Voluntary Remediation Program
Status Report No.3

Former E. Cohn Property Site
Columbus, Muscogee County, Georgia
Parcels 020 008 003, 020 008 004, 020 004 001, and 020 004 002
HSI Site No. 10933

Submission Date:
November 30, 2018

Prepared by:
Wood Environment & Infrastructure Solutions, Inc.
1075 Big Shanty Road NW, Suite 100,
Kennesaw, Georgia 30144

On behalf of:
Central of Georgia Railroad Company
Norfolk Southern Corporation
1200 Peachtree St, NE - Box 13
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Steven Aufdenkampe
Regional Manager
Environmental Remediation

November 28, 2018

Mr. Gordon Terhune
Georgia Department of Natural Resources
Environmental Protection Division
Response and Remediation Program
2 Martin Luther King, Jr. Drive
Suite 1054, East Tower
Atlanta, Georgia 30334

Subject: Voluntary Remediation Program Status Report No. 3
Former E. Cohn Property Site – Columbus, Georgia
HSI No. 10933

Dear Mr. Terhune:

Norfolk Southern Railway Corporation (NSRC) and our consultant, Wood Environment & Infrastructure Solutions, Inc. (Wood), respectfully submit the attached Voluntary Remediation Program Status Report No. 3 to the Georgia Environmental Protection Division (EPD). This Status Report No. 3 is issued in relation to the former E. Cohn Property Site – Columbus, Georgia (hereinafter referred to as the "Site"). This Status Report, required by the Voluntary Remediation Program, documents the activities conducted at the site from May to November 2018.

We respectfully request that the appropriate parties at the EPD review the Status Report No. 3. NSRC intends to proceed with the further soil investigation and groundwater monitoring. We look forward to hearing from you at your earliest convenience. Please contact us if further information or clarification is necessary.

Respectfully Submitted,

Steven Aufdenkampe
Regional Manager Environmental Remediation

cc: Rhonda Quinn/Greg Wrenn - Wood Environment & Infrastructure Solutions, Inc.

Attachment: Voluntary Remediation Program Status Report No. 3

29 November 2018

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Mr. Steven Aufdenkampe
Regional Manager - Environmental Remediation
Norfolk Southern Corporation
1200 Peachtree Street NE - Box 13
Atlanta, Georgia 30309

RE: **Voluntary Remediation Program Status Report No. 3**
Former E. Cohn Property Site – Columbus, Georgia
HSI No. 10933/Parcels 020 008 003 and 020 008 004
Wood Project 6123-14-0242

Dear Mr. Aufdenkampe:

Wood Environment & Infrastructure Solutions, Inc. is pleased to submit the attached Voluntary Remediation Program Status Report No. 3 for the Former E. Cohn Property Site in Columbus, Georgia. The enclosed report is for your submittal to the Georgia Environmental Protection Division. The report is required by the Georgia Voluntary Remediation Program.

We appreciate the opportunity to provide environmental consulting services to Norfolk Southern Corporation. Please feel free to contact us at (770) 421-3400 if you have questions or require additional information.

Sincerely,

Wood Environment & Infrastructure Solutions, Inc.

Rhonda N. Quinn, P.G.
Senior Geologist
Georgia Professional Geologist # 1031

Gregory J. Wrenn, P.E.
Associate Engineer/Project Manager
Georgia Professional Engineer # 025565

Enclosure: Voluntary Remediation Program Status Report No. 3 (posted to Share Point Site)

Cc: Mr. Gordon Terhune – Georgia EPD (1 paper copy and PDF copies on 2 CDs)

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List of Acronyms and Abbreviations

bgs	below ground surface
COG	Central of Georgia Railroad
CSR	Compliance Status Report
GA EPD	Georgia Environmental Protection Division
HSRA	Hazardous Site Response Act
HSI	Hazardous Site Inventory
mg/kg	milligrams per kilograms
mg/L	milligrams per liter
PCBs	Polychlorinated Biphenyls

RRS	Risk Reduction Standards
SVOC	Semi-Volatile Organic Compounds
USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds
VRP	Voluntary Remediation Program (Georgia)

Professional Geologist Certification

"I certify under penalty of law that this report and all attachments were prepared by me or under my direct supervision in accordance with the Voluntary Remediation Program Act (O.C.G.A. Section 12-8-101, et seq.). I am a professional geologist who is registered with the Georgia State Board of Registration for Professional Geologists and I have the necessary experience and am in charge of the investigation and remediation of this release of regulated substances.

Furthermore, to document my direct oversight of the Voluntary Remediation Plan development, implementation of corrective action, and long term monitoring, I have attached a monthly summary of hours invoiced and description of services provided by me to the Voluntary Remediation Program participant since the previous submittal to the Georgia Environmental Protection Division.

The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Rhonda N. Quinn/ Georgia P.G. #1031 — 11-30-18

Printed Name and GA PG Number — Date

Signature and Stamp

Executive Summary

This Voluntary Remediation Program (VRP) Status Report No. 3 documents the VRP activities conducted from May to November 2018 on the Former E. Cohn Property site. The property (parcels 020 008 003 and 020 008 004) located at 715 5th Street in Columbus, Georgia was leased to E. Cohn Company for metal scrapping operations for over fifty years. E. Cohn Company vacated the property in 2014 and Central of Georgia Railroad Company (COG) conducted environmental due diligence and found evidence of impacts to the soil from Cohn's long-term operations. COG submitted a Hazardous Site Response Act (HSRA) release notification, dated March 17, 2015, to the Georgia Environmental Protection Division (EPD). EPD scored the site for exposure to soil impacts only; there is not an exposure pathway to groundwater. The site was listed on the Georgia Hazardous Site Inventory on September 5, 2015 as site number 10933 for soil only. EPD then called for a HSRA Compliance Status Report (CSR) to be prepared for the site by E. Cohn Company and COG. E. Cohn Company declined to participate in the investigation and remediation of the site due to insolvency. The call-in letter also allowed for the options of 1) conducting corrective action to bring the site into compliance with risk reduction standards and then submit a CSR or 2) enter the site into the VRP. In lieu of submitting a CSR, COG elected to prepare and submit a VRP Application to enter the site into the VRP. A VRP Application was submitted to EPD on September 12, 2016 and was accepted into the VRP on June 1, 2017. The Application was for the two parcels used by E. Cohn and also the two northern parcels (020 004 001 and 020 004 002) due to the detection of constituents on COG property to the north of 6th Street.

The activities conducted during this semi-annual reporting period have included groundwater sampling and monthly inspections.

Three of the four existing monitoring wells were sampled. Well MW-03 was dry. Cis-1,2-dichloroethene, tetrachloroethene, and/or trichloroethene were detected in the three wells. Tetrachloroethene was slightly greater than the Type 1 Risk Reduction Standard (RRS) (0.005 mg/L) in wells MW-01 and MW-04, but was less than the Type 2 RRS of 0.019 mg/L. Metals (barium, copper, and lead) were detected at low concentrations less than their respective Type 1 RRS values.

This report also presents a description of the activities proposed to be conducted in the near future. The proposed activities are additional soil sampling and analysis to fill in the delineation data gaps, further investigation of hexavalent chromium in soils, groundwater monitoring, replacement of well MW-03, and evaluation of surface runoff pathways and potential sampling locations.

1.0 INTRODUCTION AND BACKGROUND

This Voluntary Remediation Program Semi-Annual Status Report No. 3 (Status Report) was prepared on behalf of Central of Georgia Railroad Company in accordance with the Voluntary Remediation Program (VRP) for the Former E. Cohn Property site, Hazardous Site Inventory (HSI) No. 10933. The Georgia Environmental Protection Division (EPD) requested in their June 1, 2017 approval letter accepting the site into the VRP that status reports be submitted in December and June. This third Status Report covers the activities conducted from May 2018 until shortly before the submittal of this Status Report (November 2018).

The Former E. Cohn Property site is located at 715 5th Street in Columbus, Muscogee County, Georgia. Currently, the site consists of two parcels (020 008 003 and 020 008 004) covering approximately 10.7 acres and additional parcels to the north (020 004 001 and 020 004 002). The property is owned by Central of Georgia Railroad Company (COG) and the two parcels (020 008 003 and 020 008 004) were leased to the E. Cohn Company and its predecessors for over fifty years. When E. Cohn Company vacated the property in 2014, COG conducted environmental due diligence and found evidence of impacts to the soil from Cohn's long-term operations. COG submitted a Hazardous Site Response Act (HSRA) release notification, dated March 17, 2015, to the EPD. EPD conducted a scoring of the site and listed the Cohn property on the HSI on September 4, 2015, as site number 10933. Subsequently, on November 5, 2015 EPD called-in a HSRA Compliance Status Report (CSR) for the site. The CSR call-in letters were sent to E. Cohn Company and COG. E. Cohn Company declined to participate in the investigation and remediation of the site due to insolvency. The call-in letter also allowed for the options of 1) conducting corrective action to bring the site into compliance with risk reduction standards and then submit a CSR or 2) enter the site into the VRP. In lieu of submitting a CSR, COG elected to prepare and submit a VRP Application to enter the site into the VRP. A VRP Application was submitted to EPD on September 12, 2016 and was accepted into the VRP on June 1, 2017. VRP status reports have been submitted in December 2017 and June 2018.

2.0 WORK CONDUCTED FROM MAY TO NOVEMBER 2018

The activities currently identified to be performed at the Former E. Cohn Property site under the VRP are outlined in the VRP Application, dated September 12, 2016, the EPD VRP approval letter dated June 1, 2017, and the EPD VRP comment letter dated June 1, 2017. The activities conducted from May to November 2018 have included semi-annual groundwater sampling and analysis and monthly inspections. These activities are described in the following sections.

2.1 Groundwater Sampling and Analysis

On October 31 to November 1, 2018, existing monitoring wells MW-01 to MW-04 were purged and sampled. Monitoring well MW-03 was dry and was not purged and sampled. The groundwater levels were measured in the wells and are summarized on Table 1. The October 31 groundwater elevations were very similar to the March 2018 groundwater elevations. The analytical results are summarized on Table 2 and laboratory reports are provided in Appendix A. Three VOCs (cis-1,2-dichloroethene, tetrachloroethene, and/or trichloroethene) were detected in the three wells. Tetrachloroethene was slightly greater than the Type 1 RRS (0.005 mg/L) in wells MW-01 and MW-04, but was less than the Type 2 RRS of 0.019 mg/L. Metals (barium, copper, and lead) were detected at low concentrations less than their respective Type 1 RRS values. Figure 1 shows the groundwater flow direction and the chemical results of the October-November 2018 groundwater samples.

2.2 Monthly Inspections

Wood, under contract to Norfolk Southern, conducts a monthly inspection of the site to check the condition of the site fencing and for evidence of unauthorized activity. Since July 2016, the site has been inspected once per month. The site fence around the two southern parcels is intact and the two gates are locked and no-trespassing signs are present on the gates. The northern parcels are not fenced. There does not appear to be evidence of trespassing or illegal trash dumping inside the fence. The existing buildings are intact.

3.0 WORK TO BE PERFORMED

Additional activities anticipated to be conducted in the near future include additional soil sampling and analysis, groundwater sampling and analysis, monitoring well installation, and storm water runoff evaluation, and reporting. The sections below describe the status of the activities yet to be performed. Figure 2 is the updated Gantt Chart Schedule of VRP Activities.

3.1 Additional Soil Sampling and Analysis

As described in Status Report No. 2, there are a few minor remaining delineation data gaps, primarily in the surface soil. Additional soil sampling and analysis may be conducted to close data delineation gaps for antimony, arsenic, copper, lead, and zinc on the northwest, south and east sides of the site.

Hexavalent chromium was detected at two locations (SBO-43 and SBO-45) in the shallow soils within the interior of the property. Further investigation may be conducted to evaluate the horizontal and vertical extent of hexavalent chromium around these two locations.

3.2 Groundwater Sampling and Analysis

Groundwater samples will be collected from the existing monitoring wells. The need for a replacement well for MW-03 will be evaluated during the first half of 2019. Constituents to be analyzed will be VOCs, SVOCs, PCBs, and total metals (antimony, arsenic, barium, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc).

3.3 Surface Runoff Path Evaluation

EPD requested additional information and/or investigation along drainage pathways to evaluate if site contamination has migrated off-property and impacted sediments or poses a threat to surface water. No surface water body exists on or near the site. The closest surface water is the Chattahoochee River approximately 3600 feet to the west of the site and Weracoba Creek located approximately 2500 feet to the east of the site. There are numerous man-made structures and pavements located between the E. Cohn Property site and these surface water bodies that impede surface runoff from the site toward these surface water bodies. The E. Cohn Property site is vegetated which limits erosion of site soils. Storm drain manholes and curb inlets are present on 5th and 6th Streets, which bound the site on the south and north sides, respectively. Curb inlets convey storm water to a combined sewer system where it is conveyed to a treatment plant, treated, and discharged.

COG will evaluate the area along with the topographic survey map during a rainfall event to evaluate a primary flow path(s). If a flow path(s) are identified flowing directly from the Cohn property additional evaluations will be considered.

3.4 Monthly Inspections

Monthly inspections of the site will be conducted to check the condition of the site fencing and for evidence of unauthorized activity on the property.

4.0 PROFESSIONAL SERVICES HOURS THIS PERIOD

Approximately 561.3 professional service hours have been provided by Wood Environment & Infrastructure Solutions, Inc. from March 3, 2018 to November 15, 2018. The registered professional geologist responsible for implementation of the VRP at this site is Ms. Rhonda Quinn who has personally charged 86 labor hours. The labor effort during this period was for the following services.

- Conducting soil investigation in March 2018
- Preparation of scopes of work and procurement for October 2018 groundwater sampling
- Conducting groundwater sampling in October-November 2018
- Monthly site inspections
- Communications with client and general project management
- Data quality evaluation
- Data analysis
- Preparation of VRP Status Reports

TABLES

Table 1: Summary of Well Construction and Groundwater Elevation Data

Well	Top of Casing (TOC) Elevation (ft, NAVD)	Screened Interval (ft, bgs)		Elevation of Screened Interval (ft, NAVD)		Depth to Groundwater on 2/24/2016 (ft, btoc)	Groundwater Elevation on 2/24/2016 (ft, NAVD)	Depth to Groundwater on 4/11/2016 (ft, btoc)	Groundwater Elevation on 4/11/2016 (ft, NAVD)	Depth to Groundwater on 3/16/2018 (ft, btoc)	Groundwater Elevation on 3/16/2018 (ft, NAVD)	Depth to Groundwater on 10/31/2018 (ft, btoc)	Groundwater Elevation on 10/31/2018 (ft, NAVD)
MW-1	241.12	25.0	40.0	212.8	197.8	25.58	215.54	27.25	213.87	29.89	211.23	29.75	211.37
MW-2	245.39	24.8	39.8	216.8	201.8	35.55	209.84	33.70	211.69	36.87	208.52	36.91	208.48
MW-3	246.60	23.0	33.0	220.1	210.1	35.28	211.32	35.39	211.21	Dry		Dry	
MW-4	244.67	30.0	40.0	211.3	201.3	31.95	212.72	32.59	212.08	35.72	208.95	35.69	208.98

Notes:
btoc = below top of casing
bgs = below ground surface
ft = feet
NAVD 88 North American Vertical Datum of 1988

Table 2: Summary of Groundwater Analytical Results

Location ID: / Sample ID: / Sample Date: / Sample Type:	Selected Groundwater RRS[a]	MW-01 MW-1-110118 11/1/2018 Sample	MW-01 MW-1-031518 3/15/2018 Sample	MW-01 MW-1-041116 4/11/2016 Sample	MW-02 MW-2-101118 10/31/2018 Sample	MW-02 MW-2-031618 3/16/2018 Sample	MW-02 MW-2-041116 4/11/2016 Sample	MW-03 MW-3-031618 11/1/2018 Sample	MW-03 MW-3-031618 3/16/2018 Sample	MW-03 MW-3-041116 4/11/2016 Sample	MW-04 MW-4-11118 11/1/2018 Sample	MW-04 MW-4-031618 3/16/2018 Sample	MW-04 MW-4-041116 4/11/2016 Sample
Explosives - SW846 8330, mg/L													
4-Nitrotoluene	0.0002	< 0.002	< 0.0007	NA	< 0.002	< 0.0007	< 0.0006	Well was dry and was not sampled	Well was dry and was not sampled	< 0.0006	< 0.002	< 0.0007	< 0.0006
Mercury, Dissolved - SW846 7470A, mg/L													
Mercury	0.002	NA	NA	NA	NA	NA	< 0.0002			NA	NA	NA	NA
Mercury, Total - SW846 7470A, mg/L													
Mercury	0.002	**0.000066 J**	< 0.0002	< 0.0002	**0.000038 J**	< 0.0002	< 0.0002			< 0.0002	**0.000037 J**	< 0.0002	< 0.0002
Metals, Dissolved - SW846 6020A, mg/L													
Antimony	0.006	NA	NA	NA	NA	NA	< 0.002			NA	NA	NA	NA
Arsenic	0.01	NA	NA	NA	NA	NA	< 0.004			NA	NA	NA	NA
Barium	2.0	NA	NA	NA	NA	NA	0.133			NA	NA	NA	NA
Beryllium	0.004	NA	NA	NA	NA	NA	< 0.001			NA	NA	NA	NA
Cadmium	0.005	NA	NA	NA	NA	NA	< 0.001			NA	NA	NA	NA
Chromium	0.10	NA	NA	NA	NA	NA	< 0.004			NA	NA	NA	NA
Copper	1.30	NA	NA	NA	NA	NA	< 0.004			NA	NA	NA	NA
Lead	0.015	NA	NA	NA	NA	NA	< 0.002			NA	NA	NA	NA
Nickel	0.10	NA	NA	NA	NA	NA	0.0058			NA	NA	NA	NA
Selenium	0.05	NA	NA	NA	NA	NA	< 0.004			NA	NA	NA	NA
Silver	0.10	NA	NA	NA	NA	NA	< 0.001			NA	NA	NA	NA
Thallium	0.002	NA	NA	NA	NA	NA	< 0.001			NA	NA	NA	NA
Zinc	2.0	NA	NA	NA	NA	NA	0.155			NA	NA	NA	NA
Metals, Total - SW846 6020A, mg/L													
Antimony	0.006	< 0.0050	< 0.002	< 0.002	< 0.0050	< 0.002	< 0.002			< 0.002	< 0.0050	< 0.002	< 0.002
Arsenic	0.01	< 0.0050	< 0.004	< 0.004	< 0.0050	< 0.004	< 0.004			< 0.004	**0.00083 J**	< 0.004	< 0.004
Barium	2.0	**0.085**	**0.107**	**0.0821**	**0.098**	**0.107**	**0.129**			**0.0873**	**0.048**	**0.0588**	**0.069**
Beryllium	0.004	**0.000068 J**	< 0.001	< 0.001	**0.00016 J**	< 0.001	< 0.001			< 0.001	**0.000084 J**	< 0.001	< 0.001
Cadmium	0.005	< 0.0050	< 0.001	< 0.001	**0.00018 J**	< 0.001	< 0.001			< 0.001	**0.00029 J**	< 0.001	< 0.001
Chromium	0.10	**0.0037 J**	< 0.004	**0.0065**	**0.0042 J**	**0.008**	< 0.004			< 0.004	< 0.0050	< 0.004	< 0.004
Copper	1.30	< 0.0050	< 0.004	< 0.004	**0.0072**	**0.0114**	< 0.004			< 0.004	< 0.0050	< 0.004	< 0.004
Lead	0.015	**0.00056 J**	< 0.002	**0.0031**	**0.0033**	**0.004**	**0.0034**			< 0.002	< 0.0010	< 0.002	< 0.002
Nickel	0.10	**0.0014 J**	< 0.004	< 0.004	**0.0032 J**	**0.0079**	**0.0062**			< 0.004	**0.0031 J**	< 0.004	< 0.004
Selenium	0.05	< 0.0050	< 0.004	< 0.004	< 0.0050	< 0.004	< 0.004			< 0.004	< 0.0050	< 0.004	< 0.004
Silver	0.10	< 0.0050	< 0.001	< 0.001	< 0.0050	< 0.001	< 0.001			< 0.001	< 0.0050	< 0.001	< 0.001
Thallium	0.002	< 0.0010	< 0.001	< 0.001	< 0.0010	< 0.001	< 0.001			< 0.001	< 0.0010	< 0.001	< 0.001
Zinc	2.0	**0.021 JB**	**0.0302**	< 0.03	**0.053 JB**	**0.0627**	**0.144**			**0.0589**	**0.033 JB**	**0.0459**	**0.0898**
Polychlorinated Biphenyls - SW846 8082A, mg/L													
PCB-1242	0.001	< 0.00050	< 0.00041	< 0.0004	< 0.00050	< 0.00041	< 0.00043			< 0.00041	< 0.00050	< 0.00041	< 0.00043
PCB-1248	0.001	< 0.00050	< 0.00041	< 0.0004	< 0.00050	< 0.00041	< 0.00043			< 0.00041	< 0.00050	< 0.00041	< 0.00043
PCB-1254	0.001	< 0.00050	< 0.00041	< 0.0004	< 0.00050	< 0.00041	< 0.00043			< 0.00041	< 0.00050	< 0.00041	< 0.00043
PCB-1260	0.001	< 0.00050	< 0.00041	< 0.0004	< 0.00050	< 0.00041	< 0.00043			< 0.00041	< 0.00050	< 0.00041	< 0.00043
Semi-Volatile Organic Compounds - SW846 8270D, mg/L													
2,4-Dimethylphenol	0.70	< 0.01 UR	< 0.001	< 0.001	< 0.01	< 0.001	< 0.001 UJ			< 0.001	< 0.01	< 0.001	< 0.001
4-Chloroaniline	0.10	< 0.01	< 0.004	< 0.004	< 0.01	< 0.004	< 0.004			< 0.004	< 0.01	< 0.004	< 0.004
Acetophenone	4.0	< 0.01	< 0.001	< 0.001	< 0.01	< 0.001	< 0.001			< 0.001	< 0.01	< 0.001	< 0.001
bis(2-Ethylhexyl)phthalate	0.002	< 0.003	< 0.005	< 0.005	**0.00133 JB**	< 0.005	< 0.005			< 0.005	< 0.003	< 0.005	< 0.005
Butyl benzyl phthalate	0.002	< 0.003	< 0.005	< 0.005	< 0.003	< 0.005	< 0.005			< 0.005	< 0.003	< 0.005	< 0.005
Di-n-butyl phthalate	0.9	< 0.003	< 0.005	< 0.005	**0.000935 J**	< 0.005	< 0.005			< 0.005	< 0.003	< 0.005	< 0.005
Diethyl phthalate	5.0	< 0.003	< 0.005	< 0.005	< 0.003	< 0.005	< 0.005			< 0.005	< 0.003	< 0.005	< 0.005
Dimethyl phthalate	400	< 0.003	< 0.005	< 0.005	< 0.003	< 0.005	< 0.005			< 0.005	< 0.003	< 0.005	< 0.005
Phenol	4.0	< 0.01 UR	< 0.001	< 0.001	< 0.01	< 0.001	< 0.001			< 0.001	< 0.01	< 0.001	< 0.001

