ug/L	50	45.7	91	70-130	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

LABORATORY CONTROL SAMPLE: 1309537

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,3-Dichlorobenzene	ug/L	50	46.8	94	70-130	
1,3-Dichloropropane	ug/L	50	46.3	93	70-130	
1,4-Dichlorobenzene	ug/L	50	47.4	95	70-130	
2,2-Dichloropropane	ug/L	50	46.8	94	58-145	
2-Butanone (MEK)	ug/L	100	86.7	87	70-145	
2-Chlorotoluene	ug/L	50	45.3	91	70-130	
2-Hexanone	ug/L	100	90.5	90	70-144	
4-Chlorotoluene	ug/L	50	45.3	91	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	95.0	95	70-140	
Acetone	ug/L	100	88.0	88	50-175	
Benzene	ug/L	50	46.8	94	70-130	
Bromobenzene	ug/L	50	44.6	89	70-130	
Bromochloromethane	ug/L	50	53.0	106	70-130	
Bromodichloromethane	ug/L	50	53.3	107	70-130	
Bromoform	ug/L	50	56.8	114	70-130	
Bromomethane	ug/L	50	29.4	59	54-130	
Carbon tetrachloride	ug/L	50	54.5	109	70-132	
Chlorobenzene	ug/L	50	50.1	100	70-130	
Chloroethane	ug/L	50	46.2	92	64-134	
Chloroform	ug/L	50	50.9	102	70-130	
Chloromethane	ug/L	50	44.1	88	64-130	
cis-1,2-Dichloroethene	ug/L	50	50.0	100	70-131	
cis-1,3-Dichloropropene	ug/L	50	48.5	97	70-130	
Dibromochloromethane	ug/L	50	56.0	112	70-130	
Dibromomethane	ug/L	50	54.2	108	70-131	
Dichlorodifluoromethane	ug/L	50	47.9	96	56-130	
Diisopropyl ether	ug/L	50	46.9	94	70-130	
Ethylbenzene	ug/L	50	47.6	95	70-130	
Hexachloro-1,3-butadiene	ug/L	50	46.7	93	70-130	
Isopropylbenzene (Cumene)	ug/L	50	48.1	96	70-130	
m&p-Xylene	ug/L	100	94.6	95	70-130	
Methyl-tert-butyl ether	ug/L	50	44.4	89	70-130	
Methylene Chloride	ug/L	50	54.0	108	63-130	
n-Propylbenzene	ug/L	50	44.7	89	70-130	
Naphthalene	ug/L	50	44.6	89	70-138	
o-Xylene	ug/L	50	46.4	93	70-130	
p-Isopropyltoluene	ug/L	50	45.3	91	70-130	
Styrene	ug/L	50	49.4	99	70-130	
Tetrachloroethene	ug/L	50	51.2	102	70-130	
Toluene	ug/L	50	49.0	98	70-130	
trans-1,2-Dichloroethene	ug/L	50	50.9	102	70-130	
trans-1,3-Dichloropropene	ug/L	50	49.6	99	70-132	
Trichloroethene	ug/L	50	49.3	99	70-130	
Trichlorofluoromethane	ug/L	50	50.4	101	62-133	
Vinyl acetate	ug/L	100	81.9	82	66-157	
Vinyl chloride	ug/L	50	46.8	94	50-150	
1,2-Dichloroethane-d4 (S)	%			101	70-130	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

LABORATORY CONTROL SAMPLE: 1309537

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE SAMPLE: 1309538

Parameter	Units	92221323005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	21.0	105	70-130	
1,1,1-Trichloroethane	ug/L	ND	20	21.9	109	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20.5	102	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	21.7	109	70-130	
1,1-Dichloroethane	ug/L	ND	20	21.7	108	70-130	
1,1-Dichloroethene	ug/L	ND	20	23.7	118	70-166	
1,1-Dichloropropene	ug/L	ND	20	19.9	100	70-130	
1,2,3-Trichlorobenzene	ug/L	ND	20	19.7	98	70-130	
1,2,3-Trichloropropane	ug/L	ND	20	21.8	109	70-130	
1,2,4-Trichlorobenzene	ug/L	ND	20	18.4	92	70-130	
1,2,4-Trimethylbenzene	ug/L	ND	20	18.7	94	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	21.1	106	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	19.4	97	70-130	
1,2-Dichloroethane	ug/L	ND	20	21.0	105	70-130	
1,2-Dichloropropane	ug/L	ND	20	19.7	98	70-130	
1,3,5-Trimethylbenzene	ug/L	ND	20	18.6	93	70-130	
1,3-Dichlorobenzene	ug/L	ND	20	19.4	97	70-130	
1,3-Dichloropropane	ug/L	ND	20	19.9	99	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	19.6	98	70-130	
2,2-Dichloropropane	ug/L	ND	20	17.6	88	70-130	
2-Butanone (MEK)	ug/L	ND	40	38.6	97	70-130	
2-Chlorotoluene	ug/L	ND	20	18.4	92	70-130	
2-Hexanone	ug/L	ND	40	39.9	100	70-130	
4-Chlorotoluene	ug/L	ND	20	18.4	92	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	43.1	108	70-130	
Acetone	ug/L	ND	40	39.6	99	70-130	
Benzene	ug/L	ND	20	20.3	102	70-148	
Bromobenzene	ug/L	ND	20	17.9	90	70-130	
Bromochloromethane	ug/L	ND	20	22.7	114	70-130	
Bromodichloromethane	ug/L	ND	20	22.6	113	70-130	
Bromoform	ug/L	ND	20	23.3	116	70-130	
Bromomethane	ug/L	ND	20	8.0	40	70-130	M0
Carbon tetrachloride	ug/L	ND	20	24.1	121	70-130	
Chlorobenzene	ug/L	ND	20	20.8	104	70-146	
Chloroethane	ug/L	ND	20	19.9	99	70-130	
Chloroform	ug/L	ND	20	21.4	107	70-130	
Chloromethane	ug/L	ND	20	17.5	87	70-130	
cis-1,2-Dichloroethene	ug/L	ND	20	21.4	107	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	18.6	93	70-130	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

MATRIX SPIKE SAMPLE: 1309538

Parameter	Units	92221323005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	ND	20	22.9	114	70-130	
Dibromomethane	ug/L	ND	20	23.5	117	70-130	
Dichlorodifluoromethane	ug/L	ND	20	21.2	106	70-130	
Diisopropyl ether	ug/L	ND	20	19.5	97	70-130	
Ethylbenzene	ug/L	ND	20	20.0	100	70-130	
Hexachloro-1,3-butadiene	ug/L	ND	20	18.3	92	70-130	
Isopropylbenzene (Cumene)	ug/L	ND	20	20.1	101	70-130	
m&p-Xylene	ug/L	ND	40	39.7	99	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	18.7	94	70-130	
Methylene Chloride	ug/L	ND	20	22.1	110	70-130	
n-Propylbenzene	ug/L	ND	20	18.5	93	70-130	
Naphthalene	ug/L	ND	20	18.1	91	70-130	
o-Xylene	ug/L	ND	20	19.0	95	70-130	
p-Isopropyltoluene	ug/L	ND	20	18.2	91	70-130	
Styrene	ug/L	ND	20	19.8	99	70-130	
Tetrachloroethene	ug/L	ND	20	21.8	109	70-130	
Toluene	ug/L	ND	20	20.9	104	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	21.7	108	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	19.7	98	70-130	
Trichloroethene	ug/L	ND	20	21.8	109	69-151	
Trichlorofluoromethane	ug/L	ND	20	22.8	114	70-130	
Vinyl acetate	ug/L	ND	40	32.2	81	70-130	
Vinyl chloride	ug/L	ND	20	20.1	101	70-130	
1,2-Dichloroethane-d4 (S)	%				104	70-130	
4-Bromofluorobenzene (S)	%				100	70-130	
Toluene-d8 (S)	%				100	70-130	

SAMPLE DUPLICATE: 1309539

Parameter	Units	92221009001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,1-Dichloropropene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	ug/L	ND	ND		30	
1,2,3-Trichloropropane	ug/L	ND	ND		30	
1,2,4-Trichlorobenzene	ug/L	ND	ND		30	
1,2,4-Trimethylbenzene	ug/L	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	

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(704)875-9092

QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

SAMPLE DUPLICATE: 1309539

Parameter	Units	92221009001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,3,5-Trimethylbenzene	ug/L	ND	ND		30	
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,3-Dichloropropane	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
2,2-Dichloropropane	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Chlorotoluene	ug/L	ND	ND		30	
2-Hexanone	ug/L	ND	ND		30	
4-Chlorotoluene	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Bromobenzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dibromomethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
n-Propylbenzene	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
p-Isopropyltoluene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl acetate	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

SAMPLE DUPLICATE: 1309539

Parameter	Units	92221009001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane-d4 (S)	%	109	109	0		
4-Bromofluorobenzene (S)	%	99	98	0		
Toluene-d8 (S)	%	98	98	0		

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

QC Batch: WET/33827 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 92221594001, 92221594002

METHOD BLANK: 1310578 Matrix: Water
Associated Lab Samples: 92221594001, 92221594002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	10/20/14 12:30	

LABORATORY CONTROL SAMPLE: 1310579

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	48.2	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1310580 1310581

Parameter	Units	92220884005 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	mg/L	15.0	50	50	64.0	63.2	98	96	90-110	1	4	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1310582 1310583

Parameter	Units	92221990002 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	mg/L	252	50	50	303	299	102	93	90-110	1	4	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

QC Batch: WET/33848 | Analysis Method: SM 3500-Fe B
QC Batch Method: SM 3500-Fe B | Analysis Description: Iron, Ferrous
Associated Lab Samples: 92221594001, 92221594002

METHOD BLANK: 1311670 | Matrix: Water
Associated Lab Samples: 92221594001, 92221594002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.50	10/21/14 14:39	N2

LABORATORY CONTROL SAMPLE: 1311671

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1.5	1.5	99	90-110	N2

SAMPLE DUPLICATE: 1311672

Parameter	Units	92220585001 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	ND	ND		10	H1,N2

SAMPLE DUPLICATE: 1311673

Parameter	Units	92222112001 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	1.9	1.8	1	10	H1,N2

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

QC Batch: WETA/20585 | Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 | Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92221594001, 92221594002

METHOD BLANK: 1309627 | Matrix: Water
Associated Lab Samples: 92221594001, 92221594002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	2.0	10/17/14 20:22	

LABORATORY CONTROL SAMPLE: 1309628

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	18.9	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1309629 1309630

Parameter	Units	92220317002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	1030	20	20	997	996	-162	-163	90-110	0	10	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1309631 1309632

Parameter	Units	92220678001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	21.9	20	20	52.9	52.6	155	153	90-110	1	10	M1

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

QC Batch: WETA/20563 | Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 | Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92221594001, 92221594002

METHOD BLANK: 1308162 | Matrix: Water
Associated Lab Samples: 92221594001, 92221594002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.020	10/16/14 02:02	

LABORATORY CONTROL SAMPLE: 1308163

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	2.5	2.5	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1308168 1308169

Parameter	Units	92221594001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	0.64	2.5	2.5	3.0	3.1	96	98	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1308170 1308171

Parameter	Units	92221594002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	0.13	2.5	2.5	2.4	2.4	92	91	90-110	0	10	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

QC Batch: WETA/20635 | Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E | Analysis Description: 4500 Chloride
Associated Lab Samples: 92221594001, 92221594002

METHOD BLANK: 1313274 | Matrix: Water
Associated Lab Samples: 92221594001, 92221594002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	10/23/14 17:18	

LABORATORY CONTROL SAMPLE: 1313275

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	21.3	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1313276 1313277

Parameter	Units	92219721001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	6420	20	20	6400	6410	-100	-50	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1313278 1313279

Parameter	Units	92220768002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2420	20	20	2410	2410	-70	-61	90-110	0	10	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

QC Batch: WETA/20565 | Analysis Method: SM 5310B
QC Batch Method: SM 5310B | Analysis Description: 5310B TOC
Associated Lab Samples: 92221594001, 92221594002

METHOD BLANK: 1308438 | Matrix: Water
Associated Lab Samples: 92221594001, 92221594002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	10/16/14 20:39	

LABORATORY CONTROL SAMPLE: 1308439

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	24.7	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1308440 1308441

Parameter	Units	92220885007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	3300	25	25	3140	3110	-644	-768	90-110	1	5	M6

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

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
PASI-M	Pace Analytical Services - Minneapolis

SAMPLE QUALIFIERS

Sample: 92221594001

[1] The sample was not collected in the appropriate container for headspace analysis.

Sample: 92221594002

[1] The sample was not collected in the appropriate container for headspace analysis.

ANALYTE QUALIFIERS

H1	Analysis conducted outside the EPA method holding time.
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.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
N2	The lab does not hold TNI accreditation for this parameter.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PNG HUNTERSVILLE 6228140220
Pace Project No.: 92221594

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92221594001	**DW-1**	RSK 175	AIR/21629		
92221594002	**MW-1D**	RSK 175	AIR/21629		
92221594001	**DW-1**	EPA 3010	MPRP/17141	EPA 6010	ICP/15454
92221594002	**MW-1D**	EPA 3010	MPRP/17141	EPA 6010	ICP/15454
92221594001	**DW-1**	EPA 8260	MSV/28796		
92221594002	**MW-1D**	EPA 8260	MSV/28796		
92221594001	**DW-1**	SM 2320B	WET/33827		
92221594002	**MW-1D**	SM 2320B	WET/33827		
92221594001	**DW-1**	SM 3500-Fe B	WET/33848		
92221594002	**MW-1D**	SM 3500-Fe B	WET/33848		
92221594001	**DW-1**	EPA 300.0	WETA/20585		
92221594002	**MW-1D**	EPA 300.0	WETA/20585		
92221594001	**DW-1**	EPA 353.2	WETA/20563		
92221594002	**MW-1D**	EPA 353.2	WETA/20563		
92221594001	**DW-1**	SM 4500-Cl-E	WETA/20635		
92221594002	**MW-1D**	SM 4500-Cl-E	WETA/20635		
92221594001	**DW-1**	SM 5310B	WETA/20565		
92221594002	**MW-1D**	SM 5310B	WETA/20565		

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Pace Analytical	Sample Condition Upon Receipt (SCUR) Document Number: F-CHR-CS-003-rev.15	Page 1 of 2 Issuing Authority: Pace Huntersville Quality Office

Client Name: AMEC

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 T1401 Type of Ice: Wet Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor T1401 No Correction

Corrected Cooler Temp.: 4.1 °C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: AP 10/15/14

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. AP 10/15/14
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. AP 10/15/14
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):_____		

Field Data Required? Y / N

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review:	JD	**Date:**	10/15/14
SRF Review:	JD	**Date:**	10/16/14

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# : 92221594

92221594

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

1782443

Section A Required Client Information:

Company: AMEC
Address: 2801 Yorkmont Rd Charlotte NC 28208
Email To: andrew.frantz@amec.com
Phone: 704-357-8600 Fax:
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: Andrew Frantz
Copy To:
Purchase Order No.:
Project Name: PNG Huntersville
Project Number: 6228-14-0220

Section C Invoice Information:

Attention:
Company Name: PNG (Bill Client)
Address:
Pace Quote Reference:
Pace Project Manager: Kevin Godwin
Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: NC

Section D Required Client Information

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

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	COLLECTED Composite Start TIME	COLLECTED Composite End/Grab DATE	COLLECTED Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other H_3PO_4	Analysis Test (Y/N) TOC	8260 B	Methane Ethane Ethene	Ferrous Iron	Sulfate	Alkalinity/Chloride	Nitrate	Metals (AS, MN)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 9222594
1	DW-1	WT	G			10-15-14	1207		14	X		X	X				X		3	3	3	1	1	1	1	1	
2	MW-1D	WT	G			10-15-14	1630		14	X		X	X				X		3	3	3	1	1	1	1	1	
3																											
4																											
5																											
6																											
7																											
8																											
9																											
10																											
11																											
12																											

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Zy L Holzschuh / AMEC	10-15-14	1643	[illegible]	10/15/14	16:43	4.1	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Troy L Holzschuh

SIGNATURE of SAMPLER: Zy L Holzschuh

DATE Signed (MM/DD/YY): 10-15-14

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

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

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

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

October 24, 2014

Ms. Alicia Mooney
Piedmont Natural Gas
P.O. Box 33068
Charlotte, NC 28233

Reviewed by AJF 10/24/14

RE: Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

Dear Ms. Mooney:
Enclosed are the analytical results for sample(s) received by the laboratory on October 16, 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

cc: Rob Foster, Amec
Mr. Andrew Frantz, Mactec

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Alabama Certification #40770
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: 8TMS-L
Florida/NELAP Certification #: E87605
Guam Certification #:14-008r
Georgia Certification #: 959
Georgia EPD #: Pace
Idaho Certification #: MN00064
Hawaii Certification #MN00064
Illinois Certification #: 200011
Indiana Certification#C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky Dept of Envi. Protection - DW #90062
Kentucky Dept of Envi. Protection - WW #:90062
Louisiana DEQ Certification #: 3086
Louisiana DHH #: LA140001
Maine Certification #: 2013011
Maryland Certification #: 322
Michigan DEPH Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Carolina State Public Health #: 27700
North Dakota Certification #: R-036
Ohio EPA #: 4150
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Saipan (CNMI) #:MP0003
South Carolina #:74003001
Texas Certification #: T104704192
Tennessee Certification #: 02818
Utah Certification #: MN000642013-4
Virginia DGS Certification #: 251
Virginia/VELAP Certification #: Pace
Washington Certification #: C486
West Virginia Certification #: 382
West Virginia DHHR #:9952C
Wisconsin Certification #: 999407970

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

Asheville Certification IDs

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

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SAMPLE SUMMARY

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92221839001	**MW-1S**	Water	10/16/14 09:50	10/16/14 16:22
92221839002	**MW-2S**	Water	10/16/14 11:45	10/16/14 16:22
92221839003	**MW-2D**	Water	10/16/14 14:45	10/16/14 16:22
92221839004	**DW-2**	Water	10/16/14 15:50	10/16/14 16:22

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SAMPLE ANALYTE COUNT

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92221839001	**MW-1S**	RSK 175	JRB	3	PASI-M
		EPA 6010	JMW	2	PASI-A
		EPA 8260	JDW1	65	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 3500-Fe B	AES2	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92221839002	**MW-2S**	RSK 175	JRB	3	PASI-M
		EPA 6010	JMW	2	PASI-A
		EPA 8260	JDW1	65	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 3500-Fe B	AES2	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92221839003	**MW-2D**	RSK 175	JRB	3	PASI-M
		EPA 6010	JMW	2	PASI-A
		EPA 8260	JDW1	65	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 3500-Fe B	AES2	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92221839004	**DW-2**	RSK 175	JRB	3	PASI-M
		EPA 6010	JMW	2	PASI-A
		EPA 8260	JDW1	65	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 3500-Fe B	AES2	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5310B	AES2	1	PASI-A

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

Sample: MW-1S **Lab ID: 92221839001** Collected: 10/16/14 09:50 Received: 10/16/14 16:22 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175							
Ethane	ND	ug/L	6.2	1		10/21/14 16:01	74-84-0	
Ethene	ND	ug/L	6.2	1		10/21/14 16:01	74-85-1	
Methane	ND	ug/L	6.6	1		10/21/14 16:01	74-82-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	10.0	1	10/17/14 15:15	10/18/14 06:07	7440-38-2	
Manganese	**11.6**	ug/L	5.0	1	10/17/14 15:15	10/18/14 06:07	7439-96-5	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/21/14 05:14	67-64-1	
Benzene	ND	ug/L	1.0	1		10/21/14 05:14	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/21/14 05:14	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/21/14 05:14	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/21/14 05:14	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/21/14 05:14	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/21/14 05:14	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/21/14 05:14	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		10/21/14 05:14	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/21/14 05:14	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/21/14 05:14	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/21/14 05:14	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/21/14 05:14	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/21/14 05:14	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/21/14 05:14	106-43-4	
Dibromochloromethane	ND	ug/L	1.0	1		10/21/14 05:14	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/21/14 05:14	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/21/14 05:14	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/21/14 05:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/21/14 05:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/21/14 05:14	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/21/14 05:14	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/21/14 05:14	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/21/14 05:14	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/21/14 05:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/21/14 05:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/21/14 05:14	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/21/14 05:14	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/21/14 05:14	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/21/14 05:14	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/21/14 05:14	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/21/14 05:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/21/14 05:14	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		10/21/14 05:14	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		10/21/14 05:14	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/21/14 05:14	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		10/21/14 05:14	591-78-6	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

Sample: MW-1S **Lab ID: 92221839001** Collected: 10/16/14 09:50 Received: 10/16/14 16:22 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/21/14 05:14	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		10/21/14 05:14	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		10/21/14 05:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/21/14 05:14	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/21/14 05:14	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		10/21/14 05:14	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/21/14 05:14	103-65-1	
Styrene	ND	ug/L	1.0	1		10/21/14 05:14	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/21/14 05:14	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/21/14 05:14	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/21/14 05:14	127-18-4	
Toluene	ND	ug/L	1.0	1		10/21/14 05:14	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/21/14 05:14	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/21/14 05:14	120-82-1	
1,1,1-Trichloroethane	**1.1**	ug/L	1.0	1		10/21/14 05:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/21/14 05:14	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/21/14 05:14	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/21/14 05:14	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/21/14 05:14	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/21/14 05:14	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/21/14 05:14	108-67-8	
Vinyl acetate	ND	ug/L	2.0	1		10/21/14 05:14	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/21/14 05:14	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		10/21/14 05:14	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/21/14 05:14	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	98	%	70-130	1		10/21/14 05:14	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		10/21/14 05:14	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		10/21/14 05:14	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**14.3**	mg/L	5.0	1		10/20/14 14:11		
Iron, Ferrous	Analytical Method: SM 3500-Fe B							
Iron, Ferrous	ND	mg/L	0.50	1		10/21/14 14:46		H1,N2
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	ND	mg/L	2.0	1		10/18/14 01:07	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**0.64**	mg/L	0.020	1		10/17/14 20:25		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**1.8**	mg/L	1.0	1		10/23/14 17:35	16887-00-6	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

Sample: MW-1S **Lab ID: 92221839001** Collected: 10/16/14 09:50 Received: 10/16/14 16:22 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**15.4**	mg/L	1.0	1		10/18/14 17:54	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

Sample: MW-2S **Lab ID: 92221839002** Collected: 10/16/14 11:45 Received: 10/16/14 16:22 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175							
Ethane	ND	ug/L	6.2	1		10/21/14 16:24	74-84-0	
Ethene	ND	ug/L	6.2	1		10/21/14 16:24	74-85-1	
Methane	ND	ug/L	6.6	1		10/21/14 16:24	74-82-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	10.0	1	10/17/14 15:15	10/18/14 06:11	7440-38-2	
Manganese	**21.8**	ug/L	5.0	1	10/17/14 15:15	10/18/14 06:11	7439-96-5	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/21/14 05:30	67-64-1	
Benzene	ND	ug/L	1.0	1		10/21/14 05:30	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/21/14 05:30	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/21/14 05:30	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/21/14 05:30	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/21/14 05:30	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/21/14 05:30	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/21/14 05:30	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		10/21/14 05:30	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/21/14 05:30	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/21/14 05:30	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/21/14 05:30	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/21/14 05:30	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/21/14 05:30	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/21/14 05:30	106-43-4	
Dibromochloromethane	ND	ug/L	1.0	1		10/21/14 05:30	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/21/14 05:30	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/21/14 05:30	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/21/14 05:30	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/21/14 05:30	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/21/14 05:30	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/21/14 05:30	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/21/14 05:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/21/14 05:30	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/21/14 05:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/21/14 05:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/21/14 05:30	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/21/14 05:30	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/21/14 05:30	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/21/14 05:30	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/21/14 05:30	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/21/14 05:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/21/14 05:30	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		10/21/14 05:30	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		10/21/14 05:30	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/21/14 05:30	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		10/21/14 05:30	591-78-6	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