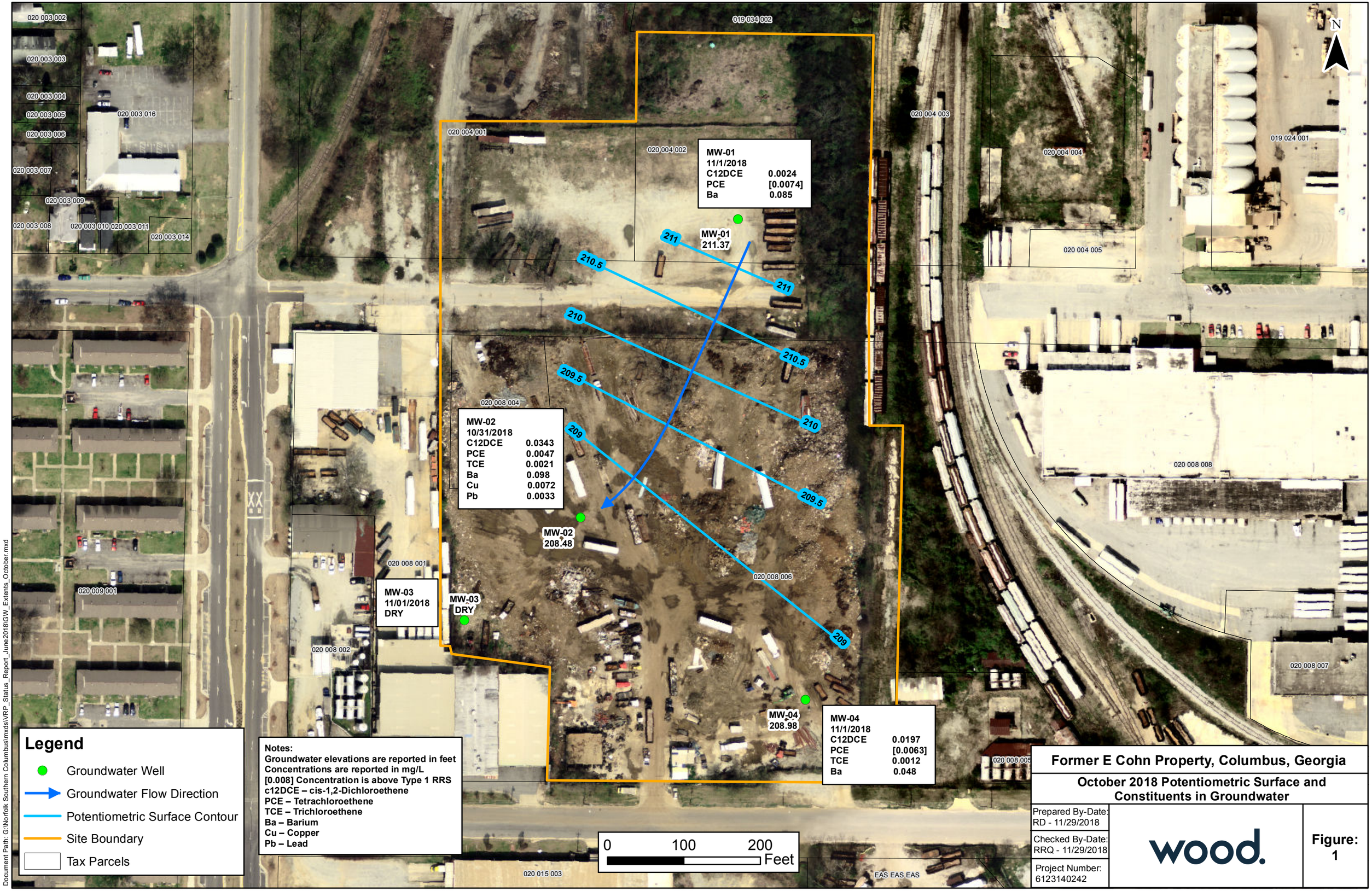
Table 2: Summary of Groundwater Analytical Results

Location ID: Sample ID: Sample Date: Sample Type:	Selected Groundwater RRS[a]	MW-01 MW-1-110118 11/1/2018 Sample	MW-01 MW-1-031518 3/15/2018 Sample	MW-01 MW-1-041116 4/11/2016 Sample	MW-02 MW-2-101118 10/31/2018 Sample	MW-02 MW-2-031618 3/16/2018 Sample	MW-02 MW-2-041116 4/11/2016 Sample	MW-03 MW-3-031618 11/1/2018 Sample	MW-03 MW-3-031618 3/16/2018 Sample	MW-03 MW-3-041116 4/11/2016 Sample	MW-04 MW-4-11118 11/1/2018 Sample	MW-04 MW-4-031618 3/16/2018 Sample	MW-04 MW-4-041116 4/11/2016 Sample
Semi-Volatile Organic Compounds - SW846 8270D-SIM, mg/L													
2-Methylnaphthalene	0.01	< 0.00025	< 0.00005	< 0.000052	< 0.00025	< 0.00005	< 0.000051			< 0.000052	< 0.00025	< 0.00005	< 0.000051
Acenaphthene	2.0	< 0.00005	< 0.00005	< 0.000052	< 0.00005	< 0.00005	< 0.000051			< 0.000052	< 0.00005	< 0.00005	< 0.000051
Acenaphthylene	0.01	< 0.00005	< 0.00005	< 0.000052	< 0.00005	< 0.00005	< 0.000051			< 0.000052	< 0.00005	< 0.00005	< 0.000051
Anthracene	0.01	< 0.00005	< 0.00005	< 0.000052	< 0.00005	< 0.00005	< 0.000051			< 0.000052	< 0.00005	< 0.00005	< 0.000051
Benzo(a)anthracene	0.0001	< 0.00005	< 0.00005	< 0.000052	< 0.00005	< 0.00005	< 0.000051			< 0.000052	< 0.00005	< 0.00005	< 0.000051
Benzo(a)pyrene	0.0002	< 0.00005	< 0.00005	< 0.000052	< 0.00005	< 0.00005	< 0.000051 UJ			< 0.000052	< 0.00005	< 0.00005	< 0.000051
Benzo(b)fluoranthene	0.0002	< 0.00005	< 0.00005	< 0.000052	**0.00000307 J**	< 0.00005	< 0.000051			< 0.000052	**0.00000405 J**	< 0.00005	< 0.000051
Benzo(g,h,i)perylene	0.01	< 0.00005	< 0.00005	< 0.000052	**0.00000255 J**	< 0.00005	< 0.000051 UJ			< 0.000052	< 0.00005	< 0.00005	< 0.000051
Benzo(k)fluoranthene	0.0001	< 0.00005	< 0.00005	< 0.000052	< 0.00005	< 0.00005	< 0.000051			< 0.000052	< 0.00005	< 0.00005	< 0.000051
Chrysene	0.01	< 0.00005	< 0.00005	< 0.000052	< 0.00005	< 0.00005	< 0.000051			< 0.000052	< 0.00005	< 0.00005	< 0.000051
Dibenzo(a,h)anthracene	0.0003	< 0.00005	< 0.00005	< 0.000052	< 0.00005	< 0.00005	< 0.000051			< 0.000052	< 0.00005	< 0.00005	< 0.000051
Fluoranthene	1.0	< 0.00005	< 0.00005	< 0.000052	< 0.00005	< 0.00005	< 0.000051			< 0.000052	< 0.00005	< 0.00005	< 0.000051
Fluorene	1.0	< 0.00005	< 0.00005	< 0.000052	< 0.00005	< 0.00005	< 0.000051			< 0.000052	< 0.00005	< 0.00005	< 0.000051
Indeno(1,2,3-cd)pyrene	0.0004	< 0.00005	< 0.00005	< 0.000052	< 0.00005	< 0.00005	< 0.000051			< 0.000052	< 0.00005	< 0.00005	< 0.000051
Naphthalene	0.02	**0.0000295 JB**	< 0.00006	< 0.000062	**0.0000299 JB**	< 0.00006	< 0.000061			< 0.000063	**0.0000411 JB**	< 0.00006	< 0.000061
Phenanthrene	0.01	< 0.00005	< 0.00006	< 0.000062	< 0.00005	< 0.00006	< 0.000061			< 0.000063	< 0.00005	< 0.00006	< 0.000061
Pyrene	1.0	< 0.00005	< 0.00005	< 0.000052	< 0.00005	< 0.00005	< 0.000051			< 0.000052	< 0.00005	< 0.00005	< 0.000051
Volatile Organic Compounds - SW846 8260C, mg/L													
1,1,1-Trichloroethane	0.20	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001			< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethane	4.0	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001			< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone (Methyl ethyl ketone)	2.0	< 0.005	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01			< 0.01	< 0.005	< 0.01	< 0.01
Acetone	4.0	< 0.025	< 0.02	< 0.02	< 0.025	< 0.02	< 0.02			< 0.02	< 0.025	< 0.02	< 0.02
Benzene	0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001			< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001			< 0.001	< 0.001	< 0.001	< 0.001
cis-1,2-Dichloroethene	0.07	**0.0024**	**0.003**	< 0.001	**0.0343**	**0.027**	**0.007 J**			< 0.001	**0.0197**	**0.024**	**0.028**
Cyclohexane	0.001	< 0.01	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005			< 0.005	< 0.01	< 0.005	< 0.005
Ethylbenzene	0.70	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001			< 0.001	< 0.001	< 0.001	< 0.001
Methylene chloride (Dichloromethane)	0.005	< 0.001	< 0.001	< 0.004	< 0.001	< 0.001	< 0.004			< 0.004	< 0.001	< 0.001	< 0.004
Styrene	0.10	< 0.001	< 0.005	< 0.005	< 0.001	< 0.005	< 0.005			< 0.005	< 0.001	< 0.005	< 0.005
Tetrachloroethene (PCE)	0.005	**0.0074**	**0.008**	**0.015**	**0.0047**	**0.005**	**0.004**			**0.012**	**0.0063**	**0.007**	**0.004**
Toluene	1.0	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001			< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene (TCE)	0.005	< 0.001	< 0.001	< 0.001	**0.0021**	**0.002**	< 0.001			< 0.001	**0.0012**	**0.002**	**0.002**
Trichlorofluoromethane (Freon 11)	2.0	< 0.01	< 0.001	< 0.001	< 0.01	< 0.001	< 0.001			< 0.001	< 0.01	< 0.001	< 0.001
Xylenes, Total	10	< 0.002	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001			< 0.001	< 0.002	< 0.001	< 0.001

Notes:
mg/L = milligrams per liter
RRS = Risk Reduction Standard
(a) Type 1 / Type 3 Risk Reduction Standards for Groundwater
HSRA Regulated Compounds shown

Data Qualifiers:
B = the same analyte was found in the associated blank
J = Value listed is estimated based on associated QC data
JB = Value listed is estimated possibly bias high or false positive and flagged due to equipment blank or method blank contamination
NA = Not Analyzed
UJ = Constituent was not detected, estimated based on associated QC data
UR = Constituent was not detected but flagged unusable due to low surrogate recoveries
< = Not Detected at or above the associated Reporting Limit (RL)
EXCEEDS Type 1/Type 3 RRS for Groundwater
Bolded indicates a positive detection

FIGURES



Legend

- Groundwater Well
- Groundwater Flow Direction
- Potentiometric Surface Contour
- Site Boundary
- Tax Parcels

Notes:
Groundwater elevations are reported in feet
Concentrations are reported in mg/L
[0.008] Concentration is above Type 1 RRS
c12DCE – cis-1,2-Dichloroethene
PCE – Tetrachloroethene
TCE – Trichloroethene
Ba – Barium
Cu – Copper
Pb – Lead

Former E Cohn Property, Columbus, Georgia

October 2018 Potentiometric Surface and Constituents in Groundwater

Prepared By-Date: RD - 11/29/2018	wood.
Checked By-Date: RRQ - 11/29/2018	Figure: 1
Project Number: 6123140242	

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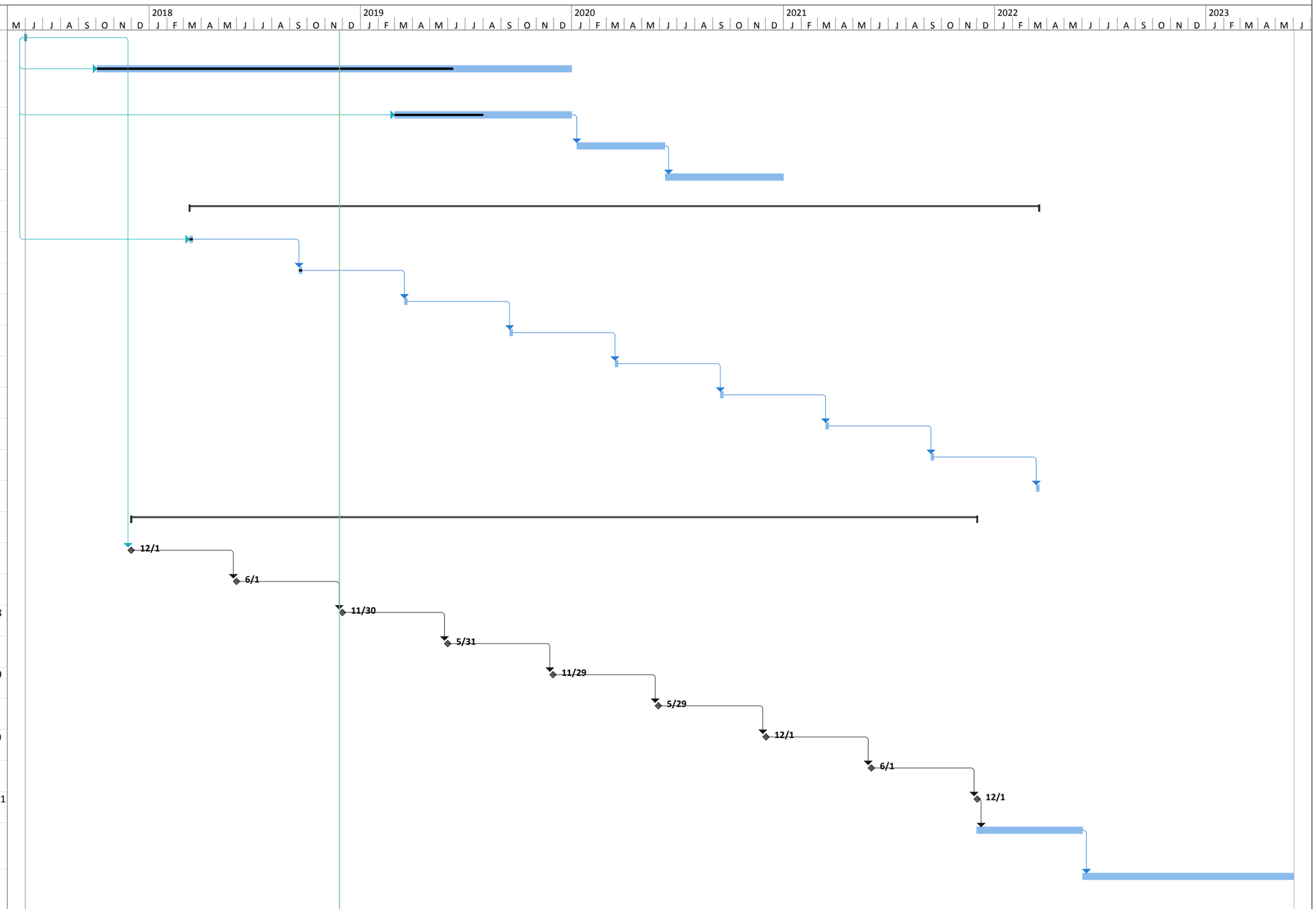
FIGURE 2 - SCHEDULE FOR VOLUNTARY INVESTIGATION AND REMEDIATION PLAN
FORMER E COHN PROPERTY

ID	Task Name	% Complete	Start	Finish
1	EPD Approval of VRP Application	100%	Thu 6/1/17	Thu 6/1/17
2	Human Health Risk Assessment, Delineation Activities	75%	Tue 10/3/17	Tue 12/31/19
3	Delineation and Pre-Design Activities	50%	Fri 3/1/19	Tue 12/31/19
4	Remedy Design and Contractor	0%	Fri 1/10/20	Tue 6/9/20
5	Remedy Implementation	0%	Thu 6/11/20	Thu 12/31/20
6	**Semi-Annual Sampling Event**	**22%**	**Mon 3/12/18**	**Fri 3/18/22**
7	Semi-Annual Sampling Event 1	100%	Mon 3/12/18	Fri 3/16/18
8	Semi-Annual Sampling Event 2	100%	Mon 9/17/18	Fri 9/21/18
9	Semi-Annual Sampling Event 3	0%	Mon 3/18/19	Fri 3/22/19
10	Semi-Annual Sampling Event 4	0%	Mon 9/16/19	Fri 9/20/19
11	Semi-Annual Sampling Event 5	0%	Mon 3/16/20	Fri 3/20/20
12	Semi-Annual Sampling Event 6	0%	Mon 9/14/20	Fri 9/18/20
13	Semi-Annual Sampling Event 7	0%	Mon 3/15/21	Fri 3/19/21
14	Semi-Annual Sampling Event 8	0%	Mon 9/13/21	Fri 9/17/21
15	Semi-Annual Sampling Event 9	0%	Mon 3/14/22	Fri 3/18/22
16	**Submit Semi-Annual Status Report**	**0%**	**Fri 12/1/17**	**Wed 12/1/21**
17	Submit Semi-Annual	100%	Fri 12/1/17	Fri 12/1/17
18	Submit Semi-Annual	100%	Fri 6/1/18	Fri 6/1/18
19	Submit Semi-Annual	100%	Fri 11/30/18	Fri 11/30/18
20	Submit Semi-Annual	0%	Fri 5/31/19	Fri 5/31/19
21	Submit Semi-Annual	0%	Fri 11/29/19	Fri 11/29/19
22	Submit Semi-Annual	0%	Fri 5/29/20	Fri 5/29/20
23	Submit Semi-Annual	0%	Tue 12/1/20	Tue 12/1/20
24	Submit Semi-Annual	0%	Tue 6/1/21	Tue 6/1/21
25	Submit Semi-Annual	0%	Wed 12/1/21	Wed 12/1/21
26	Preparation and Submittal of Post-Remediation	0%	Wed 12/1/21	Wed 6/1/22
27	Implement Uniform Environmental Covenant	0%	Thu 6/2/22	Thu 6/1/23



Norfolk Southern
Former E. Cohn Property
Columbus, Georgia

Task Summary Manual Task Manual Progress

APPENDIX A

LABORATORY REPORTS FOR OCTOBER-NOVEMBER 2018 GROUNDWATER SAMPLING

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

November 14, 2018

Mr. Greg Wrenn
Wood Environment & Infrastructure Solutions, Inc
1075 Big Shanty Rd, NW Ste 100
Kennesaw, GA 30144

RE: Project: NS_Former Cohn Property
Pace Project No.: 2611086

Dear Mr. Wrenn:
Enclosed are the analytical results for sample(s) received by the laboratory on November 02, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,

Sakina Mckenzie
sakina.mckenzie@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Michelle Barker, Norfolk Southern_Wood E&I Solutions, Inc.
Matthew Bowen, Wood E&I Solutions, Inc.
Bryon Dahlgren, Norfolk Southern_Wood E&I Solutions, Inc.
Judy Hartness, Norfolk Southern_Wood E&I Solutions, Inc.
Michael P. LaPrade, Wood E&I Solutions, Inc. - Kennesaw
Erin Rodgers, Norfolk Southern_Environmental Standards, Inc.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: NS_Former Cohn Property
Pace Project No.: 2611086

Atlanta Certification IDs

110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Texas Certification #: T104704397-08-TX
Virginia Certification #: 460204

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: NS_Former Cohn Property
Pace Project No.: 2611086

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2611086001	**TB-WG-01-1018**	Water	10/31/18 18:00	11/02/18 09:30
2611086002	**MW-02-1018**	Water	10/31/18 18:20	11/02/18 09:30
2611086003	**MW-01-1018**	Water	11/01/18 09:50	11/02/18 09:30
2611086004	**MW-04-1018**	Water	11/01/18 12:08	11/02/18 09:30
2611086005	**Dup-WG-01-1018**	Water	11/01/18 12:00	11/02/18 09:30
2611086006	**EB-WG-1018**	Water	11/01/18 10:15	11/02/18 09:30
2611086007	**MW-01-1018**	Water	11/01/18 09:50	11/02/18 08:45
2611086008	**MW-02-1018**	Water	10/31/18 18:20	11/02/18 08:45
2611086009	**EB-WG-1018**	Water	11/01/18 10:15	11/02/18 08:45
2611086010	**MW-04-1018**	Water	11/01/18 12:08	11/02/18 08:45
2611086011	**Dup-WG-01-1018**	Water	11/01/18 12:00	11/02/18 08:45

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: NS_Former Cohn Property
Pace Project No.: 2611086

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2611086001	**TB-WG-01-1018**	EPA 8260B	LIH	48
2611086002	**MW-02-1018**	EPA 8082A	SFI	9
		EPA 6020B	CSW	13
		EPA 7470A	DRB	1
		EPA 8260B	LIH	48
2611086003	**MW-01-1018**	EPA 8082A	SFI	9
		EPA 6020B	CSW	13
		EPA 7470A	DRB	1
		EPA 8260B	LIH	48
2611086004	**MW-04-1018**	EPA 8082A	SFI	9
		EPA 6020B	CSW	13
		EPA 7470A	DRB	1
		EPA 8260B	LIH	48
2611086005	**Dup-WG-01-1018**	EPA 8082A	SFI	9
		EPA 6020B	CSW	13
		EPA 7470A	DRB	1
		EPA 8260B	LIH	48
2611086006	**EB-WG-1018**	EPA 8082A	SFI	9
		EPA 6020B	CSW	13
		EPA 7470A	DRB	1
		EPA 8260B	LIH	48

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: NS_Former Cohn Property
Pace Project No.: 2611086

Sample: TB-WG-01-1018 **Lab ID: 2611086001** Collected: 10/31/18 18:00 Received: 11/02/18 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Water, Extend	Analytical Method: EPA 8260B								
Acetone	ND	ug/L	25.0	8.2	1		11/08/18 19:36	67-64-1	
Benzene	ND	ug/L	1.0	0.20	1		11/08/18 19:36	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.36	1		11/08/18 19:36	75-27-4	
Bromoform	ND	ug/L	1.0	0.55	1		11/08/18 19:36	75-25-2	
Bromomethane	ND	ug/L	2.0	0.95	1		11/08/18 19:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	3.2	1		11/08/18 19:36	78-93-3	
Carbon disulfide	ND	ug/L	10.0	0.79	1		11/08/18 19:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.42	1		11/08/18 19:36	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.53	1		11/08/18 19:36	108-90-7	
Chloroethane	ND	ug/L	1.0	0.52	1		11/08/18 19:36	75-00-3	
Chloroform	ND	ug/L	1.0	0.58	1		11/08/18 19:36	67-66-3	
Chloromethane	ND	ug/L	1.0	0.38	1		11/08/18 19:36	74-87-3	
Cyclohexane	ND	ug/L	10.0	1.6	1		11/08/18 19:36	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	0.55	1		11/08/18 19:36	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.31	1		11/08/18 19:36	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	2.0	0.28	1		11/08/18 19:36	106-93-4	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.49	1		11/08/18 19:36	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.59	1		11/08/18 19:36	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.58	1		11/08/18 19:36	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.48	1		11/08/18 19:36	75-71-8	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.41	1		11/08/18 19:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.67	1		11/08/18 19:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.72	1		11/08/18 19:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.66	1		11/08/18 19:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.46	1		11/08/18 19:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.60	1		11/08/18 19:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.22	1		11/08/18 19:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.30	1		11/08/18 19:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.45	1		11/08/18 19:36	100-41-4	
Methylcyclohexane	ND	ug/L	10.0	1.4	1		11/08/18 19:36	108-87-2	
Methylene Chloride	ND	ug/L	1.0	0.50	1		11/08/18 19:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.86	1		11/08/18 19:36	108-10-1	
Styrene	ND	ug/L	1.0	0.50	1		11/08/18 19:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.53	1		11/08/18 19:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.78	1		11/08/18 19:36	127-18-4	
Toluene	ND	ug/L	1.0	0.31	1		11/08/18 19:36	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.47	1		11/08/18 19:36	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.38	1		11/08/18 19:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.59	1		11/08/18 19:36	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.34	1		11/08/18 19:36	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.51	1		11/08/18 19:36	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	10.0	1.4	1		11/08/18 19:36	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.60	1		11/08/18 19:36	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1.5	1		11/08/18 19:36	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	115	%.	81-119		1		11/08/18 19:36	17060-07-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: NS_Former Cohn Property
Pace Project No.: 2611086

Sample: TB-WG-01-1018 **Lab ID: 2611086001** Collected: 10/31/18 18:00 Received: 11/02/18 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Water, Extend	Analytical Method: EPA 8260B								
Surrogates									
Dibromofluoromethane (S)	98	%.	82-114		1		11/08/18 19:36	1868-53-7	
4-Bromofluorobenzene (S)	106	%.	82-120		1		11/08/18 19:36	460-00-4	
Toluene-d8 (S)	98	%.	82-109		1		11/08/18 19:36	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: NS_Former Cohn Property
Pace Project No.: 2611086

Sample: MW-02-1018 **Lab ID: 2611086002** Collected: 10/31/18 18:20 Received: 11/02/18 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082 PCB Water GCS	Analytical Method: EPA 8082A Preparation Method: EPA 3510C								
PCB-1016 (Aroclor 1016)	ND	ug/L	0.50	0.34	1	11/02/18 11:00	11/02/18 18:24	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 18:24	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 18:24	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 18:24	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 18:24	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 18:24	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.50	0.24	1	11/02/18 11:00	11/02/18 18:24	11096-82-5	
PCB, Total (Aroclor)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 18:24	1336-36-3	
Surrogates									
Decachlorobiphenyl (S)	66	%.	17-144		1	11/02/18 11:00	11/02/18 18:24	2051-24-3	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0050	0.00078	1	11/06/18 14:30	11/07/18 16:22	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/06/18 14:30	11/07/18 16:22	7440-38-2	
Barium	**0.098**	mg/L	0.0050	0.00078	1	11/06/18 14:30	11/07/18 16:22	7440-39-3	
Beryllium	**0.00016J**	mg/L	0.00050	0.000050	1	11/06/18 14:30	11/08/18 14:40	7440-41-7	
Cadmium	**0.00018J**	mg/L	0.00050	0.000093	1	11/06/18 14:30	11/07/18 16:22	7440-43-9	
Chromium	**0.0042J**	mg/L	0.0050	0.0016	1	11/06/18 14:30	11/07/18 16:22	7440-47-3	
Copper	**0.0072**	mg/L	0.0050	0.0013	1	11/06/18 14:30	11/07/18 16:22	7440-50-8	
Lead	**0.0033**	mg/L	0.0010	0.00027	1	11/06/18 14:30	11/07/18 16:22	7439-92-1	
Nickel	**0.0032J**	mg/L	0.0050	0.00095	1	11/06/18 14:30	11/07/18 16:22	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	11/06/18 14:30	11/07/18 16:22	7782-49-2	
Silver	ND	mg/L	0.0050	0.00095	1	11/06/18 14:30	11/07/18 16:22	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00014	1	11/06/18 14:30	11/07/18 16:22	7440-28-0	
Zinc	**0.053**	mg/L	0.010	0.0021	1	11/06/18 14:30	11/07/18 16:22	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000038J**	mg/L	0.00020	0.000036	1	11/05/18 12:40	11/06/18 10:15	7439-97-6	
8260B MSV Water, Extend	Analytical Method: EPA 8260B								
Acetone	ND	ug/L	25.0	8.2	1		11/08/18 20:02	67-64-1	
Benzene	ND	ug/L	1.0	0.20	1		11/08/18 20:02	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.36	1		11/08/18 20:02	75-27-4	
Bromoform	ND	ug/L	1.0	0.55	1		11/08/18 20:02	75-25-2	
Bromomethane	ND	ug/L	2.0	0.95	1		11/08/18 20:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	3.2	1		11/08/18 20:02	78-93-3	
Carbon disulfide	ND	ug/L	10.0	0.79	1		11/08/18 20:02	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.42	1		11/08/18 20:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.53	1		11/08/18 20:02	108-90-7	
Chloroethane	ND	ug/L	1.0	0.52	1		11/08/18 20:02	75-00-3	
Chloroform	ND	ug/L	1.0	0.58	1		11/08/18 20:02	67-66-3	
Chloromethane	ND	ug/L	1.0	0.38	1		11/08/18 20:02	74-87-3	
Cyclohexane	ND	ug/L	10.0	1.6	1		11/08/18 20:02	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	0.55	1		11/08/18 20:02	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.31	1		11/08/18 20:02	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	2.0	0.28	1		11/08/18 20:02	106-93-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: NS_Former Cohn Property
Pace Project No.: 2611086

Sample: MW-02-1018 **Lab ID: 2611086002** Collected: 10/31/18 18:20 Received: 11/02/18 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Water, Extend	Analytical Method: EPA 8260B								
1,2-Dichlorobenzene	ND	ug/L	1.0	0.49	1		11/08/18 20:02	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.59	1		11/08/18 20:02	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.58	1		11/08/18 20:02	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.48	1		11/08/18 20:02	75-71-8	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.41	1		11/08/18 20:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.67	1		11/08/18 20:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.72	1		11/08/18 20:02	75-35-4	
cis-1,2-Dichloroethene	**34.3**	ug/L	1.0	0.66	1		11/08/18 20:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.46	1		11/08/18 20:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.60	1		11/08/18 20:02	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.22	1		11/08/18 20:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.30	1		11/08/18 20:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.45	1		11/08/18 20:02	100-41-4	
Methylcyclohexane	ND	ug/L	10.0	1.4	1		11/08/18 20:02	108-87-2	
Methylene Chloride	ND	ug/L	1.0	0.50	1		11/08/18 20:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.86	1		11/08/18 20:02	108-10-1	
Styrene	ND	ug/L	1.0	0.50	1		11/08/18 20:02	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.53	1		11/08/18 20:02	79-34-5	
Tetrachloroethene	**4.7**	ug/L	1.0	0.78	1		11/08/18 20:02	127-18-4	
Toluene	ND	ug/L	1.0	0.31	1		11/08/18 20:02	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.47	1		11/08/18 20:02	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.38	1		11/08/18 20:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.59	1		11/08/18 20:02	79-00-5	
Trichloroethene	**2.1**	ug/L	1.0	0.34	1		11/08/18 20:02	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.51	1		11/08/18 20:02	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	10.0	1.4	1		11/08/18 20:02	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.60	1		11/08/18 20:02	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1.5	1		11/08/18 20:02	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	111	%.	81-119		1		11/08/18 20:02	17060-07-0	
Dibromofluoromethane (S)	97	%.	82-114		1		11/08/18 20:02	1868-53-7	
4-Bromofluorobenzene (S)	101	%.	82-120		1		11/08/18 20:02	460-00-4	
Toluene-d8 (S)	99	%.	82-109		1		11/08/18 20:02	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: NS_Former Cohn Property
Pace Project No.: 2611086

Sample: MW-01-1018 **Lab ID: 2611086003** Collected: 11/01/18 09:50 Received: 11/02/18 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082 PCB Water GCS	Analytical Method: EPA 8082A Preparation Method: EPA 3510C								
PCB-1016 (Aroclor 1016)	ND	ug/L	0.50	0.34	1	11/02/18 11:00	11/02/18 18:03	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 18:03	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 18:03	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 18:03	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 18:03	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 18:03	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.50	0.24	1	11/02/18 11:00	11/02/18 18:03	11096-82-5	
PCB, Total (Aroclor)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 18:03	1336-36-3	
Surrogates									
Decachlorobiphenyl (S)	59	%.	17-144		1	11/02/18 11:00	11/02/18 18:03	2051-24-3	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0050	0.00078	1	11/06/18 14:30	11/07/18 16:27	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/06/18 14:30	11/07/18 16:27	7440-38-2	
Barium	**0.085**	mg/L	0.0050	0.00078	1	11/06/18 14:30	11/07/18 16:27	7440-39-3	
Beryllium	**0.000068J**	mg/L	0.00050	0.000050	1	11/06/18 14:30	11/08/18 14:45	7440-41-7	
Cadmium	ND	mg/L	0.00050	0.000093	1	11/06/18 14:30	11/07/18 16:27	7440-43-9	
Chromium	**0.0037J**	mg/L	0.0050	0.0016	1	11/06/18 14:30	11/07/18 16:27	7440-47-3	
Copper	ND	mg/L	0.0050	0.0013	1	11/06/18 14:30	11/07/18 16:27	7440-50-8	
Lead	**0.00056J**	mg/L	0.0010	0.00027	1	11/06/18 14:30	11/07/18 16:27	7439-92-1	
Nickel	**0.0014J**	mg/L	0.0050	0.00095	1	11/06/18 14:30	11/07/18 16:27	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	11/06/18 14:30	11/07/18 16:27	7782-49-2	
Silver	ND	mg/L	0.0050	0.00095	1	11/06/18 14:30	11/07/18 16:27	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00014	1	11/06/18 14:30	11/07/18 16:27	7440-28-0	
Zinc	**0.021**	mg/L	0.010	0.0021	1	11/06/18 14:30	11/07/18 16:27	7440-66-6	B
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000066J**	mg/L	0.00020	0.000036	1	11/05/18 12:40	11/06/18 09:18	7439-97-6	
8260B MSV Water, Extend	Analytical Method: EPA 8260B								
Acetone	ND	ug/L	25.0	8.2	1		11/08/18 20:27	67-64-1	
Benzene	ND	ug/L	1.0	0.20	1		11/08/18 20:27	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.36	1		11/08/18 20:27	75-27-4	
Bromoform	ND	ug/L	1.0	0.55	1		11/08/18 20:27	75-25-2	
Bromomethane	ND	ug/L	2.0	0.95	1		11/08/18 20:27	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	3.2	1		11/08/18 20:27	78-93-3	
Carbon disulfide	ND	ug/L	10.0	0.79	1		11/08/18 20:27	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.42	1		11/08/18 20:27	56-23-5	M1
Chlorobenzene	ND	ug/L	1.0	0.53	1		11/08/18 20:27	108-90-7	
Chloroethane	ND	ug/L	1.0	0.52	1		11/08/18 20:27	75-00-3	
Chloroform	ND	ug/L	1.0	0.58	1		11/08/18 20:27	67-66-3	
Chloromethane	ND	ug/L	1.0	0.38	1		11/08/18 20:27	74-87-3	
Cyclohexane	ND	ug/L	10.0	1.6	1		11/08/18 20:27	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	0.55	1		11/08/18 20:27	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.31	1		11/08/18 20:27	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	2.0	0.28	1		11/08/18 20:27	106-93-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: NS_Former Cohn Property
Pace Project No.: 2611086

Sample: MW-01-1018 **Lab ID: 2611086003** Collected: 11/01/18 09:50 Received: 11/02/18 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Water, Extend	Analytical Method: EPA 8260B								
1,2-Dichlorobenzene	ND	ug/L	1.0	0.49	1		11/08/18 20:27	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.59	1		11/08/18 20:27	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.58	1		11/08/18 20:27	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.48	1		11/08/18 20:27	75-71-8	L1,M0
1,1-Dichloroethane	ND	ug/L	1.0	0.41	1		11/08/18 20:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.67	1		11/08/18 20:27	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.72	1		11/08/18 20:27	75-35-4	
cis-1,2-Dichloroethene	**2.4**	ug/L	1.0	0.66	1		11/08/18 20:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.46	1		11/08/18 20:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.60	1		11/08/18 20:27	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.22	1		11/08/18 20:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.30	1		11/08/18 20:27	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.45	1		11/08/18 20:27	100-41-4	
Methylcyclohexane	ND	ug/L	10.0	1.4	1		11/08/18 20:27	108-87-2	
Methylene Chloride	ND	ug/L	1.0	0.50	1		11/08/18 20:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.86	1		11/08/18 20:27	108-10-1	
Styrene	ND	ug/L	1.0	0.50	1		11/08/18 20:27	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.53	1		11/08/18 20:27	79-34-5	
Tetrachloroethene	**7.4**	ug/L	1.0	0.78	1		11/08/18 20:27	127-18-4	
Toluene	ND	ug/L	1.0	0.31	1		11/08/18 20:27	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.47	1		11/08/18 20:27	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.38	1		11/08/18 20:27	71-55-6	M1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.59	1		11/08/18 20:27	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.34	1		11/08/18 20:27	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.51	1		11/08/18 20:27	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	10.0	1.4	1		11/08/18 20:27	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.60	1		11/08/18 20:27	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1.5	1		11/08/18 20:27	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	113	%.	81-119		1		11/08/18 20:27	17060-07-0	
Dibromofluoromethane (S)	97	%.	82-114		1		11/08/18 20:27	1868-53-7	
4-Bromofluorobenzene (S)	100	%.	82-120		1		11/08/18 20:27	460-00-4	
Toluene-d8 (S)	100	%.	82-109		1		11/08/18 20:27	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: NS_Former Cohn Property
Pace Project No.: 2611086

Sample: MW-04-1018 **Lab ID: 2611086004** Collected: 11/01/18 12:08 Received: 11/02/18 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082 PCB Water GCS	Analytical Method: EPA 8082A Preparation Method: EPA 3510C								
PCB-1016 (Aroclor 1016)	ND	ug/L	0.50	0.34	1	11/02/18 11:00	11/02/18 18:44	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 18:44	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 18:44	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 18:44	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 18:44	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 18:44	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.50	0.24	1	11/02/18 11:00	11/02/18 18:44	11096-82-5	
PCB, Total (Aroclor)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 18:44	1336-36-3	
Surrogates									
Decachlorobiphenyl (S)	67	%.	17-144		1	11/02/18 11:00	11/02/18 18:44	2051-24-3	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0050	0.00078	1	11/06/18 14:30	11/07/18 16:56	7440-36-0	
Arsenic	**0.00083J**	mg/L	0.0050	0.00057	1	11/06/18 14:30	11/07/18 16:56	7440-38-2	
Barium	**0.048**	mg/L	0.0050	0.00078	1	11/06/18 14:30	11/07/18 16:56	7440-39-3	
Beryllium	**0.000084J**	mg/L	0.00050	0.000050	1	11/06/18 14:30	11/08/18 14:51	7440-41-7	
Cadmium	**0.00029J**	mg/L	0.00050	0.000093	1	11/06/18 14:30	11/07/18 16:56	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0016	1	11/06/18 14:30	11/08/18 14:51	7440-47-3	
Copper	ND	mg/L	0.0050	0.0013	1	11/06/18 14:30	11/08/18 14:51	7440-50-8	
Lead	ND	mg/L	0.0010	0.00027	1	11/06/18 14:30	11/07/18 16:56	7439-92-1	
Nickel	**0.0031J**	mg/L	0.0050	0.00095	1	11/06/18 14:30	11/08/18 14:51	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	11/06/18 14:30	11/07/18 16:56	7782-49-2	
Silver	ND	mg/L	0.0050	0.00095	1	11/06/18 14:30	11/07/18 16:56	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00014	1	11/06/18 14:30	11/07/18 16:56	7440-28-0	
Zinc	**0.033**	mg/L	0.010	0.0021	1	11/06/18 14:30	11/08/18 14:51	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000037J**	mg/L	0.00020	0.000036	1	11/05/18 12:40	11/06/18 10:17	7439-97-6	
8260B MSV Water, Extend	Analytical Method: EPA 8260B								
Acetone	ND	ug/L	25.0	8.2	1		11/08/18 20:53	67-64-1	
Benzene	ND	ug/L	1.0	0.20	1		11/08/18 20:53	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.36	1		11/08/18 20:53	75-27-4	
Bromoform	ND	ug/L	1.0	0.55	1		11/08/18 20:53	75-25-2	
Bromomethane	ND	ug/L	2.0	0.95	1		11/08/18 20:53	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	3.2	1		11/08/18 20:53	78-93-3	
Carbon disulfide	ND	ug/L	10.0	0.79	1		11/08/18 20:53	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.42	1		11/08/18 20:53	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.53	1		11/08/18 20:53	108-90-7	
Chloroethane	ND	ug/L	1.0	0.52	1		11/08/18 20:53	75-00-3	
Chloroform	ND	ug/L	1.0	0.58	1		11/08/18 20:53	67-66-3	
Chloromethane	ND	ug/L	1.0	0.38	1		11/08/18 20:53	74-87-3	
Cyclohexane	ND	ug/L	10.0	1.6	1		11/08/18 20:53	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	0.55	1		11/08/18 20:53	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.31	1		11/08/18 20:53	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	2.0	0.28	1		11/08/18 20:53	106-93-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: NS_Former Cohn Property
Pace Project No.: 2611086

Sample: MW-04-1018 **Lab ID: 2611086004** Collected: 11/01/18 12:08 Received: 11/02/18 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Water, Extend	Analytical Method: EPA 8260B								
1,2-Dichlorobenzene	ND	ug/L	1.0	0.49	1		11/08/18 20:53	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.59	1		11/08/18 20:53	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.58	1		11/08/18 20:53	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.48	1		11/08/18 20:53	75-71-8	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.41	1		11/08/18 20:53	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.67	1		11/08/18 20:53	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.72	1		11/08/18 20:53	75-35-4	
cis-1,2-Dichloroethene	**19.7**	ug/L	1.0	0.66	1		11/08/18 20:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.46	1		11/08/18 20:53	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.60	1		11/08/18 20:53	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.22	1		11/08/18 20:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.30	1		11/08/18 20:53	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.45	1		11/08/18 20:53	100-41-4	
Methylcyclohexane	ND	ug/L	10.0	1.4	1		11/08/18 20:53	108-87-2	
Methylene Chloride	ND	ug/L	1.0	0.50	1		11/08/18 20:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.86	1		11/08/18 20:53	108-10-1	
Styrene	ND	ug/L	1.0	0.50	1		11/08/18 20:53	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.53	1		11/08/18 20:53	79-34-5	
Tetrachloroethene	**6.3**	ug/L	1.0	0.78	1		11/08/18 20:53	127-18-4	
Toluene	ND	ug/L	1.0	0.31	1		11/08/18 20:53	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.47	1		11/08/18 20:53	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.38	1		11/08/18 20:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.59	1		11/08/18 20:53	79-00-5	
Trichloroethene	**1.2**	ug/L	1.0	0.34	1		11/08/18 20:53	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.51	1		11/08/18 20:53	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	10.0	1.4	1		11/08/18 20:53	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.60	1		11/08/18 20:53	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1.5	1		11/08/18 20:53	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	117	%.	81-119		1		11/08/18 20:53	17060-07-0	
Dibromofluoromethane (S)	98	%.	82-114		1		11/08/18 20:53	1868-53-7	
4-Bromofluorobenzene (S)	105	%.	82-120		1		11/08/18 20:53	460-00-4	
Toluene-d8 (S)	100	%.	82-109		1		11/08/18 20:53	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: NS_Former Cohn Property
Pace Project No.: 2611086

Sample: Dup-WG-01-1018 **Lab ID: 2611086005** Collected: 11/01/18 12:00 Received: 11/02/18 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082 PCB Water GCS	Analytical Method: EPA 8082A Preparation Method: EPA 3510C								
PCB-1016 (Aroclor 1016)	ND	ug/L	0.50	0.34	1	11/02/18 11:00	11/02/18 19:04	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 19:04	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 19:04	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 19:04	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 19:04	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 19:04	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.50	0.24	1	11/02/18 11:00	11/02/18 19:04	11096-82-5	
PCB, Total (Aroclor)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 19:04	1336-36-3	
Surrogates									
Decachlorobiphenyl (S)	62	%.	17-144		1	11/02/18 11:00	11/02/18 19:04	2051-24-3	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0050	0.00078	1	11/06/18 14:30	11/07/18 18:03	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/06/18 14:30	11/07/18 18:03	7440-38-2	
Barium	**0.048**	mg/L	0.0050	0.00078	1	11/06/18 14:30	11/07/18 18:03	7440-39-3	
Beryllium	**0.000090J**	mg/L	0.00050	0.000050	1	11/06/18 14:30	11/08/18 14:57	7440-41-7	
Cadmium	**0.00030J**	mg/L	0.00050	0.000093	1	11/06/18 14:30	11/07/18 18:03	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0016	1	11/06/18 14:30	11/07/18 18:03	7440-47-3	
Copper	ND	mg/L	0.0050	0.0013	1	11/06/18 14:30	11/07/18 18:03	7440-50-8	
Lead	ND	mg/L	0.0010	0.00027	1	11/06/18 14:30	11/07/18 18:03	7439-92-1	
Nickel	**0.0030J**	mg/L	0.0050	0.00095	1	11/06/18 14:30	11/07/18 18:03	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	11/06/18 14:30	11/07/18 18:03	7782-49-2	
Silver	ND	mg/L	0.0050	0.00095	1	11/06/18 14:30	11/07/18 18:03	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00014	1	11/06/18 14:30	11/07/18 18:03	7440-28-0	
Zinc	**0.038**	mg/L	0.010	0.0021	1	11/06/18 14:30	11/07/18 18:03	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.000037J**	mg/L	0.00020	0.000036	1	11/05/18 12:40	11/06/18 10:20	7439-97-6	
8260B MSV Water, Extend	Analytical Method: EPA 8260B								
Acetone	ND	ug/L	25.0	8.2	1		11/08/18 21:18	67-64-1	
Benzene	ND	ug/L	1.0	0.20	1		11/08/18 21:18	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.36	1		11/08/18 21:18	75-27-4	
Bromoform	ND	ug/L	1.0	0.55	1		11/08/18 21:18	75-25-2	
Bromomethane	ND	ug/L	2.0	0.95	1		11/08/18 21:18	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	3.2	1		11/08/18 21:18	78-93-3	
Carbon disulfide	ND	ug/L	10.0	0.79	1		11/08/18 21:18	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.42	1		11/08/18 21:18	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.53	1		11/08/18 21:18	108-90-7	
Chloroethane	ND	ug/L	1.0	0.52	1		11/08/18 21:18	75-00-3	
Chloroform	**0.64J**	ug/L	1.0	0.58	1		11/08/18 21:18	67-66-3	
Chloromethane	ND	ug/L	1.0	0.38	1		11/08/18 21:18	74-87-3	
Cyclohexane	ND	ug/L	10.0	1.6	1		11/08/18 21:18	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	0.55	1		11/08/18 21:18	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.31	1		11/08/18 21:18	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	2.0	0.28	1		11/08/18 21:18	106-93-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: NS_Former Cohn Property
Pace Project No.: 2611086

Sample: Dup-WG-01-1018 **Lab ID: 2611086005** Collected: 11/01/18 12:00 Received: 11/02/18 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Water, Extend	Analytical Method: EPA 8260B								
1,2-Dichlorobenzene	ND	ug/L	1.0	0.49	1		11/08/18 21:18	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.59	1		11/08/18 21:18	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.58	1		11/08/18 21:18	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.48	1		11/08/18 21:18	75-71-8	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.41	1		11/08/18 21:18	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.67	1		11/08/18 21:18	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.72	1		11/08/18 21:18	75-35-4	
cis-1,2-Dichloroethene	**19.8**	ug/L	1.0	0.66	1		11/08/18 21:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.46	1		11/08/18 21:18	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.60	1		11/08/18 21:18	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.22	1		11/08/18 21:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.30	1		11/08/18 21:18	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.45	1		11/08/18 21:18	100-41-4	
Methylcyclohexane	ND	ug/L	10.0	1.4	1		11/08/18 21:18	108-87-2	
Methylene Chloride	ND	ug/L	1.0	0.50	1		11/08/18 21:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.86	1		11/08/18 21:18	108-10-1	
Styrene	ND	ug/L	1.0	0.50	1		11/08/18 21:18	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.53	1		11/08/18 21:18	79-34-5	
Tetrachloroethene	**6.8**	ug/L	1.0	0.78	1		11/08/18 21:18	127-18-4	
Toluene	ND	ug/L	1.0	0.31	1		11/08/18 21:18	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.47	1		11/08/18 21:18	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.38	1		11/08/18 21:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.59	1		11/08/18 21:18	79-00-5	
Trichloroethene	**1.6**	ug/L	1.0	0.34	1		11/08/18 21:18	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.51	1		11/08/18 21:18	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	10.0	1.4	1		11/08/18 21:18	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.60	1		11/08/18 21:18	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1.5	1		11/08/18 21:18	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	113	%.	81-119		1		11/08/18 21:18	17060-07-0	
Dibromofluoromethane (S)	95	%.	82-114		1		11/08/18 21:18	1868-53-7	
4-Bromofluorobenzene (S)	104	%.	82-120		1		11/08/18 21:18	460-00-4	
Toluene-d8 (S)	99	%.	82-109		1		11/08/18 21:18	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: NS_Former Cohn Property
Pace Project No.: 2611086