Sample: MW-2S **Lab ID: 92221839002** Collected: 10/16/14 11:45 Received: 10/16/14 16:22 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/21/14 05:30	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		10/21/14 05:30	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		10/21/14 05:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/21/14 05:30	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/21/14 05:30	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		10/21/14 05:30	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/21/14 05:30	103-65-1	
Styrene	ND	ug/L	1.0	1		10/21/14 05:30	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/21/14 05:30	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/21/14 05:30	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/21/14 05:30	127-18-4	
Toluene	ND	ug/L	1.0	1		10/21/14 05:30	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/21/14 05:30	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/21/14 05:30	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/21/14 05:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/21/14 05:30	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/21/14 05:30	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/21/14 05:30	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/21/14 05:30	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/21/14 05:30	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/21/14 05:30	108-67-8	
Vinyl acetate	ND	ug/L	2.0	1		10/21/14 05:30	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/21/14 05:30	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		10/21/14 05:30	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/21/14 05:30	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	97	%	70-130	1		10/21/14 05:30	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		10/21/14 05:30	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		10/21/14 05:30	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**21.5**	mg/L	5.0	1		10/20/14 14:20		
Iron, Ferrous	Analytical Method: SM 3500-Fe B							
Iron, Ferrous	ND	mg/L	0.50	1		10/21/14 14:49		H1,N2
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**7.0**	mg/L	2.0	1		10/18/14 01:48	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**1.9**	mg/L	0.020	1		10/17/14 20:52		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**1.8**	mg/L	1.0	1		10/23/14 17:35	16887-00-6	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

Sample: MW-2S **Lab ID: 92221839002** Collected: 10/16/14 11:45 Received: 10/16/14 16:22 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**8.7**	mg/L	1.0	1		10/18/14 18:05	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

Sample: MW-2D **Lab ID: 92221839003** Collected: 10/16/14 14:45 Received: 10/16/14 16:22 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175							
Ethane	ND	ug/L	6.2	1		10/21/14 16:35	74-84-0	
Ethene	ND	ug/L	6.2	1		10/21/14 16:35	74-85-1	
Methane	**11.1**	ug/L	6.6	1		10/21/14 16:35	74-82-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	10.0	1	10/17/14 15:15	10/18/14 06:14	7440-38-2	
Manganese	**1010**	ug/L	5.0	1	10/17/14 15:15	10/18/14 06:14	7439-96-5	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/21/14 05:45	67-64-1	
Benzene	ND	ug/L	1.0	1		10/21/14 05:45	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/21/14 05:45	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/21/14 05:45	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/21/14 05:45	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/21/14 05:45	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/21/14 05:45	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/21/14 05:45	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		10/21/14 05:45	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/21/14 05:45	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/21/14 05:45	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/21/14 05:45	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/21/14 05:45	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/21/14 05:45	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/21/14 05:45	106-43-4	
Dibromochloromethane	ND	ug/L	1.0	1		10/21/14 05:45	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/21/14 05:45	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/21/14 05:45	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/21/14 05:45	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/21/14 05:45	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/21/14 05:45	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/21/14 05:45	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/21/14 05:45	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/21/14 05:45	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/21/14 05:45	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/21/14 05:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/21/14 05:45	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/21/14 05:45	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/21/14 05:45	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/21/14 05:45	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/21/14 05:45	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/21/14 05:45	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/21/14 05:45	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		10/21/14 05:45	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		10/21/14 05:45	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/21/14 05:45	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		10/21/14 05:45	591-78-6	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

Sample: MW-2D **Lab ID: 92221839003** Collected: 10/16/14 14:45 Received: 10/16/14 16:22 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/21/14 05:45	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		10/21/14 05:45	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		10/21/14 05:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/21/14 05:45	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/21/14 05:45	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		10/21/14 05:45	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/21/14 05:45	103-65-1	
Styrene	ND	ug/L	1.0	1		10/21/14 05:45	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/21/14 05:45	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/21/14 05:45	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/21/14 05:45	127-18-4	
Toluene	ND	ug/L	1.0	1		10/21/14 05:45	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/21/14 05:45	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/21/14 05:45	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/21/14 05:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/21/14 05:45	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/21/14 05:45	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/21/14 05:45	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/21/14 05:45	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/21/14 05:45	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/21/14 05:45	108-67-8	
Vinyl acetate	ND	ug/L	2.0	1		10/21/14 05:45	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/21/14 05:45	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		10/21/14 05:45	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/21/14 05:45	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	97	%	70-130	1		10/21/14 05:45	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		10/21/14 05:45	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		10/21/14 05:45	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**62.6**	mg/L	5.0	1		10/20/14 14:30		
Iron, Ferrous	Analytical Method: SM 3500-Fe B							
Iron, Ferrous	**1.0**	mg/L	0.50	1		10/21/14 14:49		H1,N2
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**2.6**	mg/L	2.0	1		10/18/14 02:01	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.020	1		10/17/14 20:53		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**3.5**	mg/L	1.0	1		10/23/14 17:36	16887-00-6	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

Sample: MW-2D **Lab ID: 92221839003** Collected: 10/16/14 14:45 Received: 10/16/14 16:22 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**5.2**	mg/L	1.0	1		10/18/14 18:17	7440-44-0	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

Sample: DW-2 **Lab ID: 92221839004** Collected: 10/16/14 15:50 Received: 10/16/14 16:22 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175							
Ethane	ND	ug/L	6.2	1		10/21/14 16:47	74-84-0	
Ethene	ND	ug/L	6.2	1		10/21/14 16:47	74-85-1	
Methane	ND	ug/L	6.6	1		10/21/14 16:47	74-82-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	10.0	1	10/17/14 15:15	10/18/14 06:17	7440-38-2	
Manganese	**9.3**	ug/L	5.0	1	10/17/14 15:15	10/18/14 06:17	7439-96-5	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/21/14 06:01	67-64-1	
Benzene	ND	ug/L	1.0	1		10/21/14 06:01	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/21/14 06:01	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/21/14 06:01	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/21/14 06:01	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/21/14 06:01	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/21/14 06:01	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/21/14 06:01	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		10/21/14 06:01	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/21/14 06:01	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/21/14 06:01	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/21/14 06:01	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/21/14 06:01	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/21/14 06:01	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/21/14 06:01	106-43-4	
Dibromochloromethane	ND	ug/L	1.0	1		10/21/14 06:01	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/21/14 06:01	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/21/14 06:01	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/21/14 06:01	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/21/14 06:01	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/21/14 06:01	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/21/14 06:01	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/21/14 06:01	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/21/14 06:01	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/21/14 06:01	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/21/14 06:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/21/14 06:01	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/21/14 06:01	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/21/14 06:01	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/21/14 06:01	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/21/14 06:01	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/21/14 06:01	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/21/14 06:01	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		10/21/14 06:01	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		10/21/14 06:01	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/21/14 06:01	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		10/21/14 06:01	591-78-6	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

Sample: DW-2 **Lab ID: 92221839004** Collected: 10/16/14 15:50 Received: 10/16/14 16:22 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/21/14 06:01	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		10/21/14 06:01	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		10/21/14 06:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/21/14 06:01	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/21/14 06:01	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		10/21/14 06:01	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/21/14 06:01	103-65-1	
Styrene	ND	ug/L	1.0	1		10/21/14 06:01	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/21/14 06:01	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/21/14 06:01	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/21/14 06:01	127-18-4	
Toluene	ND	ug/L	1.0	1		10/21/14 06:01	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/21/14 06:01	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/21/14 06:01	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/21/14 06:01	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/21/14 06:01	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/21/14 06:01	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/21/14 06:01	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/21/14 06:01	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/21/14 06:01	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/21/14 06:01	108-67-8	
Vinyl acetate	ND	ug/L	2.0	1		10/21/14 06:01	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/21/14 06:01	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		10/21/14 06:01	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/21/14 06:01	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	98	%	70-130	1		10/21/14 06:01	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130	1		10/21/14 06:01	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		10/21/14 06:01	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**70.9**	mg/L	5.0	1		10/20/14 14:39		
Iron, Ferrous	Analytical Method: SM 3500-Fe B							
Iron, Ferrous	ND	mg/L	0.50	1		10/21/14 14:51		H1,N2
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**2.7**	mg/L	2.0	1		10/18/14 02:15	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**0.26**	mg/L	0.020	1		10/17/14 20:54		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**1.6**	mg/L	1.0	1		10/23/14 17:37	16887-00-6	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

Sample: DW-2 **Lab ID: 92221839004** Collected: 10/16/14 15:50 Received: 10/16/14 16:22 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**4.1**	mg/L	1.0	1		10/18/14 18:28	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

QC Batch: AIR/21629 — Analysis Method: RSK 175
QC Batch Method: RSK 175 — Analysis Description: RSK 175 AIR HEADSPACE
Associated Lab Samples: 92221839001, 92221839002, 92221839003, 92221839004

METHOD BLANK: 1822911 — Matrix: Water
Associated Lab Samples: 92221839001, 92221839002, 92221839003, 92221839004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethane	ug/L	ND	6.2	10/21/14 12:52	
Ethene	ug/L	ND	6.2	10/21/14 12:52	
Methane	ug/L	ND	6.6	10/21/14 12:52	

LABORATORY CONTROL SAMPLE & LCSD: 1822912 1822913

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	119	119	105	105	85-115	0	20	
Ethene	ug/L	106	110	110	104	103	85-115	1	20	
Methane	ug/L	60.7	63.1	62.6	104	103	85-115	1	20	

SAMPLE DUPLICATE: 1822914

Parameter	Units	10285700001 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	ND	ND		20	
Ethene	ug/L	ND	ND		20	
Methane	ug/L	22.2	22.1	0	20	

SAMPLE DUPLICATE: 1822915

Parameter	Units	92221839001 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	ND	ND		20	
Ethene	ug/L	ND	ND		20	
Methane	ug/L	ND	ND		20	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

QC Batch: MPRP/17154 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 92221839001, 92221839002, 92221839003, 92221839004

METHOD BLANK: 1309876 Matrix: Water
Associated Lab Samples: 92221839001, 92221839002, 92221839003, 92221839004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	10.0	10/18/14 05:37	
Manganese	ug/L	ND	5.0	10/18/14 05:37	

LABORATORY CONTROL SAMPLE: 1309877

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	483	97	80-120	
Manganese	ug/L	500	482	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1309878 1309879

Parameter	Units	92221323030 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	500	500	487	473	97	95	75-125	3	20	
Manganese	ug/L	285	500	500	752	740	93	91	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

QC Batch: MSV/28833 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92221839001, 92221839002, 92221839003, 92221839004

METHOD BLANK: 1310955 Matrix: Water
Associated Lab Samples: 92221839001, 92221839002, 92221839003, 92221839004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	10/21/14 02:07	
1,1,1-Trichloroethane	ug/L	ND	1.0	10/21/14 02:07	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	10/21/14 02:07	
1,1,2-Trichloroethane	ug/L	ND	1.0	10/21/14 02:07	
1,1-Dichloroethane	ug/L	ND	1.0	10/21/14 02:07	
1,1-Dichloroethene	ug/L	ND	1.0	10/21/14 02:07	
1,1-Dichloropropene	ug/L	ND	1.0	10/21/14 02:07	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	10/21/14 02:07	
1,2,3-Trichloropropane	ug/L	ND	1.0	10/21/14 02:07	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	10/21/14 02:07	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	10/21/14 02:07	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	10/21/14 02:07	
1,2-Dichlorobenzene	ug/L	ND	1.0	10/21/14 02:07	
1,2-Dichloroethane	ug/L	ND	1.0	10/21/14 02:07	
1,2-Dichloropropane	ug/L	ND	1.0	10/21/14 02:07	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	10/21/14 02:07	
1,3-Dichlorobenzene	ug/L	ND	1.0	10/21/14 02:07	
1,3-Dichloropropane	ug/L	ND	1.0	10/21/14 02:07	
1,4-Dichlorobenzene	ug/L	ND	1.0	10/21/14 02:07	
2,2-Dichloropropane	ug/L	ND	1.0	10/21/14 02:07	
2-Butanone (MEK)	ug/L	ND	5.0	10/21/14 02:07	
2-Chlorotoluene	ug/L	ND	1.0	10/21/14 02:07	
2-Hexanone	ug/L	ND	5.0	10/21/14 02:07	
4-Chlorotoluene	ug/L	ND	1.0	10/21/14 02:07	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	10/21/14 02:07	
Acetone	ug/L	ND	25.0	10/21/14 02:07	
Benzene	ug/L	ND	1.0	10/21/14 02:07	
Bromobenzene	ug/L	ND	1.0	10/21/14 02:07	
Bromochloromethane	ug/L	ND	1.0	10/21/14 02:07	
Bromodichloromethane	ug/L	ND	1.0	10/21/14 02:07	
Bromoform	ug/L	ND	1.0	10/21/14 02:07	
Bromomethane	ug/L	ND	2.0	10/21/14 02:07	
Carbon tetrachloride	ug/L	ND	1.0	10/21/14 02:07	
Chlorobenzene	ug/L	ND	1.0	10/21/14 02:07	
Chloroethane	ug/L	ND	1.0	10/21/14 02:07	
Chloroform	ug/L	ND	1.0	10/21/14 02:07	
Chloromethane	ug/L	ND	1.0	10/21/14 02:07	
cis-1,2-Dichloroethene	ug/L	ND	1.0	10/21/14 02:07	
cis-1,3-Dichloropropene	ug/L	ND	1.0	10/21/14 02:07	
Dibromochloromethane	ug/L	ND	1.0	10/21/14 02:07	
Dibromomethane	ug/L	ND	1.0	10/21/14 02:07	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

METHOD BLANK: 1310955 Matrix: Water
Associated Lab Samples: 92221839001, 92221839002, 92221839003, 92221839004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/L	ND	1.0	10/21/14 02:07	
Diisopropyl ether	ug/L	ND	1.0	10/21/14 02:07	
Ethylbenzene	ug/L	ND	1.0	10/21/14 02:07	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	10/21/14 02:07	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	10/21/14 02:07	
m&p-Xylene	ug/L	ND	2.0	10/21/14 02:07	
Methyl-tert-butyl ether	ug/L	ND	1.0	10/21/14 02:07	
Methylene Chloride	ug/L	ND	2.0	10/21/14 02:07	
n-Propylbenzene	ug/L	ND	1.0	10/21/14 02:07	
Naphthalene	ug/L	ND	1.0	10/21/14 02:07	
o-Xylene	ug/L	ND	1.0	10/21/14 02:07	
p-Isopropyltoluene	ug/L	ND	1.0	10/21/14 02:07	
Styrene	ug/L	ND	1.0	10/21/14 02:07	
Tetrachloroethene	ug/L	ND	1.0	10/21/14 02:07	
Toluene	ug/L	ND	1.0	10/21/14 02:07	
trans-1,2-Dichloroethene	ug/L	ND	1.0	10/21/14 02:07	
trans-1,3-Dichloropropene	ug/L	ND	1.0	10/21/14 02:07	
Trichloroethene	ug/L	ND	1.0	10/21/14 02:07	
Trichlorofluoromethane	ug/L	ND	1.0	10/21/14 02:07	
Vinyl acetate	ug/L	ND	2.0	10/21/14 02:07	
Vinyl chloride	ug/L	ND	1.0	10/21/14 02:07	
1,2-Dichloroethane-d4 (S)	%	96	70-130	10/21/14 02:07	
4-Bromofluorobenzene (S)	%	97	70-130	10/21/14 02:07	
Toluene-d8 (S)	%	99	70-130	10/21/14 02:07	

LABORATORY CONTROL SAMPLE: 1310956

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	47.4	95	70-130	
1,1,1-Trichloroethane	ug/L	50	48.4	97	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	48.9	98	70-130	
1,1,2-Trichloroethane	ug/L	50	50.7	101	70-130	
1,1-Dichloroethane	ug/L	50	52.2	104	70-130	
1,1-Dichloroethene	ug/L	50	54.8	110	70-132	
1,1-Dichloropropene	ug/L	50	48.7	97	70-130	
1,2,3-Trichlorobenzene	ug/L	50	46.6	93	70-135	
1,2,3-Trichloropropane	ug/L	50	46.8	94	70-130	
1,2,4-Trichlorobenzene	ug/L	50	45.7	91	70-134	
1,2,4-Trimethylbenzene	ug/L	50	44.1	88	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	48.6	97	70-130	
1,2-Dichlorobenzene	ug/L	50	45.2	90	70-130	
1,2-Dichloroethane	ug/L	50	45.3	91	70-130	
1,2-Dichloropropane	ug/L	50	48.9	98	70-130	
1,3,5-Trimethylbenzene	ug/L	50	43.8	88	70-130	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

LABORATORY CONTROL SAMPLE: 1310956

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,3-Dichlorobenzene	ug/L	50	45.0	90	70-130	
1,3-Dichloropropane	ug/L	50	46.2	92	70-130	
1,4-Dichlorobenzene	ug/L	50	45.2	90	70-130	
2,2-Dichloropropane	ug/L	50	42.8	86	58-145	
2-Butanone (MEK)	ug/L	100	94.4	94	70-145	
2-Chlorotoluene	ug/L	50	43.4	87	70-130	
2-Hexanone	ug/L	100	92.5	92	70-144	
4-Chlorotoluene	ug/L	50	42.9	86	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	99.5	99	70-140	
Acetone	ug/L	100	89.8	90	50-175	
Benzene	ug/L	50	48.6	97	70-130	
Bromobenzene	ug/L	50	43.5	87	70-130	
Bromochloromethane	ug/L	50	54.8	110	70-130	
Bromodichloromethane	ug/L	50	50.2	100	70-130	
Bromoform	ug/L	50	54.7	109	70-130	
Bromomethane	ug/L	50	32.6	65	54-130	
Carbon tetrachloride	ug/L	50	48.4	97	70-132	
Chlorobenzene	ug/L	50	47.8	96	70-130	
Chloroethane	ug/L	50	49.4	99	64-134	
Chloroform	ug/L	50	50.3	101	70-130	
Chloromethane	ug/L	50	48.0	96	64-130	
cis-1,2-Dichloroethene	ug/L	50	51.8	104	70-131	
cis-1,3-Dichloropropene	ug/L	50	48.6	97	70-130	
Dibromochloromethane	ug/L	50	52.6	105	70-130	
Dibromomethane	ug/L	50	52.8	106	70-131	
Dichlorodifluoromethane	ug/L	50	51.5	103	56-130	
Diisopropyl ether	ug/L	50	49.8	100	70-130	
Ethylbenzene	ug/L	50	45.4	91	70-130	
Hexachloro-1,3-butadiene	ug/L	50	42.4	85	70-130	
Isopropylbenzene (Cumene)	ug/L	50	46.0	92	70-130	
m&p-Xylene	ug/L	100	89.3	89	70-130	
Methyl-tert-butyl ether	ug/L	50	47.1	94	70-130	
Methylene Chloride	ug/L	50	56.5	113	63-130	
n-Propylbenzene	ug/L	50	43.2	86	70-130	
Naphthalene	ug/L	50	46.1	92	70-138	
o-Xylene	ug/L	50	44.3	89	70-130	
p-Isopropyltoluene	ug/L	50	43.6	87	70-130	
Styrene	ug/L	50	48.4	97	70-130	
Tetrachloroethene	ug/L	50	47.1	94	70-130	
Toluene	ug/L	50	49.6	99	70-130	
trans-1,2-Dichloroethene	ug/L	50	52.9	106	70-130	
trans-1,3-Dichloropropene	ug/L	50	47.8	96	70-132	
Trichloroethene	ug/L	50	47.7	95	70-130	
Trichlorofluoromethane	ug/L	50	47.0	94	62-133	
Vinyl acetate	ug/L	100	85.2	85	66-157	
Vinyl chloride	ug/L	50	52.2	104	50-150	
1,2-Dichloroethane-d4 (S)	%			94	70-130	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

LABORATORY CONTROL SAMPLE: 1310956

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1310957 1310958

Parameter	Units	92221791008 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	20.0	20.1	100	101	70-130	1	30	
1,1,1-Trichloroethane	ug/L	ND	20	20	21.2	20.9	106	104	70-130	1	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	20.5	20.0	102	100	70-130	2	30	
1,1,2-Trichloroethane	ug/L	ND	20	20	21.1	21.0	105	105	70-130	0	30	
1,1-Dichloroethane	ug/L	ND	20	20	22.3	22.2	111	111	70-130	0	30	
1,1-Dichloroethene	ug/L	ND	20	20	23.6	23.8	118	119	70-166	1	30	
1,1-Dichloropropene	ug/L	ND	20	20	21.6	21.6	108	108	70-130	0	30	
1,2,3-Trichlorobenzene	ug/L	ND	20	20	20.0	19.1	100	95	70-130	5	30	
1,2,3-Trichloropropane	ug/L	ND	20	20	19.6	19.4	98	97	70-130	1	30	
1,2,4-Trichlorobenzene	ug/L	ND	20	20	19.1	18.6	95	93	70-130	3	30	
1,2,4-Trimethylbenzene	ug/L	ND	20	20	18.6	18.4	93	92	70-130	1	30	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	20.3	19.9	102	99	70-130	2	30	
1,2-Dichlorobenzene	ug/L	ND	20	20	19.0	18.7	95	93	70-130	2	30	
1,2-Dichloroethane	ug/L	ND	20	20	18.7	18.7	93	93	70-130	0	30	
1,2-Dichloropropane	ug/L	ND	20	20	20.4	20.2	102	101	70-130	1	30	
1,3,5-Trimethylbenzene	ug/L	ND	20	20	18.5	18.8	93	94	70-130	1	30	
1,3-Dichlorobenzene	ug/L	ND	20	20	18.8	18.8	94	94	70-130	0	30	
1,3-Dichloropropane	ug/L	ND	20	20	19.6	19.1	98	95	70-130	2	30	
1,4-Dichlorobenzene	ug/L	ND	20	20	18.9	18.9	94	95	70-130	0	30	
2,2-Dichloropropane	ug/L	ND	20	20	18.3	18.2	92	91	70-130	1	30	
2-Butanone (MEK)	ug/L	ND	40	40	38.9	38.2	97	95	70-130	2	30	
2-Chlorotoluene	ug/L	ND	20	20	18.6	18.7	93	94	70-130	1	30	
2-Hexanone	ug/L	ND	40	40	39.3	37.0	98	93	70-130	6	30	
4-Chlorotoluene	ug/L	ND	20	20	18.2	18.4	91	92	70-130	1	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	40	42.6	41.3	107	103	70-130	3	30	
Acetone	ug/L	ND	40	40	38.7	37.0	97	92	70-130	5	30	
Benzene	ug/L	ND	20	20	21.1	21.0	106	105	70-148	0	30	
Bromobenzene	ug/L	ND	20	20	18.1	18.3	91	92	70-130	1	30	
Bromochloromethane	ug/L	ND	20	20	22.7	22.2	114	111	70-130	2	30	
Bromodichloromethane	ug/L	ND	20	20	20.9	20.9	105	104	70-130	0	30	
Bromoform	ug/L	ND	20	20	22.0	21.5	110	108	70-130	2	30	
Bromomethane	ug/L	ND	20	20	12.5	12.9	62	64	70-130	3	30	M0
Carbon tetrachloride	ug/L	ND	20	20	21.4	21.3	107	107	70-130	0	30	
Chlorobenzene	ug/L	ND	20	20	20.5	20.4	103	102	70-146	1	30	
Chloroethane	ug/L	ND	20	20	21.5	22.4	107	112	70-130	4	30	
Chloroform	ug/L	ND	20	20	21.0	21.1	105	106	70-130	0	30	
Chloromethane	ug/L	ND	20	20	18.0	18.4	90	92	70-130	2	30	

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(704)875-9092

QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1310957 1310958

Parameter	Units	92221791008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
cis-1,2-Dichloroethene	ug/L	ND	20	20	22.0	21.9	110	110	70-130	0	30	
cis-1,3-Dichloropropene	ug/L	ND	20	20	19.5	19.7	98	98	70-130	1	30	
Dibromochloromethane	ug/L	ND	20	20	21.4	21.5	107	107	70-130	0	30	
Dibromomethane	ug/L	ND	20	20	22.2	21.8	111	109	70-130	2	30	
Dichlorodifluoromethane	ug/L	ND	20	20	15.7	15.9	79	79	70-130	1	30	
Diisopropyl ether	ug/L	ND	20	20	20.9	20.8	105	104	70-130	1	30	
Ethylbenzene	ug/L	ND	20	20	19.9	19.9	100	100	70-130	0	30	
Hexachloro-1,3-butadiene	ug/L	ND	20	20	19.4	18.9	97	95	70-130	3	30	
Isopropylbenzene (Cumene)	ug/L	ND	20	20	20.1	20.0	101	100	70-130	1	30	
m&p-Xylene	ug/L	ND	40	40	39.2	38.9	98	97	70-130	1	30	
Methyl-tert-butyl ether	ug/L	ND	20	20	20.0	19.4	100	97	70-130	3	30	
Methylene Chloride	ug/L	ND	20	20	22.0	22.0	110	110	70-130	0	30	
n-Propylbenzene	ug/L	ND	20	20	18.7	18.9	94	94	70-130	1	30	
Naphthalene	ug/L	ND	20	20	19.4	18.2	97	91	70-130	6	30	
o-Xylene	ug/L	ND	20	20	18.9	19.0	95	95	70-130	0	30	
p-Isopropyltoluene	ug/L	ND	20	20	18.7	18.7	93	93	70-130	0	30	
Styrene	ug/L	ND	20	20	20.0	20.2	100	101	70-130	1	30	
Tetrachloroethene	ug/L	ND	20	20	20.8	20.7	104	104	70-130	0	30	
Toluene	ug/L	ND	20	20	20.9	21.0	104	105	70-155	1	30	
trans-1,2-Dichloroethene	ug/L	ND	20	20	23.0	23.0	115	115	70-130	0	30	
trans-1,3-Dichloropropene	ug/L	ND	20	20	19.5	19.1	97	95	70-130	2	30	
Trichloroethene	ug/L	ND	20	20	21.0	20.8	105	104	69-151	1	30	
Trichlorofluoromethane	ug/L	ND	20	20	20.7	20.5	103	102	70-130	1	30	
Vinyl acetate	ug/L	ND	40	40	31.2	30.3	78	76	70-130	3	30	
Vinyl chloride	ug/L	ND	20	20	21.2	21.4	106	107	70-130	1	30	
1,2-Dichloroethane-d4 (S)	%						94	94	70-130			
4-Bromofluorobenzene (S)	%						99	98	70-130			
Toluene-d8 (S)	%						101	101	70-130			