Sample: EB-WG-1018 **Lab ID: 2611086006** Collected: 11/01/18 10:15 Received: 11/02/18 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082 PCB Water GCS	Analytical Method: EPA 8082A Preparation Method: EPA 3510C								
PCB-1016 (Aroclor 1016)	ND	ug/L	0.50	0.34	1	11/02/18 11:00	11/02/18 19:25	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 19:25	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 19:25	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 19:25	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 19:25	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 19:25	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.50	0.24	1	11/02/18 11:00	11/02/18 19:25	11096-82-5	
PCB, Total (Aroclor)	ND	ug/L	0.50	0.50	1	11/02/18 11:00	11/02/18 19:25	1336-36-3	
Surrogates									
Decachlorobiphenyl (S)	78	%.	17-144		1	11/02/18 11:00	11/02/18 19:25	2051-24-3	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0050	0.00078	1	11/06/18 14:30	11/07/18 18:14	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	11/06/18 14:30	11/07/18 18:14	7440-38-2	
Barium	ND	mg/L	0.0050	0.00078	1	11/06/18 14:30	11/07/18 18:14	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000050	1	11/06/18 14:30	11/08/18 15:02	7440-41-7	
Cadmium	ND	mg/L	0.00050	0.000093	1	11/06/18 14:30	11/07/18 18:14	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0016	1	11/06/18 14:30	11/07/18 18:14	7440-47-3	
Copper	ND	mg/L	0.0050	0.0013	1	11/06/18 14:30	11/07/18 18:14	7440-50-8	
Lead	ND	mg/L	0.0010	0.00027	1	11/06/18 14:30	11/07/18 18:14	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00095	1	11/06/18 14:30	11/07/18 18:14	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	11/06/18 14:30	11/07/18 18:14	7782-49-2	
Silver	ND	mg/L	0.0050	0.00095	1	11/06/18 14:30	11/07/18 18:14	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00014	1	11/06/18 14:30	11/07/18 18:14	7440-28-0	
Zinc	**0.015**	mg/L	0.010	0.0021	1	11/06/18 14:30	11/07/18 18:14	7440-66-6	B
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00020	0.000036	1	11/05/18 12:40	11/06/18 10:22	7439-97-6	
8260B MSV Water, Extend	Analytical Method: EPA 8260B								
Acetone	ND	ug/L	25.0	8.2	1		11/08/18 21:44	67-64-1	
Benzene	ND	ug/L	1.0	0.20	1		11/08/18 21:44	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.36	1		11/08/18 21:44	75-27-4	
Bromoform	ND	ug/L	1.0	0.55	1		11/08/18 21:44	75-25-2	
Bromomethane	ND	ug/L	2.0	0.95	1		11/08/18 21:44	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	3.2	1		11/08/18 21:44	78-93-3	
Carbon disulfide	ND	ug/L	10.0	0.79	1		11/08/18 21:44	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.42	1		11/08/18 21:44	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.53	1		11/08/18 21:44	108-90-7	
Chloroethane	ND	ug/L	1.0	0.52	1		11/08/18 21:44	75-00-3	
Chloroform	ND	ug/L	1.0	0.58	1		11/08/18 21:44	67-66-3	
Chloromethane	ND	ug/L	1.0	0.38	1		11/08/18 21:44	74-87-3	
Cyclohexane	ND	ug/L	10.0	1.6	1		11/08/18 21:44	110-82-7	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	0.55	1		11/08/18 21:44	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.31	1		11/08/18 21:44	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	2.0	0.28	1		11/08/18 21:44	106-93-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: NS_Former Cohn Property
Pace Project No.: 2611086

Sample: EB-WG-1018 **Lab ID: 2611086006** Collected: 11/01/18 10:15 Received: 11/02/18 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Water, Extend	Analytical Method: EPA 8260B								
1,2-Dichlorobenzene	ND	ug/L	1.0	0.49	1		11/08/18 21:44	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.59	1		11/08/18 21:44	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.58	1		11/08/18 21:44	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.48	1		11/08/18 21:44	75-71-8	L1
1,1-Dichloroethane	ND	ug/L	1.0	0.41	1		11/08/18 21:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.67	1		11/08/18 21:44	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.72	1		11/08/18 21:44	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.66	1		11/08/18 21:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.46	1		11/08/18 21:44	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.60	1		11/08/18 21:44	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.22	1		11/08/18 21:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.30	1		11/08/18 21:44	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.45	1		11/08/18 21:44	100-41-4	
Methylcyclohexane	ND	ug/L	10.0	1.4	1		11/08/18 21:44	108-87-2	
Methylene Chloride	ND	ug/L	1.0	0.50	1		11/08/18 21:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.86	1		11/08/18 21:44	108-10-1	
Styrene	ND	ug/L	1.0	0.50	1		11/08/18 21:44	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.53	1		11/08/18 21:44	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.78	1		11/08/18 21:44	127-18-4	
Toluene	ND	ug/L	1.0	0.31	1		11/08/18 21:44	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.47	1		11/08/18 21:44	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.38	1		11/08/18 21:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.59	1		11/08/18 21:44	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.34	1		11/08/18 21:44	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.51	1		11/08/18 21:44	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	10.0	1.4	1		11/08/18 21:44	76-13-1	
Vinyl chloride	ND	ug/L	1.0	0.60	1		11/08/18 21:44	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1.5	1		11/08/18 21:44	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	115	%.	81-119		1		11/08/18 21:44	17060-07-0	
Dibromofluoromethane (S)	97	%.	82-114		1		11/08/18 21:44	1868-53-7	
4-Bromofluorobenzene (S)	105	%.	82-120		1		11/08/18 21:44	460-00-4	
Toluene-d8 (S)	100	%.	82-109		1		11/08/18 21:44	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: NS_Former Cohn Property
Pace Project No.: 2611086

QC Batch: 16607 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 2611086002, 2611086003, 2611086004, 2611086005, 2611086006

METHOD BLANK: 74542 Matrix: Water
Associated Lab Samples: 2611086002, 2611086003, 2611086004, 2611086005, 2611086006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.000036	11/06/18 09:13	

LABORATORY CONTROL SAMPLE: 74543

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0024	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 74558 74559

Parameter	Units	2611086003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	0.000066J	.0025	.0025	0.0024	0.0024	94	93	75-125	1	20	

SAMPLE DUPLICATE: 74544

Parameter	Units	2611044002 Result	Dup Result	RPD	Max RPD	Qualifiers
Mercury	mg/L	ND	0.000047J		20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: NS_Former Cohn Property
Pace Project No.: 2611086

QC Batch: 16694 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2611086002, 2611086003, 2611086004, 2611086005, 2611086006

METHOD BLANK: 74860 Matrix: Water
Associated Lab Samples: 2611086002, 2611086003, 2611086004, 2611086005, 2611086006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0050	0.00078	11/07/18 14:59	
Arsenic	mg/L	ND	0.0050	0.00057	11/07/18 14:59	
Barium	mg/L	ND	0.0050	0.00078	11/07/18 14:59	
Beryllium	mg/L	ND	0.00050	0.000050	11/07/18 14:59	
Cadmium	mg/L	ND	0.00050	0.000093	11/07/18 14:59	
Chromium	mg/L	ND	0.0050	0.0016	11/07/18 14:59	
Copper	mg/L	ND	0.0050	0.0013	11/07/18 14:59	
Lead	mg/L	ND	0.0010	0.00027	11/07/18 14:59	
Nickel	mg/L	ND	0.0050	0.00095	11/07/18 14:59	
Selenium	mg/L	ND	0.0050	0.0014	11/07/18 14:59	
Silver	mg/L	ND	0.0050	0.00095	11/07/18 14:59	
Thallium	mg/L	ND	0.0010	0.00014	11/07/18 14:59	
Zinc	mg/L	0.0025J	0.010	0.0021	11/07/18 14:59	

LABORATORY CONTROL SAMPLE: 74861

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.10	105	80-120	
Arsenic	mg/L	.1	0.10	103	80-120	
Barium	mg/L	.1	0.10	103	80-120	
Beryllium	mg/L	.1	0.11	106	80-120	
Cadmium	mg/L	.1	0.10	104	80-120	
Chromium	mg/L	.1	0.11	106	80-120	
Copper	mg/L	.1	0.11	106	80-120	
Lead	mg/L	.1	0.10	104	80-120	
Nickel	mg/L	.1	0.11	105	80-120	
Selenium	mg/L	.1	0.10	102	80-120	
Silver	mg/L	.1	0.11	106	80-120	
Thallium	mg/L	.1	0.10	102	80-120	
Zinc	mg/L	.1	0.11	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 74862 74863

Parameter	Units	2611086003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	.1	.1	0.11	0.11	106	106	75-125	0	20	
Arsenic	mg/L	ND	.1	.1	0.10	0.10	103	105	75-125	2	20	
Barium	mg/L	0.085	.1	.1	0.20	0.20	117	115	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: NS_Former Cohn Property
Pace Project No.: 2611086

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 74862 74863

Parameter	Units	2611086003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Beryllium	mg/L	0.000068J	.1	.1	0.10	0.10	104	103	75-125	1	20	
Cadmium	mg/L	ND	.1	.1	0.10	0.10	105	103	75-125	2	20	
Chromium	mg/L	0.0037J	.1	.1	0.11	0.11	110	108	75-125	2	20	
Copper	mg/L	ND	.1	.1	0.11	0.10	106	104	75-125	2	20	
Lead	mg/L	0.00056J	.1	.1	0.10	0.10	104	103	75-125	1	20	
Nickel	mg/L	0.0014J	.1	.1	0.11	0.11	105	104	75-125	1	20	
Selenium	mg/L	ND	.1	.1	0.10	0.11	104	106	75-125	2	20	
Silver	mg/L	ND	.1	.1	0.11	0.11	106	107	75-125	1	20	
Thallium	mg/L	ND	.1	.1	0.10	0.10	101	103	75-125	1	20	
Zinc	mg/L	0.021	.1	.1	0.13	0.12	109	103	75-125	4	20	

SAMPLE DUPLICATE: 74890

Parameter	Units	2611086003 Result	Dup Result	RPD	Max RPD	Qualifiers
Antimony	mg/L	ND	ND		20	
Arsenic	mg/L	ND	ND		20	
Barium	mg/L	0.085	0.083	3	20	
Beryllium	mg/L	0.000068J	0.000068J		20	
Cadmium	mg/L	ND	ND		20	
Chromium	mg/L	0.0037J	0.0035J		20	
Copper	mg/L	ND	ND		20	
Lead	mg/L	0.00056J	0.00054J		20	
Nickel	mg/L	0.0014J	0.0013J		20	
Selenium	mg/L	ND	ND		20	
Silver	mg/L	ND	ND		20	
Thallium	mg/L	ND	ND		20	
Zinc	mg/L	0.021	0.019	6	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: NS_Former Cohn Property
Pace Project No.: 2611086

QC Batch: 16821 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV Water, Extend
Associated Lab Samples: 2611086001, 2611086002, 2611086003, 2611086004, 2611086005, 2611086006

METHOD BLANK: 75527 Matrix: Water
Associated Lab Samples: 2611086001, 2611086002, 2611086003, 2611086004, 2611086005, 2611086006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	0.38	11/08/18 14:56	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.53	11/08/18 14:56	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.59	11/08/18 14:56	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	10.0	1.4	11/08/18 14:56	
1,1-Dichloroethane	ug/L	ND	1.0	0.41	11/08/18 14:56	
1,1-Dichloroethene	ug/L	ND	1.0	0.72	11/08/18 14:56	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.47	11/08/18 14:56	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	0.55	11/08/18 14:56	
1,2-Dibromoethane (EDB)	ug/L	ND	2.0	0.28	11/08/18 14:56	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.49	11/08/18 14:56	
1,2-Dichloroethane	ug/L	ND	1.0	0.67	11/08/18 14:56	
1,2-Dichloropropane	ug/L	ND	1.0	0.60	11/08/18 14:56	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.59	11/08/18 14:56	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.58	11/08/18 14:56	
2-Butanone (MEK)	ug/L	ND	5.0	3.2	11/08/18 14:56	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	0.86	11/08/18 14:56	
Acetone	ug/L	ND	25.0	8.2	11/08/18 14:56	
Benzene	ug/L	ND	1.0	0.20	11/08/18 14:56	
Bromodichloromethane	ug/L	ND	1.0	0.36	11/08/18 14:56	
Bromoform	ug/L	ND	1.0	0.55	11/08/18 14:56	
Bromomethane	ug/L	ND	2.0	0.95	11/08/18 14:56	
Carbon disulfide	ug/L	ND	10.0	0.79	11/08/18 14:56	
Carbon tetrachloride	ug/L	ND	1.0	0.42	11/08/18 14:56	
Chlorobenzene	ug/L	ND	1.0	0.53	11/08/18 14:56	
Chloroethane	ug/L	ND	1.0	0.52	11/08/18 14:56	
Chloroform	ug/L	ND	1.0	0.58	11/08/18 14:56	
Chloromethane	ug/L	ND	1.0	0.38	11/08/18 14:56	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.66	11/08/18 14:56	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.22	11/08/18 14:56	
Cyclohexane	ug/L	ND	10.0	1.6	11/08/18 14:56	
Dibromochloromethane	ug/L	ND	1.0	0.31	11/08/18 14:56	
Dichlorodifluoromethane	ug/L	ND	1.0	0.48	11/08/18 14:56	
Ethylbenzene	ug/L	ND	1.0	0.45	11/08/18 14:56	
Methylcyclohexane	ug/L	ND	10.0	1.4	11/08/18 14:56	
Methylene Chloride	ug/L	ND	1.0	0.50	11/08/18 14:56	
Styrene	ug/L	ND	1.0	0.50	11/08/18 14:56	
Tetrachloroethene	ug/L	ND	1.0	0.78	11/08/18 14:56	
Toluene	ug/L	ND	1.0	0.31	11/08/18 14:56	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.46	11/08/18 14:56	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.30	11/08/18 14:56	
Trichloroethene	ug/L	ND	1.0	0.34	11/08/18 14:56	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: NS_Former Cohn Property
Pace Project No.: 2611086

METHOD BLANK: 75527 Matrix: Water
Associated Lab Samples: 2611086001, 2611086002, 2611086003, 2611086004, 2611086005, 2611086006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Trichlorofluoromethane	ug/L	ND	1.0	0.51	11/08/18 14:56	
Vinyl chloride	ug/L	ND	1.0	0.60	11/08/18 14:56	
Xylene (Total)	ug/L	ND	2.0	1.5	11/08/18 14:56	
1,2-Dichloroethane-d4 (S)	%.	108	81-119		11/08/18 14:56	
4-Bromofluorobenzene (S)	%.	101	82-120		11/08/18 14:56	
Dibromofluoromethane (S)	%.	94	82-114		11/08/18 14:56	
Toluene-d8 (S)	%.	101	82-109		11/08/18 14:56	

LABORATORY CONTROL SAMPLE: 75528

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	62.8	126	72-134	
1,1,2,2-Tetrachloroethane	ug/L	50	55.7	111	51-158	
1,1,2-Trichloroethane	ug/L	50	52.9	106	78-131	
1,1-Dichloroethane	ug/L	50	55.8	112	69-151	
1,1-Dichloroethene	ug/L	50	56.7	113	64-158	
1,2,4-Trichlorobenzene	ug/L	50	62.8	126	51-163	
1,2-Dibromo-3-chloropropane	ug/L	50	57.6	115	58-124	
1,2-Dibromoethane (EDB)	ug/L	50	58.0	116	71-134	
1,2-Dichlorobenzene	ug/L	50	54.6	109	70-135	
1,2-Dichloroethane	ug/L	50	55.2	110	72-129	
1,2-Dichloropropane	ug/L	50	49.4	99	64-135	
1,3-Dichlorobenzene	ug/L	50	56.5	113	71-134	
1,4-Dichlorobenzene	ug/L	50	50.6	101	70-131	
2-Butanone (MEK)	ug/L	100	104	104	52-143	
4-Methyl-2-pentanone (MIBK)	ug/L	100	91.4	91	71-129	
Acetone	ug/L	100	129	129	48-224	
Benzene	ug/L	50	51.9	104	68-132	
Bromodichloromethane	ug/L	50	51.8	104	67-121	
Bromoform	ug/L	50	49.5	99	57-125	
Bromomethane	ug/L	50	42.6	85	35-156	
Carbon disulfide	ug/L	100	88.6	89	47-141	
Carbon tetrachloride	ug/L	50	60.3	121	66-122	
Chlorobenzene	ug/L	50	50.3	101	71-126	
Chloroethane	ug/L	50	42.5	85	43-143	
Chloroform	ug/L	50	53.6	107	71-136	
Chloromethane	ug/L	50	39.2	78	47-123	
cis-1,2-Dichloroethene	ug/L	50	54.0	108	74-131	
cis-1,3-Dichloropropene	ug/L	50	50.3	101	78-120	
Dibromochloromethane	ug/L	50	50.5	101	65-115	
Dichlorodifluoromethane	ug/L	50	71.5	143	29-124	L1
Ethylbenzene	ug/L	50	53.9	108	68-129	
Methylene Chloride	ug/L	50	54.2	108	61-147	
Styrene	ug/L	50	61.1	122	77-128	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: NS_Former Cohn Property
Pace Project No.: 2611086

LABORATORY CONTROL SAMPLE: 75528

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	ug/L	50	47.4	95	51-139	
Toluene	ug/L	50	51.6	103	60-133	
trans-1,2-Dichloroethene	ug/L	50	54.5	109	69-144	
trans-1,3-Dichloropropene	ug/L	50	47.9	96	74-128	
Trichloroethene	ug/L	50	49.3	99	73-126	
Trichlorofluoromethane	ug/L	50	50.0	100	55-132	
Vinyl chloride	ug/L	50	42.2	84	50-133	
Xylene (Total)	ug/L	150	173	116	78-132	
1,2-Dichloroethane-d4 (S)	%.			106	81-119	
4-Bromofluorobenzene (S)	%.			99	82-120	
Dibromofluoromethane (S)	%.			101	82-114	
Toluene-d8 (S)	%.			98	82-109	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 75529 75530

Parameter	Units	2611086003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	50	50	76.3	72.3	153	145	66-142	5	11	M1
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	56.9	53.0	114	106	39-171	7	13	
1,1,2-Trichloroethane	ug/L	ND	50	50	55.6	53.7	111	107	73-136	4	12	
1,1-Dichloroethane	ug/L	ND	50	50	59.7	59.0	119	118	66-155	1	15	
1,1-Dichloroethene	ug/L	ND	50	50	67.4	67.5	135	135	33-181	0	34	
1,2,4-Trichlorobenzene	ug/L	ND	50	50	57.6	55.0	115	110	44-164	5	13	
1,2-Dibromo-3-chloropropane	ug/L	ND	50	50	55.7	50.3	111	101	58-124	10	15	
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	60.4	59.8	121	120	71-134	1	12	
1,2-Dichlorobenzene	ug/L	ND	50	50	57.5	52.1	115	104	69-135	10	10	
1,2-Dichloroethane	ug/L	ND	50	50	60.4	59.0	121	118	36-159	2	10	
1,2-Dichloropropane	ug/L	ND	50	50	53.2	52.4	106	105	68-132	1	11	
1,3-Dichlorobenzene	ug/L	ND	50	50	57.8	53.6	116	107	68-135	8	10	
1,4-Dichlorobenzene	ug/L	ND	50	50	52.4	49.0	105	98	49-153	7	9	
2-Butanone (MEK)	ug/L	ND	100	100	82.2	82.5	82	83	10-189	0	23	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	89.2	86.8	89	87	30-177	3	10	
Acetone	ug/L	ND	100	100	75.7	76.4	76	76	44-223	1	14	
Benzene	ug/L	ND	50	50	55.1	54.2	110	108	66-139	2	10	
Bromodichloromethane	ug/L	ND	50	50	58.0	54.4	116	109	57-120	6	13	
Bromoform	ug/L	ND	50	50	51.1	49.3	102	99	48-128	4	13	
Bromomethane	ug/L	ND	50	50	40.5	47.3	81	95	10-187	16	32	
Carbon disulfide	ug/L	ND	100	100	99.2	100	99	100	47-141	1	322	
Carbon tetrachloride	ug/L	ND	50	50	82.5	79.0	165	158	58-127	4	14	M1
Chlorobenzene	ug/L	ND	50	50	53.5	51.3	107	103	63-137	4	10	
Chloroethane	ug/L	ND	50	50	46.2	46.6	92	93	52-146	1	16	
Chloroform	ug/L	ND	50	50	60.0	58.1	120	116	74-137	3	9	
Chloromethane	ug/L	ND	50	50	42.6	43.4	85	87	41-127	2	10	
cis-1,2-Dichloroethene	ug/L	2.4	50	50	57.4	58.7	110	113	71-138	2	16	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: NS_Former Cohn Property
Pace Project No.: 2611086

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 75529 75530

Parameter	Units	2611086003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
cis-1,3-Dichloropropene	ug/L	ND	50	50	50.2	48.4	100	97	32-145	4	12	
Dibromochloromethane	ug/L	ND	50	50	53.8	52.0	108	104	52-116	3	13	
Dichlorodifluoromethane	ug/L	ND	50	50	108	104	216	208	36-126	3	15	M0
Ethylbenzene	ug/L	ND	50	50	58.9	56.7	118	113	31-174	4	10	
Methylene Chloride	ug/L	ND	50	50	56.1	53.9	112	108	61-146	4	15	
Styrene	ug/L	ND	50	50	64.0	60.7	128	121	77-128	5	14	
Tetrachloroethene	ug/L	7.4	50	50	61.4	60.6	108	106	36-155	1	14	
Toluene	ug/L	ND	50	50	58.6	56.1	117	112	52-146	4	11	
trans-1,2-Dichloroethene	ug/L	ND	50	50	61.2	58.0	122	116	61-152	5	14	
trans-1,3-Dichloropropene	ug/L	ND	50	50	50.3	47.6	101	95	37-146	5	12	
Trichloroethene	ug/L	ND	50	50	56.8	54.0	114	108	61-141	5	12	
Trichlorofluoromethane	ug/L	ND	50	50	70.4	67.1	141	134	51-141	5	13	
Vinyl chloride	ug/L	ND	50	50	51.6	53.5	103	107	22-156	4	26	
Xylene (Total)	ug/L	ND	150	150	189	181	126	120	78-132	4	7	
1,2-Dichloroethane-d4 (S)	%.						107	109	81-119			
4-Bromofluorobenzene (S)	%.						103	98	82-120			
Dibromofluoromethane (S)	%.						102	102	82-114			
Toluene-d8 (S)	%.						99	98	82-109			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: NS_Former Cohn Property
Pace Project No.: 2611086

QC Batch: 16506 Analysis Method: EPA 8082A
QC Batch Method: EPA 3510C Analysis Description: 8082 GCS PCB
Associated Lab Samples: 2611086002, 2611086003, 2611086004, 2611086005, 2611086006

METHOD BLANK: 74060 Matrix: Water
Associated Lab Samples: 2611086002, 2611086003, 2611086004, 2611086005, 2611086006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	ND	0.50	0.34	11/02/18 16:41	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.50	0.50	11/02/18 16:41	
PCB-1232 (Aroclor 1232)	ug/L	ND	0.50	0.50	11/02/18 16:41	
PCB-1242 (Aroclor 1242)	ug/L	ND	0.50	0.50	11/02/18 16:41	
PCB-1248 (Aroclor 1248)	ug/L	ND	0.50	0.50	11/02/18 16:41	
PCB-1254 (Aroclor 1254)	ug/L	ND	0.50	0.50	11/02/18 16:41	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.50	0.24	11/02/18 16:41	
Decachlorobiphenyl (S)	%.	75	17-144		11/02/18 16:41	

LABORATORY CONTROL SAMPLE: 74061

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	5	4.3	87	47-120	
PCB-1260 (Aroclor 1260)	ug/L	5	4.3	87	51-126	
Decachlorobiphenyl (S)	%.			73	17-144	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 74196 74197

Parameter	Units	2611086003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/L	ND	5	5	4.1	4.7	81	94	10-183	14	18	
PCB-1260 (Aroclor 1260)	ug/L	ND	5	5	4.2	4.4	84	88	19-141	5	27	
Decachlorobiphenyl (S)	%.						42	53	17-144			

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: NS_Former Cohn Property
Pace Project No.: 2611086

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

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 - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
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.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NS_Former Cohn Property
Pace Project No.: 2611086

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2611086002	**MW-02-1018**	EPA 3510C	16506	EPA 8082A	16560
2611086003	**MW-01-1018**	EPA 3510C	16506	EPA 8082A	16560
2611086004	**MW-04-1018**	EPA 3510C	16506	EPA 8082A	16560
2611086005	**Dup-WG-01-1018**	EPA 3510C	16506	EPA 8082A	16560
2611086006	**EB-WG-1018**	EPA 3510C	16506	EPA 8082A	16560
2611086002	**MW-02-1018**	EPA 3005A	16694	EPA 6020B	16757
2611086003	**MW-01-1018**	EPA 3005A	16694	EPA 6020B	16757
2611086004	**MW-04-1018**	EPA 3005A	16694	EPA 6020B	16757
2611086005	**Dup-WG-01-1018**	EPA 3005A	16694	EPA 6020B	16757
2611086006	**EB-WG-1018**	EPA 3005A	16694	EPA 6020B	16757
2611086002	**MW-02-1018**	EPA 7470A	16607	EPA 7470A	16657
2611086003	**MW-01-1018**	EPA 7470A	16607	EPA 7470A	16657
2611086004	**MW-04-1018**	EPA 7470A	16607	EPA 7470A	16657
2611086005	**Dup-WG-01-1018**	EPA 7470A	16607	EPA 7470A	16657
2611086006	**EB-WG-1018**	EPA 7470A	16607	EPA 7470A	16657
2611086001	**TB-WG-01-1018**	EPA 8260B	16821		
2611086002	**MW-02-1018**	EPA 8260B	16821		
2611086003	**MW-01-1018**	EPA 8260B	16821		
2611086004	**MW-04-1018**	EPA 8260B	16821		
2611086005	**Dup-WG-01-1018**	EPA 8260B	16821		
2611086006	**EB-WG-1018**	EPA 8260B	16821		

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

2176224

Section A Required Client Information: Norfolk Southern

Company: Wood E&IS
Address: 1075 Big Shanty Rd Ste 100 Kennesaw, GA 30144
Email To: judy.hartness@woodplc.com
Phone: 770-421-3400 Fax: 770-421-3486
Requested Due Date/TAT: standard

Section B Required Project Information:

Report To: Judy Hartness
Copy To: Rhonda Quinn
Purchase Order No.:
Project Name: NS Farmer Cohn Property
Project Number: 612314021.2

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #: 1962

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: GA

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	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	VOCs 8260C	PCBs 8082A	TAL Metals 6020A 7470A Hg	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TB-WG-01-1018	WT	G			10/31/18	1800		2				X						X				
2	MW-02-1018	WT	G			10/31/18	1820		6			X	X						X	X	X		
3	MW-01-1018	WT	G			11/1/18	0950		6			X	X						X	X	X		
4	MW-01-1018MS	WT	G				0950		6			X	X						X	X	X		
5	MW-01-1018MSD	WT	G				0950		6			X	X						X	X	X		
6	MW-04-1018	WT	G				1208		6			X	X						X	X	X		
7	DUP-WG-01-1018	WT	G			↓	1200		6			X	X						X	X	X		
8																							
9																							
10																							
11																							
12																							

EB-WG-1018 11/1/18 1015 (2H 11/2/18

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Analyze for COIs on attached Tables	Daniel L Howard / Wood	11/2/18	0930	M Rahman	11/02/18	0930	

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

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Daniel Howard / Ever Guillen
SIGNATURE of SAMPLER: Daniel L Howard
DATE Signed (MM/DD/YY): 11/1/18

WO#: 2611086

2611086

Pace Analytical

Sample Condition Upon Receipt

WO#: 2611086

PM: SMM Due Date: 11/09/18

CLIENT: NS_Wood

Client Name: Wood E+IS N. S.