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

QC Batch: WET/33827 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 92221839001, 92221839002, 92221839003, 92221839004

METHOD BLANK: 1310578 Matrix: Water
Associated Lab Samples: 92221839001, 92221839002, 92221839003, 92221839004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	10/20/14 12:30	

LABORATORY CONTROL SAMPLE: 1310579

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	48.2	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1310580 1310581

Parameter	Units	92220884005 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	mg/L	15.0	50	50	64.0	63.2	98	96	90-110	1	4	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1310582 1310583

Parameter	Units	92221990002 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	mg/L	252	50	50	303	299	102	93	90-110	1	4	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

QC Batch: WET/33848 Analysis Method: SM 3500-Fe B
QC Batch Method: SM 3500-Fe B Analysis Description: Iron, Ferrous
Associated Lab Samples: 92221839001, 92221839002, 92221839003, 92221839004

METHOD BLANK: 1311670 Matrix: Water
Associated Lab Samples: 92221839001, 92221839002, 92221839003, 92221839004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.50	10/21/14 14:39	N2

LABORATORY CONTROL SAMPLE: 1311671

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1.5	1.5	99	90-110	N2

SAMPLE DUPLICATE: 1311672

Parameter	Units	92220585001 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	ND	ND		10	H1,N2

SAMPLE DUPLICATE: 1311673

Parameter	Units	92222112001 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	1.9	1.8	1	10	H1,N2

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

QC Batch: WETA/20585 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92221839001, 92221839002, 92221839003, 92221839004

METHOD BLANK: 1309627 Matrix: Water
Associated Lab Samples: 92221839001, 92221839002, 92221839003, 92221839004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	2.0	10/17/14 20:22	

LABORATORY CONTROL SAMPLE: 1309628

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	18.9	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1309629 1309630

Parameter	Units	92220317002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	1030	20	20	997	996	-162	-163	90-110	0	10	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1309631 1309632

Parameter	Units	92220678001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	21.9	20	20	52.9	52.6	155	153	90-110	1	10	M1

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

QC Batch: WETA/20593 — Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 — Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92221839001, 92221839002, 92221839003, 92221839004

METHOD BLANK: 1310306 — Matrix: Water
Associated Lab Samples: 92221839001, 92221839002, 92221839003, 92221839004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.020	10/17/14 20:19	

LABORATORY CONTROL SAMPLE: 1310307

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	2.5	2.6	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1310308 — 1310309

Parameter	Units	92221839001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	0.64	2.5	2.5	3.1	3.1	99	99	90-110	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

QC Batch: WETA/20635 — Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E — Analysis Description: 4500 Chloride
Associated Lab Samples: 92221839001, 92221839002, 92221839003, 92221839004

METHOD BLANK: 1313274 — Matrix: Water
Associated Lab Samples: 92221839001, 92221839002, 92221839003, 92221839004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	10/23/14 17:18	

LABORATORY CONTROL SAMPLE: 1313275

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	21.3	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1313276 — 1313277

Parameter	Units	92219721001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	6420	20	20	6400	6410	-100	-50	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1313278 — 1313279

Parameter	Units	92220768002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2420	20	20	2410	2410	-70	-61	90-110	0	10	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

QC Batch: WETA/20597 Analysis Method: SM 5310B
QC Batch Method: SM 5310B Analysis Description: 5310B TOC
Associated Lab Samples: 92221839001, 92221839002, 92221839003, 92221839004

METHOD BLANK: 1310441 Matrix: Water
Associated Lab Samples: 92221839001, 92221839002, 92221839003, 92221839004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	10/18/14 16:59	

LABORATORY CONTROL SAMPLE: 1310442

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	24.2	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1310443 1310444

Parameter	Units	92221711001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	11.5	25	25	32.9	32.7	85	85	90-110	1	5	M1

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QUALIFIERS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

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
PASI-M	Pace Analytical Services - Minneapolis

SAMPLE QUALIFIERS

Sample: 92221839001

[1] The sample was not collected in the appropriate container for headspace analysis.

Sample: 92221839002

[1] The sample was not collected in the appropriate container for headspace analysis.

Sample: 92221839003

[1] The sample was not collected in the appropriate container for headspace analysis.

Sample: 92221839004

[1] The sample was not collected in the appropriate container for headspace analysis.

ANALYTE QUALIFIERS

H1	Analysis conducted outside the EPA method holding time.
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.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
N2	The lab does not hold TNI accreditation for this parameter.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221839

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92221839001	**MW-1S**	RSK 175	AIR/21629		
92221839002	**MW-2S**	RSK 175	AIR/21629		
92221839003	**MW-2D**	RSK 175	AIR/21629		
92221839004	**DW-2**	RSK 175	AIR/21629		
92221839001	**MW-1S**	EPA 3010	MPRP/17154	EPA 6010	ICP/15460
92221839002	**MW-2S**	EPA 3010	MPRP/17154	EPA 6010	ICP/15460
92221839003	**MW-2D**	EPA 3010	MPRP/17154	EPA 6010	ICP/15460
92221839004	**DW-2**	EPA 3010	MPRP/17154	EPA 6010	ICP/15460
92221839001	**MW-1S**	EPA 8260	MSV/28833		
92221839002	**MW-2S**	EPA 8260	MSV/28833		
92221839003	**MW-2D**	EPA 8260	MSV/28833		
92221839004	**DW-2**	EPA 8260	MSV/28833		
92221839001	**MW-1S**	SM 2320B	WET/33827		
92221839002	**MW-2S**	SM 2320B	WET/33827		
92221839003	**MW-2D**	SM 2320B	WET/33827		
92221839004	**DW-2**	SM 2320B	WET/33827		
92221839001	**MW-1S**	SM 3500-Fe B	WET/33848		
92221839002	**MW-2S**	SM 3500-Fe B	WET/33848		
92221839003	**MW-2D**	SM 3500-Fe B	WET/33848		
92221839004	**DW-2**	SM 3500-Fe B	WET/33848		
92221839001	**MW-1S**	EPA 300.0	WETA/20585		
92221839002	**MW-2S**	EPA 300.0	WETA/20585		
92221839003	**MW-2D**	EPA 300.0	WETA/20585		
92221839004	**DW-2**	EPA 300.0	WETA/20585		
92221839001	**MW-1S**	EPA 353.2	WETA/20593		
92221839002	**MW-2S**	EPA 353.2	WETA/20593		
92221839003	**MW-2D**	EPA 353.2	WETA/20593		
92221839004	**DW-2**	EPA 353.2	WETA/20593		
92221839001	**MW-1S**	SM 4500-Cl-E	WETA/20635		
92221839002	**MW-2S**	SM 4500-Cl-E	WETA/20635		
92221839003	**MW-2D**	SM 4500-Cl-E	WETA/20635		
92221839004	**DW-2**	SM 4500-Cl-E	WETA/20635		
92221839001	**MW-1S**	SM 5310B	WETA/20597		
92221839002	**MW-2S**	SM 5310B	WETA/20597		
92221839003	**MW-2D**	SM 5310B	WETA/20597		
92221839004	**DW-2**	SM 5310B	WETA/20597		

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Pace Analytical	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: September 22, 2014 Page 1 of 2
	Document Number: **F-CHR-CS-003-rev.15**	Issuing Authority: Pace Huntersville Quality Office

Client Name: Amec

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 T1401 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor T1401 No Correction

Corrected Cooler Temp.: 3.5 °C **Biological Tissue is Frozen:** Yes No N/A

Date and initials of person examining contents: 10/16/14

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

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☑Yes ☐No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix:_____	☐Yes ☑No ☐N/A	12. Residual Chlorine not on COC for all
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No	
Samples checked for dechlorination:	☑Yes ☐No ☐N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: [signature] Date: 10/14/14

SRF Review: [signature] Date: 10/17/14

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#: 92221839

92221839

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

1782228

Section A Required Client Information:

Company: AMEC E+I
Address: 2801 Yorkmont Rd Charlotte, NC
Email To: andrew.frantz@amec.com
Phone: 704-357-8600 Fax:
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: Andrew Frantz
Copy To:
Purchase Order No.:
Project Name: PNG Huntersville
Project Number: 6228-14-0220

Section C Invoice Information:

Attention:
Company Name: Direct Bill PNG
Address:
Pace Quote Reference:
Pace Project Manager: Kevin Godwin
Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER ____

Site Location STATE: NC

Section D Required Client Information

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	COLLECTED Composite Start TIME	COLLECTED Composite End/Grab DATE	COLLECTED Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other HPOA	Y/N Analysis Test	8260B	TOC	Methane Ethane Ethene	Ferrous Iron	Sulfate	Alkalinity	Metals (As, Mn)	Nitrate	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92221839
1	MW-1S	WT	G			10.16.14	950		14	X		XX					X		3	3	3	1	1	1	1	1		001
2	MW-2S	↓	↓			↓	1145		14	X		XX					X		3	3	3	1	1	1	1	1		002
3	MW-2D	↓	↓			↓	1445		14	X		XX					X		3	3	3	1	1	1	1	1		003
4	MW-2	↓	↓			↓	1550		14	X		XX					X		3	3	3	1	1	1	1	1		004
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Zy Z Holzschuh / AMEC	10-16-14	1622	[signature]	10/16/14	16:22	3.7 / — / —

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

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Troy L Holzschuh
SIGNATURE of SAMPLER: Zy Z Holzschuh
DATE Signed (MM/DD/YY): 10-16-14

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

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

October 24, 2014

Ms. Alicia Mooney
Piedmont Natural Gas
P.O. Box 33068
Charlotte, NC 28233

Reviewed by AJF 10/24/14

RE: Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

Dear Ms. Mooney:
Enclosed are the analytical results for sample(s) received by the laboratory on October 20, 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

cc: Rob Foster, Amec
Mr. Andrew Frantz, Mactec

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Alabama Certification #40770
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: 8TMS-L
Florida/NELAP Certification #: E87605
Guam Certification #:14-008r
Georgia Certification #: 959
Georgia EPD #: Pace
Idaho Certification #: MN00064
Hawaii Certification #MN00064
Illinois Certification #: 200011
Indiana Certification#C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky Dept of Envi. Protection - DW #90062
Kentucky Dept of Envi. Protection - WW #:90062
Louisiana DEQ Certification #: 3086
Louisiana DHH #: LA140001
Maine Certification #: 2013011
Maryland Certification #: 322
Michigan DEPH Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Carolina State Public Health #: 27700
North Dakota Certification #: R-036
Ohio EPA #: 4150
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Saipan (CNMI) #:MP0003
South Carolina #:74003001
Texas Certification #: T104704192
Tennessee Certification #: 02818
Utah Certification #: MN000642013-4
Virginia DGS Certification #: 251
Virginia/VELAP Certification #: Pace
Washington Certification #: C486
West Virginia Certification #: 382
West Virginia DHHR #:9952C
Wisconsin Certification #: 999407970

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

Asheville Certification IDs

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

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SAMPLE SUMMARY

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92222112001	**MW-3D**	Water	10/20/14 10:20	10/20/14 16:15
92222112002	**MW-7D**	Water	10/20/14 12:00	10/20/14 16:15
92222112003	**MW-6S**	Water	10/20/14 14:15	10/20/14 16:15
92222112004	**MW-6D**	Water	10/20/14 15:35	10/20/14 16:15

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SAMPLE ANALYTE COUNT

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92222112001	**MW-3D**	RSK 175	JRB	3	PASI-M
		EPA 6010	JMW	2	PASI-A
		EPA 8260	JDW1	65	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 3500-Fe B	AES2	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92222112002	**MW-7D**	RSK 175	JRB	3	PASI-M
		EPA 6010	JMW	2	PASI-A
		EPA 8260	JDW1	65	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 3500-Fe B	AES2	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92222112003	**MW-6S**	RSK 175	JRB	3	PASI-M
		EPA 6010	JMW	2	PASI-A
		EPA 8260	JDW1	65	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 3500-Fe B	AES2	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92222112004	**MW-6D**	RSK 175	JRB	3	PASI-M
		EPA 6010	JMW	2	PASI-A
		EPA 8260	JDW1	65	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 3500-Fe B	AES2	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5310B	AES2	1	PASI-A

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ANALYTICAL RESULTS

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

Sample: MW-3D **Lab ID: 92222112001** Collected: 10/20/14 10:20 Received: 10/20/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175							
Ethane	ND	ug/L	6.2	1		10/23/14 14:55	74-84-0	
Ethene	ND	ug/L	6.2	1		10/23/14 14:55	74-85-1	
Methane	**240**	ug/L	6.6	1		10/23/14 14:55	74-82-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	10.0	1	10/21/14 15:10	10/21/14 23:26	7440-38-2	
Manganese	**3030**	ug/L	5.0	1	10/21/14 15:10	10/21/14 23:26	7439-96-5	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/22/14 17:52	67-64-1	
Benzene	ND	ug/L	1.0	1		10/22/14 17:52	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/22/14 17:52	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/22/14 17:52	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/22/14 17:52	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/22/14 17:52	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/22/14 17:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/22/14 17:52	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		10/22/14 17:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/22/14 17:52	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/22/14 17:52	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/22/14 17:52	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/22/14 17:52	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/22/14 17:52	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/22/14 17:52	106-43-4	
Dibromochloromethane	ND	ug/L	1.0	1		10/22/14 17:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/22/14 17:52	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/22/14 17:52	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 17:52	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 17:52	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 17:52	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/22/14 17:52	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/22/14 17:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/22/14 17:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/22/14 17:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/22/14 17:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/22/14 17:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/22/14 17:52	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/22/14 17:52	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/22/14 17:52	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/22/14 17:52	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/22/14 17:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/22/14 17:52	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		10/22/14 17:52	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		10/22/14 17:52	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/22/14 17:52	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		10/22/14 17:52	591-78-6	

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ANALYTICAL RESULTS

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

Sample: MW-3D **Lab ID: 92222112001** Collected: 10/20/14 10:20 Received: 10/20/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/22/14 17:52	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		10/22/14 17:52	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		10/22/14 17:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/22/14 17:52	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/22/14 17:52	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		10/22/14 17:52	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/22/14 17:52	103-65-1	
Styrene	ND	ug/L	1.0	1		10/22/14 17:52	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/22/14 17:52	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/22/14 17:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/22/14 17:52	127-18-4	
Toluene	ND	ug/L	1.0	1		10/22/14 17:52	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/22/14 17:52	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/22/14 17:52	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/22/14 17:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/22/14 17:52	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/22/14 17:52	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/22/14 17:52	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/22/14 17:52	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/22/14 17:52	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/22/14 17:52	108-67-8	
Vinyl acetate	ND	ug/L	2.0	1		10/22/14 17:52	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/22/14 17:52	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		10/22/14 17:52	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/22/14 17:52	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	99	%	70-130	1		10/22/14 17:52	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130	1		10/22/14 17:52	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		10/22/14 17:52	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**437**	mg/L	5.0	1		10/23/14 15:26		
Iron, Ferrous	Analytical Method: SM 3500-Fe B							
Iron, Ferrous	**1.9**	mg/L	0.50	1		10/21/14 14:58		H1,N2
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**2.5**	mg/L	2.0	1		10/23/14 20:34	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.020	1		10/22/14 01:19		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**6.6**	mg/L	1.0	1		10/23/14 18:19	16887-00-6	

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ANALYTICAL RESULTS

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

Sample: MW-3D **Lab ID: 92222112001** Collected: 10/20/14 10:20 Received: 10/20/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**217**	mg/L	10.0	10		10/22/14 20:33	7440-44-0	M6

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ANALYTICAL RESULTS

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

Sample: MW-7D **Lab ID: 92222112002** Collected: 10/20/14 12:00 Received: 10/20/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175							
Ethane	ND	ug/L	6.2	1		10/23/14 15:07	74-84-0	
Ethene	ND	ug/L	6.2	1		10/23/14 15:07	74-85-1	
Methane	ND	ug/L	6.6	1		10/23/14 15:07	74-82-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	10.0	1	10/21/14 15:10	10/21/14 23:29	7440-38-2	
Manganese	**56.9**	ug/L	5.0	1	10/21/14 15:10	10/21/14 23:29	7439-96-5	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/22/14 18:07	67-64-1	
Benzene	ND	ug/L	1.0	1		10/22/14 18:07	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/22/14 18:07	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/22/14 18:07	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/22/14 18:07	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/22/14 18:07	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/22/14 18:07	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/22/14 18:07	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		10/22/14 18:07	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/22/14 18:07	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/22/14 18:07	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/22/14 18:07	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/22/14 18:07	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/22/14 18:07	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/22/14 18:07	106-43-4	
Dibromochloromethane	ND	ug/L	1.0	1		10/22/14 18:07	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/22/14 18:07	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/22/14 18:07	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 18:07	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 18:07	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 18:07	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/22/14 18:07	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/22/14 18:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/22/14 18:07	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/22/14 18:07	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/22/14 18:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/22/14 18:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/22/14 18:07	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/22/14 18:07	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/22/14 18:07	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/22/14 18:07	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/22/14 18:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/22/14 18:07	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		10/22/14 18:07	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		10/22/14 18:07	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/22/14 18:07	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		10/22/14 18:07	591-78-6	

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ANALYTICAL RESULTS

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

Sample: MW-7D **Lab ID: 92222112002** Collected: 10/20/14 12:00 Received: 10/20/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/22/14 18:07	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		10/22/14 18:07	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		10/22/14 18:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/22/14 18:07	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/22/14 18:07	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		10/22/14 18:07	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/22/14 18:07	103-65-1	
Styrene	ND	ug/L	1.0	1		10/22/14 18:07	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/22/14 18:07	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/22/14 18:07	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/22/14 18:07	127-18-4	
Toluene	ND	ug/L	1.0	1		10/22/14 18:07	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/22/14 18:07	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/22/14 18:07	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/22/14 18:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/22/14 18:07	79-00-5	
Trichloroethene	**1.6**	ug/L	1.0	1		10/22/14 18:07	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/22/14 18:07	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/22/14 18:07	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/22/14 18:07	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/22/14 18:07	108-67-8	
Vinyl acetate	ND	ug/L	2.0	1		10/22/14 18:07	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/22/14 18:07	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		10/22/14 18:07	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/22/14 18:07	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	100	%	70-130	1		10/22/14 18:07	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130	1		10/22/14 18:07	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		10/22/14 18:07	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**97.6**	mg/L	5.0	1		10/23/14 17:27		
Iron, Ferrous	Analytical Method: SM 3500-Fe B							
Iron, Ferrous	ND	mg/L	0.50	1		10/21/14 15:01		H1,N2
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	ND	mg/L	2.0	1		10/23/14 20:48	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**0.25**	mg/L	0.020	1		10/22/14 01:39		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**1.3**	mg/L	1.0	1		10/23/14 18:19	16887-00-6	

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ANALYTICAL RESULTS

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

Sample: MW-7D **Lab ID: 92222112002** Collected: 10/20/14 12:00 Received: 10/20/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**10.6**	mg/L	1.0	1		10/22/14 21:04	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

Sample: MW-6S **Lab ID: 92222112003** Collected: 10/20/14 14:15 Received: 10/20/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175							
Ethane	ND	ug/L	6.2	1		10/23/14 15:18	74-84-0	
Ethene	ND	ug/L	6.2	1		10/23/14 15:18	74-85-1	
Methane	ND	ug/L	6.6	1		10/23/14 15:18	74-82-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	10.0	1	10/21/14 15:10	10/21/14 23:32	7440-38-2	
Manganese	**49.2**	ug/L	5.0	1	10/21/14 15:10	10/21/14 23:32	7439-96-5	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/22/14 18:23	67-64-1	
Benzene	ND	ug/L	1.0	1		10/22/14 18:23	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/22/14 18:23	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/22/14 18:23	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/22/14 18:23	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/22/14 18:23	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/22/14 18:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/22/14 18:23	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		10/22/14 18:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/22/14 18:23	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/22/14 18:23	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/22/14 18:23	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/22/14 18:23	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/22/14 18:23	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/22/14 18:23	106-43-4	
Dibromochloromethane	ND	ug/L	1.0	1		10/22/14 18:23	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/22/14 18:23	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/22/14 18:23	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 18:23	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 18:23	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 18:23	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/22/14 18:23	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/22/14 18:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/22/14 18:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/22/14 18:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/22/14 18:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/22/14 18:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/22/14 18:23	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/22/14 18:23	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/22/14 18:23	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/22/14 18:23	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/22/14 18:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/22/14 18:23	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		10/22/14 18:23	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		10/22/14 18:23	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/22/14 18:23	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		10/22/14 18:23	591-78-6	

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ANALYTICAL RESULTS

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

Sample: MW-6S **Lab ID: 92222112003** Collected: 10/20/14 14:15 Received: 10/20/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/22/14 18:23	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		10/22/14 18:23	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		10/22/14 18:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/22/14 18:23	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/22/14 18:23	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		10/22/14 18:23	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/22/14 18:23	103-65-1	
Styrene	ND	ug/L	1.0	1		10/22/14 18:23	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/22/14 18:23	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/22/14 18:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/22/14 18:23	127-18-4	
Toluene	ND	ug/L	1.0	1		10/22/14 18:23	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/22/14 18:23	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/22/14 18:23	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/22/14 18:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/22/14 18:23	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/22/14 18:23	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/22/14 18:23	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/22/14 18:23	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/22/14 18:23	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/22/14 18:23	108-67-8	
Vinyl acetate	ND	ug/L	2.0	1		10/22/14 18:23	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/22/14 18:23	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		10/22/14 18:23	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/22/14 18:23	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	98	%	70-130	1		10/22/14 18:23	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130	1		10/22/14 18:23	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		10/22/14 18:23	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**149**	mg/L	5.0	1		10/23/14 17:37		
Iron, Ferrous	Analytical Method: SM 3500-Fe B							
Iron, Ferrous	ND	mg/L	0.50	1		10/21/14 15:01		H1,N2
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**3.6**	mg/L	2.0	1		10/23/14 21:29	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.020	1		10/22/14 01:43		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**4.2**	mg/L	1.0	1		10/23/14 18:20	16887-00-6	

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ANALYTICAL RESULTS

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

Sample: MW-6S **Lab ID: 92222112003** Collected: 10/20/14 14:15 Received: 10/20/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**25.5**	mg/L	1.0	1		10/22/14 21:15	7440-44-0	

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ANALYTICAL RESULTS

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

Sample: MW-6D **Lab ID: 92222112004** Collected: 10/20/14 15:35 Received: 10/20/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175							
Ethane	ND	ug/L	6.2	1		10/23/14 16:00	74-84-0	
Ethene	ND	ug/L	6.2	1		10/23/14 16:00	74-85-1	
Methane	ND	ug/L	6.6	1		10/23/14 16:00	74-82-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	10.0	1	10/21/14 15:10	10/21/14 23:35	7440-38-2	
Manganese	**20.6**	ug/L	5.0	1	10/21/14 15:10	10/21/14 23:35	7439-96-5	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/22/14 18:38	67-64-1	
Benzene	ND	ug/L	1.0	1		10/22/14 18:38	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/22/14 18:38	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/22/14 18:38	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/22/14 18:38	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/22/14 18:38	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/22/14 18:38	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/22/14 18:38	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		10/22/14 18:38	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/22/14 18:38	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/22/14 18:38	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/22/14 18:38	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/22/14 18:38	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/22/14 18:38	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/22/14 18:38	106-43-4	
Dibromochloromethane	ND	ug/L	1.0	1		10/22/14 18:38	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/22/14 18:38	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/22/14 18:38	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 18:38	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 18:38	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 18:38	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/22/14 18:38	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/22/14 18:38	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/22/14 18:38	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/22/14 18:38	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/22/14 18:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/22/14 18:38	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/22/14 18:38	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/22/14 18:38	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/22/14 18:38	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/22/14 18:38	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/22/14 18:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/22/14 18:38	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		10/22/14 18:38	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		10/22/14 18:38	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/22/14 18:38	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		10/22/14 18:38	591-78-6	