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other _____

Tracking #: _____

Optional
Proj. Due Date:
Proj. Name:

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

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☑ Other _____

Thermometer Used 083

Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.8°C

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 11/2/18 CM

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. EB-WG-1018 Sample present but not listed on the COC.
-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	Initial when completed _____ Lot # of added preservative _____
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: Collection Date & time is 11/1/18 @ 1015 per container labels for EB-WG-1018. CM 11/2/18

Project Manager Review: _____ **Date:** _____

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

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

November 12, 2018

Pace Analytical - Atlanta, GA

Sample Delivery Group:	L1040667
Samples Received:	11/02/2018
Project Number:	2611086
Description:	NS_Former Cohn Property

Report To: Sakina McKenzie
110 Technology Pky
Peachtree Corners, GA 30092

Entire Report Reviewed By:

Nancy McLain
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

MW-01-1018 L1040667-01 GW

Collected by	Collected date/time	Received date/time
	11/01/18 09:50	11/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (HPLC) by Method 8330B	WG1191730	1	11/05/18 17:51	11/06/18 19:10	GKM
Semi Volatile Organic Compounds (GC/MS) by Method 8270 C-SIM	WG1191718	1	11/06/18 12:02	11/06/18 18:10	CJR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1192176	1	11/07/18 16:42	11/08/18 16:19	AO

MW-02-1018 L1040667-02 GW

Collected by	Collected date/time	Received date/time
	10/31/18 18:20	11/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (HPLC) by Method 8330B	WG1191730	1	11/05/18 17:51	11/06/18 19:38	GKM
Semi Volatile Organic Compounds (GC/MS) by Method 8270 C-SIM	WG1191718	1	11/06/18 12:02	11/06/18 19:15	CJR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1192384	1	11/07/18 20:13	11/08/18 11:55	AO

EB-WG-1018 L1040667-03 GW

Collected by	Collected date/time	Received date/time
	11/01/18 10:15	11/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (HPLC) by Method 8330B	WG1191730	1	11/05/18 17:51	11/06/18 20:06	GKM
Semi Volatile Organic Compounds (GC/MS) by Method 8270 C-SIM	WG1191718	1	11/06/18 12:02	11/06/18 19:37	CJR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1192384	1	11/07/18 20:13	11/08/18 12:20	AO

MW-04-1018 L1040667-04 GW

Collected by	Collected date/time	Received date/time
	11/01/18 12:08	11/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (HPLC) by Method 8330B	WG1191730	1	11/05/18 17:51	11/06/18 20:34	GKM
Semi Volatile Organic Compounds (GC/MS) by Method 8270 C-SIM	WG1191718	1	11/06/18 12:02	11/06/18 19:59	CJR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1192384	1	11/07/18 20:13	11/08/18 12:45	AO

DUP-WG-01-1018 L1040667-05 GW

Collected by	Collected date/time	Received date/time
	11/01/18 12:00	11/02/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (HPLC) by Method 8330B	WG1191730	1	11/05/18 17:51	11/06/18 21:02	GKM
Semi Volatile Organic Compounds (GC/MS) by Method 8270 C-SIM	WG1191718	1	11/06/18 12:02	11/06/18 20:21	CJR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1192384	1	11/07/18 20:13	11/08/18 13:11	AO

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Nancy F. McLain

Nancy McLain
Project Manager

Semi-Volatile Organic Compounds (HPLC) by Method 8330B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2,4-Dinitrotoluene	U		0.142	2.00	1	11/06/2018 19:10	WG1191730
4-Nitrotoluene (4-NT)	U		0.125	2.00	1	11/06/2018 19:10	WG1191730
Nitrobenzene	U		0.170	0.500	1	11/06/2018 19:10	WG1191730
1,3,5-Trinitrobenzene	U		0.0979	0.500	1	11/06/2018 19:10	WG1191730
1,3-Dinitrobenzene	U		0.177	0.500	1	11/06/2018 19:10	WG1191730
(S) 1,3-Dimethyl-2-NB	*79.4*			*57.0-120*		*11/06/2018 19:10*	WG1191730

Semi Volatile Organic Compounds (GC/MS) by Method 8270 C-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.00800	0.0500	1	11/06/2018 18:10	WG1191718
Acenaphthene	U		0.0100	0.0500	1	11/06/2018 18:10	WG1191718
Acenaphthylene	U		0.00700	0.0500	1	11/06/2018 18:10	WG1191718
Benzo(a)anthracene	U		0.00830	0.0500	1	11/06/2018 18:10	WG1191718
Benzo(a)pyrene	U		0.0158	0.0500	1	11/06/2018 18:10	WG1191718
Benzo(b)fluoranthene	U		0.00212	0.0500	1	11/06/2018 18:10	WG1191718
Benzo(g,h,i)perylene	U		0.00227	0.0500	1	11/06/2018 18:10	WG1191718
Benzo(k)fluoranthene	U		0.0255	0.0500	1	11/06/2018 18:10	WG1191718
Chrysene	U		0.0144	0.0500	1	11/06/2018 18:10	WG1191718
Dibenz(a,h)anthracene	U		0.00454	0.0500	1	11/06/2018 18:10	WG1191718
Fluoranthene	U		0.0165	0.0500	1	11/06/2018 18:10	WG1191718
Fluorene	U		0.00898	0.0500	1	11/06/2018 18:10	WG1191718
Indeno(1,2,3-cd)pyrene	U		0.00739	0.0500	1	11/06/2018 18:10	WG1191718
Naphthalene	0.0295	B J	0.0120	0.250	1	11/06/2018 18:10	WG1191718
Phenanthrene	U		0.0184	0.0500	1	11/06/2018 18:10	WG1191718
Pyrene	U		0.0155	0.0500	1	11/06/2018 18:10	WG1191718
2-Methylnaphthalene	U		0.0155	0.250	1	11/06/2018 18:10	WG1191718
(S) Nitrobenzene-d5	*120*			*11.0-135*		*11/06/2018 18:10*	WG1191718
(S) 2-Fluorobiphenyl	*98.0*			*32.0-120*		*11/06/2018 18:10*	WG1191718
(S) p-Terphenyl-d14	*104*			*23.0-122*		*11/06/2018 18:10*	WG1191718

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetophenone	U		2.71	10.0	1	11/08/2018 16:19	WG1192176
Bis(2-chloroethyl)ether	U		1.62	10.0	1	11/08/2018 16:19	WG1192176
Bis(2-chloroisopropyl)ether	U		0.445	10.0	1	11/08/2018 16:19	WG1192176
4-Chloroaniline	U		0.382	10.0	1	11/08/2018 16:19	WG1192176
3,3-Dichlorobenzidine	U	J4	2.02	10.0	1	11/08/2018 16:19	WG1192176
Hexachloro-1,3-butadiene	U		0.329	10.0	1	11/08/2018 16:19	WG1192176
Hexachlorobenzene	U	J4	0.341	1.00	1	11/08/2018 16:19	WG1192176
Hexachlorocyclopentadiene	U	J3	2.33	10.0	1	11/08/2018 16:19	WG1192176
Hexachloroethane	U		0.365	10.0	1	11/08/2018 16:19	WG1192176
Isophorone	U	J4	0.272	10.0	1	11/08/2018 16:19	WG1192176
Nitrobenzene	U		0.367	10.0	1	11/08/2018 16:19	WG1192176
n-Nitrosodiphenylamine	U	J4	1.19	10.0	1	11/08/2018 16:19	WG1192176
n-Nitrosodi-n-propylamine	U		0.403	10.0	1	11/08/2018 16:19	WG1192176
Benzylbutyl phthalate	U		0.275	3.00	1	11/08/2018 16:19	WG1192176
Bis(2-ethylhexyl)phthalate	U		0.709	3.00	1	11/08/2018 16:19	WG1192176
Di-n-butyl phthalate	U		0.266	3.00	1	11/08/2018 16:19	WG1192176
Diethyl phthalate	U	J4	0.282	3.00	1	11/08/2018 16:19	WG1192176
Dimethyl phthalate	U	J4	0.283	3.00	1	11/08/2018 16:19	WG1192176
Di-n-octyl phthalate	U		0.278	3.00	1	11/08/2018 16:19	WG1192176
2,4-Dinitrotoluene	U	J4	1.65	10.0	1	11/08/2018 16:19	WG1192176
2-Chlorophenol	U		0.283	10.0	1	11/08/2018 16:19	WG1192176

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2,4-Dichlorophenol	U	J4	0.284	10.0	1	11/08/2018 16:19	WG1192176
2,4-Dimethylphenol	U	J4	0.624	10.0	1	11/08/2018 16:19	WG1192176
2,4-Dinitrophenol	U		3.25	10.0	1	11/08/2018 16:19	WG1192176
3&4-Methyl Phenol	U	J4	0.266	10.0	1	11/08/2018 16:19	WG1192176
2-Nitrophenol	U	J4	0.320	10.0	1	11/08/2018 16:19	WG1192176
4-Nitrophenol	U		2.01	10.0	1	11/08/2018 16:19	WG1192176
Pentachlorophenol	U	J4	0.313	10.0	1	11/08/2018 16:19	WG1192176
Phenol	U	J4	0.334	10.0	1	11/08/2018 16:19	WG1192176
2,4,5-Trichlorophenol	U	J4	0.236	10.0	1	11/08/2018 16:19	WG1192176
2,4,6-Trichlorophenol	U	J4	0.297	10.0	1	11/08/2018 16:19	WG1192176
(S) 2-Fluorophenol	*6.35*	J2		*10.0-120*		*11/08/2018 16:19*	WG1192176
(S) Phenol-d5	*3.68*	J2		*10.0-120*		*11/08/2018 16:19*	WG1192176
(S) Nitrobenzene-d5	*16.5*			*10.0-127*		*11/08/2018 16:19*	WG1192176
(S) 2-Fluorobiphenyl	*16.5*			*10.0-130*		*11/08/2018 16:19*	WG1192176
(S) 2,4,6-Tribromophenol	*22.2*			*10.0-155*		*11/08/2018 16:19*	WG1192176
(S) p-Terphenyl-d14	*41.1*			*10.0-128*		*11/08/2018 16:19*	WG1192176

Semi-Volatile Organic Compounds (HPLC) by Method 8330B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2,4-Dinitrotoluene	U		0.142	2.00	1	11/06/2018 19:38	WG1191730
4-Nitrotoluene (4-NT)	U		0.125	2.00	1	11/06/2018 19:38	WG1191730
Nitrobenzene	U		0.170	0.500	1	11/06/2018 19:38	WG1191730
1,3,5-Trinitrobenzene	U		0.0979	0.500	1	11/06/2018 19:38	WG1191730
1,3-Dinitrobenzene	U		0.177	0.500	1	11/06/2018 19:38	WG1191730
(S) 1,3-Dimethyl-2-NB	*83.5*			*57.0-120*		*11/06/2018 19:38*	WG1191730

Semi Volatile Organic Compounds (GC/MS) by Method 8270 C-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.00800	0.0500	1	11/06/2018 19:15	WG1191718
Acenaphthene	U		0.0100	0.0500	1	11/06/2018 19:15	WG1191718
Acenaphthylene	U		0.00700	0.0500	1	11/06/2018 19:15	WG1191718
Benzo(a)anthracene	U		0.00830	0.0500	1	11/06/2018 19:15	WG1191718
Benzo(a)pyrene	U		0.0158	0.0500	1	11/06/2018 19:15	WG1191718
Benzo(b)fluoranthene	0.00307	J	0.00212	0.0500	1	11/06/2018 19:15	WG1191718
Benzo(g,h,i)perylene	0.00255	J	0.00227	0.0500	1	11/06/2018 19:15	WG1191718
Benzo(k)fluoranthene	U		0.0255	0.0500	1	11/06/2018 19:15	WG1191718
Chrysene	U		0.0144	0.0500	1	11/06/2018 19:15	WG1191718
Dibenz(a,h)anthracene	U		0.00454	0.0500	1	11/06/2018 19:15	WG1191718
Fluoranthene	U		0.0165	0.0500	1	11/06/2018 19:15	WG1191718
Fluorene	U		0.00898	0.0500	1	11/06/2018 19:15	WG1191718
Indeno(1,2,3-cd)pyrene	U		0.00739	0.0500	1	11/06/2018 19:15	WG1191718
Naphthalene	0.0299	B J	0.0120	0.250	1	11/06/2018 19:15	WG1191718
Phenanthrene	U		0.0184	0.0500	1	11/06/2018 19:15	WG1191718
Pyrene	U		0.0155	0.0500	1	11/06/2018 19:15	WG1191718
2-Methylnaphthalene	U		0.0155	0.250	1	11/06/2018 19:15	WG1191718
(S) Nitrobenzene-d5	*103*			*11.0-135*		*11/06/2018 19:15*	WG1191718
(S) 2-Fluorobiphenyl	*91.5*			*32.0-120*		*11/06/2018 19:15*	WG1191718
(S) p-Terphenyl-d14	*78.5*			*23.0-122*		*11/06/2018 19:15*	WG1191718

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetophenone	U		2.71	10.0	1	11/08/2018 11:55	WG1192384
Bis(2-chloroethyl)ether	U		1.62	10.0	1	11/08/2018 11:55	WG1192384
Bis(2-chloroisopropyl)ether	U		0.445	10.0	1	11/08/2018 11:55	WG1192384
4-Chloroaniline	U	J3	0.382	10.0	1	11/08/2018 11:55	WG1192384
3,3-Dichlorobenzidine	U		2.02	10.0	1	11/08/2018 11:55	WG1192384
Hexachloro-1,3-butadiene	U		0.329	10.0	1	11/08/2018 11:55	WG1192384
Hexachlorobenzene	U		0.341	1.00	1	11/08/2018 11:55	WG1192384
Hexachlorocyclopentadiene	U		2.33	10.0	1	11/08/2018 11:55	WG1192384
Hexachloroethane	U		0.365	10.0	1	11/08/2018 11:55	WG1192384
Isophorone	U		0.272	10.0	1	11/08/2018 11:55	WG1192384
Nitrobenzene	U		0.367	10.0	1	11/08/2018 11:55	WG1192384
n-Nitrosodiphenylamine	U		1.19	10.0	1	11/08/2018 11:55	WG1192384
n-Nitrosodi-n-propylamine	U		0.403	10.0	1	11/08/2018 11:55	WG1192384
Benzylbutyl phthalate	U		0.275	3.00	1	11/08/2018 11:55	WG1192384
Bis(2-ethylhexyl)phthalate	1.33	J	0.709	3.00	1	11/08/2018 11:55	WG1192384
Di-n-butyl phthalate	0.935	J	0.266	3.00	1	11/08/2018 11:55	WG1192384
Diethyl phthalate	U		0.282	3.00	1	11/08/2018 11:55	WG1192384
Dimethyl phthalate	U		0.283	3.00	1	11/08/2018 11:55	WG1192384
Di-n-octyl phthalate	U		0.278	3.00	1	11/08/2018 11:55	WG1192384
2,4-Dinitrotoluene	U		1.65	10.0	1	11/08/2018 11:55	WG1192384
2-Chlorophenol	U		0.283	10.0	1	11/08/2018 11:55	WG1192384

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2,4-Dichlorophenol	U		0.284	10.0	1	11/08/2018 11:55	WG1192384
2,4-Dimethylphenol	U		0.624	10.0	1	11/08/2018 11:55	WG1192384
2,4-Dinitrophenol	U		3.25	10.0	1	11/08/2018 11:55	WG1192384
3&4-Methyl Phenol	U		0.266	10.0	1	11/08/2018 11:55	WG1192384
2-Nitrophenol	U		0.320	10.0	1	11/08/2018 11:55	WG1192384
4-Nitrophenol	U		2.01	10.0	1	11/08/2018 11:55	WG1192384
Pentachlorophenol	U		0.313	10.0	1	11/08/2018 11:55	WG1192384
Phenol	U		0.334	10.0	1	11/08/2018 11:55	WG1192384
2,4,5-Trichlorophenol	U		0.236	10.0	1	11/08/2018 11:55	WG1192384
2,4,6-Trichlorophenol	U		0.297	10.0	1	11/08/2018 11:55	WG1192384
(S) 2-Fluorophenol	*28.1*			*10.0-120*		*11/08/2018 11:55*	WG1192384
(S) Phenol-d5	*18.7*			*10.0-120*		*11/08/2018 11:55*	WG1192384
(S) Nitrobenzene-d5	*41.6*			*10.0-127*		*11/08/2018 11:55*	WG1192384
(S) 2-Fluorobiphenyl	*46.7*			*10.0-130*		*11/08/2018 11:55*	WG1192384
(S) 2,4,6-Tribromophenol	*52.6*			*10.0-155*		*11/08/2018 11:55*	WG1192384
(S) p-Terphenyl-d14	*61.6*			*10.0-128*		*11/08/2018 11:55*	WG1192384

Semi-Volatile Organic Compounds (HPLC) by Method 8330B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2,4-Dinitrotoluene	U		0.142	2.00	1	11/06/2018 20:06	WG1191730
4-Nitrotoluene (4-NT)	U		0.125	2.00	1	11/06/2018 20:06	WG1191730
Nitrobenzene	U		0.170	0.500	1	11/06/2018 20:06	WG1191730
1,3,5-Trinitrobenzene	U		0.0979	0.500	1	11/06/2018 20:06	WG1191730
1,3-Dinitrobenzene	U		0.177	0.500	1	11/06/2018 20:06	WG1191730
(S) 1,3-Dimethyl-2-NB	*86.9*			*57.0-120*		*11/06/2018 20:06*	WG1191730

Semi Volatile Organic Compounds (GC/MS) by Method 8270 C-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.00800	0.0500	1	11/06/2018 19:37	WG1191718
Acenaphthene	U		0.0100	0.0500	1	11/06/2018 19:37	WG1191718
Acenaphthylene	U		0.00700	0.0500	1	11/06/2018 19:37	WG1191718
Benzo(a)anthracene	U		0.00830	0.0500	1	11/06/2018 19:37	WG1191718
Benzo(a)pyrene	U		0.0158	0.0500	1	11/06/2018 19:37	WG1191718
Benzo(b)fluoranthene	U		0.00212	0.0500	1	11/06/2018 19:37	WG1191718
Benzo(g,h,i)perylene	U		0.00227	0.0500	1	11/06/2018 19:37	WG1191718
Benzo(k)fluoranthene	U		0.0255	0.0500	1	11/06/2018 19:37	WG1191718
Chrysene	U		0.0144	0.0500	1	11/06/2018 19:37	WG1191718
Dibenz(a,h)anthracene	U		0.00454	0.0500	1	11/06/2018 19:37	WG1191718
Fluoranthene	U		0.0165	0.0500	1	11/06/2018 19:37	WG1191718
Fluorene	U		0.00898	0.0500	1	11/06/2018 19:37	WG1191718
Indeno(1,2,3-cd)pyrene	U		0.00739	0.0500	1	11/06/2018 19:37	WG1191718
Naphthalene	0.0379	B J	0.0120	0.250	1	11/06/2018 19:37	WG1191718
Phenanthrene	U		0.0184	0.0500	1	11/06/2018 19:37	WG1191718
Pyrene	U		0.0155	0.0500	1	11/06/2018 19:37	WG1191718
2-Methylnaphthalene	U		0.0155	0.250	1	11/06/2018 19:37	WG1191718
(S) Nitrobenzene-d5	*105*			*11.0-135*		*11/06/2018 19:37*	WG1191718
(S) 2-Fluorobiphenyl	*94.0*			*32.0-120*		*11/06/2018 19:37*	WG1191718
(S) p-Terphenyl-d14	*93.0*			*23.0-122*		*11/06/2018 19:37*	WG1191718

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetophenone	U		2.71	10.0	1	11/08/2018 12:20	WG1192384
Bis(2-chloroethyl)ether	U		1.62	10.0	1	11/08/2018 12:20	WG1192384
Bis(2-chloroisopropyl)ether	U		0.445	10.0	1	11/08/2018 12:20	WG1192384
4-Chloroaniline	U	J3	0.382	10.0	1	11/08/2018 12:20	WG1192384
3,3-Dichlorobenzidine	U		2.02	10.0	1	11/08/2018 12:20	WG1192384
Hexachloro-1,3-butadiene	U		0.329	10.0	1	11/08/2018 12:20	WG1192384
Hexachlorobenzene	U		0.341	1.00	1	11/08/2018 12:20	WG1192384
Hexachlorocyclopentadiene	U		2.33	10.0	1	11/08/2018 12:20	WG1192384
Hexachloroethane	U		0.365	10.0	1	11/08/2018 12:20	WG1192384
Isophorone	U		0.272	10.0	1	11/08/2018 12:20	WG1192384
Nitrobenzene	U		0.367	10.0	1	11/08/2018 12:20	WG1192384
n-Nitrosodiphenylamine	U		1.19	10.0	1	11/08/2018 12:20	WG1192384
n-Nitrosodi-n-propylamine	U		0.403	10.0	1	11/08/2018 12:20	WG1192384
Benzylbutyl phthalate	U		0.275	3.00	1	11/08/2018 12:20	WG1192384
Bis(2-ethylhexyl)phthalate	1.21	J	0.709	3.00	1	11/08/2018 12:20	WG1192384
Di-n-butyl phthalate	U		0.266	3.00	1	11/08/2018 12:20	WG1192384
Diethyl phthalate	U		0.282	3.00	1	11/08/2018 12:20	WG1192384
Dimethyl phthalate	U		0.283	3.00	1	11/08/2018 12:20	WG1192384
Di-n-octyl phthalate	U		0.278	3.00	1	11/08/2018 12:20	WG1192384
2,4-Dinitrotoluene	U		1.65	10.0	1	11/08/2018 12:20	WG1192384
2-Chlorophenol	U		0.283	10.0	1	11/08/2018 12:20	WG1192384