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ANALYTICAL RESULTS

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

Sample: MW-6D **Lab ID: 92222112004** Collected: 10/20/14 15:35 Received: 10/20/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/22/14 18:38	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		10/22/14 18:38	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		10/22/14 18:38	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/22/14 18:38	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/22/14 18:38	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		10/22/14 18:38	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/22/14 18:38	103-65-1	
Styrene	ND	ug/L	1.0	1		10/22/14 18:38	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/22/14 18:38	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/22/14 18:38	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/22/14 18:38	127-18-4	
Toluene	ND	ug/L	1.0	1		10/22/14 18:38	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/22/14 18:38	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/22/14 18:38	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/22/14 18:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/22/14 18:38	79-00-5	
Trichloroethene	**1.2**	ug/L	1.0	1		10/22/14 18:38	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/22/14 18:38	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/22/14 18:38	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/22/14 18:38	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/22/14 18:38	108-67-8	
Vinyl acetate	ND	ug/L	2.0	1		10/22/14 18:38	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/22/14 18:38	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		10/22/14 18:38	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/22/14 18:38	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	98	%	70-130	1		10/22/14 18:38	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130	1		10/22/14 18:38	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		10/22/14 18:38	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**101**	mg/L	5.0	1		10/23/14 17:49		
Iron, Ferrous	Analytical Method: SM 3500-Fe B							
Iron, Ferrous	ND	mg/L	0.50	1		10/21/14 15:03		N2
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**12.0**	mg/L	2.0	1		10/23/14 21:42	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**0.11**	mg/L	0.020	1		10/22/14 01:45		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**2.0**	mg/L	1.0	1		10/23/14 18:21	16887-00-6	

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ANALYTICAL RESULTS

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

Sample: MW-6D **Lab ID: 92222112004** Collected: 10/20/14 15:35 Received: 10/20/14 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**6.8**	mg/L	1.0	1		10/22/14 21:25	7440-44-0	

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QUALITY CONTROL DATA

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

QC Batch: AIR/21643 Analysis Method: RSK 175
QC Batch Method: RSK 175 Analysis Description: RSK 175 AIR HEADSPACE
Associated Lab Samples: 92222112001, 92222112002, 92222112003, 92222112004

METHOD BLANK: 1825028 Matrix: Water
Associated Lab Samples: 92222112001, 92222112002, 92222112003, 92222112004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethane	ug/L	ND	6.2	10/23/14 12:49	
Ethene	ug/L	ND	6.2	10/23/14 12:49	
Methane	ug/L	ND	6.6	10/23/14 12:49	

LABORATORY CONTROL SAMPLE & LCSD: 1825029 1825030

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	113	116	99	102	85-115	3	20	
Ethene	ug/L	106	103	107	97	101	85-115	5	20	
Methane	ug/L	60.7	61.6	61.2	102	101	85-115	1	20	

SAMPLE DUPLICATE: 1825031

Parameter	Units	10285757001 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	ND	ND		20	
Ethene	ug/L	ND	ND		20	
Methane	ug/L	21000	21200	1	20	E

SAMPLE DUPLICATE: 1825032

Parameter	Units	92222112004 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	ND	ND		20	
Ethene	ug/L	ND	ND		20	
Methane	ug/L	ND	ND		20	

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QUALITY CONTROL DATA

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

QC Batch: MPRP/17169 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 92222112001, 92222112002, 92222112003, 92222112004

METHOD BLANK: 1311721 Matrix: Water
Associated Lab Samples: 92222112001, 92222112002, 92222112003, 92222112004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	10.0	10/21/14 23:01	
Manganese	ug/L	ND	5.0	10/21/14 23:01	

LABORATORY CONTROL SAMPLE: 1311722

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	447	89	80-120	
Manganese	ug/L	500	441	88	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1311723 1311724

Parameter	Units	92222089001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	500	500	453	462	91	92	75-125	2	20	
Manganese	ug/L	53.4	500	500	493	501	88	90	75-125	2	20	

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QUALITY CONTROL DATA

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

QC Batch: MSV/28858 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92222112001, 92222112002, 92222112003, 92222112004

METHOD BLANK: 1312470 Matrix: Water
Associated Lab Samples: 92222112001, 92222112002, 92222112003, 92222112004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	10/22/14 15:47	
1,1,1-Trichloroethane	ug/L	ND	1.0	10/22/14 15:47	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	10/22/14 15:47	
1,1,2-Trichloroethane	ug/L	ND	1.0	10/22/14 15:47	
1,1-Dichloroethane	ug/L	ND	1.0	10/22/14 15:47	
1,1-Dichloroethene	ug/L	ND	1.0	10/22/14 15:47	
1,1-Dichloropropene	ug/L	ND	1.0	10/22/14 15:47	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	10/22/14 15:47	
1,2,3-Trichloropropane	ug/L	ND	1.0	10/22/14 15:47	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	10/22/14 15:47	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	10/22/14 15:47	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	10/22/14 15:47	
1,2-Dichlorobenzene	ug/L	ND	1.0	10/22/14 15:47	
1,2-Dichloroethane	ug/L	ND	1.0	10/22/14 15:47	
1,2-Dichloropropane	ug/L	ND	1.0	10/22/14 15:47	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	10/22/14 15:47	
1,3-Dichlorobenzene	ug/L	ND	1.0	10/22/14 15:47	
1,3-Dichloropropane	ug/L	ND	1.0	10/22/14 15:47	
1,4-Dichlorobenzene	ug/L	ND	1.0	10/22/14 15:47	
2,2-Dichloropropane	ug/L	ND	1.0	10/22/14 15:47	
2-Butanone (MEK)	ug/L	ND	5.0	10/22/14 15:47	
2-Chlorotoluene	ug/L	ND	1.0	10/22/14 15:47	
2-Hexanone	ug/L	ND	5.0	10/22/14 15:47	
4-Chlorotoluene	ug/L	ND	1.0	10/22/14 15:47	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	10/22/14 15:47	
Acetone	ug/L	ND	25.0	10/22/14 15:47	
Benzene	ug/L	ND	1.0	10/22/14 15:47	
Bromobenzene	ug/L	ND	1.0	10/22/14 15:47	
Bromochloromethane	ug/L	ND	1.0	10/22/14 15:47	
Bromodichloromethane	ug/L	ND	1.0	10/22/14 15:47	
Bromoform	ug/L	ND	1.0	10/22/14 15:47	
Bromomethane	ug/L	ND	2.0	10/22/14 15:47	
Carbon tetrachloride	ug/L	ND	1.0	10/22/14 15:47	
Chlorobenzene	ug/L	ND	1.0	10/22/14 15:47	
Chloroethane	ug/L	ND	1.0	10/22/14 15:47	
Chloroform	ug/L	ND	1.0	10/22/14 15:47	
Chloromethane	ug/L	ND	1.0	10/22/14 15:47	
cis-1,2-Dichloroethene	ug/L	ND	1.0	10/22/14 15:47	
cis-1,3-Dichloropropene	ug/L	ND	1.0	10/22/14 15:47	
Dibromochloromethane	ug/L	ND	1.0	10/22/14 15:47	
Dibromomethane	ug/L	ND	1.0	10/22/14 15:47	

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QUALITY CONTROL DATA

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

METHOD BLANK: 1312470 Matrix: Water
Associated Lab Samples: 92222112001, 92222112002, 92222112003, 92222112004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/L	ND	1.0	10/22/14 15:47	
Diisopropyl ether	ug/L	ND	1.0	10/22/14 15:47	
Ethylbenzene	ug/L	ND	1.0	10/22/14 15:47	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	10/22/14 15:47	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	10/22/14 15:47	
m&p-Xylene	ug/L	ND	2.0	10/22/14 15:47	
Methyl-tert-butyl ether	ug/L	ND	1.0	10/22/14 15:47	
Methylene Chloride	ug/L	ND	2.0	10/22/14 15:47	
n-Propylbenzene	ug/L	ND	1.0	10/22/14 15:47	
Naphthalene	ug/L	ND	1.0	10/22/14 15:47	
o-Xylene	ug/L	ND	1.0	10/22/14 15:47	
p-Isopropyltoluene	ug/L	ND	1.0	10/22/14 15:47	
Styrene	ug/L	ND	1.0	10/22/14 15:47	
Tetrachloroethene	ug/L	ND	1.0	10/22/14 15:47	
Toluene	ug/L	ND	1.0	10/22/14 15:47	
trans-1,2-Dichloroethene	ug/L	ND	1.0	10/22/14 15:47	
trans-1,3-Dichloropropene	ug/L	ND	1.0	10/22/14 15:47	
Trichloroethene	ug/L	ND	1.0	10/22/14 15:47	
Trichlorofluoromethane	ug/L	ND	1.0	10/22/14 15:47	
Vinyl acetate	ug/L	ND	2.0	10/22/14 15:47	
Vinyl chloride	ug/L	ND	1.0	10/22/14 15:47	
1,2-Dichloroethane-d4 (S)	%	97	70-130	10/22/14 15:47	
4-Bromofluorobenzene (S)	%	98	70-130	10/22/14 15:47	
Toluene-d8 (S)	%	100	70-130	10/22/14 15:47	

LABORATORY CONTROL SAMPLE: 1312471

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	46.4	93	70-130	
1,1,1-Trichloroethane	ug/L	50	49.3	99	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	47.8	96	70-130	
1,1,2-Trichloroethane	ug/L	50	50.1	100	70-130	
1,1-Dichloroethane	ug/L	50	51.8	104	70-130	
1,1-Dichloroethene	ug/L	50	56.5	113	70-132	
1,1-Dichloropropene	ug/L	50	49.8	100	70-130	
1,2,3-Trichlorobenzene	ug/L	50	45.0	90	70-135	
1,2,3-Trichloropropane	ug/L	50	47.4	95	70-130	
1,2,4-Trichlorobenzene	ug/L	50	43.6	87	70-134	
1,2,4-Trimethylbenzene	ug/L	50	42.1	84	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	47.8	96	70-130	
1,2-Dichlorobenzene	ug/L	50	42.9	86	70-130	
1,2-Dichloroethane	ug/L	50	46.3	93	70-130	
1,2-Dichloropropane	ug/L	50	47.7	95	70-130	
1,3,5-Trimethylbenzene	ug/L	50	42.0	84	70-130	

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QUALITY CONTROL DATA

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

LABORATORY CONTROL SAMPLE: 1312471

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,3-Dichlorobenzene	ug/L	50	43.2	86	70-130	
1,3-Dichloropropane	ug/L	50	45.0	90	70-130	
1,4-Dichlorobenzene	ug/L	50	43.2	86	70-130	
2,2-Dichloropropane	ug/L	50	46.2	92	58-145	
2-Butanone (MEK)	ug/L	100	102	102	70-145	
2-Chlorotoluene	ug/L	50	41.2	82	70-130	
2-Hexanone	ug/L	100	95.0	95	70-144	
4-Chlorotoluene	ug/L	50	41.4	83	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	104	104	70-140	
Acetone	ug/L	100	96.6	97	50-175	
Benzene	ug/L	50	48.2	96	70-130	
Bromobenzene	ug/L	50	41.4	83	70-130	
Bromochloromethane	ug/L	50	55.2	110	70-130	
Bromodichloromethane	ug/L	50	50.1	100	70-130	
Bromoform	ug/L	50	54.1	108	70-130	
Bromomethane	ug/L	50	34.3	69	54-130	
Carbon tetrachloride	ug/L	50	50.3	101	70-132	
Chlorobenzene	ug/L	50	46.6	93	70-130	
Chloroethane	ug/L	50	50.2	100	64-134	
Chloroform	ug/L	50	50.6	101	70-130	
Chloromethane	ug/L	50	49.7	99	64-130	
cis-1,2-Dichloroethene	ug/L	50	52.0	104	70-131	
cis-1,3-Dichloropropene	ug/L	50	48.3	97	70-130	
Dibromochloromethane	ug/L	50	51.4	103	70-130	
Dibromomethane	ug/L	50	53.4	107	70-131	
Dichlorodifluoromethane	ug/L	50	54.9	110	56-130	
Diisopropyl ether	ug/L	50	49.3	99	70-130	
Ethylbenzene	ug/L	50	44.7	89	70-130	
Hexachloro-1,3-butadiene	ug/L	50	41.5	83	70-130	
Isopropylbenzene (Cumene)	ug/L	50	44.9	90	70-130	
m&p-Xylene	ug/L	100	87.7	88	70-130	
Methyl-tert-butyl ether	ug/L	50	47.9	96	70-130	
Methylene Chloride	ug/L	50	56.0	112	63-130	
n-Propylbenzene	ug/L	50	41.5	83	70-130	
Naphthalene	ug/L	50	45.2	90	70-138	
o-Xylene	ug/L	50	43.3	87	70-130	
p-Isopropyltoluene	ug/L	50	41.6	83	70-130	
Styrene	ug/L	50	46.7	93	70-130	
Tetrachloroethene	ug/L	50	47.2	94	70-130	
Toluene	ug/L	50	48.9	98	70-130	
trans-1,2-Dichloroethene	ug/L	50	53.3	107	70-130	
trans-1,3-Dichloropropene	ug/L	50	47.8	96	70-132	
Trichloroethene	ug/L	50	48.7	97	70-130	
Trichlorofluoromethane	ug/L	50	49.4	99	62-133	
Vinyl acetate	ug/L	100	86.8	87	66-157	
Vinyl chloride	ug/L	50	54.7	109	50-150	
1,2-Dichloroethane-d4 (S)	%			98	70-130	

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QUALITY CONTROL DATA

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

LABORATORY CONTROL SAMPLE: 1312471

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE SAMPLE: 1312472

Parameter	Units	92222094002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	19.6	98	70-130	
1,1,1-Trichloroethane	ug/L	ND	20	21.7	109	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	18.8	94	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	20.7	104	70-130	
1,1-Dichloroethane	ug/L	ND	20	22.8	114	70-130	
1,1-Dichloroethene	ug/L	ND	20	25.6	128	70-166	
1,1-Dichloropropene	ug/L	ND	20	22.1	111	70-130	
1,2,3-Trichlorobenzene	ug/L	ND	20	18.2	91	70-130	
1,2,3-Trichloropropane	ug/L	ND	20	18.6	93	70-130	
1,2,4-Trichlorobenzene	ug/L	ND	20	18.3	91	70-130	
1,2,4-Trimethylbenzene	ug/L	ND	20	18.3	91	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	19.5	98	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	18.2	91	70-130	
1,2-Dichloroethane	ug/L	ND	20	19.2	96	70-130	
1,2-Dichloropropane	ug/L	ND	20	20.5	102	70-130	
1,3,5-Trimethylbenzene	ug/L	ND	20	18.4	92	70-130	
1,3-Dichlorobenzene	ug/L	ND	20	18.6	93	70-130	
1,3-Dichloropropane	ug/L	ND	20	19.0	95	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	18.5	92	70-130	
2,2-Dichloropropane	ug/L	ND	20	20.3	101	70-130	
2-Butanone (MEK)	ug/L	ND	40	36.3	91	70-130	
2-Chlorotoluene	ug/L	ND	20	18.2	91	70-130	
2-Hexanone	ug/L	ND	40	35.3	88	70-130	
4-Chlorotoluene	ug/L	ND	20	18.1	90	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	40.4	101	70-130	
Acetone	ug/L	ND	40	34.7	87	70-130	
Benzene	ug/L	ND	20	21.5	108	70-148	
Bromobenzene	ug/L	ND	20	17.8	89	70-130	
Bromochloromethane	ug/L	ND	20	22.6	113	70-130	
Bromodichloromethane	ug/L	ND	20	21.2	106	70-130	
Bromoform	ug/L	ND	20	21.0	105	70-130	
Bromomethane	ug/L	ND	20	15.2	76	70-130	
Carbon tetrachloride	ug/L	ND	20	22.2	111	70-130	
Chlorobenzene	ug/L	ND	20	20.4	102	70-146	
Chloroethane	ug/L	ND	20	24.5	122	70-130	
Chloroform	ug/L	ND	20	21.8	109	70-130	
Chloromethane	ug/L	ND	20	22.1	111	70-130	
cis-1,2-Dichloroethene	ug/L	ND	20	22.5	112	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	19.4	97	70-130	

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QUALITY CONTROL DATA

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

MATRIX SPIKE SAMPLE: 1312472

Parameter	Units	92222094002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	ND	20	20.7	104	70-130	
Dibromomethane	ug/L	ND	20	21.7	108	70-130	
Dichlorodifluoromethane	ug/L	ND	20	24.6	123	70-130	
Diisopropyl ether	ug/L	ND	20	20.7	103	70-130	
Ethylbenzene	ug/L	ND	20	20.0	100	70-130	
Hexachloro-1,3-butadiene	ug/L	ND	20	23.2	116	70-130	
Isopropylbenzene (Cumene)	ug/L	ND	20	19.9	100	70-130	
m&p-Xylene	ug/L	ND	40	39.4	98	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	19.0	95	70-130	
Methylene Chloride	ug/L	ND	20	22.5	112	70-130	
n-Propylbenzene	ug/L	ND	20	18.5	92	70-130	
Naphthalene	ug/L	ND	20	17.2	86	70-130	
o-Xylene	ug/L	ND	20	18.6	93	70-130	
p-Isopropyltoluene	ug/L	ND	20	18.6	93	70-130	
Styrene	ug/L	ND	20	20.1	101	70-130	
Tetrachloroethene	ug/L	ND	20	21.3	106	70-130	
Toluene	ug/L	ND	20	21.4	107	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	23.6	118	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	19.0	95	70-130	
Trichloroethene	ug/L	ND	20	21.7	108	69-151	
Trichlorofluoromethane	ug/L	ND	20	23.0	115	70-130	
Vinyl acetate	ug/L	ND	40	34.3	86	70-130	
Vinyl chloride	ug/L	ND	20	24.6	123	70-130	
1,2-Dichloroethane-d4 (S)	%				95	70-130	
4-Bromofluorobenzene (S)	%				99	70-130	
Toluene-d8 (S)	%				101	70-130	

SAMPLE DUPLICATE: 1312473

Parameter	Units	92222094005 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,1-Dichloropropene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	ug/L	ND	ND		30	
1,2,3-Trichloropropane	ug/L	ND	ND		30	
1,2,4-Trichlorobenzene	ug/L	ND	ND		30	
1,2,4-Trimethylbenzene	ug/L	ND	.6J		30	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

SAMPLE DUPLICATE: 1312473

Parameter	Units	92222094005 Result	Dup Result	RPD	Max RPD	Qualifiers
1,3,5-Trimethylbenzene	ug/L	ND	ND		30	
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,3-Dichloropropane	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
2,2-Dichloropropane	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Chlorotoluene	ug/L	ND	ND		30	
2-Hexanone	ug/L	ND	ND		30	
4-Chlorotoluene	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	
Benzene	ug/L	1.6	1.6	1	30	
Bromobenzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dibromomethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	.52J		30	
Ethylbenzene	ug/L	ND	ND		30	
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
n-Propylbenzene	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	.36J		30	
o-Xylene	ug/L	ND	ND		30	
p-Isopropyltoluene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl acetate	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

SAMPLE DUPLICATE: 1312473

Parameter	Units	92222094005 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane-d4 (S)	%	99	99	0		
4-Bromofluorobenzene (S)	%	98	99	1		
Toluene-d8 (S)	%	100	99	1		

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QUALITY CONTROL DATA

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

QC Batch: WET/33911 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 92222112001, 92222112002, 92222112003, 92222112004

METHOD BLANK: 1313509 Matrix: Water
Associated Lab Samples: 92222112001, 92222112002, 92222112003, 92222112004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	10/23/14 15:07	

LABORATORY CONTROL SAMPLE: 1313513

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.4	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1313514 1313515

Parameter	Units	92222112001 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	mg/L	437	50	50	487	484	99	93	90-110	1	4	

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QUALITY CONTROL DATA

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

QC Batch: WET/33848 Analysis Method: SM 3500-Fe B
QC Batch Method: SM 3500-Fe B Analysis Description: Iron, Ferrous
Associated Lab Samples: 92222112001, 92222112002, 92222112003, 92222112004

METHOD BLANK: 1311670 Matrix: Water
Associated Lab Samples: 92222112001, 92222112002, 92222112003, 92222112004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.50	10/21/14 14:39	N2

LABORATORY CONTROL SAMPLE: 1311671

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1.5	1.5	99	90-110	N2

SAMPLE DUPLICATE: 1311672

Parameter	Units	92220585001 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	ND	ND		10	H1,N2

SAMPLE DUPLICATE: 1311673

Parameter	Units	92222112001 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	1.9	1.8	1	10	H1,N2

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QUALITY CONTROL DATA

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

QC Batch: WETA/20639 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92222112001, 92222112002, 92222112003, 92222112004

METHOD BLANK: 1313458 Matrix: Water
Associated Lab Samples: 92222112001, 92222112002, 92222112003, 92222112004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	2.0	10/23/14 18:46	

LABORATORY CONTROL SAMPLE: 1313459

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	18.9	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1313460 1313461

Parameter	Units	92221976001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	934	20	20	877	896	-281	-187	90-110	2	10	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1313462 1313463

Parameter	Units	92221490003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	44.5	20	20	64.4	67.0	100	113	90-110	4	10	M1

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QUALITY CONTROL DATA

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

QC Batch: WETA/20620 — Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 — Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92222112001, 92222112002, 92222112003, 92222112004

METHOD BLANK: 1312140 — Matrix: Water
Associated Lab Samples: 92222112001, 92222112002, 92222112003, 92222112004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.020	10/22/14 01:15	

LABORATORY CONTROL SAMPLE: 1312141

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	2.5	2.6	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1312142 1312143

Parameter	Units	92222112001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	2.5	2.5	2.6	2.6	103	104	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1312144 1312145

Parameter	Units	92222059002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	4.9	2.5	2.5	7.6	7.6	107	106	90-110	0	10	

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QUALITY CONTROL DATA

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

QC Batch: WETA/20636 Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E Analysis Description: 4500 Chloride
Associated Lab Samples: 92222112001, 92222112002, 92222112003, 92222112004

METHOD BLANK: 1313286 Matrix: Water
Associated Lab Samples: 92222112001, 92222112002, 92222112003, 92222112004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	10/23/14 18:06	

LABORATORY CONTROL SAMPLE: 1313287

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	21.3	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1313288 1313289

Parameter	Units	92220983008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	79.3	20	20	103	97.3	118	90	90-110	6	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1313290 1313291

Parameter	Units	92221990003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.7	20	20	22.1	21.7	97	95	90-110	2	10	

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QUALITY CONTROL DATA

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

QC Batch: WETA/20627 Analysis Method: SM 5310B
QC Batch Method: SM 5310B Analysis Description: 5310B TOC
Associated Lab Samples: 92222112001, 92222112002, 92222112003, 92222112004

METHOD BLANK: 1312690 Matrix: Water
Associated Lab Samples: 92222112001, 92222112002, 92222112003, 92222112004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	10/22/14 20:05	

LABORATORY CONTROL SAMPLE: 1312691

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	24.7	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1312692 1312693

Parameter	Units	92222112001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	217	25	25	231	241	57	96	90-110	4	5	M6

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

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
PASI-M	Pace Analytical Services - Minneapolis

SAMPLE QUALIFIERS

Sample: 92222112001

[1] The sample was not collected in the appropriate container for headspace analysis.

Sample: 92222112002

[1] The sample was not collected in the appropriate container for headspace analysis.

Sample: 92222112003

[1] The sample was not collected in the appropriate container for headspace analysis.

Sample: 92222112004

[1] The sample was not collected in the appropriate container for headspace analysis.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H1	Analysis conducted outside the EPA method holding time.
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.
N2	The lab does not hold TNI accreditation for this parameter.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PNG-Huntersville 6228-14-0220
Pace Project No.: 92222112

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92222112001	**MW-3D**	RSK 175	AIR/21643		
92222112002	**MW-7D**	RSK 175	AIR/21643		
92222112003	**MW-6S**	RSK 175	AIR/21643		
92222112004	**MW-6D**	RSK 175	AIR/21643		
92222112001	**MW-3D**	EPA 3010	MPRP/17169	EPA 6010	ICP/15482
92222112002	**MW-7D**	EPA 3010	MPRP/17169	EPA 6010	ICP/15482
92222112003	**MW-6S**	EPA 3010	MPRP/17169	EPA 6010	ICP/15482
92222112004	**MW-6D**	EPA 3010	MPRP/17169	EPA 6010	ICP/15482
92222112001	**MW-3D**	EPA 8260	MSV/28858		
92222112002	**MW-7D**	EPA 8260	MSV/28858		
92222112003	**MW-6S**	EPA 8260	MSV/28858		
92222112004	**MW-6D**	EPA 8260	MSV/28858		
92222112001	**MW-3D**	SM 2320B	WET/33911		
92222112002	**MW-7D**	SM 2320B	WET/33911		
92222112003	**MW-6S**	SM 2320B	WET/33911		
92222112004	**MW-6D**	SM 2320B	WET/33911		
92222112001	**MW-3D**	SM 3500-Fe B	WET/33848		
92222112002	**MW-7D**	SM 3500-Fe B	WET/33848		
92222112003	**MW-6S**	SM 3500-Fe B	WET/33848		
92222112004	**MW-6D**	SM 3500-Fe B	WET/33848		
92222112001	**MW-3D**	EPA 300.0	WETA/20639		
92222112002	**MW-7D**	EPA 300.0	WETA/20639		
92222112003	**MW-6S**	EPA 300.0	WETA/20639		
92222112004	**MW-6D**	EPA 300.0	WETA/20639		
92222112001	**MW-3D**	EPA 353.2	WETA/20620		
92222112002	**MW-7D**	EPA 353.2	WETA/20620		
92222112003	**MW-6S**	EPA 353.2	WETA/20620		
92222112004	**MW-6D**	EPA 353.2	WETA/20620		
92222112001	**MW-3D**	SM 4500-Cl-E	WETA/20636		
92222112002	**MW-7D**	SM 4500-Cl-E	WETA/20636		
92222112003	**MW-6S**	SM 4500-Cl-E	WETA/20636		
92222112004	**MW-6D**	SM 4500-Cl-E	WETA/20636		
92222112001	**MW-3D**	SM 5310B	WETA/20627		
92222112002	**MW-7D**	SM 5310B	WETA/20627		
92222112003	**MW-6S**	SM 5310B	WETA/20627		
92222112004	**MW-6D**	SM 5310B	WETA/20627		

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Pace Analytical	Sample Condition Upon Receipt (SCUR)	Page 1 of 2
	Document Number: F-CHR-CS-003-rev.15	Issuing Authority: Pace Huntersville Quality Office

Client Name: AMEC / PNG Huntersville PS 10/20/14

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 T1401 Type of Ice: Wet Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor T1401 No Correction

Corrected Cooler Temp.: 5.2 °C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: PS 10/20/14

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. #1 - no time 3 DGAH, Methane/Ethane/Ethene
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked:	☑Yes ☐No ☐N/A	13. ~~#3 - BPSN pH greater than 2~~ PS 10/20/14
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. #1 - 1 DGAH ; #3 - 1 DGAH
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:	VG	Date:	10/20/14
SRF Review:	AMB	Date:	10-21-14

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# : 92222112

92222112

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

1782227

Section A Required Client Information:

Company: AMEC E+I
Address: 2801 Yorkmont Rd
Charlotte, NC 28208
Email To: andrew.frantz@amec.com
Phone: 704-357-8600 Fax:
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: Andrew Frantz
Copy To:
Purchase Order No.:
Project Name: PNC - Huntersville
Project Number: 6237-14-0220

Section C Invoice Information:

Attention:
Company Name: Bill Client Direct
Address:
Pace Quote Reference:
Pace Project Manager: Kevin Godwin
Pace Profile #: 2304-3

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: NC

Section D Required Client Information

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

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	COLLECTED Composite Start TIME	COLLECTED Composite End/Grab DATE	COLLECTED Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other H_2SO_4	Analysis Test: BOD	TOC	Methane Ethane Ethene (Kr Mn)	Metals (As Mn)	Nitrate	Alkalinity/Chloride	Nitrite	Ferrous Iron	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-3D	WT	G			10-20-14	1120		14	X		X	X				X	3	3	3	1	1	1	1	1		92222112
2	MW-7D	↓	↓			↓	1200		14	X		X	X				X	3	3	3	1	1	1	1	1		001
3	MW-6S						1415		14	X		X	X				X	3	3	3	1	1	1	1	1		002
4	MW-6D	✓	✓			✓	1535		14	X		X	X				X	3	3	3	1	1	1	1	1		003
5																		3	3	3	1	1	1	1	1		004
6																											
7																											
8																											
9																											
10																											
11																											
12																											

~~A2222122~~ KG 14/21/14

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Troy L Holzschuh / AMEC	10-20-14	1615	[illegible] Pace	10/20/14	1615	5.2	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Troy L Holzschuh

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 10-20-14

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

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

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

October 30, 2014

Ms. Alicia Mooney
Piedmont Natural Gas
P.O. Box 33068
Charlotte, NC 28233

Reviewed by AJF 10/30/14

RE: Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

Dear Ms. Mooney:
Enclosed are the analytical results for sample(s) received by the laboratory on October 21, 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

cc: Rob Foster, Amec
Mr. Andrew Frantz, Mactec

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CERTIFICATIONS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Alabama Certification #40770
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: 8TMS-L
Florida/NELAP Certification #: E87605
Guam Certification #:14-008r
Georgia Certification #: 959
Georgia EPD #: Pace
Idaho Certification #: MN00064
Hawaii Certification #MN00064
Illinois Certification #: 200011
Indiana Certification#C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky Dept of Envi. Protection - DW #90062
Kentucky Dept of Envi. Protection - WW #:90062
Louisiana DEQ Certification #: 3086
Louisiana DHH #: LA140001
Maine Certification #: 2013011
Maryland Certification #: 322
Michigan DEPH Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Carolina State Public Health #: 27700
North Dakota Certification #: R-036
Ohio EPA #: 4150
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Saipan (CNMI) #:MP0003
South Carolina #:74003001
Texas Certification #: T104704192
Tennessee Certification #: 02818
Utah Certification #: MN000642013-4
Virginia DGS Certification #: 251
Virginia/VELAP Certification #: Pace
Washington Certification #: C486
West Virginia Certification #: 382
West Virginia DHHR #:9952C
Wisconsin Certification #: 999407970

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

Asheville Certification IDs

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

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SAMPLE SUMMARY

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92222278001	**MW-4S**	Water	10/21/14 10:50	10/21/14 14:28
92222278002	**MW-4D**	Water	10/21/14 13:40	10/21/14 14:28
92222278003	**WSW**	Water	10/21/14 14:00	10/21/14 14:28

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SAMPLE ANALYTE COUNT

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92222278001	**MW-4S**	RSK 175	JRB	3	PASI-M
		EPA 6010	JMW	2	PASI-A
		EPA 8260	JDW1	65	PASI-C
		EPA 8260B Mod.	DLK	3	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 3500-Fe B	SMW	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92222278002	**MW-4D**	RSK 175	JRB	3	PASI-M
		EPA 6010	JMW	2	PASI-A
		EPA 8260	JDW1	65	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 3500-Fe B	SMW	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92222278003	**WSW**	RSK 175	JRB	3	PASI-M
		EPA 6010	JMW	2	PASI-A
		EPA 8260	JDW1	65	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 3500-Fe B	SMW	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5310B	AES2	1	PASI-A

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

Sample: MW-4S **Lab ID: 92222278001** Collected: 10/21/14 10:50 Received: 10/21/14 14:28 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175							
Ethane	ND	ug/L	6.2	1		10/23/14 17:17	74-84-0	
Ethene	ND	ug/L	6.2	1		10/23/14 17:17	74-85-1	
Methane	**10.3**	ug/L	6.6	1		10/23/14 17:17	74-82-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	10.0	1	10/22/14 15:45	10/23/14 00:54	7440-38-2	
Manganese	**9.7**	ug/L	5.0	1	10/22/14 15:45	10/23/14 00:54	7439-96-5	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/22/14 20:43	67-64-1	
Benzene	ND	ug/L	1.0	1		10/22/14 20:43	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/22/14 20:43	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/22/14 20:43	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/22/14 20:43	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/22/14 20:43	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/22/14 20:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/22/14 20:43	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		10/22/14 20:43	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/22/14 20:43	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/22/14 20:43	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/22/14 20:43	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/22/14 20:43	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/22/14 20:43	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/22/14 20:43	106-43-4	
Dibromochloromethane	ND	ug/L	1.0	1		10/22/14 20:43	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/22/14 20:43	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/22/14 20:43	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 20:43	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 20:43	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 20:43	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/22/14 20:43	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/22/14 20:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/22/14 20:43	107-06-2	
1,1-Dichloroethene	**6.3**	ug/L	1.0	1		10/22/14 20:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/22/14 20:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/22/14 20:43	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/22/14 20:43	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/22/14 20:43	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/22/14 20:43	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/22/14 20:43	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/22/14 20:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/22/14 20:43	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		10/22/14 20:43	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		10/22/14 20:43	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/22/14 20:43	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		10/22/14 20:43	591-78-6	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

Sample: MW-4S **Lab ID: 92222278001** Collected: 10/21/14 10:50 Received: 10/21/14 14:28 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/22/14 20:43	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		10/22/14 20:43	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		10/22/14 20:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/22/14 20:43	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/22/14 20:43	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		10/22/14 20:43	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/22/14 20:43	103-65-1	
Styrene	ND	ug/L	1.0	1		10/22/14 20:43	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/22/14 20:43	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/22/14 20:43	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/22/14 20:43	127-18-4	
Toluene	ND	ug/L	1.0	1		10/22/14 20:43	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/22/14 20:43	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/22/14 20:43	120-82-1	
1,1,1-Trichloroethane	**4.1**	ug/L	1.0	1		10/22/14 20:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/22/14 20:43	79-00-5	
Trichloroethene	**103**	ug/L	1.0	1		10/22/14 20:43	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/22/14 20:43	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/22/14 20:43	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/22/14 20:43	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/22/14 20:43	108-67-8	
Vinyl acetate	ND	ug/L	2.0	1		10/22/14 20:43	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/22/14 20:43	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		10/22/14 20:43	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/22/14 20:43	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	100	%	70-130	1		10/22/14 20:43	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130	1		10/22/14 20:43	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		10/22/14 20:43	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		10/29/14 20:16	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	95	%	50-150	1		10/29/14 20:16	17060-07-0	
Toluene-d8 (S)	78	%	50-150	1		10/29/14 20:16	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**46.5**	mg/L	5.0	1		10/23/14 18:19		
Iron, Ferrous	Analytical Method: SM 3500-Fe B							
Iron, Ferrous	ND	mg/L	0.50	1		10/24/14 20:44		H1,N2
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	ND	mg/L	2.0	1		10/28/14 13:32	14808-79-8	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

Sample: MW-4S **Lab ID: 92222278001** Collected: 10/21/14 10:50 Received: 10/21/14 14:28 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**0.44**	mg/L	0.020	1		10/22/14 01:46		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**1.2**	mg/L	1.0	1		10/28/14 04:24	16887-00-6	
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**4.5**	mg/L	1.0	1		10/22/14 21:36	7440-44-0	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

Sample: MW-4D **Lab ID: 92222278002** Collected: 10/21/14 13:40 Received: 10/21/14 14:28 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175							
Ethane	ND	ug/L	6.2	1		10/23/14 17:28	74-84-0	
Ethene	ND	ug/L	6.2	1		10/23/14 17:28	74-85-1	
Methane	**24.7**	ug/L	6.6	1		10/23/14 17:28	74-82-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	10.0	1	10/22/14 15:45	10/23/14 01:04	7440-38-2	
Manganese	**283**	ug/L	5.0	1	10/22/14 15:45	10/23/14 01:04	7439-96-5	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/22/14 20:58	67-64-1	
Benzene	ND	ug/L	1.0	1		10/22/14 20:58	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/22/14 20:58	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/22/14 20:58	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/22/14 20:58	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/22/14 20:58	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/22/14 20:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/22/14 20:58	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		10/22/14 20:58	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/22/14 20:58	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/22/14 20:58	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/22/14 20:58	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/22/14 20:58	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/22/14 20:58	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/22/14 20:58	106-43-4	
Dibromochloromethane	ND	ug/L	1.0	1		10/22/14 20:58	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/22/14 20:58	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/22/14 20:58	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 20:58	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 20:58	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 20:58	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/22/14 20:58	75-71-8	
1,1-Dichloroethane	**3.9**	ug/L	1.0	1		10/22/14 20:58	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/22/14 20:58	107-06-2	
1,1-Dichloroethene	**9.2**	ug/L	1.0	1		10/22/14 20:58	75-35-4	
cis-1,2-Dichloroethene	**2.5**	ug/L	1.0	1		10/22/14 20:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/22/14 20:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/22/14 20:58	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/22/14 20:58	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/22/14 20:58	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/22/14 20:58	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/22/14 20:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/22/14 20:58	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		10/22/14 20:58	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		10/22/14 20:58	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/22/14 20:58	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		10/22/14 20:58	591-78-6	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

Sample: MW-4D **Lab ID: 92222278002** Collected: 10/21/14 13:40 Received: 10/21/14 14:28 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/22/14 20:58	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		10/22/14 20:58	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		10/22/14 20:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/22/14 20:58	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/22/14 20:58	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		10/22/14 20:58	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/22/14 20:58	103-65-1	
Styrene	ND	ug/L	1.0	1		10/22/14 20:58	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/22/14 20:58	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/22/14 20:58	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/22/14 20:58	127-18-4	
Toluene	ND	ug/L	1.0	1		10/22/14 20:58	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/22/14 20:58	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/22/14 20:58	120-82-1	
1,1,1-Trichloroethane	**3.5**	ug/L	1.0	1		10/22/14 20:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/22/14 20:58	79-00-5	
Trichloroethene	**86.5**	ug/L	1.0	1		10/22/14 20:58	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/22/14 20:58	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/22/14 20:58	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/22/14 20:58	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/22/14 20:58	108-67-8	
Vinyl acetate	ND	ug/L	2.0	1		10/22/14 20:58	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/22/14 20:58	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		10/22/14 20:58	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/22/14 20:58	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	100	%	70-130	1		10/22/14 20:58	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130	1		10/22/14 20:58	17060-07-0	
Toluene-d8 (S)	98	%	70-130	1		10/22/14 20:58	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**148**	mg/L	5.0	1		10/23/14 18:36		
Iron, Ferrous	Analytical Method: SM 3500-Fe B							
Iron, Ferrous	ND	mg/L	0.50	1		10/24/14 20:44		H1,N2
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**5.4**	mg/L	2.0	1		10/28/14 14:13	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.020	1		10/22/14 01:48		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**1.9**	mg/L	1.0	1		10/28/14 04:25	16887-00-6	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

Sample: MW-4D **Lab ID: 92222278002** Collected: 10/21/14 13:40 Received: 10/21/14 14:28 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**44.5**	mg/L	1.0	1		10/23/14 10:07	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

Sample: WSW **Lab ID: 92222278003** Collected: 10/21/14 14:00 Received: 10/21/14 14:28 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175							
Ethane	ND	ug/L	6.2	1		10/23/14 17:39	74-84-0	
Ethene	ND	ug/L	6.2	1		10/23/14 17:39	74-85-1	
Methane	ND	ug/L	6.6	1		10/23/14 17:39	74-82-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	10.0	1	10/22/14 15:45	10/23/14 01:07	7440-38-2	
Manganese	ND	ug/L	5.0	1	10/22/14 15:45	10/23/14 01:07	7439-96-5	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/25/14 21:25	67-64-1	
Benzene	ND	ug/L	1.0	1		10/25/14 21:25	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/25/14 21:25	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/25/14 21:25	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/25/14 21:25	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/25/14 21:25	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/25/14 21:25	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/25/14 21:25	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		10/25/14 21:25	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/25/14 21:25	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/25/14 21:25	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/25/14 21:25	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/25/14 21:25	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/25/14 21:25	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/25/14 21:25	106-43-4	
Dibromochloromethane	ND	ug/L	1.0	1		10/25/14 21:25	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/25/14 21:25	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/25/14 21:25	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/25/14 21:25	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/25/14 21:25	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/25/14 21:25	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/25/14 21:25	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/25/14 21:25	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/25/14 21:25	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/25/14 21:25	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/25/14 21:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/25/14 21:25	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/25/14 21:25	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/25/14 21:25	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/25/14 21:25	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/25/14 21:25	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/25/14 21:25	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/25/14 21:25	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		10/25/14 21:25	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		10/25/14 21:25	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/25/14 21:25	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		10/25/14 21:25	591-78-6	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

Sample: WSW **Lab ID: 92222278003** Collected: 10/21/14 14:00 Received: 10/21/14 14:28 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/25/14 21:25	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		10/25/14 21:25	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		10/25/14 21:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/25/14 21:25	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/25/14 21:25	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		10/25/14 21:25	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/25/14 21:25	103-65-1	
Styrene	ND	ug/L	1.0	1		10/25/14 21:25	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/25/14 21:25	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/25/14 21:25	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/25/14 21:25	127-18-4	
Toluene	ND	ug/L	1.0	1		10/25/14 21:25	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/25/14 21:25	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/25/14 21:25	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/25/14 21:25	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/25/14 21:25	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/25/14 21:25	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/25/14 21:25	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/25/14 21:25	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/25/14 21:25	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/25/14 21:25	108-67-8	
Vinyl acetate	ND	ug/L	2.0	1		10/25/14 21:25	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/25/14 21:25	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		10/25/14 21:25	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/25/14 21:25	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	100	%	70-130	1		10/25/14 21:25	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	70-130	1		10/25/14 21:25	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		10/25/14 21:25	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**88.8**	mg/L	5.0	1		10/23/14 19:03		
Iron, Ferrous	Analytical Method: SM 3500-Fe B							
Iron, Ferrous	ND	mg/L	0.50	1		10/24/14 20:46		H1,N2
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**3.3**	mg/L	2.0	1		10/28/14 14:27	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**0.63**	mg/L	0.020	1		10/22/14 01:49		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**2.3**	mg/L	1.0	1		10/28/14 04:25	16887-00-6	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

Sample: WSW **Lab ID: 92222278003** Collected: 10/21/14 14:00 Received: 10/21/14 14:28 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**9.4**	mg/L	1.0	1		10/22/14 22:19	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

QC Batch: AIR/21643 — Analysis Method: RSK 175
QC Batch Method: RSK 175 — Analysis Description: RSK 175 AIR HEADSPACE
Associated Lab Samples: 92222278001, 92222278002, 92222278003

METHOD BLANK: 1825028 — Matrix: Water
Associated Lab Samples: 92222278001, 92222278002, 92222278003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethane	ug/L	ND	6.2	10/23/14 12:49	
Ethene	ug/L	ND	6.2	10/23/14 12:49	
Methane	ug/L	ND	6.6	10/23/14 12:49	

LABORATORY CONTROL SAMPLE & LCSD: 1825029 1825030

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	113	116	99	102	85-115	3	20	
Ethene	ug/L	106	103	107	97	101	85-115	5	20	
Methane	ug/L	60.7	61.6	61.2	102	101	85-115	1	20	

SAMPLE DUPLICATE: 1825031

Parameter	Units	10285757001 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	ND	ND		20	
Ethene	ug/L	ND	ND		20	
Methane	ug/L	21000	21200	1	20	E

SAMPLE DUPLICATE: 1825032

Parameter	Units	92222112004 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	ND	ND		20	
Ethene	ug/L	ND	ND		20	
Methane	ug/L	ND	ND		20	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

QC Batch: MPRP/17179 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 92222278001, 92222278002, 92222278003

METHOD BLANK: 1312696 Matrix: Water
Associated Lab Samples: 92222278001, 92222278002, 92222278003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	10.0	10/23/14 00:45	
Manganese	ug/L	ND	5.0	10/23/14 00:45	

LABORATORY CONTROL SAMPLE: 1312697

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	460	92	80-120	
Manganese	ug/L	500	459	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1312698 1312699

Parameter	Units	92222278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	500	500	462	453	92	91	75-125	2	20	
Manganese	ug/L	9.7	500	500	467	458	92	90	75-125	2	20	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

QC Batch: MSV/28858 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92222278001, 92222278002

METHOD BLANK: 1312470 | Matrix: Water
Associated Lab Samples: 92222278001, 92222278002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	10/22/14 15:47	
1,1,1-Trichloroethane	ug/L	ND	1.0	10/22/14 15:47	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	10/22/14 15:47	
1,1,2-Trichloroethane	ug/L	ND	1.0	10/22/14 15:47	
1,1-Dichloroethane	ug/L	ND	1.0	10/22/14 15:47	
1,1-Dichloroethene	ug/L	ND	1.0	10/22/14 15:47	
1,1-Dichloropropene	ug/L	ND	1.0	10/22/14 15:47	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	10/22/14 15:47	
1,2,3-Trichloropropane	ug/L	ND	1.0	10/22/14 15:47	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	10/22/14 15:47	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	10/22/14 15:47	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	10/22/14 15:47	
1,2-Dichlorobenzene	ug/L	ND	1.0	10/22/14 15:47	
1,2-Dichloroethane	ug/L	ND	1.0	10/22/14 15:47	
1,2-Dichloropropane	ug/L	ND	1.0	10/22/14 15:47	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	10/22/14 15:47	
1,3-Dichlorobenzene	ug/L	ND	1.0	10/22/14 15:47	
1,3-Dichloropropane	ug/L	ND	1.0	10/22/14 15:47	
1,4-Dichlorobenzene	ug/L	ND	1.0	10/22/14 15:47	
2,2-Dichloropropane	ug/L	ND	1.0	10/22/14 15:47	
2-Butanone (MEK)	ug/L	ND	5.0	10/22/14 15:47	
2-Chlorotoluene	ug/L	ND	1.0	10/22/14 15:47	
2-Hexanone	ug/L	ND	5.0	10/22/14 15:47	
4-Chlorotoluene	ug/L	ND	1.0	10/22/14 15:47	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	10/22/14 15:47	
Acetone	ug/L	ND	25.0	10/22/14 15:47	
Benzene	ug/L	ND	1.0	10/22/14 15:47	
Bromobenzene	ug/L	ND	1.0	10/22/14 15:47	
Bromochloromethane	ug/L	ND	1.0	10/22/14 15:47	
Bromodichloromethane	ug/L	ND	1.0	10/22/14 15:47	
Bromoform	ug/L	ND	1.0	10/22/14 15:47	
Bromomethane	ug/L	ND	2.0	10/22/14 15:47	
Carbon tetrachloride	ug/L	ND	1.0	10/22/14 15:47	
Chlorobenzene	ug/L	ND	1.0	10/22/14 15:47	
Chloroethane	ug/L	ND	1.0	10/22/14 15:47	
Chloroform	ug/L	ND	1.0	10/22/14 15:47	
Chloromethane	ug/L	ND	1.0	10/22/14 15:47	
cis-1,2-Dichloroethene	ug/L	ND	1.0	10/22/14 15:47	
cis-1,3-Dichloropropene	ug/L	ND	1.0	10/22/14 15:47	
Dibromochloromethane	ug/L	ND	1.0	10/22/14 15:47	
Dibromomethane	ug/L	ND	1.0	10/22/14 15:47	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

METHOD BLANK: 1312470 Matrix: Water
Associated Lab Samples: 92222278001, 92222278002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/L	ND	1.0	10/22/14 15:47	
Diisopropyl ether	ug/L	ND	1.0	10/22/14 15:47	
Ethylbenzene	ug/L	ND	1.0	10/22/14 15:47	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	10/22/14 15:47	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	10/22/14 15:47	
m&p-Xylene	ug/L	ND	2.0	10/22/14 15:47	
Methyl-tert-butyl ether	ug/L	ND	1.0	10/22/14 15:47	
Methylene Chloride	ug/L	ND	2.0	10/22/14 15:47	
n-Propylbenzene	ug/L	ND	1.0	10/22/14 15:47	
Naphthalene	ug/L	ND	1.0	10/22/14 15:47	
o-Xylene	ug/L	ND	1.0	10/22/14 15:47	
p-Isopropyltoluene	ug/L	ND	1.0	10/22/14 15:47	
Styrene	ug/L	ND	1.0	10/22/14 15:47	
Tetrachloroethene	ug/L	ND	1.0	10/22/14 15:47	
Toluene	ug/L	ND	1.0	10/22/14 15:47	
trans-1,2-Dichloroethene	ug/L	ND	1.0	10/22/14 15:47	
trans-1,3-Dichloropropene	ug/L	ND	1.0	10/22/14 15:47	
Trichloroethene	ug/L	ND	1.0	10/22/14 15:47	
Trichlorofluoromethane	ug/L	ND	1.0	10/22/14 15:47	
Vinyl acetate	ug/L	ND	2.0	10/22/14 15:47	
Vinyl chloride	ug/L	ND	1.0	10/22/14 15:47	
1,2-Dichloroethane-d4 (S)	%	97	70-130	10/22/14 15:47	
4-Bromofluorobenzene (S)	%	98	70-130	10/22/14 15:47	
Toluene-d8 (S)	%	100	70-130	10/22/14 15:47	