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2,4-Dichlorophenol	U		0.284	10.0	1	11/08/2018 12:20	WG1192384
2,4-Dimethylphenol	U		0.624	10.0	1	11/08/2018 12:20	WG1192384
2,4-Dinitrophenol	U		3.25	10.0	1	11/08/2018 12:20	WG1192384
3&4-Methyl Phenol	U		0.266	10.0	1	11/08/2018 12:20	WG1192384
2-Nitrophenol	U		0.320	10.0	1	11/08/2018 12:20	WG1192384
4-Nitrophenol	U		2.01	10.0	1	11/08/2018 12:20	WG1192384
Pentachlorophenol	U		0.313	10.0	1	11/08/2018 12:20	WG1192384
Phenol	U		0.334	10.0	1	11/08/2018 12:20	WG1192384
2,4,5-Trichlorophenol	U		0.236	10.0	1	11/08/2018 12:20	WG1192384
2,4,6-Trichlorophenol	U		0.297	10.0	1	11/08/2018 12:20	WG1192384
(S) 2-Fluorophenol	*17.2*			*10.0-120*		*11/08/2018 12:20*	WG1192384
(S) Phenol-d5	*9.17*	J2		*10.0-120*		*11/08/2018 12:20*	WG1192384
(S) Nitrobenzene-d5	*45.7*			*10.0-127*		*11/08/2018 12:20*	WG1192384
(S) 2-Fluorobiphenyl	*47.7*			*10.0-130*		*11/08/2018 12:20*	WG1192384
(S) 2,4,6-Tribromophenol	*41.3*			*10.0-155*		*11/08/2018 12:20*	WG1192384
(S) p-Terphenyl-d14	*60.3*			*10.0-128*		*11/08/2018 12:20*	WG1192384

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Semi-Volatile Organic Compounds (HPLC) by Method 8330B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2,4-Dinitrotoluene	U		0.142	2.00	1	11/06/2018 20:34	WG1191730
4-Nitrotoluene (4-NT)	U		0.125	2.00	1	11/06/2018 20:34	WG1191730
Nitrobenzene	U		0.170	0.500	1	11/06/2018 20:34	WG1191730
1,3,5-Trinitrobenzene	U		0.0979	0.500	1	11/06/2018 20:34	WG1191730
1,3-Dinitrobenzene	U		0.177	0.500	1	11/06/2018 20:34	WG1191730
(S) 1,3-Dimethyl-2-NB	*85.5*			*57.0-120*		*11/06/2018 20:34*	WG1191730

Semi Volatile Organic Compounds (GC/MS) by Method 8270 C-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Anthracene	U		0.00800	0.0500	1	11/06/2018 19:59	WG1191718
Acenaphthene	U		0.0100	0.0500	1	11/06/2018 19:59	WG1191718
Acenaphthylene	U		0.00700	0.0500	1	11/06/2018 19:59	WG1191718
Benzo(a)anthracene	U		0.00830	0.0500	1	11/06/2018 19:59	WG1191718
Benzo(a)pyrene	U		0.0158	0.0500	1	11/06/2018 19:59	WG1191718
Benzo(b)fluoranthene	0.00405	J	0.00212	0.0500	1	11/06/2018 19:59	WG1191718
Benzo(g,h,i)perylene	U		0.00227	0.0500	1	11/06/2018 19:59	WG1191718
Benzo(k)fluoranthene	U		0.0255	0.0500	1	11/06/2018 19:59	WG1191718
Chrysene	U		0.0144	0.0500	1	11/06/2018 19:59	WG1191718
Dibenz(a,h)anthracene	U		0.00454	0.0500	1	11/06/2018 19:59	WG1191718
Fluoranthene	U		0.0165	0.0500	1	11/06/2018 19:59	WG1191718
Fluorene	U		0.00898	0.0500	1	11/06/2018 19:59	WG1191718
Indeno(1,2,3-cd)pyrene	U		0.00739	0.0500	1	11/06/2018 19:59	WG1191718
Naphthalene	0.0411	B J	0.0120	0.250	1	11/06/2018 19:59	WG1191718
Phenanthrene	U		0.0184	0.0500	1	11/06/2018 19:59	WG1191718
Pyrene	U		0.0155	0.0500	1	11/06/2018 19:59	WG1191718
2-Methylnaphthalene	U		0.0155	0.250	1	11/06/2018 19:59	WG1191718
(S) Nitrobenzene-d5	*104*			*11.0-135*		*11/06/2018 19:59*	WG1191718
(S) 2-Fluorobiphenyl	*95.0*			*32.0-120*		*11/06/2018 19:59*	WG1191718
(S) p-Terphenyl-d14	*116*			*23.0-122*		*11/06/2018 19:59*	WG1191718

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetophenone	U		2.71	10.0	1	11/08/2018 12:45	WG1192384
Bis(2-chloroethyl)ether	U		1.62	10.0	1	11/08/2018 12:45	WG1192384
Bis(2-chloroisopropyl)ether	U		0.445	10.0	1	11/08/2018 12:45	WG1192384
4-Chloroaniline	U	J3	0.382	10.0	1	11/08/2018 12:45	WG1192384
3,3-Dichlorobenzidine	U		2.02	10.0	1	11/08/2018 12:45	WG1192384
Hexachloro-1,3-butadiene	U		0.329	10.0	1	11/08/2018 12:45	WG1192384
Hexachlorobenzene	U		0.341	1.00	1	11/08/2018 12:45	WG1192384
Hexachlorocyclopentadiene	U		2.33	10.0	1	11/08/2018 12:45	WG1192384
Hexachloroethane	U		0.365	10.0	1	11/08/2018 12:45	WG1192384
Isophorone	U		0.272	10.0	1	11/08/2018 12:45	WG1192384
Nitrobenzene	U		0.367	10.0	1	11/08/2018 12:45	WG1192384
n-Nitrosodiphenylamine	U		1.19	10.0	1	11/08/2018 12:45	WG1192384
n-Nitrosodi-n-propylamine	U		0.403	10.0	1	11/08/2018 12:45	WG1192384
Benzylbutyl phthalate	U		0.275	3.00	1	11/08/2018 12:45	WG1192384
Bis(2-ethylhexyl)phthalate	U		0.709	3.00	1	11/08/2018 12:45	WG1192384
Di-n-butyl phthalate	U		0.266	3.00	1	11/08/2018 12:45	WG1192384
Diethyl phthalate	U		0.282	3.00	1	11/08/2018 12:45	WG1192384
Dimethyl phthalate	U		0.283	3.00	1	11/08/2018 12:45	WG1192384
Di-n-octyl phthalate	U		0.278	3.00	1	11/08/2018 12:45	WG1192384
2,4-Dinitrotoluene	U		1.65	10.0	1	11/08/2018 12:45	WG1192384
2-Chlorophenol	U		0.283	10.0	1	11/08/2018 12:45	WG1192384

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2,4-Dichlorophenol	U		0.284	10.0	1	11/08/2018 12:45	WG1192384
2,4-Dimethylphenol	U		0.624	10.0	1	11/08/2018 12:45	WG1192384
2,4-Dinitrophenol	U		3.25	10.0	1	11/08/2018 12:45	WG1192384
3&4-Methyl Phenol	U		0.266	10.0	1	11/08/2018 12:45	WG1192384
2-Nitrophenol	U		0.320	10.0	1	11/08/2018 12:45	WG1192384
4-Nitrophenol	U		2.01	10.0	1	11/08/2018 12:45	WG1192384
Pentachlorophenol	U		0.313	10.0	1	11/08/2018 12:45	WG1192384
Phenol	U		0.334	10.0	1	11/08/2018 12:45	WG1192384
2,4,5-Trichlorophenol	U		0.236	10.0	1	11/08/2018 12:45	WG1192384
2,4,6-Trichlorophenol	U		0.297	10.0	1	11/08/2018 12:45	WG1192384
(S) 2-Fluorophenol	*33.9*			*10.0-120*		*11/08/2018 12:45*	WG1192384
(S) Phenol-d5	*19.4*			*10.0-120*		*11/08/2018 12:45*	WG1192384
(S) Nitrobenzene-d5	*46.1*			*10.0-127*		*11/08/2018 12:45*	WG1192384
(S) 2-Fluorobiphenyl	*45.8*			*10.0-130*		*11/08/2018 12:45*	WG1192384
(S) 2,4,6-Tribromophenol	*44.3*			*10.0-155*		*11/08/2018 12:45*	WG1192384
(S) p-Terphenyl-d14	*59.6*			*10.0-128*		*11/08/2018 12:45*	WG1192384

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Semi-Volatile Organic Compounds (HPLC) by Method 8330B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2,4-Dinitrotoluene	U		0.142	2.00	1	11/06/2018 21:02	WG1191730
4-Nitrotoluene (4-NT)	U		0.125	2.00	1	11/06/2018 21:02	WG1191730
Nitrobenzene	U		0.170	0.500	1	11/06/2018 21:02	WG1191730
1,3,5-Trinitrobenzene	U		0.0979	0.500	1	11/06/2018 21:02	WG1191730
1,3-Dinitrobenzene	U		0.177	0.500	1	11/06/2018 21:02	WG1191730
(S) 1,3-Dimethyl-2-NB	*82.6*			*57.0-120*		*11/06/2018 21:02*	WG1191730

Semi Volatile Organic Compounds (GC/MS) by Method 8270 C-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.00800	0.0500	1	11/06/2018 20:21	WG1191718
Acenaphthene	U		0.0100	0.0500	1	11/06/2018 20:21	WG1191718
Acenaphthylene	U		0.00700	0.0500	1	11/06/2018 20:21	WG1191718
Benzo(a)anthracene	U		0.00830	0.0500	1	11/06/2018 20:21	WG1191718
Benzo(a)pyrene	U		0.0158	0.0500	1	11/06/2018 20:21	WG1191718
Benzo(b)fluoranthene	U		0.00212	0.0500	1	11/06/2018 20:21	WG1191718
Benzo(g,h,i)perylene	U		0.00227	0.0500	1	11/06/2018 20:21	WG1191718
Benzo(k)fluoranthene	U		0.0255	0.0500	1	11/06/2018 20:21	WG1191718
Chrysene	U		0.0144	0.0500	1	11/06/2018 20:21	WG1191718
Dibenz(a,h)anthracene	U		0.00454	0.0500	1	11/06/2018 20:21	WG1191718
Fluoranthene	U		0.0165	0.0500	1	11/06/2018 20:21	WG1191718
Fluorene	U		0.00898	0.0500	1	11/06/2018 20:21	WG1191718
Indeno(1,2,3-cd)pyrene	U		0.00739	0.0500	1	11/06/2018 20:21	WG1191718
Naphthalene	0.0293	B J	0.0120	0.250	1	11/06/2018 20:21	WG1191718
Phenanthrene	U		0.0184	0.0500	1	11/06/2018 20:21	WG1191718
Pyrene	U		0.0155	0.0500	1	11/06/2018 20:21	WG1191718
2-Methylnaphthalene	U		0.0155	0.250	1	11/06/2018 20:21	WG1191718
(S) Nitrobenzene-d5	*108*			*11.0-135*		*11/06/2018 20:21*	WG1191718
(S) 2-Fluorobiphenyl	*95.0*			*32.0-120*		*11/06/2018 20:21*	WG1191718
(S) p-Terphenyl-d14	*91.5*			*23.0-122*		*11/06/2018 20:21*	WG1191718

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetophenone	U		2.71	10.0	1	11/08/2018 13:11	WG1192384
Bis(2-chloroethyl)ether	U		1.62	10.0	1	11/08/2018 13:11	WG1192384
Bis(2-chloroisopropyl)ether	U		0.445	10.0	1	11/08/2018 13:11	WG1192384
4-Chloroaniline	U	J3	0.382	10.0	1	11/08/2018 13:11	WG1192384
3,3-Dichlorobenzidine	U		2.02	10.0	1	11/08/2018 13:11	WG1192384
Hexachloro-1,3-butadiene	U		0.329	10.0	1	11/08/2018 13:11	WG1192384
Hexachlorobenzene	U		0.341	1.00	1	11/08/2018 13:11	WG1192384
Hexachlorocyclopentadiene	U		2.33	10.0	1	11/08/2018 13:11	WG1192384
Hexachloroethane	U		0.365	10.0	1	11/08/2018 13:11	WG1192384
Isophorone	U		0.272	10.0	1	11/08/2018 13:11	WG1192384
Nitrobenzene	U		0.367	10.0	1	11/08/2018 13:11	WG1192384
n-Nitrosodiphenylamine	U		1.19	10.0	1	11/08/2018 13:11	WG1192384
n-Nitrosodi-n-propylamine	U		0.403	10.0	1	11/08/2018 13:11	WG1192384
Benzylbutyl phthalate	U		0.275	3.00	1	11/08/2018 13:11	WG1192384
Bis(2-ethylhexyl)phthalate	U		0.709	3.00	1	11/08/2018 13:11	WG1192384
Di-n-butyl phthalate	U		0.266	3.00	1	11/08/2018 13:11	WG1192384
Diethyl phthalate	U		0.282	3.00	1	11/08/2018 13:11	WG1192384
Dimethyl phthalate	U		0.283	3.00	1	11/08/2018 13:11	WG1192384
Di-n-octyl phthalate	U		0.278	3.00	1	11/08/2018 13:11	WG1192384
2,4-Dinitrotoluene	U		1.65	10.0	1	11/08/2018 13:11	WG1192384
2-Chlorophenol	U		0.283	10.0	1	11/08/2018 13:11	WG1192384

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2,4-Dichlorophenol	U		0.284	10.0	1	11/08/2018 13:11	WG1192384
2,4-Dimethylphenol	U		0.624	10.0	1	11/08/2018 13:11	WG1192384
2,4-Dinitrophenol	U		3.25	10.0	1	11/08/2018 13:11	WG1192384
3&4-Methyl Phenol	U		0.266	10.0	1	11/08/2018 13:11	WG1192384
2-Nitrophenol	U		0.320	10.0	1	11/08/2018 13:11	WG1192384
4-Nitrophenol	U		2.01	10.0	1	11/08/2018 13:11	WG1192384
Pentachlorophenol	U		0.313	10.0	1	11/08/2018 13:11	WG1192384
Phenol	U		0.334	10.0	1	11/08/2018 13:11	WG1192384
2,4,5-Trichlorophenol	U		0.236	10.0	1	11/08/2018 13:11	WG1192384
2,4,6-Trichlorophenol	U		0.297	10.0	1	11/08/2018 13:11	WG1192384
(S) 2-Fluorophenol	*28.4*			*10.0-120*		*11/08/2018 13:11*	WG1192384
(S) Phenol-d5	*16.0*			*10.0-120*		*11/08/2018 13:11*	WG1192384
(S) Nitrobenzene-d5	*48.3*			*10.0-127*		*11/08/2018 13:11*	WG1192384
(S) 2-Fluorobiphenyl	*50.5*			*10.0-130*		*11/08/2018 13:11*	WG1192384
(S) 2,4,6-Tribromophenol	*44.3*			*10.0-155*		*11/08/2018 13:11*	WG1192384
(S) p-Terphenyl-d14	*59.4*			*10.0-128*		*11/08/2018 13:11*	WG1192384

Method Blank (MB)

(MB) R3357657-1 11/06/18 16:50

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
2,4-Dinitrotoluene	U		0.142	2.00
4-Nitrotoluene (4-NT)	U		0.125	2.00
Nitrobenzene	U		0.170	0.500
1,3,5-Trinitrobenzene	U		0.0979	0.500
1,3-Dinitrobenzene	U		0.177	0.500
(S) 1,3-Dimethyl-2-NB	*85.8*			*57.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3357657-2 11/06/18 17:18 • (LCSD) R3357657-3 11/06/18 17:46

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2,4-Dinitrotoluene	20.0	18.4	18.8	92.0	94.0	80.0-120			2.15	20
4-Nitrotoluene (4-NT)	20.0	18.1	18.1	90.5	90.5	80.0-120			0.000	20
Nitrobenzene	20.0	18.9	19.2	94.5	96.0	80.0-120			1.57	20
1,3,5-Trinitrobenzene	20.0	19.5	19.6	97.5	98.0	80.0-120			0.512	20
1,3-Dinitrobenzene	20.0	18.7	18.9	93.5	94.5	80.0-120			1.06	20
(S) 1,3-Dimethyl-2-NB				*87.9*	*87.8*	*57.0-120*				

L1040667-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1040667-01 11/06/18 19:10 • (MS) R3357657-4 11/06/18 18:14 • (MSD) R3357657-5 11/06/18 18:42

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
2,4-Dinitrotoluene	20.0	U	18.2	17.4	91.0	87.0	1	75.0-120			4.49	20
4-Nitrotoluene (4-NT)	20.0	U	18.0	17.6	90.0	88.0	1	29.0-160			2.25	20
Nitrobenzene	20.0	U	18.4	18.3	92.0	91.5	1	78.0-120			0.545	20
1,3,5-Trinitrobenzene	20.0	U	19.4	19.2	97.0	96.0	1	64.0-128			1.04	20
1,3-Dinitrobenzene	20.0	U	18.3	18.3	91.5	91.5	1	75.0-123			0.000	20
(S) 1,3-Dimethyl-2-NB					*83.7*	*82.3*		*57.0-120*				

Method Blank (MB)

(MB) R3357562-3 11/06/18 17:48

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.00800	0.0500
Acenaphthene	U		0.0100	0.0500
Acenaphthylene	U		0.00700	0.0500
Benzo(a)anthracene	U		0.00830	0.0500
Benzo(a)pyrene	U		0.0158	0.0500
Benzo(b)fluoranthene	U		0.00212	0.0500
Benzo(g,h,i)perylene	U		0.00227	0.0500
Benzo(k)fluoranthene	U		0.0255	0.0500
Chrysene	U		0.0144	0.0500
Dibenz(a,h)anthracene	U		0.00454	0.0500
Fluoranthene	U		0.0165	0.0500
Fluorene	U		0.00898	0.0500
Indeno(1,2,3-cd)pyrene	U		0.00739	0.0500
Naphthalene	0.0278	J	0.0120	0.250
Phenanthrene	U		0.0184	0.0500
Pyrene	U		0.0155	0.0500
2-Methylnaphthalene	U		0.0155	0.250
(S) Nitrobenzene-d5	*114*			*11.0-135*
(S) 2-Fluorobiphenyl	*102*			*32.0-120*
(S) p-Terphenyl-d14	*107*			*23.0-122*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3357562-1 11/06/18 17:04 • (LCSD) R3357562-2 11/06/18 17:26

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	2.00	1.94	1.86	97.0	93.0	43.0-127			4.21	20
Acenaphthene	2.00	1.85	1.74	92.5	87.0	42.0-120			6.13	20
Acenaphthylene	2.00	1.89	1.75	94.5	87.5	43.0-120			7.69	20
Benzo(a)anthracene	2.00	2.01	1.82	100	91.0	46.0-120			9.92	20
Benzo(a)pyrene	2.00	1.98	1.82	99.0	91.0	44.0-122			8.42	20
Benzo(b)fluoranthene	2.00	2.10	1.89	105	94.5	43.0-122			10.5	20
Benzo(g,h,i)perylene	2.00	2.17	2.03	108	102	25.0-137			6.67	23
Benzo(k)fluoranthene	2.00	2.02	1.97	101	98.5	39.0-128			2.51	22
Chrysene	2.00	2.07	1.94	103	97.0	42.0-129			6.48	20
Dibenz(a,h)anthracene	2.00	2.12	1.98	106	99.0	25.0-139			6.83	22
Fluoranthene	2.00	2.19	2.25	109	112	48.0-131			2.70	20
Fluorene	2.00	1.90	1.75	95.0	87.5	42.0-120			8.22	20
Indeno(1,2,3-cd)pyrene	2.00	2.16	2.01	108	100	37.0-133			7.19	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3357562-1 11/06/18 17:04 • (LCSD) R3357562-2 11/06/18 17:26

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Naphthalene	2.00	1.87	1.65	93.5	82.5	30.0-120			12.5	22
Phenanthrene	2.00	1.89	1.82	94.5	91.0	42.0-120			3.77	20
Pyrene	2.00	1.88	1.75	94.0	87.5	38.0-124			7.16	20
2-Methylnaphthalene	2.00	1.79	1.58	89.5	79.0	40.0-120			12.5	20
(S) Nitrobenzene-d5				*113*	*106*	*11.0-135*				
(S) 2-Fluorobiphenyl				*98.5*	*88.5*	*32.0-120*				
(S) p-Terphenyl-d14				*108*	*99.5*	*23.0-122*				

L1040667-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1040667-01 11/06/18 18:10 • (MS) R3357562-4 11/06/18 18:32 • (MSD) R3357562-5 11/06/18 18:53

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	2.00	U	1.78	1.74	89.0	91.6	1	28.0-120			2.27	25
Acenaphthene	2.00	U	1.66	1.57	83.0	82.6	1	16.0-120			5.57	25
Acenaphthylene	2.00	U	1.80	1.64	90.0	86.3	1	16.0-121			9.30	26
Benzo(a)anthracene	2.00	U	1.85	1.78	92.5	93.7	1	19.0-125			3.86	26
Benzo(a)pyrene	2.00	U	1.52	1.54	76.0	81.1	1	10.0-126			1.31	32
Benzo(b)fluoranthene	2.00	U	1.60	1.64	80.0	86.3	1	10.0-125			2.47	36
Benzo(g,h,i)perylene	2.00	U	0.819	0.972	40.9	51.2	1	10.0-128			17.1	37
Benzo(k)fluoranthene	2.00	U	1.61	1.61	80.5	84.7	1	10.0-124			0.000	32
Chrysene	2.00	U	1.94	1.86	97.0	97.9	1	18.0-127			4.21	26
Dibenz(a,h)anthracene	2.00	U	0.847	0.943	42.3	49.6	1	10.0-132			10.7	43
Fluoranthene	2.00	U	2.05	1.96	102	103	1	37.0-122			4.49	23
Fluorene	2.00	U	1.75	1.65	87.5	86.8	1	20.0-120			5.88	26
Indeno(1,2,3-cd)pyrene	2.00	U	0.912	1.02	45.6	53.7	1	10.0-130			11.2	38
Naphthalene	2.00	0.0295	1.62	1.68	79.5	86.9	1	14.0-120			3.64	20
Phenanthrene	2.00	U	1.74	1.68	87.0	88.4	1	26.0-120			3.51	24
Pyrene	2.00	U	1.79	1.70	89.5	89.5	1	29.0-120			5.16	24
2-Methylnaphthalene	2.00	U	1.58	1.61	79.0	84.7	1	10.0-143			1.88	24
(S) Nitrobenzene-d5					*96.5*	*105*		*11.0-135*				
(S) 2-Fluorobiphenyl					*91.0*	*91.6*		*32.0-120*				
(S) p-Terphenyl-d14					*99.0*	*101*		*23.0-122*				

Method Blank (MB)

(MB) R3358118-3 11/08/18 09:14

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetophenone	U		2.71	10.0
Bis(2-chloroethyl)ether	U		1.62	10.0
Bis(2-chloroisopropyl)ether	U		0.445	10.0
4-Chloroaniline	U		0.382	10.0
3,3-Dichlorobenzidine	U		2.02	10.0
2,4-Dinitrotoluene	U		1.65	10.0
Hexachlorobenzene	U		0.341	1.00
Hexachloro-1,3-butadiene	U		0.329	10.0
Hexachlorocyclopentadiene	U		2.33	10.0
Hexachloroethane	U		0.365	10.0
Isophorone	U		0.272	10.0
Nitrobenzene	U		0.367	10.0
n-Nitrosodiphenylamine	U		1.19	10.0
n-Nitrosodi-n-propylamine	U		0.403	10.0
Benzylbutyl phthalate	U		0.275	3.00
Bis(2-ethylhexyl)phthalate	U		0.709	3.00
Di-n-butyl phthalate	U		0.266	3.00
Diethyl phthalate	U		0.282	3.00
Dimethyl phthalate	U		0.283	3.00
Di-n-octyl phthalate	U		0.278	3.00
2-Chlorophenol	U		0.283	10.0
2-Nitrophenol	U		0.320	10.0
4-Nitrophenol	U		2.01	10.0
Pentachlorophenol	U		0.313	10.0
Phenol	U		0.334	10.0
2,4,6-Trichlorophenol	U		0.297	10.0
2,4-Dichlorophenol	U		0.284	10.0
2,4-Dimethylphenol	U		0.624	10.0
3&4-Methyl Phenol	U		0.266	10.0
2,4-Dinitrophenol	U		3.25	10.0
2,4,5-Trichlorophenol	U		0.236	10.0
(S) Nitrobenzene-d5	*30.1*			*10.0-127*
(S) 2-Fluorobiphenyl	*31.7*			*10.0-130*
(S) p-Terphenyl-d14	*54.2*			*10.0-128*
(S) Phenol-d5	*9.35*	J2		*10.0-120*
(S) 2-Fluorophenol	*16.5*			*10.0-120*
(S) 2,4,6-Tribromophenol	*25.8*			*10.0-155*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3358118-1 11/08/18 08:26 • (LCSD) R3358118-2 11/08/18 08:50