LABORATORY CONTROL SAMPLE: 1312471

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	46.4	93	70-130	
1,1,1-Trichloroethane	ug/L	50	49.3	99	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	47.8	96	70-130	
1,1,2-Trichloroethane	ug/L	50	50.1	100	70-130	
1,1-Dichloroethane	ug/L	50	51.8	104	70-130	
1,1-Dichloroethene	ug/L	50	56.5	113	70-132	
1,1-Dichloropropene	ug/L	50	49.8	100	70-130	
1,2,3-Trichlorobenzene	ug/L	50	45.0	90	70-135	
1,2,3-Trichloropropane	ug/L	50	47.4	95	70-130	
1,2,4-Trichlorobenzene	ug/L	50	43.6	87	70-134	
1,2,4-Trimethylbenzene	ug/L	50	42.1	84	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	47.8	96	70-130	
1,2-Dichlorobenzene	ug/L	50	42.9	86	70-130	
1,2-Dichloroethane	ug/L	50	46.3	93	70-130	
1,2-Dichloropropane	ug/L	50	47.7	95	70-130	
1,3,5-Trimethylbenzene	ug/L	50	42.0	84	70-130	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

LABORATORY CONTROL SAMPLE: 1312471

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,3-Dichlorobenzene	ug/L	50	43.2	86	70-130	
1,3-Dichloropropane	ug/L	50	45.0	90	70-130	
1,4-Dichlorobenzene	ug/L	50	43.2	86	70-130	
2,2-Dichloropropane	ug/L	50	46.2	92	58-145	
2-Butanone (MEK)	ug/L	100	102	102	70-145	
2-Chlorotoluene	ug/L	50	41.2	82	70-130	
2-Hexanone	ug/L	100	95.0	95	70-144	
4-Chlorotoluene	ug/L	50	41.4	83	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	104	104	70-140	
Acetone	ug/L	100	96.6	97	50-175	
Benzene	ug/L	50	48.2	96	70-130	
Bromobenzene	ug/L	50	41.4	83	70-130	
Bromochloromethane	ug/L	50	55.2	110	70-130	
Bromodichloromethane	ug/L	50	50.1	100	70-130	
Bromoform	ug/L	50	54.1	108	70-130	
Bromomethane	ug/L	50	34.3	69	54-130	
Carbon tetrachloride	ug/L	50	50.3	101	70-132	
Chlorobenzene	ug/L	50	46.6	93	70-130	
Chloroethane	ug/L	50	50.2	100	64-134	
Chloroform	ug/L	50	50.6	101	70-130	
Chloromethane	ug/L	50	49.7	99	64-130	
cis-1,2-Dichloroethene	ug/L	50	52.0	104	70-131	
cis-1,3-Dichloropropene	ug/L	50	48.3	97	70-130	
Dibromochloromethane	ug/L	50	51.4	103	70-130	
Dibromomethane	ug/L	50	53.4	107	70-131	
Dichlorodifluoromethane	ug/L	50	54.9	110	56-130	
Diisopropyl ether	ug/L	50	49.3	99	70-130	
Ethylbenzene	ug/L	50	44.7	89	70-130	
Hexachloro-1,3-butadiene	ug/L	50	41.5	83	70-130	
Isopropylbenzene (Cumene)	ug/L	50	44.9	90	70-130	
m&p-Xylene	ug/L	100	87.7	88	70-130	
Methyl-tert-butyl ether	ug/L	50	47.9	96	70-130	
Methylene Chloride	ug/L	50	56.0	112	63-130	
n-Propylbenzene	ug/L	50	41.5	83	70-130	
Naphthalene	ug/L	50	45.2	90	70-138	
o-Xylene	ug/L	50	43.3	87	70-130	
p-Isopropyltoluene	ug/L	50	41.6	83	70-130	
Styrene	ug/L	50	46.7	93	70-130	
Tetrachloroethene	ug/L	50	47.2	94	70-130	
Toluene	ug/L	50	48.9	98	70-130	
trans-1,2-Dichloroethene	ug/L	50	53.3	107	70-130	
trans-1,3-Dichloropropene	ug/L	50	47.8	96	70-132	
Trichloroethene	ug/L	50	48.7	97	70-130	
Trichlorofluoromethane	ug/L	50	49.4	99	62-133	
Vinyl acetate	ug/L	100	86.8	87	66-157	
Vinyl chloride	ug/L	50	54.7	109	50-150	
1,2-Dichloroethane-d4 (S)	%			98	70-130	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

LABORATORY CONTROL SAMPLE: 1312471

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE SAMPLE: 1312472

Parameter	Units	92222094002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	19.6	98	70-130	
1,1,1-Trichloroethane	ug/L	ND	20	21.7	109	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	18.8	94	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	20.7	104	70-130	
1,1-Dichloroethane	ug/L	ND	20	22.8	114	70-130	
1,1-Dichloroethene	ug/L	ND	20	25.6	128	70-166	
1,1-Dichloropropene	ug/L	ND	20	22.1	111	70-130	
1,2,3-Trichlorobenzene	ug/L	ND	20	18.2	91	70-130	
1,2,3-Trichloropropane	ug/L	ND	20	18.6	93	70-130	
1,2,4-Trichlorobenzene	ug/L	ND	20	18.3	91	70-130	
1,2,4-Trimethylbenzene	ug/L	ND	20	18.3	91	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	19.5	98	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	18.2	91	70-130	
1,2-Dichloroethane	ug/L	ND	20	19.2	96	70-130	
1,2-Dichloropropane	ug/L	ND	20	20.5	102	70-130	
1,3,5-Trimethylbenzene	ug/L	ND	20	18.4	92	70-130	
1,3-Dichlorobenzene	ug/L	ND	20	18.6	93	70-130	
1,3-Dichloropropane	ug/L	ND	20	19.0	95	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	18.5	92	70-130	
2,2-Dichloropropane	ug/L	ND	20	20.3	101	70-130	
2-Butanone (MEK)	ug/L	ND	40	36.3	91	70-130	
2-Chlorotoluene	ug/L	ND	20	18.2	91	70-130	
2-Hexanone	ug/L	ND	40	35.3	88	70-130	
4-Chlorotoluene	ug/L	ND	20	18.1	90	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	40.4	101	70-130	
Acetone	ug/L	ND	40	34.7	87	70-130	
Benzene	ug/L	ND	20	21.5	108	70-148	
Bromobenzene	ug/L	ND	20	17.8	89	70-130	
Bromochloromethane	ug/L	ND	20	22.6	113	70-130	
Bromodichloromethane	ug/L	ND	20	21.2	106	70-130	
Bromoform	ug/L	ND	20	21.0	105	70-130	
Bromomethane	ug/L	ND	20	15.2	76	70-130	
Carbon tetrachloride	ug/L	ND	20	22.2	111	70-130	
Chlorobenzene	ug/L	ND	20	20.4	102	70-146	
Chloroethane	ug/L	ND	20	24.5	122	70-130	
Chloroform	ug/L	ND	20	21.8	109	70-130	
Chloromethane	ug/L	ND	20	22.1	111	70-130	
cis-1,2-Dichloroethene	ug/L	ND	20	22.5	112	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	19.4	97	70-130	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

MATRIX SPIKE SAMPLE: 1312472

Parameter	Units	92222094002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	ND	20	20.7	104	70-130	
Dibromomethane	ug/L	ND	20	21.7	108	70-130	
Dichlorodifluoromethane	ug/L	ND	20	24.6	123	70-130	
Diisopropyl ether	ug/L	ND	20	20.7	103	70-130	
Ethylbenzene	ug/L	ND	20	20.0	100	70-130	
Hexachloro-1,3-butadiene	ug/L	ND	20	23.2	116	70-130	
Isopropylbenzene (Cumene)	ug/L	ND	20	19.9	100	70-130	
m&p-Xylene	ug/L	ND	40	39.4	98	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	19.0	95	70-130	
Methylene Chloride	ug/L	ND	20	22.5	112	70-130	
n-Propylbenzene	ug/L	ND	20	18.5	92	70-130	
Naphthalene	ug/L	ND	20	17.2	86	70-130	
o-Xylene	ug/L	ND	20	18.6	93	70-130	
p-Isopropyltoluene	ug/L	ND	20	18.6	93	70-130	
Styrene	ug/L	ND	20	20.1	101	70-130	
Tetrachloroethene	ug/L	ND	20	21.3	106	70-130	
Toluene	ug/L	ND	20	21.4	107	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	23.6	118	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	19.0	95	70-130	
Trichloroethene	ug/L	ND	20	21.7	108	69-151	
Trichlorofluoromethane	ug/L	ND	20	23.0	115	70-130	
Vinyl acetate	ug/L	ND	40	34.3	86	70-130	
Vinyl chloride	ug/L	ND	20	24.6	123	70-130	
1,2-Dichloroethane-d4 (S)	%				95	70-130	
4-Bromofluorobenzene (S)	%				99	70-130	
Toluene-d8 (S)	%				101	70-130	

SAMPLE DUPLICATE: 1312473

Parameter	Units	92222094005 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,1-Dichloropropene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	ug/L	ND	ND		30	
1,2,3-Trichloropropane	ug/L	ND	ND		30	
1,2,4-Trichlorobenzene	ug/L	ND	ND		30	
1,2,4-Trimethylbenzene	ug/L	ND	.6J		30	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

SAMPLE DUPLICATE: 1312473

Parameter	Units	92222094005 Result	Dup Result	RPD	Max RPD	Qualifiers
1,3,5-Trimethylbenzene	ug/L	ND	ND		30	
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,3-Dichloropropane	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
2,2-Dichloropropane	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Chlorotoluene	ug/L	ND	ND		30	
2-Hexanone	ug/L	ND	ND		30	
4-Chlorotoluene	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	
Benzene	ug/L	1.6	1.6	1	30	
Bromobenzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dibromomethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	.52J		30	
Ethylbenzene	ug/L	ND	ND		30	
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
n-Propylbenzene	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	.36J		30	
o-Xylene	ug/L	ND	ND		30	
p-Isopropyltoluene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl acetate	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

SAMPLE DUPLICATE: 1312473

Parameter	Units	92222094005 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane-d4 (S)	%	99	99	0		
4-Bromofluorobenzene (S)	%	98	99	1		
Toluene-d8 (S)	%	100	99	1		

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

QC Batch: MSV/28912 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92222278003

METHOD BLANK: 1315511 | Matrix: Water
Associated Lab Samples: 92222278003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	10/25/14 19:05	
1,1,1-Trichloroethane	ug/L	ND	1.0	10/25/14 19:05	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	10/25/14 19:05	
1,1,2-Trichloroethane	ug/L	ND	1.0	10/25/14 19:05	
1,1-Dichloroethane	ug/L	ND	1.0	10/25/14 19:05	
1,1-Dichloroethene	ug/L	ND	1.0	10/25/14 19:05	
1,1-Dichloropropene	ug/L	ND	1.0	10/25/14 19:05	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	10/25/14 19:05	
1,2,3-Trichloropropane	ug/L	ND	1.0	10/25/14 19:05	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	10/25/14 19:05	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	10/25/14 19:05	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	10/25/14 19:05	
1,2-Dichlorobenzene	ug/L	ND	1.0	10/25/14 19:05	
1,2-Dichloroethane	ug/L	ND	1.0	10/25/14 19:05	
1,2-Dichloropropane	ug/L	ND	1.0	10/25/14 19:05	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	10/25/14 19:05	
1,3-Dichlorobenzene	ug/L	ND	1.0	10/25/14 19:05	
1,3-Dichloropropane	ug/L	ND	1.0	10/25/14 19:05	
1,4-Dichlorobenzene	ug/L	ND	1.0	10/25/14 19:05	
2,2-Dichloropropane	ug/L	ND	1.0	10/25/14 19:05	
2-Butanone (MEK)	ug/L	ND	5.0	10/25/14 19:05	
2-Chlorotoluene	ug/L	ND	1.0	10/25/14 19:05	
2-Hexanone	ug/L	ND	5.0	10/25/14 19:05	
4-Chlorotoluene	ug/L	ND	1.0	10/25/14 19:05	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	10/25/14 19:05	
Acetone	ug/L	ND	25.0	10/25/14 19:05	
Benzene	ug/L	ND	1.0	10/25/14 19:05	
Bromobenzene	ug/L	ND	1.0	10/25/14 19:05	
Bromochloromethane	ug/L	ND	1.0	10/25/14 19:05	
Bromodichloromethane	ug/L	ND	1.0	10/25/14 19:05	
Bromoform	ug/L	ND	1.0	10/25/14 19:05	
Bromomethane	ug/L	ND	2.0	10/25/14 19:05	
Carbon tetrachloride	ug/L	ND	1.0	10/25/14 19:05	
Chlorobenzene	ug/L	ND	1.0	10/25/14 19:05	
Chloroethane	ug/L	ND	1.0	10/25/14 19:05	
Chloroform	ug/L	ND	1.0	10/25/14 19:05	
Chloromethane	ug/L	ND	1.0	10/25/14 19:05	
cis-1,2-Dichloroethene	ug/L	ND	1.0	10/25/14 19:05	
cis-1,3-Dichloropropene	ug/L	ND	1.0	10/25/14 19:05	
Dibromochloromethane	ug/L	ND	1.0	10/25/14 19:05	
Dibromomethane	ug/L	ND	1.0	10/25/14 19:05	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

METHOD BLANK: 1315511 Matrix: Water
Associated Lab Samples: 92222278003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/L	ND	1.0	10/25/14 19:05	
Diisopropyl ether	ug/L	ND	1.0	10/25/14 19:05	
Ethylbenzene	ug/L	ND	1.0	10/25/14 19:05	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	10/25/14 19:05	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	10/25/14 19:05	
m&p-Xylene	ug/L	ND	2.0	10/25/14 19:05	
Methyl-tert-butyl ether	ug/L	ND	1.0	10/25/14 19:05	
Methylene Chloride	ug/L	ND	2.0	10/25/14 19:05	
n-Propylbenzene	ug/L	ND	1.0	10/25/14 19:05	
Naphthalene	ug/L	ND	1.0	10/25/14 19:05	
o-Xylene	ug/L	ND	1.0	10/25/14 19:05	
p-Isopropyltoluene	ug/L	ND	1.0	10/25/14 19:05	
Styrene	ug/L	ND	1.0	10/25/14 19:05	
Tetrachloroethene	ug/L	ND	1.0	10/25/14 19:05	
Toluene	ug/L	ND	1.0	10/25/14 19:05	
trans-1,2-Dichloroethene	ug/L	ND	1.0	10/25/14 19:05	
trans-1,3-Dichloropropene	ug/L	ND	1.0	10/25/14 19:05	
Trichloroethene	ug/L	ND	1.0	10/25/14 19:05	
Trichlorofluoromethane	ug/L	ND	1.0	10/25/14 19:05	
Vinyl acetate	ug/L	ND	2.0	10/25/14 19:05	
Vinyl chloride	ug/L	ND	1.0	10/25/14 19:05	
1,2-Dichloroethane-d4 (S)	%	91	70-130	10/25/14 19:05	
4-Bromofluorobenzene (S)	%	98	70-130	10/25/14 19:05	
Toluene-d8 (S)	%	100	70-130	10/25/14 19:05	

LABORATORY CONTROL SAMPLE: 1315512

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	44.5	89	70-130	
1,1,1-Trichloroethane	ug/L	50	45.7	91	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	48.5	97	70-130	
1,1,2-Trichloroethane	ug/L	50	53.0	106	70-130	
1,1-Dichloroethane	ug/L	50	50.4	101	70-130	
1,1-Dichloroethene	ug/L	50	50.8	102	70-132	
1,1-Dichloropropene	ug/L	50	47.9	96	70-130	
1,2,3-Trichlorobenzene	ug/L	50	46.8	94	70-135	
1,2,3-Trichloropropane	ug/L	50	46.8	94	70-130	
1,2,4-Trichlorobenzene	ug/L	50	46.1	92	70-134	
1,2,4-Trimethylbenzene	ug/L	50	43.0	86	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	48.6	97	70-130	
1,2-Dichlorobenzene	ug/L	50	45.0	90	70-130	
1,2-Dichloroethane	ug/L	50	44.5	89	70-130	
1,2-Dichloropropane	ug/L	50	48.9	98	70-130	
1,3,5-Trimethylbenzene	ug/L	50	42.2	84	70-130	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

LABORATORY CONTROL SAMPLE: 1315512

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,3-Dichlorobenzene	ug/L	50	44.5	89	70-130	
1,3-Dichloropropane	ug/L	50	46.0	92	70-130	
1,4-Dichlorobenzene	ug/L	50	44.8	90	70-130	
2,2-Dichloropropane	ug/L	50	43.1	86	58-145	
2-Butanone (MEK)	ug/L	100	98.3	98	70-145	
2-Chlorotoluene	ug/L	50	42.1	84	70-130	
2-Hexanone	ug/L	100	92.7	93	70-144	
4-Chlorotoluene	ug/L	50	42.2	84	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	105	105	70-140	
Acetone	ug/L	100	93.2	93	50-175	
Benzene	ug/L	50	48.1	96	70-130	
Bromobenzene	ug/L	50	41.9	84	70-130	
Bromochloromethane	ug/L	50	55.7	111	70-130	
Bromodichloromethane	ug/L	50	47.0	94	70-130	
Bromoform	ug/L	50	46.7	93	70-130	
Bromomethane	ug/L	50	29.9	60	54-130	
Carbon tetrachloride	ug/L	50	40.8	82	70-132	
Chlorobenzene	ug/L	50	47.8	96	70-130	
Chloroethane	ug/L	50	43.9	88	64-134	
Chloroform	ug/L	50	50.7	101	70-130	
Chloromethane	ug/L	50	35.5	71	64-130	
cis-1,2-Dichloroethene	ug/L	50	51.5	103	70-131	
cis-1,3-Dichloropropene	ug/L	50	47.7	95	70-130	
Dibromochloromethane	ug/L	50	47.3	95	70-130	
Dibromomethane	ug/L	50	54.1	108	70-131	
Dichlorodifluoromethane	ug/L	50	25.5	51	56-130	L0
Diisopropyl ether	ug/L	50	48.4	97	70-130	
Ethylbenzene	ug/L	50	44.8	90	70-130	
Hexachloro-1,3-butadiene	ug/L	50	41.3	83	70-130	
Isopropylbenzene (Cumene)	ug/L	50	44.8	90	70-130	
m&p-Xylene	ug/L	100	87.6	88	70-130	
Methyl-tert-butyl ether	ug/L	50	47.6	95	70-130	
Methylene Chloride	ug/L	50	53.5	107	63-130	
n-Propylbenzene	ug/L	50	41.7	83	70-130	
Naphthalene	ug/L	50	46.1	92	70-138	
o-Xylene	ug/L	50	43.5	87	70-130	
p-Isopropyltoluene	ug/L	50	42.0	84	70-130	
Styrene	ug/L	50	47.9	96	70-130	
Tetrachloroethene	ug/L	50	46.4	93	70-130	
Toluene	ug/L	50	50.2	100	70-130	
trans-1,2-Dichloroethene	ug/L	50	50.5	101	70-130	
trans-1,3-Dichloropropene	ug/L	50	46.9	94	70-132	
Trichloroethene	ug/L	50	48.2	96	70-130	
Trichlorofluoromethane	ug/L	50	41.5	83	62-133	
Vinyl acetate	ug/L	100	80.4	80	66-157	
Vinyl chloride	ug/L	50	41.8	84	50-150	
1,2-Dichloroethane-d4 (S)	%			93	70-130	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

LABORATORY CONTROL SAMPLE: 1315512

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE SAMPLE: 1315513

Parameter	Units	92222278003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	17.4	87	70-130	
1,1,1-Trichloroethane	ug/L	ND	20	19.9	100	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	18.4	92	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	20.9	105	70-130	
1,1-Dichloroethane	ug/L	ND	20	21.8	109	70-130	
1,1-Dichloroethene	ug/L	ND	20	22.8	114	70-166	
1,1-Dichloropropene	ug/L	ND	20	21.2	106	70-130	
1,2,3-Trichlorobenzene	ug/L	ND	20	17.4	87	70-130	
1,2,3-Trichloropropane	ug/L	ND	20	18.1	90	70-130	
1,2,4-Trichlorobenzene	ug/L	ND	20	17.7	88	70-130	
1,2,4-Trimethylbenzene	ug/L	ND	20	18.1	90	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	18.4	92	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	18.2	91	70-130	
1,2-Dichloroethane	ug/L	ND	20	18.7	93	70-130	
1,2-Dichloropropane	ug/L	ND	20	20.1	100	70-130	
1,3,5-Trimethylbenzene	ug/L	ND	20	18.1	90	70-130	
1,3-Dichlorobenzene	ug/L	ND	20	18.5	92	70-130	
1,3-Dichloropropane	ug/L	ND	20	18.0	90	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	18.5	93	70-130	
2,2-Dichloropropane	ug/L	ND	20	16.0	80	70-130	
2-Butanone (MEK)	ug/L	ND	40	35.1	88	70-130	
2-Chlorotoluene	ug/L	ND	20	17.8	89	70-130	
2-Hexanone	ug/L	ND	40	30.8	77	70-130	
4-Chlorotoluene	ug/L	ND	20	17.6	88	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	36.6	91	70-130	
Acetone	ug/L	ND	40	33.9	85	70-130	
Benzene	ug/L	ND	20	20.5	103	70-148	
Bromobenzene	ug/L	ND	20	17.3	86	70-130	
Bromochloromethane	ug/L	ND	20	22.9	114	70-130	
Bromodichloromethane	ug/L	ND	20	18.2	91	70-130	
Bromoform	ug/L	ND	20	15.4	77	70-130	
Bromomethane	ug/L	ND	20	11.2	56	70-130	M0
Carbon tetrachloride	ug/L	ND	20	17.5	88	70-130	
Chlorobenzene	ug/L	ND	20	19.9	100	70-146	
Chloroethane	ug/L	ND	20	21.5	108	70-130	
Chloroform	ug/L	ND	20	21.4	107	70-130	
Chloromethane	ug/L	ND	20	14.1	71	70-130	
cis-1,2-Dichloroethene	ug/L	ND	20	21.7	108	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	16.9	85	70-130	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

MATRIX SPIKE SAMPLE: 1315513

Parameter	Units	92222278003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	ND	20	16.8	84	70-130	
Dibromomethane	ug/L	ND	20	21.4	107	70-130	
Dichlorodifluoromethane	ug/L	ND	20	12.0	60	70-130	M0
Diisopropyl ether	ug/L	ND	20	19.8	99	70-130	
Ethylbenzene	ug/L	ND	20	19.3	96	70-130	
Hexachloro-1,3-butadiene	ug/L	ND	20	18.1	91	70-130	
Isopropylbenzene (Cumene)	ug/L	ND	20	19.6	98	70-130	
m&p-Xylene	ug/L	ND	40	38.1	95	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	18.2	91	70-130	
Methylene Chloride	ug/L	ND	20	21.0	105	70-130	
n-Propylbenzene	ug/L	ND	20	18.1	91	70-130	
Naphthalene	ug/L	ND	20	16.1	80	70-130	
o-Xylene	ug/L	ND	20	18.4	92	70-130	
p-Isopropyltoluene	ug/L	ND	20	18.3	91	70-130	
Styrene	ug/L	ND	20	19.3	97	70-130	
Tetrachloroethene	ug/L	ND	20	20.1	101	70-130	
Toluene	ug/L	ND	20	21.1	106	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	22.0	110	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	16.3	81	70-130	
Trichloroethene	ug/L	ND	20	20.9	105	69-151	
Trichlorofluoromethane	ug/L	ND	20	20.2	101	70-130	
Vinyl acetate	ug/L	ND	40	26.0	65	70-130	M0
Vinyl chloride	ug/L	ND	20	19.1	96	70-130	
1,2-Dichloroethane-d4 (S)	%				92	70-130	
4-Bromofluorobenzene (S)	%				101	70-130	
Toluene-d8 (S)	%				101	70-130	