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bis(2-chloroethyl)ether	50.0	20.1	15.0	40.2	30.0	23.0-120			29.1	33
Bis(2-chloroisopropyl)ether	50.0	19.5	15.0	39.0	30.0	28.0-120			26.1	31
3,3-Dichlorobenzidine	50.0	26.6	19.0	53.2	38.0	44.0-120		J3 J4	33.3	20
2,4-Dinitrotoluene	50.0	29.4	21.3	58.8	42.6	49.0-124		J3 J4	32.0	20
Hexachlorobenzene	50.0	28.0	20.4	56.0	40.8	44.0-120		J3 J4	31.4	20
Acetophenone	50.0	23.1	16.8	46.2	33.6	29.0-120		J3	31.6	28
Hexachloro-1,3-butadiene	50.0	15.0	11.8	30.0	23.6	19.0-120			23.9	32
Hexachlorocyclopentadiene	50.0	14.3	10.5	28.6	21.0	15.0-120			30.6	31
Hexachloroethane	50.0	15.5	12.2	31.0	24.4	15.0-120			23.8	37
Isophorone	50.0	22.2	17.0	44.4	34.0	36.0-120		J3 J4	26.5	23
Nitrobenzene	50.0	19.5	15.0	39.0	30.0	27.0-120			26.1	29
n-Nitrosodiphenylamine	50.0	26.8	19.3	53.6	38.6	47.0-120		J3 J4	32.5	20
n-Nitrosodi-n-propylamine	50.0	22.0	16.1	44.0	32.2	31.0-120		J3	31.0	28
Benzylbutyl phthalate	50.0	30.4	22.6	60.8	45.2	43.0-121		J3	29.4	20
Bis(2-ethylhexyl)phthalate	50.0	31.8	23.6	63.6	47.2	43.0-122		J3	29.6	20
Di-n-butyl phthalate	50.0	33.6	25.0	67.2	50.0	49.0-121		J3	29.4	20
Diethyl phthalate	50.0	32.3	23.4	64.6	46.8	48.0-122		J3 J4	32.0	20
Dimethyl phthalate	50.0	30.3	22.1	60.6	44.2	48.0-120		J3 J4	31.3	20
Di-n-octyl phthalate	50.0	31.8	24.4	63.6	48.8	42.0-125		J3	26.3	20
4-Chloroaniline	50.0	23.4	18.5	46.8	37.0	25.0-120			23.4	25
2-Chlorophenol	50.0	18.2	13.0	36.4	26.0	25.0-120			33.3	35
2,4-Dichlorophenol	50.0	20.5	15.0	41.0	30.0	36.0-120		J3 J4	31.0	26
2,4-Dimethylphenol	50.0	19.5	14.3	39.0	28.6	33.0-120		J3 J4	30.8	26
2,4-Dinitrophenol	50.0	19.6	13.8	39.2	27.6	10.0-120			34.7	39
2-Nitrophenol	50.0	20.7	15.4	41.4	30.8	31.0-120		J3 J4	29.4	29
4-Nitrophenol	50.0	12.7	7.28	25.4	14.6	10.0-120		J3	54.3	33
Pentachlorophenol	50.0	14.6	8.97	29.2	17.9	23.0-120		J3 J4	47.8	25
Phenol	50.0	6.68	4.15	13.4	8.30	10.0-120		J3 J4	46.7	36
2,4,6-Trichlorophenol	50.0	23.3	16.4	46.6	32.8	42.0-120		J3 J4	34.8	23
3&4-Methyl Phenol	50.0	17.4	11.3	34.8	22.6	31.0-120		J3 J4	42.5	30
2,4,5-Trichlorophenol	50.0	24.9	17.4	49.8	34.8	44.0-120		J3 J4	35.5	22
(S) Nitrobenzene-d5				*37.3*	*28.3*	*10.0-127*				
(S) 2-Fluorobiphenyl				*43.3*	*30.9*	*10.0-130*				
(S) p-Terphenyl-d14				*55.1*	*41.7*	*10.0-128*				
(S) Phenol-d5				*13.0*	*7.90*	*10.0-120*		J2		
(S) 2-Fluorophenol				*22.6*	*14.1*	*10.0-120*				
(S) 2,4,6-Tribromophenol				*51.5*	*36.3*	*10.0-155*				

L1040532-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1040532-09 11/08/18 14:21 • (MS) R3358118-4 11/08/18 14:44 • (MSD) R3358118-5 11/08/18 15:08

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bis(2-chloroethyl)ether	50.0	U	18.2	21.5	36.4	43.0	1	14.0-120			16.6	33
Bis(2-chloroisopropyl)ether	50.0	U	18.0	21.1	36.0	42.2	1	18.0-120			15.9	34
3,3-Dichlorobenzidine	50.0	U	23.7	23.1	47.4	46.2	1	10.0-134			2.56	30
2,4-Dinitrotoluene	50.0	U	28.5	26.7	57.0	53.4	1	39.0-125			6.52	25
Hexachlorobenzene	50.0	U	26.8	24.8	53.6	49.6	1	35.0-122			7.75	24
Hexachloro-1,3-butadiene	50.0	U	16.0	18.3	32.0	36.6	1	12.0-120			13.4	34
Hexachlorocyclopentadiene	50.0	U	14.4	17.8	28.8	35.6	1	10.0-120			21.1	33
Hexachloroethane	50.0	U	16.7	19.1	33.4	38.2	1	10.0-120			13.4	40
Isophorone	50.0	U	19.9	21.1	39.8	42.2	1	21.0-120			5.85	27
Nitrobenzene	50.0	U	17.7	20.2	35.4	40.4	1	12.0-120			13.2	30
n-Nitrosodiphenylamine	50.0	U	24.4	23.2	48.8	46.4	1	37.0-120			5.04	24
n-Nitrosodi-n-propylamine	50.0	U	19.3	22.0	38.6	44.0	1	16.0-120			13.1	30
Benzylbutyl phthalate	50.0	U	28.2	26.4	56.4	52.8	1	34.0-126			6.59	24
Bis(2-ethylhexyl)phthalate	50.0	U	31.0	27.9	62.0	55.8	1	33.0-126			10.5	25
Di-n-butyl phthalate	50.0	U	33.1	30.3	66.2	60.6	1	35.0-128			8.83	23
Diethyl phthalate	50.0	U	31.5	28.7	63.0	57.4	1	39.0-125			9.30	24
Dimethyl phthalate	50.0	U	29.1	27.9	58.2	55.8	1	37.0-120			4.21	24
Di-n-octyl phthalate	50.0	U	30.8	27.6	61.6	55.2	1	25.0-135			11.0	26
Acetophenone	50.0		20.3	23.3	40.6	46.6	1	20.0-120			13.8	35
2-Chlorophenol	50.0	U	16.6	19.2	33.2	38.4	1	18.0-120			14.5	34
2,4-Dichlorophenol	50.0	U	18.3	20.9	36.6	41.8	1	19.0-120			13.3	27
2,4-Dimethylphenol	50.0	U	17.0	17.5	34.0	35.0	1	15.0-120			2.90	28
2,4-Dinitrophenol	50.0	U	18.7	20.5	37.4	41.0	1	10.0-120			9.18	40
2-Nitrophenol	50.0	U	18.7	21.6	37.4	43.2	1	20.0-120			14.4	30
4-Nitrophenol	50.0	U	12.1	10.8	24.2	21.6	1	10.0-120			11.4	40
Pentachlorophenol	50.0	U	13.2	14.6	26.4	29.2	1	10.0-128			10.1	37
Phenol	50.0	1.46	7.11	6.87	11.3	10.8	1	10.0-120			3.43	40
4-Chloroaniline	50.0		22.1	21.1	44.2	42.2	1	10.0-120			4.63	31
2,4,6-Trichlorophenol	50.0	U	20.9	23.2	41.8	46.4	1	26.0-120			10.4	31
3&4-Methyl Phenol	50.0		14.7	16.5	29.4	33.0	1	10.0-120			11.5	36
2,4,5-Trichlorophenol	50.0		22.1	23.7	44.2	47.4	1	33.0-120			6.99	31
(S) Nitrobenzene-d5					*33.5*	*39.7*		*10.0-127*				
(S) 2-Fluorobiphenyl					*37.7*	*43.9*		*10.0-130*				
(S) p-Terphenyl-d14					*53.0*	*47.0*		*10.0-128*				
(S) Phenol-d5					*11.2*	*13.1*		*10.0-120*				
(S) 2-Fluorophenol					*19.5*	*22.4*		*10.0-120*				
(S) 2,4,6-Tribromophenol					*49.4*	*51.0*		*10.0-155*				

L1040667-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1040667-01 11/08/18 16:19 • (MS) R3358118-6 11/08/18 16:42 • (MSD) R3358118-7 11/08/18 17:06

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bis(2-chloroethyl)ether	50.0	U	16.4	20.4	32.8	40.8	1	14.0-120			21.7	33
Bis(2-chloroisopropyl)ether	50.0	U	16.5	20.2	33.0	40.4	1	18.0-120			20.2	34
3,3-Dichlorobenzidine	50.0	U	20.0	22.4	40.0	44.8	1	10.0-134			11.3	30
2,4-Dinitrotoluene	50.0	U	24.1	29.1	48.2	58.2	1	39.0-125			18.8	25
Hexachlorobenzene	50.0	U	22.8	27.3	45.6	54.6	1	35.0-122			18.0	24
Hexachloro-1,3-butadiene	50.0	U	15.0	18.8	30.0	37.6	1	12.0-120			22.5	34
Hexachlorocyclopentadiene	50.0	U	13.2	18.5	26.4	37.0	1	10.0-120		J3	33.4	33
Hexachloroethane	50.0	U	14.9	18.8	29.8	37.6	1	10.0-120			23.1	40
Isophorone	50.0	U	18.0	21.6	36.0	43.2	1	21.0-120			18.2	27
Nitrobenzene	50.0	U	16.4	20.0	32.8	40.0	1	12.0-120			19.8	30
n-Nitrosodiphenylamine	50.0	U	20.9	23.2	41.8	46.4	1	37.0-120			10.4	24
n-Nitrosodi-n-propylamine	50.0	U	17.4	21.5	34.8	43.0	1	16.0-120			21.1	30
Benzylbutyl phthalate	50.0	U	24.6	31.0	49.2	62.0	1	34.0-126			23.0	24
Bis(2-ethylhexyl)phthalate	50.0	U	25.8	30.1	51.6	60.2	1	33.0-126			15.4	25
Di-n-butyl phthalate	50.0	U	27.8	33.7	55.6	67.4	1	35.0-128			19.2	23
Diethyl phthalate	50.0	U	26.5	31.9	53.0	63.8	1	39.0-125			18.5	24
Dimethyl phthalate	50.0	U	25.0	30.0	50.0	60.0	1	37.0-120			18.2	24
Di-n-octyl phthalate	50.0	U	25.8	30.7	51.6	61.4	1	25.0-135			17.3	26
Acetophenone	50.0	U	18.4	23.1	36.8	46.2	1	20.0-120			22.7	35
2-Chlorophenol	50.0	U	14.7	18.0	29.4	36.0	1	18.0-120			20.2	34
2,4-Dichlorophenol	50.0	U	16.7	20.7	33.4	41.4	1	19.0-120			21.4	27
2,4-Dimethylphenol	50.0	U	15.3	17.7	30.6	35.4	1	15.0-120			14.5	28
2,4-Dinitrophenol	50.0	U	16.8	22.5	33.6	45.0	1	10.0-120			29.0	40
2-Nitrophenol	50.0	U	17.3	21.6	34.6	43.2	1	20.0-120			22.1	30
4-Nitrophenol	50.0	U	9.85	13.5	19.7	27.0	1	10.0-120			31.3	40
Pentachlorophenol	50.0	U	12.3	16.4	24.6	32.8	1	10.0-128			28.6	37
Phenol	50.0	U	6.09	6.33	12.2	12.7	1	10.0-120			3.86	40
4-Chloroaniline	50.0	U	19.2	21.5	38.4	43.0	1	10.0-120			11.3	31
2,4,6-Trichlorophenol	50.0	U	18.8	24.2	37.6	48.4	1	26.0-120			25.1	31
3&4-Methyl Phenol	50.0	U	13.1	16.0	26.2	32.0	1	10.0-120			19.9	36
2,4,5-Trichlorophenol	50.0	U	20.2	25.9	40.4	51.8	1	33.0-120			24.7	31
(S) Nitrobenzene-d5					*32.3*	*38.9*		*10.0-127*				
(S) 2-Fluorobiphenyl					*34.3*	*43.1*		*10.0-130*				
(S) p-Terphenyl-d14					*44.3*	*52.6*		*10.0-128*				
(S) Phenol-d5					*10.2*	*12.0*		*10.0-120*				
(S) 2-Fluorophenol					*16.6*	*20.5*		*10.0-120*				
(S) 2,4,6-Tribromophenol					*43.0*	*53.5*		*10.0-155*				

Method Blank (MB)

(MB) R3358228-3 11/08/18 09:24

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetophenone	U		2.71	10.0
Bis(2-chloroethyl)ether	U		1.62	10.0
Bis(2-chloroisopropyl)ether	U		0.445	10.0
4-Chloroaniline	U		0.382	10.0
3,3-Dichlorobenzidine	U		2.02	10.0
2,4-Dinitrotoluene	U		1.65	10.0
Hexachlorobenzene	U		0.341	1.00
Hexachloro-1,3-butadiene	U		0.329	10.0
Hexachlorocyclopentadiene	U		2.33	10.0
Hexachloroethane	U		0.365	10.0
Benzylbutyl phthalate	U		0.275	3.00
Bis(2-ethylhexyl)phthalate	U		0.709	3.00
Isophorone	U		0.272	10.0
Di-n-butyl phthalate	U		0.266	3.00
Diethyl phthalate	U		0.282	3.00
Dimethyl phthalate	U		0.283	3.00
Di-n-octyl phthalate	U		0.278	3.00
Nitrobenzene	U		0.367	10.0
n-Nitrosodiphenylamine	U		1.19	10.0
n-Nitrosodi-n-propylamine	U		0.403	10.0
2-Chlorophenol	U		0.283	10.0
3&4-Methyl Phenol	U		0.266	10.0
2,4-Dichlorophenol	U		0.284	10.0
2,4-Dimethylphenol	U		0.624	10.0
2,4-Dinitrophenol	U		3.25	10.0
2-Nitrophenol	U		0.320	10.0
4-Nitrophenol	U		2.01	10.0
Pentachlorophenol	U		0.313	10.0
Phenol	U		0.334	10.0
2,4,5-Trichlorophenol	U		0.236	10.0
2,4,6-Trichlorophenol	U		0.297	10.0
(S) Nitrobenzene-d5	*38.7*			*10.0-127*
(S) 2-Fluorobiphenyl	*42.4*			*10.0-130*
(S) p-Terphenyl-d14	*56.1*			*10.0-128*
(S) Phenol-d5	*13.2*			*10.0-120*
(S) 2-Fluorophenol	*23.9*			*10.0-120*
(S) 2,4,6-Tribromophenol	*29.7*			*10.0-155*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3358228-1 11/08/18 08:34 • (LCSD) R3358228-2 11/08/18 08:59

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetophenone	50.0	26.6	26.9	53.2	53.8	29.0-120			1.12	28
Benzylbutyl phthalate	50.0	28.3	28.4	56.6	56.8	43.0-121			0.353	20
Bis(2-ethylhexyl)phthalate	50.0	28.5	29.1	57.0	58.2	43.0-122			2.08	20
Di-n-butyl phthalate	50.0	27.9	30.1	55.8	60.2	49.0-121			7.59	20
Bis(2-chloroethyl)ether	50.0	25.9	25.3	51.8	50.6	23.0-120			2.34	33
Diethyl phthalate	50.0	31.7	32.2	63.4	64.4	48.0-122			1.56	20
Bis(2-chloroisopropyl)ether	50.0	25.3	25.0	50.6	50.0	28.0-120			1.19	31
Dimethyl phthalate	50.0	30.6	31.7	61.2	63.4	48.0-120			3.53	20
Di-n-octyl phthalate	50.0	27.1	28.0	54.2	56.0	42.0-125			3.27	20
4-Chloroaniline	50.0	13.7	20.0	27.4	40.0	25.0-120		J3	37.4	25
3,3-Dichlorobenzidine	50.0	31.1	30.7	62.2	61.4	44.0-120			1.29	20
2,4-Dinitrotoluene	50.0	30.3	31.0	60.6	62.0	49.0-124			2.28	20
Hexachlorobenzene	50.0	30.0	31.9	60.0	63.8	44.0-120			6.14	20
Hexachloro-1,3-butadiene	50.0	21.2	21.5	42.4	43.0	19.0-120			1.41	32
Hexachlorocyclopentadiene	50.0	22.3	21.3	44.6	42.6	15.0-120			4.59	31
Hexachloroethane	50.0	20.7	21.1	41.4	42.2	15.0-120			1.91	37
Isophorone	50.0	24.5	25.5	49.0	51.0	36.0-120			4.00	23
Nitrobenzene	50.0	23.4	23.4	46.8	46.8	27.0-120			0.000	29
n-Nitrosodiphenylamine	50.0	28.9	30.1	57.8	60.2	47.0-120			4.07	20
n-Nitrosodi-n-propylamine	50.0	26.3	26.2	52.6	52.4	31.0-120			0.381	28
2-Chlorophenol	50.0	23.6	22.5	47.2	45.0	25.0-120			4.77	35
3&4-Methyl Phenol	50.0	23.8	22.1	47.6	44.2	31.0-120			7.41	30
2,4-Dichlorophenol	50.0	24.4	24.2	48.8	48.4	36.0-120			0.823	26
2,4-Dimethylphenol	50.0	23.5	22.6	47.0	45.2	33.0-120			3.90	26
2,4-Dinitrophenol	50.0	21.1	23.2	42.2	46.4	10.0-120			9.48	39
2-Nitrophenol	50.0	23.1	23.9	46.2	47.8	31.0-120			3.40	29
4-Nitrophenol	50.0	11.5	11.5	23.0	23.0	10.0-120			0.000	33
Pentachlorophenol	50.0	21.9	24.4	43.8	48.8	23.0-120			10.8	25
Phenol	50.0	10.5	9.40	21.0	18.8	10.0-120			11.1	36
2,4,5-Trichlorophenol	50.0	27.9	28.2	55.8	56.4	44.0-120			1.07	22
2,4,6-Trichlorophenol	50.0	26.7	27.3	53.4	54.6	42.0-120			2.22	23
(S) Nitrobenzene-d5				*44.8*	*46.4*	*10.0-127*				
(S) 2-Fluorobiphenyl				*52.4*	*50.2*	*10.0-130*				
(S) p-Terphenyl-d14				*59.6*	*59.9*	*10.0-128*				
(S) Phenol-d5				*19.3*	*18.6*	*10.0-120*				
(S) 2-Fluorophenol				*34.0*	*28.6*	*10.0-120*				
(S) 2,4,6-Tribromophenol				*51.5*	*56.5*	*10.0-155*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

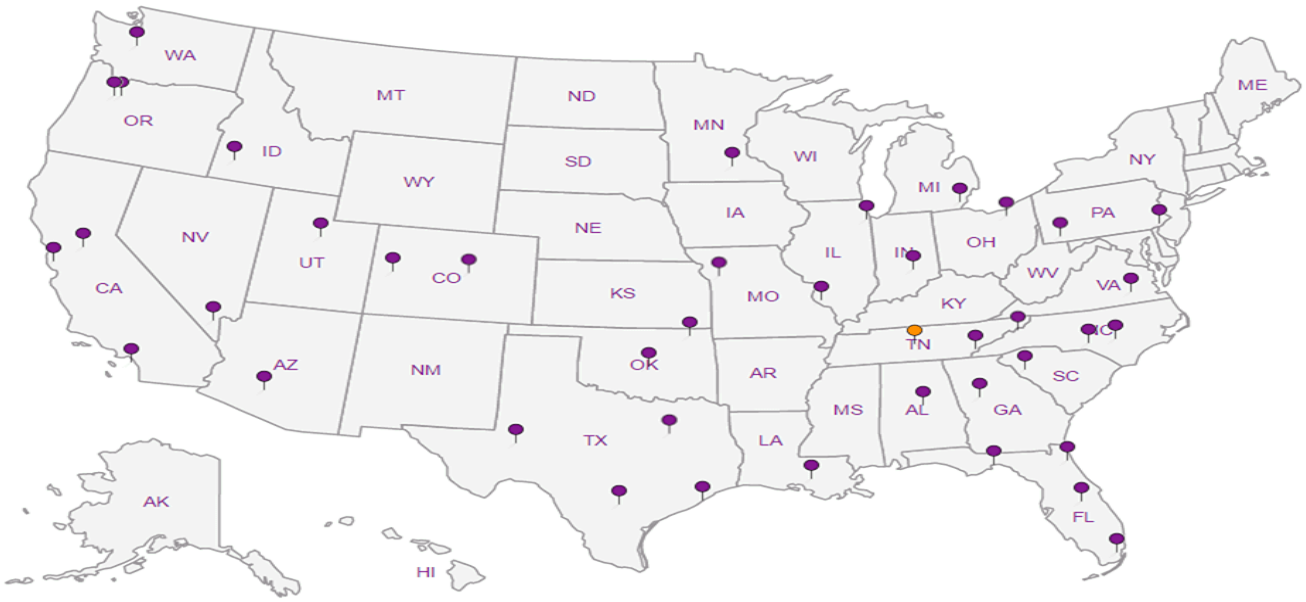
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



CHAIN-OF-CUSTODY / Analytical Request Document

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

E097

Pace Analytical
www.pacelabs.com

Page: 1 of 1

2176225

Section A Required Client Information: Norfolk Southern

Company: Wood E+IS
Address: 1075 Big Shanty Rd Ste 100 Kennesaw, GA 30144
Email To: judy.hartness@woodplc.com
Phone: 770-421-3400 Fax: 770-421-3486
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: Judy Hartness / Rhonda Quinn
Copy To:
Purchase Order No.:
Project Name: NS Former Cohn Property
Project Number: 6123140243

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #: 1962

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: GA

Section D Required Client Information

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

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

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: N	N	N	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Analysis Test: SVOC 8270	PAHs 8270SIM	Explosives 8330B		
1	MW-01-1018	WT	G			11/1/18	0950		6	X								X	X	X		L1040667-01
2	MW-01-1018MS	WT	G			11/1/18	0950		6	X								X	X	X		01
3	MW-01-1018MSD	WT	G			11/1/18	0950		6	X								X	X	X		01
4	MW-02-1018	WT	G			10/31/18	1820		6	X								X	X	X		02
5	EB-WG-1018	WT	G			11/1/18	1015		6	X								X	X	X		03
6	MW-04-1018	WT	G			11/1/18	1208		6	X								X	X	X		04
7	DUP-WG-01-1018	WT	G			11/1/18	1200		6	X								X	X	X		05
8	Temp Blank	WT	G			~~11/1/18~~																
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Analyze For COIs on attached Tables	Daniel Howard / Wood E+IS	11/1/18	1900	[signature]	11/2/18	0345

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

ORIGINAL 1.9 -0.1 1.7

RAD SCREEN: <0.5 mR/hr COCSI

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Daniel Howard / Ever Guillen

SIGNATURE of SAMPLER: Daniel Howard DATE Signed (MM/DD/YY): 11/1/18

*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.

rec 42 cont

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

Chain of Custody

Workorder: 2611086 **Workorder Name:** NS_Former Cohn Property **Results Requested By:** 11/9/2018

Report / Invoice To	Subcontract To
Sakina Mckenzie Pace Analytical Atlanta 110 Technology Parkway Peachtree Corners, GA 30092 Phone (770)734-4200 Email: sakina.mckenzie@pacelabs.com	P.O._____

State of Sample Origin: GA

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved						Requested Analysis: ect Ship_8270 Full, PAH 8330 Expl												LAB USE ONLY
1	MW-01-1018	11/1/2018 09:50	2611086007	Water							X												
2	MW-02-1018	10/31/2018 18:20	2611086008	Water							X												
3	EB-WG-1018	11/1/2018 10:15	2611086009	Water							X												
4	MW-04-1018	11/1/2018 12:08	2611086010	Water							X												
5	Dup-WG-01-1018	11/1/2018 12:00	2611086011	Water							X												

Transfers	Released By	Date/Time	Received By	Date/Time
1				
2				
3				

Comments

Cooler Temperature on Receipt _____ ℃ | **Custody Seal Y or N** | **Received on Ice Y or N** | **Samples Intact Y or N**