SAMPLE DUPLICATE: 1315514

Parameter	Units	92221841001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,1-Dichloropropene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	ug/L	ND	ND		30	
1,2,3-Trichloropropane	ug/L	ND	ND		30	
1,2,4-Trichlorobenzene	ug/L	ND	ND		30	
1,2,4-Trimethylbenzene	ug/L	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

SAMPLE DUPLICATE: 1315514

Parameter	Units	92221841001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,3,5-Trimethylbenzene	ug/L	ND	ND		30	
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,3-Dichloropropane	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
2,2-Dichloropropane	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Chlorotoluene	ug/L	ND	ND		30	
2-Hexanone	ug/L	ND	ND		30	
4-Chlorotoluene	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Bromobenzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dibromomethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
n-Propylbenzene	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
p-Isopropyltoluene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	10.3	10.3	1	30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl acetate	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	

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(704)875-9092

QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

SAMPLE DUPLICATE: 1315514

Parameter	Units	92221841001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane-d4 (S)	%	93	93	1		
4-Bromofluorobenzene (S)	%	100	100	0		
Toluene-d8 (S)	%	99	99	0		

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

QC Batch: MSV/28966 | Analysis Method: EPA 8260B Mod.
QC Batch Method: EPA 8260B Mod. | Analysis Description: 8260 MSV SIM
Associated Lab Samples: 92222278001

METHOD BLANK: 1317385 | Matrix: Water
Associated Lab Samples: 92222278001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	ND	2.0	10/29/14 14:09	
1,2-Dichloroethane-d4 (S)	%	96	50-150	10/29/14 14:09	
Toluene-d8 (S)	%	92	50-150	10/29/14 14:09	

LABORATORY CONTROL SAMPLE & LCSD: 1317386 1317387

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	20	21.0	21.0	105	105	71-125	0	30	
1,2-Dichloroethane-d4 (S)	%				101	98	50-150		150	
Toluene-d8 (S)	%				97	96	50-150		150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1317388 1317389

Parameter	Units	92222926004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,4-Dioxane (p-Dioxane)	ug/L	ND	20	20	19.2	20.6	96	103	50-150	7	30	
1,2-Dichloroethane-d4 (S)	%						99	97	50-150		150	
Toluene-d8 (S)	%						78	78	50-150		150	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

QC Batch: WET/33911 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 92222278001, 92222278002, 92222278003

METHOD BLANK: 1313509 Matrix: Water
Associated Lab Samples: 92222278001, 92222278002, 92222278003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	10/23/14 15:07	

LABORATORY CONTROL SAMPLE: 1313513

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.4	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1313514 1313515

Parameter	Units	92222112001 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	mg/L	437	50	50	487	484	99	93	90-110	1	4	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

QC Batch: WET/33942 Analysis Method: SM 3500-Fe B
QC Batch Method: SM 3500-Fe B Analysis Description: Iron, Ferrous
Associated Lab Samples: 92222278001, 92222278002, 92222278003

METHOD BLANK: 1315305 Matrix: Water
Associated Lab Samples: 92222278001, 92222278002, 92222278003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.50	10/24/14 20:37	N2

LABORATORY CONTROL SAMPLE: 1315306

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1.5	1.5	99	90-110	N2

SAMPLE DUPLICATE: 1315307

Parameter	Units	92221401005 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	ND	ND		10	H3,N2

SAMPLE DUPLICATE: 1315308

Parameter	Units	92222561007 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	25.7	26.6	3	10	H3,N2

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

QC Batch: WETA/20675 — Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 — Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92222278001, 92222278002, 92222278003

METHOD BLANK: 1315488 — Matrix: Water
Associated Lab Samples: 92222278001, 92222278002, 92222278003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	2.0	10/28/14 13:05	

LABORATORY CONTROL SAMPLE: 1315489

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	19.2	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1315490 — 1315491

Parameter	Units	92222278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	ND	20	20	20.2	20.0	94	93	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1315492 — 1315493

Parameter	Units	92220339037 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	8.6	20	20	28.8	28.8	101	101	90-110	0	10	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

QC Batch: WETA/20620 — Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 — Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92222278001, 92222278002, 92222278003

METHOD BLANK: 1312140 — Matrix: Water
Associated Lab Samples: 92222278001, 92222278002, 92222278003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.020	10/22/14 01:15	

LABORATORY CONTROL SAMPLE: 1312141

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	2.5	2.6	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1312142 1312143

Parameter	Units	92222112001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	2.5	2.5	2.6	2.6	103	104	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1312144 1312145

Parameter	Units	92222059002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	4.9	2.5	2.5	7.6	7.6	107	106	90-110	0	10	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

QC Batch: WETA/20689 Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E Analysis Description: 4500 Chloride
Associated Lab Samples: 92222278001, 92222278002, 92222278003

METHOD BLANK: 1316114 Matrix: Water
Associated Lab Samples: 92222278001, 92222278002, 92222278003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	10/28/14 04:19	

LABORATORY CONTROL SAMPLE: 1316115

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.9	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1316116 1316117

Parameter	Units	92221990001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.2	20	20	23.3	23.5	111	111	90-110	1	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1316118 1316119

Parameter	Units	92221374002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	32.8	20	20	52.0	52.4	96	98	90-110	1	10	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

QC Batch: WETA/20627 Analysis Method: SM 5310B
QC Batch Method: SM 5310B Analysis Description: 5310B TOC
Associated Lab Samples: 92222278001, 92222278002, 92222278003

METHOD BLANK: 1312690 Matrix: Water
Associated Lab Samples: 92222278001, 92222278002, 92222278003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	10/22/14 20:05	

LABORATORY CONTROL SAMPLE: 1312691

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	24.7	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1312692 1312693

Parameter	Units	92222112001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	217	25	25	231	241	57	96	90-110	4	5	M6

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

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
PASI-M	Pace Analytical Services - Minneapolis

SAMPLE QUALIFIERS

Sample: 92222278001

[1] The sample was not collected in the appropriate container for headspace analysis.

Sample: 92222278002

[1] The sample was not collected in the appropriate container for headspace analysis.

Sample: 92222278003

[1] The sample was not collected in the appropriate container for headspace analysis.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H1	Analysis conducted outside the EPA method holding time.
H3	Sample was received or analysis requested beyond the recognized method holding time.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
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.

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QUALIFIERS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

ANALYTE QUALIFIERS

N2 The lab does not hold TNI accreditation for this parameter.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92222278

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92222278001	**MW-4S**	RSK 175	AIR/21643		
92222278002	**MW-4D**	RSK 175	AIR/21643		
92222278003	**WSW**	RSK 175	AIR/21643		
92222278001	**MW-4S**	EPA 3010	MPRP/17179	EPA 6010	ICP/15487
92222278002	**MW-4D**	EPA 3010	MPRP/17179	EPA 6010	ICP/15487
92222278003	**WSW**	EPA 3010	MPRP/17179	EPA 6010	ICP/15487
92222278001	**MW-4S**	EPA 8260	MSV/28858		
92222278002	**MW-4D**	EPA 8260	MSV/28858		
92222278003	**WSW**	EPA 8260	MSV/28912		
92222278001	**MW-4S**	EPA 8260B Mod.	MSV/28966		
92222278001	**MW-4S**	SM 2320B	WET/33911		
92222278002	**MW-4D**	SM 2320B	WET/33911		
92222278003	**WSW**	SM 2320B	WET/33911		
92222278001	**MW-4S**	SM 3500-Fe B	WET/33942		
92222278002	**MW-4D**	SM 3500-Fe B	WET/33942		
92222278003	**WSW**	SM 3500-Fe B	WET/33942		
92222278001	**MW-4S**	EPA 300.0	WETA/20675		
92222278002	**MW-4D**	EPA 300.0	WETA/20675		
92222278003	**WSW**	EPA 300.0	WETA/20675		
92222278001	**MW-4S**	EPA 353.2	WETA/20620		
92222278002	**MW-4D**	EPA 353.2	WETA/20620		
92222278003	**WSW**	EPA 353.2	WETA/20620		
92222278001	**MW-4S**	SM 4500-Cl-E	WETA/20689		
92222278002	**MW-4D**	SM 4500-Cl-E	WETA/20689		
92222278003	**WSW**	SM 4500-Cl-E	WETA/20689		
92222278001	**MW-4S**	SM 5310B	WETA/20627		
92222278002	**MW-4D**	SM 5310B	WETA/20627		
92222278003	**WSW**	SM 5310B	WETA/20627		

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Pace Analytical	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: September 22, 2014 Page 1 of 2
	Document Number: **F-CHR-CS-003-rev.15**	Issuing Authority: Pace Huntersville Quality Office

Client Name: AMEC

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

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

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

Thermometer Used: IR Gun (T1401) **Type of Ice:** (Wet) Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor **T1401** No Correction

Optional
Proj. Due Date:
Proj. Name:

Corrected Cooler Temp.: 4.9 °C **Biological Tissue is Frozen:** Yes No (N/A)

Temp should be above freezing to 6°C

Date and Initials of person examining contents: CE 10/21/14

		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 CE 10/21/14	
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes (☐No) ☑N/A	15. CE 10/21/14
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:	JH	Date:	10/21/14
SRF Review:	JH	Date:	10/22/14

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# : 92222278

92222278

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

1782442

Section A Required Client Information:

Company: AMEC
Address: 2801 Yorkmont Rd Charlotte, NC 28208
Email To: andrew.frantz@amec.com
Phone: 704-357-5900 Fax:
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: Andrew Frantz
Copy To:
Purchase Order No.:
Project Name: PNG Hartsville
Project Number: 6222-14-0220

Section C Invoice Information:

Attention:
Company Name: Bill Client Direct
Address:
Pace Quote Reference:
Pace Project Manager: Kevin Godwin
Pace Profile #:

REGULATORY AGENCY

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

Site Location STATE: NC

Section D Required Client Information

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

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

Requested Analysis Filtered (Y/N): BOD5 ✓; TSS ✓; Methane, Ethane, Ethene ✓; Sulfate ✓; Ferrous Iron ✓; Metals (As, Mn) ✓; Alkalinity/Chloride ✓; Nitrate ✓; 1,4 Dioxane ✓

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other H_2SO_4	BOD5	TSS	Methane, Ethane, Ethene	Sulfate	Ferrous Iron	Metals (As, Mn)	Alkalinity/Chloride	Nitrate	1,4 Dioxane	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92222278
1	MW-4S	WT	C			10-21-14	1050		17	X		X	X				X	3	3	3	1	1	1	1	1	3			001
2	MW-4D	↓	↓			↓	1340		14	X		X	X				X	3	3	3	1	1	1	1	1				002
3	MW5W	↓	↓			↓	1400		14	X		X	X				X	3	3	3	1	1	1	1	1				003
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Tz Hartsfield / AMEC	10-21-14	1422	Chris Elliott / Pace	10/21/14	1428	4.7	Y	N	Y

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

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Troy L Hartsfield
SIGNATURE of SAMPLER: Tz Hartsfield
DATE Signed (MM/DD/YY): 10-21-14

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

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

October 31, 2014

Ms. Alicia Mooney
Piedmont Natural Gas
P.O. Box 33068
Charlotte, NC 28233

Reviewed by AJF 10/31/14

RE: Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

Dear Ms. Mooney:
Enclosed are the analytical results for sample(s) received by the laboratory on October 17, 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

cc: Rob Foster, Amec
Mr. Andrew Frantz, Mactec

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CERTIFICATIONS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Alabama Certification #40770
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: 8TMS-L
Florida/NELAP Certification #: E87605
Guam Certification #:14-008r
Georgia Certification #: 959
Georgia EPD #: Pace
Idaho Certification #: MN00064
Hawaii Certification #MN00064
Illinois Certification #: 200011
Indiana Certification#C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky Dept of Envi. Protection - DW #90062
Kentucky Dept of Envi. Protection - WW #:90062
Louisiana DEQ Certification #: 3086
Louisiana DHH #: LA140001
Maine Certification #: 2013011
Maryland Certification #: 322
Michigan DEPH Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Carolina State Public Health #: 27700
North Dakota Certification #: R-036
Ohio EPA #: 4150
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Saipan (CNMI) #:MP0003
South Carolina #:74003001
Texas Certification #: T104704192
Tennessee Certification #: 02818
Utah Certification #: MN000642013-4
Virginia DGS Certification #: 251
Virginia/VELAP Certification #: Pace
Washington Certification #: C486
West Virginia Certification #: 382
West Virginia DHHR #:9952C
Wisconsin Certification #: 999407970

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

Asheville Certification IDs

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

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SAMPLE SUMMARY

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92221990001	**MW-5S**	Water	10/17/14 10:05	10/17/14 14:45
92221990002	**MW-5D**	Water	10/17/14 12:35	10/17/14 14:45
92221990003	**MW-3S**	Water	10/17/14 14:20	10/17/14 14:45

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SAMPLE ANALYTE COUNT

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92221990001	**MW-5S**	RSK 175	JRB	3	PASI-M
		EPA 6010	JMW	2	PASI-A
		EPA 8260	JDW1	65	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 3500-Fe B	AES2	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92221990002	**MW-5D**	RSK 175	JRB	3	PASI-M
		EPA 6010	JMW	2	PASI-A
		EPA 8260	JDW1	65	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 3500-Fe B	AES2	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92221990003	**MW-3S**	RSK 175	JRB	3	PASI-M
		EPA 6010	JMW	2	PASI-A
		EPA 8260	JDW1	65	PASI-C
		SM 2320B	MAB	1	PASI-A
		SM 3500-Fe B	AES2	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5310B	AES2	1	PASI-A

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

Sample: MW-5S **Lab ID: 92221990001** Collected: 10/17/14 10:05 Received: 10/17/14 14:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175							
Ethane	ND	ug/L	6.2	1		10/30/14 18:15	74-84-0	
Ethene	ND	ug/L	6.2	1		10/30/14 18:15	74-85-1	
Methane	ND	ug/L	6.6	1		10/30/14 18:15	74-82-8	1g
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	10.0	1	10/20/14 15:15	10/21/14 00:53	7440-38-2	
Manganese	**10.0**	ug/L	5.0	1	10/20/14 15:15	10/21/14 00:53	7439-96-5	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/22/14 04:20	67-64-1	
Benzene	ND	ug/L	1.0	1		10/22/14 04:20	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/22/14 04:20	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/22/14 04:20	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/22/14 04:20	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/22/14 04:20	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/22/14 04:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/22/14 04:20	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		10/22/14 04:20	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/22/14 04:20	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/22/14 04:20	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/22/14 04:20	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/22/14 04:20	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/22/14 04:20	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/22/14 04:20	106-43-4	
Dibromochloromethane	ND	ug/L	1.0	1		10/22/14 04:20	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/22/14 04:20	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/22/14 04:20	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 04:20	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 04:20	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 04:20	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/22/14 04:20	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/22/14 04:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/22/14 04:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/22/14 04:20	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/22/14 04:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/22/14 04:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/22/14 04:20	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/22/14 04:20	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/22/14 04:20	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/22/14 04:20	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/22/14 04:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/22/14 04:20	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		10/22/14 04:20	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		10/22/14 04:20	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/22/14 04:20	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		10/22/14 04:20	591-78-6	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

Sample: MW-5S **Lab ID: 92221990001** Collected: 10/17/14 10:05 Received: 10/17/14 14:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/22/14 04:20	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		10/22/14 04:20	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		10/22/14 04:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/22/14 04:20	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/22/14 04:20	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		10/22/14 04:20	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/22/14 04:20	103-65-1	
Styrene	ND	ug/L	1.0	1		10/22/14 04:20	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/22/14 04:20	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/22/14 04:20	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/22/14 04:20	127-18-4	
Toluene	ND	ug/L	1.0	1		10/22/14 04:20	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/22/14 04:20	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/22/14 04:20	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/22/14 04:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/22/14 04:20	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/22/14 04:20	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/22/14 04:20	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/22/14 04:20	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/22/14 04:20	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/22/14 04:20	108-67-8	
Vinyl acetate	ND	ug/L	2.0	1		10/22/14 04:20	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/22/14 04:20	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		10/22/14 04:20	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/22/14 04:20	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	99	%	70-130	1		10/22/14 04:20	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-130	1		10/22/14 04:20	17060-07-0	
Toluene-d8 (S)	98	%	70-130	1		10/22/14 04:20	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**20.2**	mg/L	5.0	1		10/20/14 15:04		
Iron, Ferrous	Analytical Method: SM 3500-Fe B							
Iron, Ferrous	ND	mg/L	0.50	1		10/21/14 14:54		H1,N2
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**6.6**	mg/L	2.0	1		10/23/14 19:53	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**0.80**	mg/L	0.020	1		10/17/14 22:56		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**1.2**	mg/L	1.0	1		10/28/14 04:22	16887-00-6	M1

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

Sample: MW-5S **Lab ID: 92221990001** Collected: 10/17/14 10:05 Received: 10/17/14 14:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**8.4**	mg/L	1.0	1		10/18/14 18:38	7440-44-0	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

Sample: MW-5D **Lab ID: 92221990002** Collected: 10/17/14 12:35 Received: 10/17/14 14:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175							
Ethane	ND	ug/L	6.2	1		10/30/14 18:27	74-84-0	
Ethene	ND	ug/L	6.2	1		10/30/14 18:27	74-85-1	
Methane	**517**	ug/L	6.6	1		10/30/14 18:27	74-82-8	1g
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	10.0	1	10/20/14 15:15	10/21/14 00:56	7440-38-2	
Manganese	**320**	ug/L	5.0	1	10/20/14 15:15	10/21/14 00:56	7439-96-5	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/22/14 04:36	67-64-1	
Benzene	ND	ug/L	1.0	1		10/22/14 04:36	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/22/14 04:36	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/22/14 04:36	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/22/14 04:36	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/22/14 04:36	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/22/14 04:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/22/14 04:36	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		10/22/14 04:36	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/22/14 04:36	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/22/14 04:36	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/22/14 04:36	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/22/14 04:36	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/22/14 04:36	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/22/14 04:36	106-43-4	
Dibromochloromethane	ND	ug/L	1.0	1		10/22/14 04:36	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/22/14 04:36	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/22/14 04:36	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 04:36	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 04:36	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 04:36	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/22/14 04:36	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/22/14 04:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/22/14 04:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/22/14 04:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/22/14 04:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/22/14 04:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/22/14 04:36	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/22/14 04:36	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/22/14 04:36	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/22/14 04:36	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/22/14 04:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/22/14 04:36	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		10/22/14 04:36	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		10/22/14 04:36	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/22/14 04:36	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		10/22/14 04:36	591-78-6	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

Sample: MW-5D **Lab ID: 92221990002** Collected: 10/17/14 12:35 Received: 10/17/14 14:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/22/14 04:36	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		10/22/14 04:36	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		10/22/14 04:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/22/14 04:36	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/22/14 04:36	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		10/22/14 04:36	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/22/14 04:36	103-65-1	
Styrene	ND	ug/L	1.0	1		10/22/14 04:36	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/22/14 04:36	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/22/14 04:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/22/14 04:36	127-18-4	
Toluene	ND	ug/L	1.0	1		10/22/14 04:36	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/22/14 04:36	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/22/14 04:36	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/22/14 04:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/22/14 04:36	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/22/14 04:36	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/22/14 04:36	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/22/14 04:36	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/22/14 04:36	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/22/14 04:36	108-67-8	
Vinyl acetate	ND	ug/L	2.0	1		10/22/14 04:36	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/22/14 04:36	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		10/22/14 04:36	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/22/14 04:36	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	99	%	70-130	1		10/22/14 04:36	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-130	1		10/22/14 04:36	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		10/22/14 04:36	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**252**	mg/L	5.0	1		10/20/14 15:13		
Iron, Ferrous	Analytical Method: SM 3500-Fe B							
Iron, Ferrous	ND	mg/L	0.50	1		10/21/14 14:56		H1,N2
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**6.2**	mg/L	2.0	1		10/23/14 20:07	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.020	1		10/17/14 23:02		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**7.4**	mg/L	1.0	1		10/23/14 18:31	16887-00-6	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

Sample: MW-5D **Lab ID: 92221990002** Collected: 10/17/14 12:35 Received: 10/17/14 14:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**76.7**	mg/L	5.0	5		10/18/14 19:27	7440-44-0	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

Sample: MW-3S **Lab ID: 92221990003** Collected: 10/17/14 14:20 Received: 10/17/14 14:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175							
Ethane	ND	ug/L	6.2	1		10/30/14 18:38	74-84-0	
Ethene	ND	ug/L	6.2	1		10/30/14 18:38	74-85-1	
Methane	ND	ug/L	6.6	1		10/30/14 18:38	74-82-8	1g
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	10.0	1	10/20/14 15:15	10/21/14 00:59	7440-38-2	
Manganese	**25.7**	ug/L	5.0	1	10/20/14 15:15	10/21/14 00:59	7439-96-5	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		10/22/14 05:07	67-64-1	
Benzene	ND	ug/L	1.0	1		10/22/14 05:07	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/22/14 05:07	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/22/14 05:07	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/22/14 05:07	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/22/14 05:07	75-25-2	
Bromomethane	ND	ug/L	2.0	1		10/22/14 05:07	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/22/14 05:07	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		10/22/14 05:07	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/22/14 05:07	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/22/14 05:07	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/22/14 05:07	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/22/14 05:07	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/22/14 05:07	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/22/14 05:07	106-43-4	
Dibromochloromethane	ND	ug/L	1.0	1		10/22/14 05:07	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/22/14 05:07	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/22/14 05:07	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 05:07	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 05:07	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/22/14 05:07	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/22/14 05:07	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/22/14 05:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/22/14 05:07	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/22/14 05:07	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/22/14 05:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/22/14 05:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/22/14 05:07	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/22/14 05:07	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/22/14 05:07	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/22/14 05:07	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/22/14 05:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/22/14 05:07	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		10/22/14 05:07	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		10/22/14 05:07	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/22/14 05:07	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		10/22/14 05:07	591-78-6	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

Sample: MW-3S **Lab ID: 92221990003** Collected: 10/17/14 14:20 Received: 10/17/14 14:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/22/14 05:07	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		10/22/14 05:07	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		10/22/14 05:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/22/14 05:07	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/22/14 05:07	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		10/22/14 05:07	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/22/14 05:07	103-65-1	
Styrene	ND	ug/L	1.0	1		10/22/14 05:07	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/22/14 05:07	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/22/14 05:07	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/22/14 05:07	127-18-4	
Toluene	ND	ug/L	1.0	1		10/22/14 05:07	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/22/14 05:07	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/22/14 05:07	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/22/14 05:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/22/14 05:07	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/22/14 05:07	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/22/14 05:07	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		10/22/14 05:07	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/22/14 05:07	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/22/14 05:07	108-67-8	
Vinyl acetate	ND	ug/L	2.0	1		10/22/14 05:07	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		10/22/14 05:07	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		10/22/14 05:07	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		10/22/14 05:07	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	99	%	70-130	1		10/22/14 05:07	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130	1		10/22/14 05:07	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		10/22/14 05:07	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	**57.5**	mg/L	5.0	1		10/20/14 16:10		
Iron, Ferrous	Analytical Method: SM 3500-Fe B							
Iron, Ferrous	ND	mg/L	0.50	1		10/21/14 14:56		H1,N2
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**3.1**	mg/L	2.0	1		10/23/14 20:21	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**0.033**	mg/L	0.020	1		10/17/14 23:03		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**2.7**	mg/L	1.0	1		10/23/14 18:32	16887-00-6	

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ANALYTICAL RESULTS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

Sample: MW-3S **Lab ID: 92221990003** Collected: 10/17/14 14:20 Received: 10/17/14 14:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**14.4**	mg/L	1.0	1		10/18/14 19:38	7440-44-0	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

QC Batch: AIR/21698 — Analysis Method: RSK 175
QC Batch Method: RSK 175 — Analysis Description: RSK 175 AIR HEADSPACE
Associated Lab Samples: 92221990001, 92221990002, 92221990003

METHOD BLANK: 1831242 — Matrix: Water
Associated Lab Samples: 92221990001, 92221990002, 92221990003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethane	ug/L	ND	6.2	10/30/14 14:28	
Ethene	ug/L	ND	6.2	10/30/14 14:28	
Methane	ug/L	ND	6.6	10/30/14 14:28	

LABORATORY CONTROL SAMPLE & LCSD: 1831243 1831244

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	115	120	101	105	85-115	4	20	
Ethene	ug/L	106	105	110	99	103	85-115	4	20	
Methane	ug/L	60.7	64.4	67.1	106	111	85-115	4	20	

SAMPLE DUPLICATE: 1831245

Parameter	Units	92222798002 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	ND	ND		20	
Ethene	ug/L	ND	ND		20	
Methane	ug/L	ND	ND		20	

SAMPLE DUPLICATE: 1831246

Parameter	Units	60181270016 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	ND	ND		20	
Ethene	ug/L	ND	ND		20	
Methane	ug/L	512	580	13	20	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

QC Batch: MPRP/17160 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 92221990001, 92221990002, 92221990003

METHOD BLANK: 1310832 Matrix: Water
Associated Lab Samples: 92221990001, 92221990002, 92221990003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	10.0	10/21/14 00:19	
Manganese	ug/L	ND	5.0	10/21/14 00:19	

LABORATORY CONTROL SAMPLE: 1310833

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	474	95	80-120	
Manganese	ug/L	500	500	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1310834 1310835

Parameter	Units	92221910001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	500	500	470	454	94	91	75-125	4	20	
Manganese	ug/L	128	500	500	606	582	95	91	75-125	4	20	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

QC Batch: MSV/28848 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92221990001, 92221990002, 92221990003

METHOD BLANK: 1311735 Matrix: Water
Associated Lab Samples: 92221990001, 92221990002, 92221990003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	10/22/14 03:33	
1,1,1-Trichloroethane	ug/L	ND	1.0	10/22/14 03:33	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	10/22/14 03:33	
1,1,2-Trichloroethane	ug/L	ND	1.0	10/22/14 03:33	
1,1-Dichloroethane	ug/L	ND	1.0	10/22/14 03:33	
1,1-Dichloroethene	ug/L	ND	1.0	10/22/14 03:33	
1,1-Dichloropropene	ug/L	ND	1.0	10/22/14 03:33	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	10/22/14 03:33	
1,2,3-Trichloropropane	ug/L	ND	1.0	10/22/14 03:33	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	10/22/14 03:33	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	10/22/14 03:33	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	10/22/14 03:33	
1,2-Dichlorobenzene	ug/L	ND	1.0	10/22/14 03:33	
1,2-Dichloroethane	ug/L	ND	1.0	10/22/14 03:33	
1,2-Dichloropropane	ug/L	ND	1.0	10/22/14 03:33	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	10/22/14 03:33	
1,3-Dichlorobenzene	ug/L	ND	1.0	10/22/14 03:33	
1,3-Dichloropropane	ug/L	ND	1.0	10/22/14 03:33	
1,4-Dichlorobenzene	ug/L	ND	1.0	10/22/14 03:33	
2,2-Dichloropropane	ug/L	ND	1.0	10/22/14 03:33	
2-Butanone (MEK)	ug/L	ND	5.0	10/22/14 03:33	
2-Chlorotoluene	ug/L	ND	1.0	10/22/14 03:33	
2-Hexanone	ug/L	ND	5.0	10/22/14 03:33	
4-Chlorotoluene	ug/L	ND	1.0	10/22/14 03:33	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	10/22/14 03:33	
Acetone	ug/L	ND	25.0	10/22/14 03:33	
Benzene	ug/L	ND	1.0	10/22/14 03:33	
Bromobenzene	ug/L	ND	1.0	10/22/14 03:33	
Bromochloromethane	ug/L	ND	1.0	10/22/14 03:33	
Bromodichloromethane	ug/L	ND	1.0	10/22/14 03:33	
Bromoform	ug/L	ND	1.0	10/22/14 03:33	
Bromomethane	ug/L	ND	2.0	10/22/14 03:33	
Carbon tetrachloride	ug/L	ND	1.0	10/22/14 03:33	
Chlorobenzene	ug/L	ND	1.0	10/22/14 03:33	
Chloroethane	ug/L	ND	1.0	10/22/14 03:33	
Chloroform	ug/L	ND	1.0	10/22/14 03:33	
Chloromethane	ug/L	ND	1.0	10/22/14 03:33	
cis-1,2-Dichloroethene	ug/L	ND	1.0	10/22/14 03:33	
cis-1,3-Dichloropropene	ug/L	ND	1.0	10/22/14 03:33	
Dibromochloromethane	ug/L	ND	1.0	10/22/14 03:33	
Dibromomethane	ug/L	ND	1.0	10/22/14 03:33	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

METHOD BLANK: 1311735 Matrix: Water
Associated Lab Samples: 92221990001, 92221990002, 92221990003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/L	ND	1.0	10/22/14 03:33	
Diisopropyl ether	ug/L	ND	1.0	10/22/14 03:33	
Ethylbenzene	ug/L	ND	1.0	10/22/14 03:33	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	10/22/14 03:33	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	10/22/14 03:33	
m&p-Xylene	ug/L	ND	2.0	10/22/14 03:33	
Methyl-tert-butyl ether	ug/L	ND	1.0	10/22/14 03:33	
Methylene Chloride	ug/L	ND	2.0	10/22/14 03:33	
n-Propylbenzene	ug/L	ND	1.0	10/22/14 03:33	
Naphthalene	ug/L	ND	1.0	10/22/14 03:33	
o-Xylene	ug/L	ND	1.0	10/22/14 03:33	
p-Isopropyltoluene	ug/L	ND	1.0	10/22/14 03:33	
Styrene	ug/L	ND	1.0	10/22/14 03:33	
Tetrachloroethene	ug/L	ND	1.0	10/22/14 03:33	
Toluene	ug/L	ND	1.0	10/22/14 03:33	
trans-1,2-Dichloroethene	ug/L	ND	1.0	10/22/14 03:33	
trans-1,3-Dichloropropene	ug/L	ND	1.0	10/22/14 03:33	
Trichloroethene	ug/L	ND	1.0	10/22/14 03:33	
Trichlorofluoromethane	ug/L	ND	1.0	10/22/14 03:33	
Vinyl acetate	ug/L	ND	2.0	10/22/14 03:33	
Vinyl chloride	ug/L	ND	1.0	10/22/14 03:33	
1,2-Dichloroethane-d4 (S)	%	107	70-130	10/22/14 03:33	
4-Bromofluorobenzene (S)	%	100	70-130	10/22/14 03:33	
Toluene-d8 (S)	%	99	70-130	10/22/14 03:33	

LABORATORY CONTROL SAMPLE: 1311736

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	49.1	98	70-130	
1,1,1-Trichloroethane	ug/L	50	49.7	99	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	45.8	92	70-130	
1,1,2-Trichloroethane	ug/L	50	49.8	100	70-130	
1,1-Dichloroethane	ug/L	50	50.1	100	70-130	
1,1-Dichloroethene	ug/L	50	54.8	110	70-132	
1,1-Dichloropropene	ug/L	50	47.4	95	70-130	
1,2,3-Trichlorobenzene	ug/L	50	46.4	93	70-135	
1,2,3-Trichloropropane	ug/L	50	47.1	94	70-130	
1,2,4-Trichlorobenzene	ug/L	50	44.9	90	70-134	
1,2,4-Trimethylbenzene	ug/L	50	42.1	84	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	47.2	94	70-130	
1,2-Dichlorobenzene	ug/L	50	43.4	87	70-130	
1,2-Dichloroethane	ug/L	50	46.9	94	70-130	
1,2-Dichloropropane	ug/L	50	46.7	93	70-130	
1,3,5-Trimethylbenzene	ug/L	50	42.1	84	70-130	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

LABORATORY CONTROL SAMPLE: 1311736

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,3-Dichlorobenzene	ug/L	50	43.7	87	70-130	
1,3-Dichloropropane	ug/L	50	44.3	89	70-130	
1,4-Dichlorobenzene	ug/L	50	44.0	88	70-130	
2,2-Dichloropropane	ug/L	50	41.4	83	58-145	
2-Butanone (MEK)	ug/L	100	90.2	90	70-145	
2-Chlorotoluene	ug/L	50	41.6	83	70-130	
2-Hexanone	ug/L	100	87.4	87	70-144	
4-Chlorotoluene	ug/L	50	41.3	83	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.3	96	70-140	
Acetone	ug/L	100	89.2	89	50-175	
Benzene	ug/L	50	46.5	93	70-130	
Bromobenzene	ug/L	50	41.7	83	70-130	
Bromochloromethane	ug/L	50	53.1	106	70-130	
Bromodichloromethane	ug/L	50	51.2	102	70-130	
Bromoform	ug/L	50	54.4	109	70-130	
Bromomethane	ug/L	50	35.6	71	54-130	
Carbon tetrachloride	ug/L	50	52.6	105	70-132	
Chlorobenzene	ug/L	50	47.3	95	70-130	
Chloroethane	ug/L	50	46.5	93	64-134	
Chloroform	ug/L	50	50.1	100	70-130	
Chloromethane	ug/L	50	42.3	85	64-130	
cis-1,2-Dichloroethene	ug/L	50	50.4	101	70-131	
cis-1,3-Dichloropropene	ug/L	50	46.9	94	70-130	
Dibromochloromethane	ug/L	50	52.7	105	70-130	
Dibromomethane	ug/L	50	53.3	107	70-131	
Dichlorodifluoromethane	ug/L	50	37.2	74	56-130	
Diisopropyl ether	ug/L	50	46.8	94	70-130	
Ethylbenzene	ug/L	50	45.0	90	70-130	
Hexachloro-1,3-butadiene	ug/L	50	42.8	86	70-130	
Isopropylbenzene (Cumene)	ug/L	50	45.5	91	70-130	
m&p-Xylene	ug/L	100	89.9	90	70-130	
Methyl-tert-butyl ether	ug/L	50	43.7	87	70-130	
Methylene Chloride	ug/L	50	55.8	112	63-130	
n-Propylbenzene	ug/L	50	41.0	82	70-130	
Naphthalene	ug/L	50	43.7	87	70-138	
o-Xylene	ug/L	50	43.8	88	70-130	
p-Isopropyltoluene	ug/L	50	42.2	84	70-130	
Styrene	ug/L	50	47.2	94	70-130	
Tetrachloroethene	ug/L	50	47.9	96	70-130	
Toluene	ug/L	50	48.3	97	70-130	
trans-1,2-Dichloroethene	ug/L	50	51.1	102	70-130	
trans-1,3-Dichloropropene	ug/L	50	47.1	94	70-132	
Trichloroethene	ug/L	50	47.9	96	70-130	
Trichlorofluoromethane	ug/L	50	49.1	98	62-133	
Vinyl acetate	ug/L	100	78.6	79	66-157	
Vinyl chloride	ug/L	50	46.5	93	50-150	
1,2-Dichloroethane-d4 (S)	%			100	70-130	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

LABORATORY CONTROL SAMPLE: 1311736

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE SAMPLE: 1311737

Parameter	Units	92221990001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20.0	100	70-130	
1,1,1-Trichloroethane	ug/L	ND	20	21.8	109	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20.0	100	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	21.2	106	70-130	
1,1-Dichloroethane	ug/L	ND	20	22.4	112	70-130	
1,1-Dichloroethene	ug/L	ND	20	24.5	123	70-166	
1,1-Dichloropropene	ug/L	ND	20	21.5	107	70-130	
1,2,3-Trichlorobenzene	ug/L	ND	20	19.8	99	70-130	
1,2,3-Trichloropropane	ug/L	ND	20	19.7	99	70-130	
1,2,4-Trichlorobenzene	ug/L	ND	20	18.8	94	70-130	
1,2,4-Trimethylbenzene	ug/L	ND	20	18.4	92	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20.2	101	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	18.6	93	70-130	
1,2-Dichloroethane	ug/L	ND	20	20.3	101	70-130	
1,2-Dichloropropane	ug/L	ND	20	19.8	99	70-130	
1,3,5-Trimethylbenzene	ug/L	ND	20	18.4	92	70-130	
1,3-Dichlorobenzene	ug/L	ND	20	18.8	94	70-130	
1,3-Dichloropropane	ug/L	ND	20	19.3	96	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	18.8	94	70-130	
2,2-Dichloropropane	ug/L	ND	20	18.1	91	70-130	
2-Butanone (MEK)	ug/L	ND	40	39.6	99	70-130	
2-Chlorotoluene	ug/L	ND	20	18.1	90	70-130	
2-Hexanone	ug/L	ND	40	37.7	94	70-130	
4-Chlorotoluene	ug/L	ND	20	18.1	91	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	41.7	104	70-130	
Acetone	ug/L	ND	40	38.7	97	70-130	
Benzene	ug/L	ND	20	20.7	103	70-148	
Bromobenzene	ug/L	ND	20	18.0	90	70-130	
Bromochloromethane	ug/L	ND	20	22.7	113	70-130	
Bromodichloromethane	ug/L	ND	20	21.6	108	70-130	
Bromoform	ug/L	ND	20	22.3	111	70-130	
Bromomethane	ug/L	ND	20	14.9	74	70-130	
Carbon tetrachloride	ug/L	ND	20	23.0	115	70-130	
Chlorobenzene	ug/L	ND	20	20.3	102	70-146	
Chloroethane	ug/L	ND	20	21.8	109	70-130	
Chloroform	ug/L	ND	20	21.9	110	70-130	
Chloromethane	ug/L	ND	20	18.0	90	70-130	
cis-1,2-Dichloroethene	ug/L	ND	20	22.2	111	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	19.0	95	70-130	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

MATRIX SPIKE SAMPLE: 1311737

Parameter	Units	92221990001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	ND	20	21.7	109	70-130	
Dibromomethane	ug/L	ND	20	22.5	113	70-130	
Dichlorodifluoromethane	ug/L	ND	20	16.4	82	70-130	
Diisopropyl ether	ug/L	ND	20	20.2	101	70-130	
Ethylbenzene	ug/L	ND	20	19.8	98	70-130	
Hexachloro-1,3-butadiene	ug/L	ND	20	19.3	97	70-130	
Isopropylbenzene (Cumene)	ug/L	ND	20	19.9	100	70-130	
m&p-Xylene	ug/L	ND	40	39.1	97	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	19.3	96	70-130	
Methylene Chloride	ug/L	ND	20	22.3	112	70-130	
n-Propylbenzene	ug/L	ND	20	18.4	92	70-130	
Naphthalene	ug/L	ND	20	18.3	92	70-130	
o-Xylene	ug/L	ND	20	18.8	94	70-130	
p-Isopropyltoluene	ug/L	ND	20	18.4	92	70-130	
Styrene	ug/L	ND	20	19.7	99	70-130	
Tetrachloroethene	ug/L	ND	20	21.3	106	70-130	
Toluene	ug/L	ND	20	21.3	105	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	22.9	114	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	19.6	98	70-130	
Trichloroethene	ug/L	ND	20	21.2	106	69-151	
Trichlorofluoromethane	ug/L	ND	20	22.3	111	70-130	
Vinyl acetate	ug/L	ND	40	30.3	76	70-130	
Vinyl chloride	ug/L	ND	20	20.8	104	70-130	
1,2-Dichloroethane-d4 (S)	%				99	70-130	
4-Bromofluorobenzene (S)	%				100	70-130	
Toluene-d8 (S)	%				99	70-130	

SAMPLE DUPLICATE: 1311738

Parameter	Units	92221990002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,1-Dichloropropene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	ug/L	ND	ND		30	
1,2,3-Trichloropropane	ug/L	ND	ND		30	
1,2,4-Trichlorobenzene	ug/L	ND	ND		30	
1,2,4-Trimethylbenzene	ug/L	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

SAMPLE DUPLICATE: 1311738

Parameter	Units	92221990002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,3,5-Trimethylbenzene	ug/L	ND	ND		30	
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,3-Dichloropropane	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
2,2-Dichloropropane	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Chlorotoluene	ug/L	ND	ND		30	
2-Hexanone	ug/L	ND	ND		30	
4-Chlorotoluene	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Bromobenzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dibromomethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
n-Propylbenzene	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
p-Isopropyltoluene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Toluene	ug/L	ND	.33J		30	
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl acetate	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

SAMPLE DUPLICATE: 1311738

Parameter	Units	92221990002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane-d4 (S)	%	106	108	2		
4-Bromofluorobenzene (S)	%	99	99	0		
Toluene-d8 (S)	%	100	99	1		

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

QC Batch: WET/33827 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 92221990001, 92221990002, 92221990003

METHOD BLANK: 1310578 Matrix: Water
Associated Lab Samples: 92221990001, 92221990002, 92221990003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	10/20/14 12:30	

LABORATORY CONTROL SAMPLE: 1310579

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	48.2	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1310580 1310581

Parameter	Units	92220884005 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	mg/L	15.0	50	50	64.0	63.2	98	96	90-110	1	4	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1310582 1310583

Parameter	Units	92221990002 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	mg/L	252	50	50	303	299	102	93	90-110	1	4	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

QC Batch: WET/33848 Analysis Method: SM 3500-Fe B
QC Batch Method: SM 3500-Fe B Analysis Description: Iron, Ferrous
Associated Lab Samples: 92221990001, 92221990002, 92221990003

METHOD BLANK: 1311670 Matrix: Water
Associated Lab Samples: 92221990001, 92221990002, 92221990003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.50	10/21/14 14:39	N2

LABORATORY CONTROL SAMPLE: 1311671

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1.5	1.5	99	90-110	N2

SAMPLE DUPLICATE: 1311672

Parameter	Units	92220585001 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	ND	ND		10	H1,N2

SAMPLE DUPLICATE: 1311673

Parameter	Units	92222112001 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	1.9	1.8	1	10	H1,N2

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

QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

QC Batch: WETA/20639 — Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 — Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92221990001, 92221990002, 92221990003

METHOD BLANK: 1313458 — Matrix: Water
Associated Lab Samples: 92221990001, 92221990002, 92221990003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	2.0	10/23/14 18:46	

LABORATORY CONTROL SAMPLE: 1313459

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	18.9	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1313460 — 1313461

Parameter	Units	92221976001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	934	20	20	877	896	-281	-187	90-110	2	10	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1313462 — 1313463

Parameter	Units	92221490003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	44.5	20	20	64.4	67.0	100	113	90-110	4	10	M1

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

QC Batch: WETA/20595 — Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 — Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92221990001, 92221990002, 92221990003

METHOD BLANK: 1310329 — Matrix: Water
Associated Lab Samples: 92221990001, 92221990002, 92221990003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.020	10/17/14 22:53	

LABORATORY CONTROL SAMPLE: 1310330

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	2.5	2.6	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1310331 1310332

Parameter	Units	92221990001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	0.80	2.5	2.5	3.3	3.3	98	98	90-110	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

QC Batch: WETA/20636 | Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E | Analysis Description: 4500 Chloride
Associated Lab Samples: 92221990002, 92221990003

METHOD BLANK: 1313286 | Matrix: Water
Associated Lab Samples: 92221990002, 92221990003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	10/23/14 18:06	

LABORATORY CONTROL SAMPLE: 1313287

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	21.3	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1313288 1313289

Parameter	Units	92220983008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	79.3	20	20	103	97.3	118	90	90-110	6	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1313290 1313291

Parameter	Units	92221990003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.7	20	20	22.1	21.7	97	95	90-110	2	10	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

QC Batch: WETA/20689 | Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E | Analysis Description: 4500 Chloride
Associated Lab Samples: 92221990001

METHOD BLANK: 1316114 | Matrix: Water
Associated Lab Samples: 92221990001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	10/28/14 04:19	

LABORATORY CONTROL SAMPLE: 1316115

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.9	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1316116 1316117

Parameter	Units	92221990001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.2	20	20	23.3	23.5	111	111	90-110	1	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1316118 1316119

Parameter	Units	92221374002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	32.8	20	20	52.0	52.4	96	98	90-110	1	10	

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QUALITY CONTROL DATA

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

QC Batch: WETA/20597 Analysis Method: SM 5310B
QC Batch Method: SM 5310B Analysis Description: 5310B TOC
Associated Lab Samples: 92221990001, 92221990002, 92221990003

METHOD BLANK: 1310441 Matrix: Water
Associated Lab Samples: 92221990001, 92221990002, 92221990003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	10/18/14 16:59	

LABORATORY CONTROL SAMPLE: 1310442

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	24.2	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1310443 1310444

Parameter	Units	92221711001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	11.5	25	25	32.9	32.7	85	85	90-110	1	5	M1

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QUALIFIERS

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

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
PASI-M	Pace Analytical Services - Minneapolis

SAMPLE QUALIFIERS

Sample: 92221990001

[1] The sample was not collected in the appropriate container for headspace analysis.

Sample: 92221990002

[1] The sample was not collected in the appropriate container for headspace analysis.

Sample: 92221990003

[1] The sample was not collected in the appropriate container for headspace analysis.

ANALYTE QUALIFIERS

1g	Post-analysis pH measurement indicates pH < 2.
H1	Analysis conducted outside the EPA method holding time.
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.
N2	The lab does not hold TNI accreditation for this parameter.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PNG HUNTERSVILLE 6228-14-0220
Pace Project No.: 92221990

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92221990001	**MW-5S**	RSK 175	AIR/21698		
92221990002	**MW-5D**	RSK 175	AIR/21698		
92221990003	**MW-3S**	RSK 175	AIR/21698		
92221990001	**MW-5S**	EPA 3010	MPRP/17160	EPA 6010	ICP/15471
92221990002	**MW-5D**	EPA 3010	MPRP/17160	EPA 6010	ICP/15471
92221990003	**MW-3S**	EPA 3010	MPRP/17160	EPA 6010	ICP/15471
92221990001	**MW-5S**	EPA 8260	MSV/28848		
92221990002	**MW-5D**	EPA 8260	MSV/28848		
92221990003	**MW-3S**	EPA 8260	MSV/28848		
92221990001	**MW-5S**	SM 2320B	WET/33827		
92221990002	**MW-5D**	SM 2320B	WET/33827		
92221990003	**MW-3S**	SM 2320B	WET/33827		
92221990001	**MW-5S**	SM 3500-Fe B	WET/33848		
92221990002	**MW-5D**	SM 3500-Fe B	WET/33848		
92221990003	**MW-3S**	SM 3500-Fe B	WET/33848		
92221990001	**MW-5S**	EPA 300.0	WETA/20639		
92221990002	**MW-5D**	EPA 300.0	WETA/20639		
92221990003	**MW-3S**	EPA 300.0	WETA/20639		
92221990001	**MW-5S**	EPA 353.2	WETA/20595		
92221990002	**MW-5D**	EPA 353.2	WETA/20595		
92221990003	**MW-3S**	EPA 353.2	WETA/20595		
92221990001	**MW-5S**	SM 4500-Cl-E	WETA/20689		
92221990002	**MW-5D**	SM 4500-Cl-E	WETA/20636		
92221990003	**MW-3S**	SM 4500-Cl-E	WETA/20636		
92221990001	**MW-5S**	SM 5310B	WETA/20597		
92221990002	**MW-5D**	SM 5310B	WETA/20597		
92221990003	**MW-3S**	SM 5310B	WETA/20597		

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Pace Analytical	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: September 22, 2014 Page 1 of 2
	Document Number: F-CHR-CS-003-rev.15	Issuing Authority: Pace Huntersville Quality Office

Client Name: AMEC

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 T1401 **Type of Ice:** Wet Blue None ☐ Samples on ice, cooling process has begun

Temp Correction Factor T1401 No Correction

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

Date and Initials of person examining contents: [illegible]

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: [illegible] Date: 10/17/14

SRF Review: [illegible] Date: 10/20/14

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# : 92221990

92221990

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

1782226

Section A Required Client Information:

Company: AMEC
Address: 2201 Yorkmont Rd
Charlotte, NC 28208
Email To: andrew.frantz@amec.com
Phone: 704-357-8600 Fax:
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: Andrew Frantz
Copy To:
Purchase Order No.:
Project Name: PNG Huntersville
Project Number: 6228-14-0220

Section C Invoice Information:

Attention:
Company Name: Direct Bill PNG
Address:
Pace Quote Reference:
Pace Project Manager: Kevin Godwin
Pace Profile #:

REGULATORY AGENCY

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

Site Location STATE: NC

Section D Required Client Information

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

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	COLLECTED Composite Start TIME	COLLECTED Composite End/Grab DATE	COLLECTED Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other H3PO4	8260B	TOC	Methane Ethane Ethene	Metals (As Mn)	Nitrate	Alkalinity/Chloride	Sulfate	Ferrous Iron	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-5S	WT	G			10-17-14	1005		14	X		X	X				X	3	3	3	1	1	1	1	1		001
2	MW-5D	↓	↓			↓	1235		14	X		X	X				X	3	3	3	1	1	1	1	1		002
3	MW-3S	↓	↓			↓	1420		14	X		X	X				X	3	3	3	1	1	1	1	1		003
4																											
5																											
6																											
7																											
8																											
9																											
10																											
11																											
12																											

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Troy L Holzschuh / AMEC	10-17-14	1445	Jaclyn Wienlace	10-17-14	1445	2.5

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Troy L Holzschuh

SIGNATURE of SAMPLER: Troy L Holzschuh DATE Signed (MM/DD/YY): 10-17-14

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

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