Pace National (TN)

PLACE IN COOLER WITH CHAIN-OF-CUSTODY

Delineation and Characterization Sampling and Analysis Plan - GROUND WATER - October 2018

Former Cohn Property - Norfolk Southern / Columbus, Muscogee Co, Georgia

Location ID	Sample ID	Parameter COIs Only	Method	Container; Preservation	No of Containers	Lab	QC Samples	Comments
MW-01	MW-01-1018	Metals, Hg	6020/7470	250 mL poly; HNO3 <pH2	1	Pace - Peachtree Corners, GA	Collect MS/MSD	See Table 1
		PCBs	8082A	1 x 1 L amber glass; cool to 6°C	3			See Table 4
		VOCs	8260	3 x 40 mL VOA; HCl <pH2; cool to 6°C	9			See Table 2
		SVOCs	8270	2 x 100 mL amber glass; cool to 6°C	6	Pace National-Mt Julliet, TN		See Table 3
		PAHs	8270 SIM	2 x 100 mL amber glass; cool to 6°C	6			See Table 3a
		Explosives	8330B	2 x 1 L amber glass; cool to 6°C	6			See Table 5
MW-02	MW-02-1018	Metals, Hg	6020/7470	250 mL poly; HNO3 <pH2	1	Pace - Peachtree Corners, GA		See Table 1
		PCBs	8082A	1 x 1 L amber glass; cool to 6°C	2			See Table 4
		VOCs	8260	3 x 40 mL VOA; HCl <pH2; cool to 6°C	3			See Table 2
		SVOCs	8270	2 x 100 mL amber glass; cool to 6°C	2	Pace National-Mt Julliet, TN		See Table 3
		PAHs	8270 SIM	2 x 100 mL amber glass; cool to 6°C	2			See Table 3a
		Explosives	8330B	2 x 1 L amber glass; cool to 6°C	2			See Table 5
MW-03	MW-03-1018	Metals, Hg	6020/7470	250 mL poly; HNO3 <pH2	1	Pace - Peachtree Corners, GA		See Table 1
		PCBs	8082A	1 x 1 L amber glass; cool to 6°C	2			See Table 4
		VOCs	8260	3 x 40 mL VOA; HCl <pH2; cool to 6°C	3			See Table 2
		SVOCs	8270	2 x 100 mL amber glass; cool to 6°C	2	Pace National-Mt Julliet, TN		See Table 3
		PAHs	8270 SIM	2 x 100 mL amber glass; cool to 6°C	2			See Table 3a
		Explosives	8330B	2 x 1 L amber glass; cool to 6°C	2			See Table 5
MW-04	MW-04-1018	Metals, Hg	6020/7470	250 mL poly; HNO3 <pH2	1	Pace - Peachtree Corners, GA		See Table 1
		PCBs	8082A	1 x 1 L amber glass; cool to 6°C	2			See Table 4
		VOCs	8260	3 x 40 mL VOA; HCl <pH2; cool to 6°C	3			See Table 2
		SVOCs	8270	2 x 100 mL amber glass; cool to 6°C	2	Pace National-Mt Julliet, TN		See Table 3
		PAHs	8270 SIM	2 x 100 mL amber glass; cool to 6°C	2			See Table 3a
		Explosives	8330B	2 x 1 L amber glass; cool to 6°C	2			See Table 5
Field QC								
MW-XX	DUP-WG-01-1018	Metals, Hg	6020/7470	250 mL poly; HNO3 <pH2	1	Pace - Peachtree Corners, GA	Dup of MW-XX	See Table 1
		PCBs	8082A	1 x 1 L amber glass; cool to 6°C	2			See Table 4
		VOCs	8260	3 x 40 mL VOA; HCl <pH2; cool to 6°C	3			See Table 2
		SVOCs	8270	2 x 100 mL amber glass; cool to 6°C	2	Pace National-Mt Julliet, TN		See Table 3
		PAHs	8270 SIM	2 x 100 mL amber glass; cool to 6°C	2			See Table 3a
		Explosives	8330B	2 x 1 L amber glass; cool to 6°C	2			See Table 5
EB	EB-WG-1018	Metals, Hg	6020/7470	250 mL poly; HNO3 <pH2	1	Pace - Peachtree Corners, GA	equipment blank	See Table 1
		PCBs	8082A	1 x 1 L amber glass; cool to 6°C	2			See Table 4
		VOCs	8260	3 x 40 mL VOA; HCl <pH2; cool to 6°C	3			See Table 2
		SVOCs	8270	2 x 100 mL amber glass; cool to 6°C	2	Pace National-Mt Julliet, TN		See Table 3
		PAHs	8270 SIM	2 x 100 mL amber glass; cool to 6°C	2			See Table 3a
		Explosives	8330B	2 x 1 L amber glass; cool to 6°C	2			See Table 5
TB	TB-WG-01-1018	VOCs	8260	40 mL VOA; HCl <pH2; cool to 6°C	2	Pace - Peachtree Corners, GA	trip blank	See Table 2
TB	TB-WG-02-1018	VOCs	8260	40 mL VOA; HCl <pH2; cool to 6°C	2	Pace - Peachtree Corners, GA	trip blank	See Table 2

Notes:

Project COIs to be analyzed per method; see tables

1.8 -0.1 1.7 Al COCSE

RAD SCREEN: <0.5 mR/hr

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TABLE 3 SVOCS

GC/MS Semivolatiles SW-846 8270D	CAS Number	Laboratory Quantitation Limit (ug/L)
Acetophenone	98-86-2	1
Butylbenzylphthalate	85-68-7	5
Di-n-butylphthalate	84-74-2	5
4-Chloroaniline	106-47-8	4
bis(2-Chloroethyl)ether	111-44-4	1
2-Chlorophenol	95-57-8	1
2,2'-oxybis(1-Chloropropane)	108-60-1	1
Bis(2-chloroisopropyl) ether	39638-32-9	
2,2'-Oxybis(1-chloropropane)	108-60-1	
3,3'-Dichlorobenzidine	91-94-1	5
2,4-Dichlorophenol	120-83-2	1
Diethylphthalate	84-66-2	5
2,4-Dimethylphenol	105-67-9	1
Dimethylphthalate	131-11-3	5
2,4-Dinitrophenol	51-28-5	31
2,4-Dinitrotoluene	121-14-2	5
bis(2-Ethylhexyl)phthalate	117-81-7	5
Hexachlorobenzene	118-74-1	0.5
Hexachlorobutadiene	87-68-3	1
Hexachlorocyclopentadiene	77-47-4	16
Hexachloroethane	67-72-1	5
Isophorone	78-59-1	1
4-Methylphenol	106-44-5	1
3-Methylphenol		
Nitrobenzene	98-95-3	1
2-Nitrophenol	88-75-5	1
4-Nitrophenol	100-02-7	31
N-Nitroso-di-n-propylamine	621-64-7	1
N-Nitrosodiphenylamine	86-30-6	1
Di-n-octylphthalate	117-84-0	5
Pentachlorophenol	87-86-5	5
Phenol	108-95-2	1
2,4,5-Trichlorophenol	95-95-4	1
2,4,6-Trichlorophenol	88-06-2	1

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TABLE 3a PAHs by SIM

GC/MS Semivolatiles SW-846 8270D SIM	CAS Number	Laboratory Quantitation Limit (ug/L)
2-Methylnaphthalene	91-57-6	0.052
Acenaphthene	83-32-9	0.052
Acenaphthylene	208-96-8	0.052
Anthracene	120-12-7	0.052
Benzo(a)anthracene	56-55-3	0.052
Benzo(a)pyrene	50-32-8	0.052
Benzo(b)fluoranthene	205-99-2	0.052
Benzo(g,h,i)perylene	191-24-2	0.052
Benzo(k)fluoranthene	207-08-9	0.052
Chrysene	218-01-9	0.052
Dibenz(a,h)anthracene	53-70-3	0.052
Fluoranthene	206-44-0	0.052
Fluorene	86-73-7	0.052
Indeno(1,2,3-cd)pyrene	193-39-5	0.052
Naphthalene	91-20-3	0.063
Phenanthrene	85-01-8	0.063
Pyrene	129-00-0	0.052

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TABLE 5 EXPLOSIVES

Explosives SW-846 8330B Rev 2 (Oct 2006)	CAS Number	Laboratory Quantitation Limit (ug/L)
1,3-Dinitrobenzene	99-65-0	0.6
2,4-Dinitrotoluene	121-14-2	0.6
Nitrobenzene	98-95-3	0.6
4-Nitrotoluene	99-99-0	0.6
1,3,5-Trinitrobenzene	99-35-4	0.6

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: PACEAGA	SDG#	L1040667	
Cooler Received/Opened On: 11/2/18	Temperature:	1.7	
Received By: Keteishia Cameron			
Signature: Kcameron			

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

GROUNDWATER SAMPLING SHEETS

PROJECT NAME:
NS - Former Cohn Property

Norfolk Southern - Former Cohn Property
Field Sampling Report

Project Number: 6123-14-0242

Wood Environment & Infrastructure Solutions, Inc.
1075 Big Shanty Rd. Ste 100
PHONE: (770) 421-3400 / FAX: (770) 421-3486

SAMPLING EVENT: ___1ST SEMI-ANNUAL; ___2ND SEMI-ANNUAL; X OTHER
WELL ID / SAMPLE ID: MW-01-1018

WELL MATERIAL: PVC
SAMPLE METHOD: Bladder Pump
QC: MS/MSD for 6020A, 7470A, 8082A, 8260C, 8270D, 8270SIM, 8330B

Pump Intake Set at (btoc): 38'
or
Tubing Inlet Set at (btoc):_____

WELL DIAMETER: 2"
DEPTH TO WATER: 29.75 GRAB (x) COMPOSITE ( )
TOTAL DEPTH: 41.96

WATER COLUMN HEIGHT: 12.21 = 2.07 X 6.22
PURGE VOLUME: 6.22
[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]
[1.47 x water column height (ft) x 3 (well volumes) for 6" wells]

TIME	VOL. PURGED (gal)	Diss. Oxygen (+/- 10%)	ORP (+/- 10 mV)	pH (+/- 0.1 pH units)	SPEC. COND. (ms/cm) [+/- 3%]	TEMP (°C)	TURB. (NTU) [<10 NTU]	Pump Rate ml/min. (& pump setting)	New Water Level
10-31-18 Initial: 1633	0.25	6.24	165.6	5.80	0.182	21.94	786	400 ( )	31.61
1640	1.0	7.07	159.4	5.94	0.185	21.76	>1000		31.61
1650	2.0	7.06	153.1	5.93	0.194	21.43	>1000		31.61
1700	3.0	5.62	149.8	5.81	0.195	21.33	>1000		31.61
1710	4.0	5.54	148.9	5.81	0.195	21.32	417		31.61
1720	5.0	5.79	146.3	5.79	0.195	21.31	287		31.61
1730	6.0	5.78	137.9	5.78	0.193	21.46	189		31.61
1740	7.0	5.71	133.8	5.77	0.191	21.49	87		31.61
11-1-18 900	1.0	5.25	151.7	5.77	0.204	21.21	246		30.11 (29.80)
920	3.0	4.46	113.1	5.75	0.201	21.15	61.1		30.11
940	5.0	4.36	108.5	5.76	0.204	21.17	20.2		30.11

NOTES: TURBIDITY AFTER SAMPLING = 20.1
Collected MW-01-1018MS & MW-01-1018 MSD

SAMPLE DATE: ~~10-31-18~~ 11-1-18
SAMPLE TIME: 950

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS	Ship to:
250 mL poly	3	HNO3 <pH2	6020A 7470A	Special COI List TAL Metals Mercury	(A)
1 L amber glass	16	cool to 6°C	8082A	PCBs	(A)
40 mL VOA	9	HCl <pH2; cool to 6°C	8260C	Special COI List VOCs	(A)
100 mL amber glass	6	cool to 6°C	8270D	Special COI List SVOCs	(B)
100 mL amber glass	6	cool to 6°C	8270 SIM	PAHs by SIM	(B)
1 L amber glass	6	cool to 6°C	8330B	Special COI List Explosives	(B)

GENERAL INFORMATION

WEATHER:	Cool - CLEAR - DRY
SHIPPED VIA:	FedEx
SHIPPED TO: (A)	PM: Sakina McKenzie Pace Analytical Services 110 Technology Parkway, Peachtree Corners, GA 30092 770.734.4204 | 770.734.4200
SHIPPED TO: (B)	Pace Analytical National Center for Testing & Innovation 12065 Lebanon Road | Mt. Juliet, TN 37122 615.758.5858 ATTN: Nancy McLain
SAMPLER: EVER GUILLEN	OBSERVER:

PROJECT NAME:
NS - Former Cohn Property

Norfolk Southern - Former Cohn Property
Field Sampling Report

Project Number: 6123-14-0242

Wood Environment & Infrastructure Solutions, Inc.
1075 Big Shanty Rd. Ste 100
PHONE: (770) 421-3400 / FAX: (770) 421-3486

SAMPLING EVENT: ___1ST SEMI-ANNUAL; ___2ND SEMI-ANNUAL; X OTHER

WELL ID / SAMPLE ID: **MW-02-1018**

WELL MATERIAL: PVC
SAMPLE METHOD: Bladder Pump

WELL DIAMETER: 2"
DEPTH TO WATER: 36.91 GRAB (x) COMPOSITE ( )
MEASURED TOTAL DEPTH: 43.55
WATER COLUMN HEIGHT: 6.64
PURGE VOLUME: _____
[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]
[1.47 x water column height (ft) x 3 (well volumes) for 6" wells]

Pump Intake Set at (btoc): 42.5
or
Tubing Inlet Set at (btoc): _____

TIME	VOL. PURGED (gal)	Diss. Oxygen (+/- 10%)	ORP (+/- 10 mV)	pH (+/- 0.1 pH units)	SPEC. COND. (ms/cm) [+/- 3%]	TEMP (°C)	TURB. (NTU) [<10 NTU]	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: ~~1756~~ 1746	0.2	2.16	109.7	5.43	0.242	22.64	28.7	100 ( )	38.95
~~1756~~ ~~1806~~ 1756	0.35	1.64	119.2	5.10	0.239	22.45	72.0	100	39.45
1801	0.475	1.65	118.6	5.09	0.238	22.21	71.8	100	39.63
1806	0.60	1.57	117.8	5.09	0.239	22.08	71.7	100	39.82
1811	0.725	1.77	116.4	5.11	0.241	21.97	67.0	100	39.98
1816	0.85	1.69	114.5	5.12	0.243	21.84	66.4	100	40.21

NOTES: Turbidity without Flow cell 66.4

SAMPLE DATE: 10/31/18
SAMPLE TIME: 1820

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS	Ship to:
250 mL poly	1	HNO3 <pH2	6020A 7470A	Special COI List TAL Metals Mercury	(A)
1 L amber glass	12	cool to 6°C	8082A	PCBs	(A)
40 mL VOA	3	HCl <pH2; cool to 6°C	8260C	Special COI List VOCs	(A)
100 mL amber glass	2	cool to 6°C	8270D	Special COI List SVOCs	(B)
100 mL amber glass	2	cool to 6°C	8270 SIM	PAHs by SIM	(B)
1 L amber glass	2	cool to 6°C	8330B	Special COI List Explosives	(B)

GENERAL INFORMATION

WEATHER:	Clear + Sunny, Temp 80°F
SHIPPED VIA:	FedEx
SHIPPED TO: (A)	PM: Sakina McKenzie Pace Analytical Services 110 Technology Parkway, Peachtree Corners, GA 30092 770.734.4204 | 770.734.4200
SHIPPED TO: (B)	Pace Analytical National Center for Testing & Innovation 12065 Lebanon Road | Mt. Juliet, TN 37122 615.758.5858 ATTN: Nancy McLain
SAMPLER: Daniel Howard	OBSERVER:

PROJECT NAME:
NS - Former Cohn Property

Norfolk Southern - Former Cohn Property
Field Sampling Report

Project Number: 6123-14-0242

Wood Environment & Infrastructure Solutions, Inc.
1075 Big Shanty Rd. Ste 100
PHONE: (770) 421-3400 / FAX: (770) 421-3486

SAMPLING EVENT: ___1ST SEMI-ANNUAL; ___2ND SEMI-ANNUAL; X OTHER

WELL ID / SAMPLE ID: MW-03-1018

WELL MATERIAL: PVC
SAMPLE METHOD: Bladder Pump

WELL DIAMETER: 2"
DEPTH TO WATER:_____ GRAB (x) COMPOSITE ( )
TOTAL DEPTH:_____

WATER COLUMN HEIGHT:_____
PURGE VOLUME:_____
[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]
[1.47 x water column height (ft) x 3 (well volumes) for 6" wells]

Pump Intake Set at (btoc):_____
or
Tubing Inlet Set at (btoc):_____

TIME	VOL. PURGED (gal)	Diss. Oxygen (+/- 10%)	ORP (+/- 10 mV)	pH (+/- 0.1 pH units)	SPEC. COND. (ms/cm) [+/- 3%]	TEMP (°C)	TURB. (NTU) [<10 NTU]	Pump Rate ml/min. (& pump setting)	New Water Level
Initial:								( )	
		WELL IS DRY							
		0.2 FT WATER IN WELL							

NOTES:

SAMPLE DATE:_____
SAMPLE TIME:_____

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS	Ship to:
250 mL poly	1	HNO3 <pH2	6020A 7470A	Special COI List TAL Metals Mercury	(A)
1 L amber glass	12	cool to 6°C	8082A	PCBs	(A)
40 mL VOA	3	HCl <pH2; cool to 6°C	8260C	Special COI List VOCs	(A)
100 mL amber glass	2	cool to 6°C	8270D	Special COI List SVOCs	(B)
100 mL amber glass	2	cool to 6°C	8270 SIM	PAHs by SIM	(B)
1 L amber glass	2	cool to 6°C	8330B	Special COI List Explosives	(B)

GENERAL INFORMATION	
WEATHER:	
SHIPPED VIA:	FedEx
SHIPPED TO: (A)	PM: Sakina McKenzie Pace Analytical Services 110 Technology Parkway, Peachtree Corners, GA 30092 770.734.4204 | 770.734.4200
SHIPPED TO: (B)	Pace Analytical National Center for Testing & Innovation 12065 Lebanon Road | Mt. Juliet, TN 37122 615.758.5858 ATTN: Nancy McLain
SAMPLER:	OBSERVER:

PROJECT NAME:
NS - Former Cohn Property

Norfolk Southern - Former Cohn Property
Field Sampling Report

Project Number: 6123-14-0242

Wood Environment & Infrastructure Solutions, Inc.
1075 Big Shanty Rd. Ste 100
PHONE: (770) 421-3400 / FAX: (770) 421-3486

SAMPLING EVENT: ___1ST SEMI-ANNUAL; ___2ND SEMI-ANNUAL; X OTHER

WELL ID / SAMPLE ID: **MW-04-1018**

WELL MATERIAL: PVC
SAMPLE METHOD: Bladder Pump

QC: DUP-WG-01-1018

Pump Intake Set at (btoc): ~~40~~ DH 39
or
Tubing Inlet Set at (btoc):_____

WELL DIAMETER: 2"
DEPTH TO WATER: 35.69
TOTAL DEPTH: 43.76

WATER COLUMN HEIGHT: 8.07 GRAB (x) COMPOSITE ( )
PURGE VOLUME:_____
[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]
[1.47 x water column height (ft) x 3 (well volumes) for 6" wells]

TIME	VOL. PURGED (gal)	Diss. Oxygen (+/- 10%)	ORP (+/- 10 mV)	pH (+/- 0.1 pH units)	SPEC. COND. (ms/cm) [+/- 3%]	TEMP (°C)	TURB. (NTU) [<10 NTU]	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1110	0.1	3.50	145.0	5.67	0.239	20.24	46.6	300 ( )	36.25
1120	0.6	2.18	135.4	5.40	0.234	20.17	48.4	300	36.23
1130	1.2	1.88	122.7	5.42	0.233	20.24	77.4	300	36.25
1140	1.8	1.89	114.9	5.48	0.232	20.29	61.0	300	36.25
1145	2.1	1.93	112.0	5.49	0.231	20.35	25.1	300	36.21
1150	2.4	1.89	105.2	5.55	0.231	20.56	18.2	300	36.16
1155	2.7	1.88	100.6	5.56	0.231	20.54	9.62	300	36.16
1200	3.0	1.84	98.5	5.54	0.231	20.54	8.25	300	36.16
1205	3.3	1.83	95.4	5.55	0.231	20.62	6.17	300	36.16

NOTES: Collected DUP-WG-01-1018 (Time 1200)

SAMPLE DATE: 11/1/18
SAMPLE TIME: 1208

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS	Ship to:
250 mL poly	1	HNO3 <pH2	6020A 7470A	Special COI List TAL Metals Mercury	(A)
1 L amber glass	12	cool to 6°C	8082A	PCBs	(A)
40 mL VOA	3	HCl <pH2; cool to 6°C	8260C	Special COI List VOCs	(A)
100 mL amber glass	2	cool to 6°C	8270D	Special COI List SVOCs	(B)
100 mL amber glass	2	cool to 6°C	8270 SIM	PAHs by SIM	(B)
1 L amber glass	2	cool to 6°C	8330B	Special COI List Explosives	(B)

GENERAL INFORMATION	
WEATHER:	Overcast, Temp 72°F
SHIPPED VIA:	FedEx
SHIPPED TO: (A)	PM: Sakina McKenzie Pace Analytical Services 110 Technology Parkway, Peachtree Corners, GA 30092 770.734.4204 | 770.734.4200
SHIPPED TO: (B)	Pace Analytical National Center for Testing & Innovation 12065 Lebanon Road | Mt. Juliet, TN 37122 615.758.5858 ATTN: Nancy McLain
SAMPLER: Daniel Howard	OBSERVER:

PROJECT NAME:
NS - Former Cohn Property

Norfolk Southern - Former Cohn Property
Field Sampling Report

Project Number: 6123-14-0242

Wood Environment & Infrastructure Solutions, Inc.
1075 Big Shanty Rd. Ste 100
PHONE: (770) 421-3400 / FAX: (770) 421-3486

SAMPLING EVENT: ___1ST SEMI-ANNUAL; ___2ND SEMI-ANNUAL; X OTHER

WELL ID / SAMPLE ID: **DUP-WG-01-1018**

WELL MATERIAL: PVC
SAMPLE METHOD: Bladder Pump

QC: Field Duplicate of Sample MW-04-1018

Pump Intake Set at (btoc):_____
or
Tubing Inlet Set at (btoc):_____

WELL DIAMETER: 2"
DEPTH TO WATER: 35.69 GRAB (x) COMPOSITE ( )
TOTAL DEPTH: 43.76
WATER COLUMN HEIGHT: 8.07
PURGE VOLUME:_____

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]
[1.47 x water column height (ft) x 3 (well volumes) for 6" wells]

TIME	VOL. PURGED (gal)	Diss. Oxygen (+/- 10%)	ORP (+/- 10 mV)	pH (+/- 0.1 pH units)	SPEC. COND. (ms/cm) [+/- 3%]	TEMP (°C)	TURB. (NTU) [<10 NTU]	Pump Rate ml/min. (& pump setting)	New Water Level
Initial:								( )	

NOTES: See MW-04 FSR for field parameters

SAMPLE DATE: 11/1/18
SAMPLE TIME: 1200

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS	Ship to:
250 mL poly	1	HNO3 <pH2	6020A 7470A	Special COI List TAL Metals Mercury	(A)
1 L amber glass	12	cool to 6°C	8082A	PCBs	(A)
40 mL VOA	3	HCl <pH2; cool to 6°C	8260C	Special COI List VOCs	(A)
100 mL amber glass	2	cool to 6°C	8270D	Special COI List SVOCs	(B)
100 mL amber glass	2	cool to 6°C	8270 SIM	PAHs by SIM	(B)
1 L amber glass	2	cool to 6°C	8330B	Special COI List Explosives	(B)

GENERAL INFORMATION

WEATHER:	Overcast, Temp 72°F
SHIPPED VIA:	FedEx
SHIPPED TO: (A)	PM: Sakina McKenzie Pace Analytical Services 110 Technology Parkway, Peachtree Corners, GA 30092 770.734.4204 | 770.734.4200
SHIPPED TO: (B)	Pace Analytical National Center for Testing & Innovation 12065 Lebanon Road | Mt. Juliet, TN 37122 615.758.5858 ATTN: Nancy McLain
SAMPLER: Daniel Howard	OBSERVER: