

Phase II Environmental Site Assessment Report

**Former Wilson Cypress Company
PID# 42-10-27-6850-0001-0260
Palatka, Florida 32177**

**Brownfields Petroleum and Hazardous Substance
Assessment
City of Palatka, Florida**

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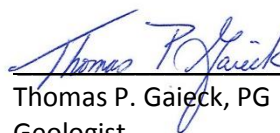


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Executive Summary

The City of Palatka retained Ayres Associates to evaluate the subject property for potential redevelopment. The purpose of this scope of work is to assess potential environmental impacts that may exist at the subject property that were identified in a Phase I Environmental Site Assessment (ESA) and their possible impact on site redevelopment, should any exist.

Subsurface information collected during this assessment was from the advancement of seven soil probes, and installation of four shallow monitoring wells and two deep monitoring wells. The data collected indicates that unconsolidated sediments at the site consists of 1-3 foot thick sand to inorganic silt or fill overlaying discontinuous layers of alluvial deposits to the depth of exploration at 30 feet below ground surface (bgs). Poorly graded sand and clayey sand exists in lenses below the first 3 feet and wood/peat/organic silt is below these layers (about 4-16 feet bgs). The lithology is different between the two deep wells below 16 feet bgs. Discontinuous layers of clayey sand, poorly graded sand, clay, and silt were sampled from 12 to 28 feet bgs in deep monitoring well WC-MW-1D. Limestone was encountered from 28-29 feet bgs which caused refusal during drilling. A poorly graded fine-grained sand was encountered from 19-30 feet bgs in WC-MW-2D.

Five additional probes and two additional shallow monitoring wells were proposed in the Sampling and Analysis Plan (SAP) that was submitted in January 2017. The proposed probes and shallow wells (WC-GP-5 through WC-GP-8, WC-GP-12, and WC-MW-5 through WC-MW-6) were located on the far southwest side of the project site with the intention to further determine the extent of contamination. However, these proposed probes were to be located in thickly vegetated land that is segregated from the northeast side of the site by a narrow wash stream (see Figure 2). Due to inaccessibility by the drilling equipment, the proposed probes and wells were not advanced during this investigation.

Arsenic was detected at concentrations exceeding Florida Department of Environmental Protection's (FDEP's) Soil Cleanup Target Level (SCTL) for resident exposure in three samples. These exceedances occurred in samples collected from probes WC-MW-2D, WC-MW-3, and WC-GP-2, sampled 0 to 5 feet bgs. However, the arsenic concentrations detected in WC-MW-2D (2.4 mg/Kg) and WC-GP-2 (2.8 mg/Kg) are consistent with naturally occurring background concentrations in soil for this region.¹ Background arsenic concentrations compiled by the FDEP indicates a range of arsenic in soil between 3.70 and 7.02 mg/Kg. The arsenic concentration sampled at WC-MW-3 between 2.5 and 5 feet bgs exceeded the FDEP's SCTL for commercial/industrial exposure (67 mg/Kg compared to 12 mg/Kg).

The barium concentration in the soil sampled from WC-GP-1 from 2.5 to 5 feet bgs exceeds the designated direct exposure residential FDEP SCTL for that constituent (210 mg/Kg compared to 120 mg/Kg). Lead concentrations at both WC-MW-3 and WC-GP-1 (2.5 to 5 feet bgs) exceed the designated direct exposure residential FDEP SCTL for that chemical (400 mg/Kg). The concentration measured at WC-MW-3 exceeds the direct exposure commercial/industrial FDEP SCTL as well (6,500 mg/Kg compared to 1,400 mg/Kg).

¹ FDEP. 1996. Applicability of Soil Cleanup Goals for Florida. Internal Memorandum. Tallahassee, FL, Florida Department of Environmental Protection.

The residential direct exposure concentration SCTL for polycyclic aromatic hydrocarbons (PAHs) benzo(a)pyrene and total benzo(a)pyrene equivalents was exceeded in five soil samples, WC-MW-2D, WC-GP-1, WC-GP-2, WC-GP-9, FF-GP-11 ranging from 0 to 5 feet bgs.

Detectable concentrations of PAHs benzo(a)anthracene and benzo(b)fluoranthene were found in the groundwater samples collected from well WC-MW-1D. These concentrations exceed the FDEP's Groundwater Cleanup Target Level (GCTL) for these constituents. However, for six of the samples, the laboratory method detection limit for benzo(b)fluoranthene and dibenz(a,h)anthracene exceeds the GCTL.

Water level data obtained from the monitoring wells on February 22, 2017, indicate that water elevation ranged from -0.28 to 0.36 feet mean sea level (MSL). Groundwater flow is generally south-southwest toward the narrow wash stream that runs from the project site to the St. Johns River, as illustrated in Figure 4. The horizontal hydraulic gradient calculated for the water table aquifer ranges from 0.0067 to 0.05 with an arithmetic average of 0.0284. Hydraulic conductivity values calculated for the monitoring wells were relatively consistent across the site, ranging from 1.57×10^{-5} ft/sec in WC-MW-2 which is screened primarily in peat, to 4.86×10^{-5} ft/sec in WC-MW-4 which is screened in poorly graded sand, wood, and peat. The hydraulic conductivity value calculated for deep monitoring wells WC-MW-1D and WC-MW-2D, was 1.87×10^{-6} ft/sec and 7.60×10^{-5} ft/sec, respectively. These deep monitoring wells were screened in a combination of silt, poorly graded sand, and limestone and a poorly graded sand, respectively. The average horizontal groundwater flow velocity in the unconfined water table aquifer is estimated to be 0.2 feet/day

Vertical groundwater gradients were calculated for each of the two well nests installed in the project area. An upward vertical gradient was measured at the WC-MW-1/WC-MW-1D well nest with a vertical gradient value of 0.0154. A downward vertical gradient was measured at the WC-MW-2/WC-MW-2D well nest with a vertical gradient value of -0.00240. These measurements indicate both discharge and recharge conditions, respectively.

Ayres Associates believes that environmental conditions at the site have been sufficiently evaluated and no additional investigation is recommended or warranted.

Acknowledgement

On behalf of the City of Palatka, Florida, Ayres Associates would like to extend its sincere appreciation to the U.S. Environmental Protection Agency (USEPA) for their funding support and to the Florida Department of Environmental Protection (FDEP) for their technical assistance. The U.S. EPA Brownfield Site Assessment Grant Program not only graciously awarded the City of Palatka this grant to assist in funding the environmental activities outlined in this report, but has continued to support the City of Palatka's efforts as they move toward redevelopment. Without this funding support, this Brownfield site may have laid idle indefinitely. We are indebted to the U.S. EPA for making financial assistance available for this important redevelopment project.

Introduction

The City of Palatka, Florida retained Ayres Associates to evaluate the subject property for redevelopment. The purpose of this scope of work is to assess potential environmental impacts that may exist at the subject property and their possible impact on site redevelopment. The scope of work performed at the Former Wilson Cypress Company property, located southeast of River Street and east/southeast of South 10th Street (PID# 42-10-27-6850-0001-0260), includes evaluation and analysis of existing environmental data, soil sampling in the unsaturated zone, installation of monitoring wells and collection of groundwater samples, hydraulic conductivity testing and laboratory analysis of soil and groundwater samples. Proposed sample locations include areas of known or suspected impacts based on historical information contained in a Phase I Environmental Site Assessment (ESA) prepared by Ayres Associates.

A Phase II Environmental Site Assessment was conducted at the site in February 14-22, 2017. The primary objectives of the assessment were to:

- Characterize the hydrogeologic and environmental conditions at the site
- Characterize the nature of potential impacts to soil and groundwater at the site
- Evaluate the threat, if any, to human health and the environment
- Evaluate the need to implement remedial action at the site in regards to site development

Environmental assessment and remediation planning activities related to site development are the subjects of this report.

Background

Site Location and Description

The subject property consists of one of parcel of land (PID# 42-10-27-6850-0001-0260) measuring approximately 49.03-acres and located in the south corner of Section 42 and the east corner of Section 7, Township 10 South, Range 27 East, in the City of Palatka, Putnam County, Florida. The subject property is legally described as "DICK'S MAP OF PALATKA MB2 P46, WATER LOTS 26 & 27 BK201 P467, BK207 P150 OR354 P406 ALL OF, BLKS 139 140 (EX PT OF S/D), WILSON CYPRESS CO S/D MB3 P194, LOTS 19 20 21 22 23 24 25 & PT, OF GOVT LOT 1 18-10-27 BK 133, P139 OR1201 P615 + WHITES ADD OF GOVT LOTS 10 + 13 MB1 PP50 65 LOT C (EX W 147 FT OF S 90 FT N 60 FT OF W 208 FT) + LOT D (EX W 150 FT OF N 59 FT + LOT E (MAP SHEET, 7/42)". The subject property does not have a designated address, but is located southeast of River Street and east/southeast of South 10th Street. The location of the parcel is shown on Figure 1.

Site History and Background

The history of the project area was substantially obtained from a *Phase I Environmental Assessment Report, Former Wilson Cypress Company, PID# 42-10-27-6850-0001-0260, Palatka, FL* (October 2016), prepared by Ayres Associates Inc.

The site is occupied by a vacant and overgrown cypress mill that now contains deteriorating and dilapidated building structures (Wilson Cypress Company).

According to historical records, the Wilson Cypress Company mill was built in 1893.² By the 1900s, the company became the second largest cypress mill in the world. The site was a saw, planing, lath, and shingle mill that was powered by steam, waste, and sawdust. Lumber storage was contained mostly on the western portion of the subject property and on two lumber storage piles that extended eastward into the St. Johns River. The site also contained a steam dry kiln that dried the lumber prior to shipment and/or storage. A railroad switch was located on the western portion of the subject property and was connected to the adjoining property across River Street to the north, which produced doors, blinds, moldings, and furniture. Wilson Cypress ceased mill operations in December 5, 1944, and the company was formally dissolved in 1983. By 1962, most of the cypress mill buildings were vacant and the U.S. Corps of Engineers' field house was the only building in use on the property according to Sanborn Maps and city directories. By 1969, the subject property was vacant.

According to Sanborn Maps, the subject property used to house an oil house, northeast of the main saw mill building, a machine shop, and a 120-gallon underground gasoline tank on the northern corner of the subject property north of an automotive garage. By 1924, there is a fuel oil tank on the northwest portion of the subject property, near River Street, associated with a second automobile garage. Available regulatory records are not available regarding these tanks and oil storage.

² University of Florida Smathers Libraries – Special and Area Studies Collections. A Guide to the Records of the Wilson Cypress Company. April 2008. <http://www.library.ufl.edu/spec/pkyonge/wilsoncypress.htm>

The adjoining site, north of River Street, is listed within the Resource Conservation and Recovery Act Non-Generators/No Longer Reporting (RCRA NonGen / NLR) database. According to a hazardous waste compliance report from 1983, disposal practice from the 1930s to 1976 was to pour the solvent based ink and alcohol based lacquer waste on the ground behind the cypress manufacturing plant located north of River Street (722 River Street). It was reported that sometimes the waste solvent had caught on fire.

Currently, the property is overgrown and deteriorating with native plants, and there is one driveway connected to River Street which is gated off. The site is generally vacant, with some dilapidated building foundations from the prior use of the site as a cypress mill. Most of the buildings have been demolished and there are several rubble piles around the property. The few remaining structures are composed of brick and/or concrete with crumbling structural supports, broken and missing windows, and gaping holes in the walls and roof. One concrete shed was observed, with the remainder of the structures being columns associated with larger structures that had been demolished. Due to the age of remaining structures on the subject property, there is a possibility that the remaining structures contain asbestos containing materials (ACMs) and/or lead-based paint (LBP).

Recognized Environmental Concerns

Real or perceived environmental impacts at this site, and surrounding sites include but are not limited to: 1) possible VOC and alcohol impacts from solvent based ink and alcohol based lacquer utilized on site adjacent to the site and improper disposal, potential storage tank leakage, and oil house; 2) PAH contamination from the potential use of diesel fuel in the machine shop, oil house, and/or automobile garage; 3) heavy metals contamination from railroad use and gasoline storage in the automobile garage and/or listed tanks; and 4) possible presence of asbestos and lead-based paint in remaining buildings.

Regional Geology and Hydrogeology

Geology

This preliminary evaluation of the site geology is based on existing published regional information and reports of environmental assessments performed on nearby sites by others. Regional information³ indicates that surficial unconsolidated deposits in the Palatka area consist primarily of undifferentiated Quaternary sediments comprised of fine to coarse grained, clean to clayey unfossiliferous sands, sandy clay and clay with variable amounts of organics. These sediments are estimated to be between 20 to 140 feet thick and lie unconformably on the Hawthorn Group (quartz sands, dolostone and clay), undifferentiated Pliocene/Pleistocene shelly sediments or Cypresshead Formation (variably clayey to clean quartz sand). In turn, these formations lie unconformably on the Upper Eocene Ocala Limestone.

The Ocala Limestone, a biogenic marine limestone, is the uppermost bedrock unit of the Floridan aquifer system in the Palatka area. The Ocala Limestone is described as a white to cream, fine to coarse grained, poorly to well indurated fossiliferous limestone. Bedrock is expected to be located between 50 and 100 feet below mean sea level (msl).

Hydrogeology

Groundwater is the main source for domestic, municipal, stock watering, and general irrigation water supplies in the Palatka area. Much of Florida, including Putnam County, is moving toward the use of reclaimed water. Reclaimed water is wastewater that has been thoroughly treated to remove harmful organisms and substances so it can be reused. This water is usable only for nondrinking or nonpotable water purposes. Ninety-three percent of the reclaimed water in Putnam County goes toward golf course irrigation, five percent goes toward groundwater recharge, and two percent goes toward surface water discharge.

Three aquifer systems supply groundwater in Putnam County: the surficial, the intermediate, and the Floridan. The surficial aquifer system consists primarily of sand, silt, and sandy clay. It extends from land surface downward to the top of the confining unit of the intermediate aquifer system. Regionally, the intermediate aquifer system/intermediate confining unit consists of fine-grained clastic deposits of clayey sand to clay interlayered with thin water-bearing zones of sand, shell, and limestone.⁴ The Floridan aquifer system is one of the world's most productive aquifers. The rocks, primarily limestone and dolomite, that compose the Floridan aquifer system underlie the entire state.

Groundwater from the surficial aquifer system recharges the Floridan aquifer system throughout Putnam County's upland areas. Discharge from the Floridan aquifer occurs in areas where the elevation of the aquifer's potentiometric surface is higher than water levels within the surficial

³ Green, Richard C., William, Christopher P. et al., 2014, Geologic Map of the USGS Saint Augustine 30 x 60 Minute Quadrangle, Northeast Florida, Florida Geological Survey Open- File Report 102.

⁴ Miller, J.A. 1986. Hydrogeologic framework of the Floridan aquifer system in Florida and in parts of Georgia, Alabama, and South Carolina. Professional Paper 1403-B. Washington, D.C.: U.S. Geological Survey.

aquifer system. Likewise, areas where the Floridan aquifer potentiometric surface is higher than land surface, springs and free-flowing artesian wells occur.

According to an investigation conducted on a site located 0.1 miles northwest of the subject property, groundwater is expected to be within 5 feet below ground surface (bgs).⁵ Given the proximity of the subject property to St Johns River, groundwater on site is expected to flow east-southeast.

Marsh areas exist throughout a lot of the subject property, closer to the eastern edge toward St. Johns River. St. Johns River adjoins the subject property on the east side. The subject property is within the Lower St. Johns River Basin which ultimately drains into the Atlantic Ocean directly east of Jacksonville.

⁵ H2O Environmental, Inc. Ryder LC-1182, 809 Kirby Street Underground Storage Tank Investigation. February 1999.

Site Geology and Hydrogeology

Site Stratigraphy

Subsurface conditions were evaluated based on information collected from seven soil probes and six soil borings advanced at the site during this assessment. Soil probes were advanced to a maximum depth of 10 feet below ground surface; soil borings were advanced to a maximum depth of 30 feet below ground surface. The nomenclature for probes and wells, or samples collected from probes or wells is as follows:

- WC – Wilson Cypress
- GP or MW – geoprobe™ or monitoring well
- 0-2.5' - interval of soil sample collected
- D – indicates deep monitoring well

Four of the six soil borings advanced on the Former Wilson Cypress Company site during this assessment were used for installation of monitoring wells (WC-MW-1 thru WC-MW-6); the two deeper soil borings were used for installation of deep wells (WC-MW-1D and WC-MW-2D). Locations of the probes, borings, and monitoring wells are shown on Figure 2. Geologic boring and well construction logs are presented in Appendix A. Geologic cross section A-A' showing the site stratigraphy is presented on Figure 5.

Subsurface information collected during this assessment indicates that unconsolidated sediments at the site consists of 1- to 3-foot thick sand to inorganic silt or fill overlaying discontinuous layers of alluvial terrace deposits to the depth of exploration at 30 feet below ground surface (bgs). Poorly graded sand and clayey sand exists in lenses below the first 3 feet and wood/peat/organic silt is below these layers (about 4-16 feet bgs). The lithology is different between the two deep wells below 16 feet bgs. Discontinuous layers of clayey sand, poorly graded sand, clay, and silt were sampled from 12 to 28 feet bgs in WC-MW-1D. Limestone was encountered from 28-29 feet bgs which caused refusal during drilling. A poorly graded fine-grained sand was encountered from 19-30 feet bgs in WC-MW-2D.

Five additional probes and two additional shallow monitoring wells were proposed in the Sampling and Analysis Plan (SAP) that was submitted in January 2017. The proposed probes and shallow wells (WC-GP-5 through WC-GP-8, WC-GP-12, and WC-MW-5 through WC-MW-6) were located on the far southwest side of the project site with the intention to further determine the extent of contamination. However, these proposed probes were to be located in thickly vegetated land that is segregated from the northeast side of the site by a narrow wash stream (see Figure 2). Due to inaccessibility by the drilling equipment, the proposed probes and wells were not advanced during this investigation.

The four stratigraphic units shown on the cross-sections were subdivided or defined by their different hydrogeologic characteristics, primarily grain size, porosity, and permeability. Bedrock was not encountered in any of the soil borings advanced at the site by Ayres Associates during this assessment, although limestone fragments were recovered in WC-MW-1D from 28 to 29 feet bgs.

Groundwater Flow Conditions

Groundwater Levels

Groundwater level and elevation data obtained from the monitoring wells on February 22, 2017, were used to estimate groundwater flow direction and gradient (Table 1). Top of casing well elevations were surveyed using a level loop and recorded to the nearest 0.01 feet. Water level data collected on February 22, 2017, indicate that depth to water ranged from 1.29 feet to 3.52 feet below ground surface (-0.28 feet above msl to 0.66 feet above msl). All of these wells were installed aboveground with metal Protops.

Hydraulic Conductivity Testing

Hydraulic conductivity (slug) tests were performed on five of the six monitoring wells installed at the site during this assessment. A slug test was not performed on WC-MW-3 due to potential hydrocarbon contamination in this well based on odors noted in the field.

The slug tests were performed by rapidly lowering a solid cylinder (slug) into the well to cause an instantaneous rise in water level (falling head test), then measuring the return of the water level to its static condition. A second test was performed by removing the slug (rising head test), and again measuring the response of the water level in the well. Water level data were recorded with an automated pressure transducer and data logger system. Slug test data were evaluated using Waterloo Hydrologic Aquifer Test Pro v. 2013.1 graphical analysis and reporting software. The slug tests were analyzed using the methods of Bouwer and Rice (1976)⁶ for unconfined aquifers. Results of the slug tests are summarized in Table 2. Slug test data and test parameters are presented in Appendix B.

Hydraulic conductivity values calculated for the monitoring wells were relatively consistent across the site, ranging from 1.57×10^{-5} ft/sec in well WC-MW-2 which is screened primarily in peat, to 4.86×10^{-5} ft/sec in well WC-MW-4 which is screened in poorly graded sand, wood, and peat. The hydraulic conductivity value calculated for deep monitoring wells WC-MW-1D and WC-MW-2D, was 1.87×10^{-6} ft/sec and 7.60×10^{-5} ft/sec, respectively. These deep monitoring wells were screened in a combination of silt, poorly graded sand, and limestone and a poorly graded sand, respectively.

Groundwater Flow

Water level data obtained from the monitoring wells on February 22, 2017, were used to construct a water table contour map. The water table contour map shown in Figure 4 utilizes data from monitoring wells installed on the subject site (Former Wilson Cypress Company). Based on this data, groundwater flow is generally south-southwest toward the narrow wash stream that runs from the project site to the St. Johns River, as illustrated in Figure 4. The horizontal hydraulic gradient calculated for the water table aquifer ranges from 0.0067 to 0.05 with an arithmetic average of 0.0284.

⁶ Bouwer, H. and R.C. Rice, A Slug Test for Determining Hydraulic Conductivity of Unconfined Aquifers with Completely or Partially Penetrating Wells, *Water Resources Research*, Vol.12, No.3, 1976, pp.423-428

Since only two deep monitoring wells were installed on the project site, groundwater flow direction of the potentiometric surface and the gradient are unable to be determined. Although two deep monitoring wells were installed on the adjoining site across River Street, Former Florida Furniture, these wells were screened with an approximate difference of 11 feet between their screen center points and the Wilson Cypress deep wells. The Wilson Cypress deep monitoring wells also have about 8 to 14 feet of clay and silty clay peat (acting as a potential aquitard) above their screens that cause them to be ineffective at determining an effective potentiometric surface related to Florida Furniture.

Vertical Gradients

Differences in hydraulic head can occur between different geologic units. The difference in hydraulic head is caused by steep hydraulic gradients induced by heavy groundwater pumping, large topographic relief, or by differences in hydraulic conductivity. Vertical gradients can induce or prevent contaminant migration in and between aquifers depending on the magnitude and direction of the gradient.

Vertical groundwater gradients were calculated for each of the two well nests installed at the project site. An upward vertical gradient was measured at the WC-MW-1/WC-MW-1D well nest with a vertical gradient value of 0.0154. A downward vertical gradient was measured at the WC-MW-2/WC-MW-2D well nest with a vertical gradient value of -0.00240. These measurements indicate both discharge and recharge conditions, respectively.

Groundwater Flow Velocity

Groundwater flow velocity was calculated for the water table aquifer at this site using the formula:

$$V = ki/n_e$$

Where:

V = horizontal groundwater flow velocity

k = hydraulic conductivity

i = hydraulic gradient

n_e = effective porosity

An average (geometric mean) hydraulic conductivity value of 2.53×10^{-5} ft/sec was used in calculating groundwater flow velocity in the water table aquifers. This value was obtained by calculating the arithmetic mean of hydraulic conductivity results for tests performed on monitoring wells at the site.

The hydraulic gradient (i) used to calculate horizontal groundwater flow velocity is based on water levels measured on February 22, 2017. An average horizontal gradient of 0.0284 was used to calculate groundwater flow in the upper unconsolidated aquifer.

The velocity of groundwater is also influenced by the porosity of the aquifer material. The effective porosity (n_e) is a measure of the amount of interconnecting pore space that is available in a given

volume of material through which water can move. The average effective porosity of the unconsolidated material (SM, PT, OL, wood) is assumed to be about 32%⁷.

Based on the values stated above, the average horizontal groundwater flow velocity in the unconsolidated aquifer across the subject site is approximately 0.194 feet/day or 70.8 feet/year. The relatively moderate groundwater velocity is a result of the moderate hydraulic conductivity of the silty and organic sediments and the moderate hydraulic gradient.

⁷ Morris, D.A. and A.I. Johnson, 1967. Summary of hydrologic and physical properties of rock and soil materials as analyzed by the Hydrologic Laboratory of the U.S. Geological Survey, U.S. Geological Survey Water-Supply Paper 1839-D, 42p.

Soil Quality Assessment

Soil samples were collected from the probes and borings advanced during the investigation and submitted to Advanced Environmental Laboratories Inc. in Jacksonville, Florida, for analysis. Selected samples were analyzed for volatile organic compounds (VOC), polycyclic aromatic hydrocarbons (PAH), and Resource Conservation and Recovery Act (RCRA) metals. The samples selected for analysis and type of analysis performed was based on field screening results, visual and olfactory observations during drilling, and the type of activity formerly performed in the area where the boring was advanced, as outlined in the site-specific sampling and analysis plan (SAP).

Field Observations and Screening Results

Headspace analysis was performed on each of the soil samples obtained from the probes and borings. Headspace analysis is a screening tool used to qualitatively assess the degree of potential impacts to soil from volatile organic compounds. The headspace analysis was performed using a photo ionization detector (PID) equipped with an 11.7 eV lamp in accordance with FDEP Standard Operation Procedure FS 3000 (revised March 1, 2014). Headspace analysis results are shown on the boring logs in Appendix A.

Results of the headspace analysis indicate elevated PID readings above 30 ppm were recorded in WC-GP-10 and WC-GP-1 (both 2.5 to 5 feet bgs). It is unknown why an elevated PID reading was recorded in WC-GP-10 (based on the soil results), but WC-GP-1 had elevated concentrations of benzo(a)pyrene and total benzo(a)pyrene equivalents that exceeded FDEP direct exposure concentrations for residents.

Results of Soil Sample Laboratory Analysis

Twelve soil samples collected from the soil probes and borings advanced during this assessment were submitted for analysis. Samples were analyzed for one or more of the following parameters: VOCs, PAHs, and RCRA metals. VOCs and PAH were analyzed using EPA SW-846 Method 8260 and Method 8270 SIM, respectively. Metals were analyzed using Methods 6010C and 7471. A summary of analyte detections in soil is presented in Table 3. Laboratory data reports for soil samples are presented in Appendix C. Laboratory detections above FDEP soil standards are shown on Figure 6.

Inorganic Analysis

Naturally occurring metals (arsenic, barium, cadmium, chromium, lead, mercury, and/or silver) were detected in one or more of the soil samples submitted for analysis. Arsenic was detected at concentrations exceeding FDEP's Soil Cleanup Target Level (SCTL) for resident exposure in three samples. These exceedances occurred in samples collected from WC-MW-2D, WC-MW-3, and WC-GP-2, sampled 0 to 5 feet bgs. However, the arsenic concentrations detected in WC-MW-2D (2.4 mg/Kg) and WC-GP-2 (2.8 mg/Kg) are consistent with naturally occurring background concentrations in soil for this region.⁸ Background arsenic concentrations compiled by the FDEP indicates a range of arsenic in soil between 3.70 and 7.02 mg/Kg. The arsenic concentration sampled at WC-MW-3

⁸ FDEP. 1996. Applicability of Soil Cleanup Goals for Florida. Internal Memorandum. Tallahassee, FL, Florida Department of Environmental Protection.

between 2.5 and 5 feet bgs exceeded the FDEP's SCTL for commercial/industrial exposure (67 mg/Kg compared to 12 mg/Kg). Other arsenic values were relatively consistent throughout the soil profile and there is no reason, based on historical data, to suspect a widespread anthropogenic source of arsenic across this site.

The barium concentration in the soil sampled from WC-GP-1 from 2.5 to 5 feet bgs exceeds the designated direct exposure residential FDEP SCTL for that constituent (210 mg/Kg compared to 120 mg/Kg).

Lead concentrations at both WC-MW-3 and WC-GP-1 (2.5 to 5 feet bgs) exceed the designated direct exposure residential FDEP SCTL for that chemical (400 mg/Kg). The concentration measured at WC-MW-3 exceeds the direct exposure commercial/industrial FDEP SCTL as well (6,500 mg/Kg compared to 1,400 mg/Kg).

Volatile Organic Compound Analysis (VOCs)

Eleven soil samples collected during this assessment were analyzed for VOCs. Laboratory results indicate that four VOC constituents were detected above laboratory method detection limits. All of the concentrations are well below the direct exposure concentrations delineated by the FDEP.

Polycyclic Aromatic Hydrocarbon Analysis (PAH)

Detectable concentrations of various PAH compounds were found in each of the soil samples submitted for PAH analysis. The residential direct exposure concentration SCTL for benzo(a)pyrene and total benzo(a)pyrene equivalents was exceeded in five soil samples, WC-MW-2D, WC-GP-1, WC-GP-2, WC-GP-9, FF-GP-11 ranging from 0 to 5 feet bgs.

Groundwater Quality Assessment

Groundwater samples were collected from each of the eight monitoring wells installed at the project site. The purpose of this sampling is to characterize the nature and extent of potential contamination at the site by determining the type, distribution, and concentration of chemical constituents present in the groundwater. The analytical data were used in conjunction with site-specific geologic and hydrogeologic data and information on other environmental conditions to determine the potential for contaminant migration.

Ayres Associates collected one round of groundwater samples from six monitoring wells (WC-MW-1 through WC-MW-6) and two deep wells (WC-MW-1D and WC-MW-2D). Samples were collected from the wells on February 21-22, 2017, and submitted to Advanced Environmental Laboratories Inc. in Jacksonville, Florida, for analysis. Each of the groundwater samples were analyzed for VOCs, PAH, and RCRA metals (dissolved). VOCs and PAH were analyzed using EPA SW-846 Method 8260 and Method 8270 SIM, respectively. Metals were analyzed using Methods 6010 and 7470. A summary of analyte detections in groundwater samples is presented in Table 4. Low-flow sampling stabilization data (field parameters) is presented on Table 5 and in Appendix D. Laboratory data sheets for the sampling event are presented in Appendix E. Laboratory detections above Florida Department of Environmental Protection's groundwater standards are shown on Figure 7.

Inorganic Analysis

Concentrations of naturally occurring metals (dissolved) were detected in each of the seven groundwater samples analyzed. Dissolved barium and chromium were detected in each of the groundwater samples submitted for analysis. Concentrations are well below the designated FDEP Groundwater Cleanup Target Level (GCTL) concentrations.

Volatile Organic Compound Analysis (VOCs)

Laboratory results indicate trace concentrations of seven compounds in groundwater samples collected from seven monitoring wells sampled for VOCs. None of the VOC concentrations exceeded FDEP GCTLs.

Polycyclic Aromatic Hydrocarbon Analysis (PAH)

Detectable concentrations of benzo(a)anthracene and benzo(b)fluoranthene were found in the groundwater samples collected from well WC-MW-1D. These concentrations exceed the FDEP's GCTL for these constituents. However, for six of the samples, the laboratory method detection limit for benzo(b)fluoranthene and dibenz(a,h)anthracene exceeds the GCTL. It is inconclusive whether the FDEP GCTL was exceeded for the other wells on the project site.

Field Parameter Data

Real time data of temperature, pH, specific conductance, dissolved oxygen, oxidation-reduction potential (ORP), and turbidity were collected to compliment the analytical data. These data were used to construct a "geochemical model" of conditions at the site to assist in the interpretation and understanding of attenuation and or transformation processes that may be occurring, and the potential fate of the constituents of interest. Temperature, pH, specific conductance, turbidity, dissolved oxygen, and redox potential were obtained using an In-Situ[®], Inc. Troll 9000 multi

parameter water quality monitoring system. Simultaneous parameters were taken continuously during pumping until readings stabilized. Field parameter data are presented on Table 5 and on the low-flow stabilization logs in Appendix D.

Temperature was relatively consistent from well to well across the project site (69.08-71.31°F). Other parameters such as pH, conductivity, dissolved oxygen (DO), oxidation reduction potential, and turbidity varied slightly throughout the site.

Overall, the dissolved oxygen levels of the groundwater indicate an anaerobic environment which are indicative of the low pH that was measured in the groundwater. It should be noted that the DO concentrations measured in WC-MW-3 and WC-MW-4 are falsely high (52.50 mg/L). The instrument was calibrated incorrectly prior to these measurements and was recalibrated prior to WC-MW-1/WC-MW-1D sampling. The acidity measured at WC-MW-1D had a more neutral pH compared to its shallow well counterparts. This is most likely due to the limestone encountered at the end of the boring. The Oxidation Reduction Potential (ORP) was also relatively low and ranged from -170.76 mV to -55.86 mV.

The conductivity of the groundwater was relatively high (752.87-954.38 $\mu\text{S}/\text{cm}$), varying throughout the project site. Turbidity also varied (0.51 – 24.66 NTU) amongst the wells and was highest in WC-MW-2.

Summary of Findings

Geology and Hydrogeology

- Subsurface information collected during this assessment indicates that unconsolidated sediments at the site consists of 1-3 foot thick sand to inorganic silt or fill overlaying discontinuous layers of alluvial terrace deposits to the depth of exploration at 30 feet below ground surface (bgs). Poorly graded sand and clayey sand exists in lenses below the first 3 feet and wood/peat/organic silt is below these layers (about 4-16 feet bgs). The lithology is different between the two deep wells below 16 feet bgs. Discontinuous layers of clayey sand, poorly graded sand, clay, and silt were sampled from 12 to 28 feet bgs in WC-MW-1D. Limestone was encountered from 28-29 feet bgs which caused refusal during drilling. A poorly graded fine-grained sand was encountered from 19-30 feet bgs in WC-MW-2D.
- Water level data obtained from the monitoring wells on February 22, 2017, indicate that depth to water ranged from 4.11 feet to 5.60 feet below ground surface, with elevations that ranged from -0.28 to 0.61 (ft MSL).
- Groundwater flow is generally south-southwest toward St. Johns River at an average horizontal hydraulic gradient of 0.0284. The average horizontal groundwater flow velocity in the unconfined water table aquifer is estimated to be 0.2 feet/day or 70.8 feet/year.
- An upward vertical gradient was measured at the WC-MW-1/WC-MW-1D well nest with a vertical gradient value of 0.0154. A downward vertical gradient was measured at the WC-MW-2/WC-MW-2D well nest with a vertical gradient value of -0.00240. These measurements indicate both discharge and recharge conditions, respectively.

Soil Assessment

Inorganic Analysis

- Twelve soil samples collected during this assessment were analyzed for RCRA metals.
- Naturally occurring metals (arsenic, barium, cadmium, chromium, lead, mercury, and/or silver) were detected in one or more of the soil samples submitted for analysis.
- Arsenic was detected at concentrations exceeding FDEP's SCTL for resident exposure in three samples. These exceedances occurred in samples collected from probes WC-MW-2D, WC-MW-3, and WC-GP-2, sampled 0 to 5 feet bgs. However, the arsenic concentrations detected in WC-MW-2D (2.4 mg/Kg) and WC-GP-2 (2.8 mg/Kg) are consistent with naturally occurring background concentrations in soil for this region.⁹ Background arsenic concentrations compiled by the FDEP indicates a range of arsenic in soil between 3.70 and 7.02 mg/Kg. The arsenic concentration sampled at WC-MW-3 between 2.5 and 5 feet bgs exceeded the FDEP's SCTL for commercial/industrial exposure (67 mg/Kg compared to 12 mg/Kg). Other

⁹ FDEP. 1996. Applicability of Soil Cleanup Goals for Florida. Internal Memorandum. Tallahassee, FL, Florida Department of Environmental Protection.

arsenic values were relatively consistent throughout the soil profile and there is no reason, based on historical data, to suspect a widespread anthropogenic source of arsenic across this site.

- The barium concentration in the soil sampled from WC-GP-1 from 2.5 to 5 feet bgs exceeds the designated direct exposure residential FDEP SCTL for that constituent (210 mg/Kg compared to 120 mg/Kg).
- Lead concentrations at both WC-MW-3 and WC-GP-1 (2.5 to 5 feet bgs) exceed the designated direct exposure residential FDEP SCTL for that chemical (400 mg/Kg). The concentration measured at WC-MW-3 exceeds the direct exposure commercial/industrial FDEP SCTL as well (6,500 mg/Kg compared to 1,400 mg/Kg).

Volatile Organic Compound Analysis (VOCs)

- Eleven soil samples collected during this assessment were analyzed for VOCs. Laboratory results indicate that four VOC constituents were detected above laboratory method detection limits. All the concentrations are well below the direct exposure concentrations delineated by the FDEP.

Polycyclic Aromatic Hydrocarbon Analysis (PAH)

- Detectable concentrations of various PAH compounds were found in each of the 12 soil samples submitted for PAH analysis.
- The residential direct exposure concentration SCTL for benzo(a)pyrene and total benzo(a)pyrene equivalents was exceeded in five soil samples, WC-MW-2D, WC-GP-1, WC-GP-2, WC-GP-9, FF-GP-11 ranging from 0 to 5 feet bgs.

Groundwater Assessment

Inorganic Analysis

- Seven samples were submitted for RCRA metals analysis, one from each of the six wells plus one duplicate.
- Concentrations of naturally occurring metals (dissolved) were detected in each of the seven groundwater samples analyzed. Dissolved barium and chromium were detected in each of the groundwater samples submitted for analysis. Concentrations are well below the designated FDEP Groundwater Cleanup Target Level (GCTL) concentrations.

Volatile Organic Compound Analysis (VOCs)

- Laboratory results indicate trace concentrations of seven compounds in groundwater samples collected from six monitoring wells sampled for VOCs. None of the VOC concentrations exceeded FDEP GCTLs.

Polycyclic Aromatic Hydrocarbon Analysis (PAH)

- One sample from each of the six wells were analyzed for PAHs.
- Detectable concentrations of benzo(a)anthracene and benzo(b)fluoranthene were found in the groundwater samples collected from well WC-MW-1D. These concentrations exceed the FDEP's GCTL for these constituents. However, for all six of the samples, the laboratory method detection limit for benzo(b)fluoranthene and dibenz(a,h)anthracene exceeds the GCTL. It is inconclusive whether the FDEP GCTL was exceeded for the other wells on the project site.

Recommendations

Ayres Associates recommends the following, based on information collected during the site assessment:

- The property owner or their interested parties should submit this Phase II Environmental Site Assessment Report to the FDEP and the US EPA.
- No additional investigation is warranted or recommended based on the results of this Phase II Site Investigation.
- If future redevelopment of the site will include excavation of underlying soil, any solid waste or contaminated material would require proper handling, capping, or off-site disposal in accordance with applicable State and Federal regulations.

Acknowledgement

On behalf of the City of Palatka, Florida, Ayres Associates would like to extend its sincere appreciation to the U.S. Environmental Protection Agency (USEPA) for their funding support and to the Florida Department of Environmental Protection (FDEP) for their technical assistance. The U.S. EPA Brownfield Site Assessment Grant Program not only graciously awarded the City of Palatka this grant to assist in funding the environmental activities outlined in this report, but has continued to support the City of Palatka's efforts as they move toward redevelopment. Without this funding support, this Brownfield site may have laid idle indefinitely. We are indebted to the U.S. EPA for making financial assistance available for this important redevelopment project.

Figures



Source: USGS 7.5-Minute Series Topographic Quadrangle, Palatka, Hastings, San Mateo, and Satsuma, FL, 2012



Figure 1 – Location Map

Phase II Environmental Site Assessment
Former Wilson Cypress Company, 42-10-27-6850-0001-0260
Palatka, FL
March 2017

19-0668.25

AYRES
ASSOCIATES

4/13/2017
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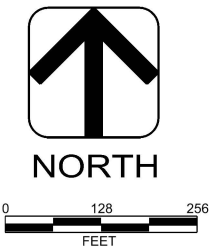
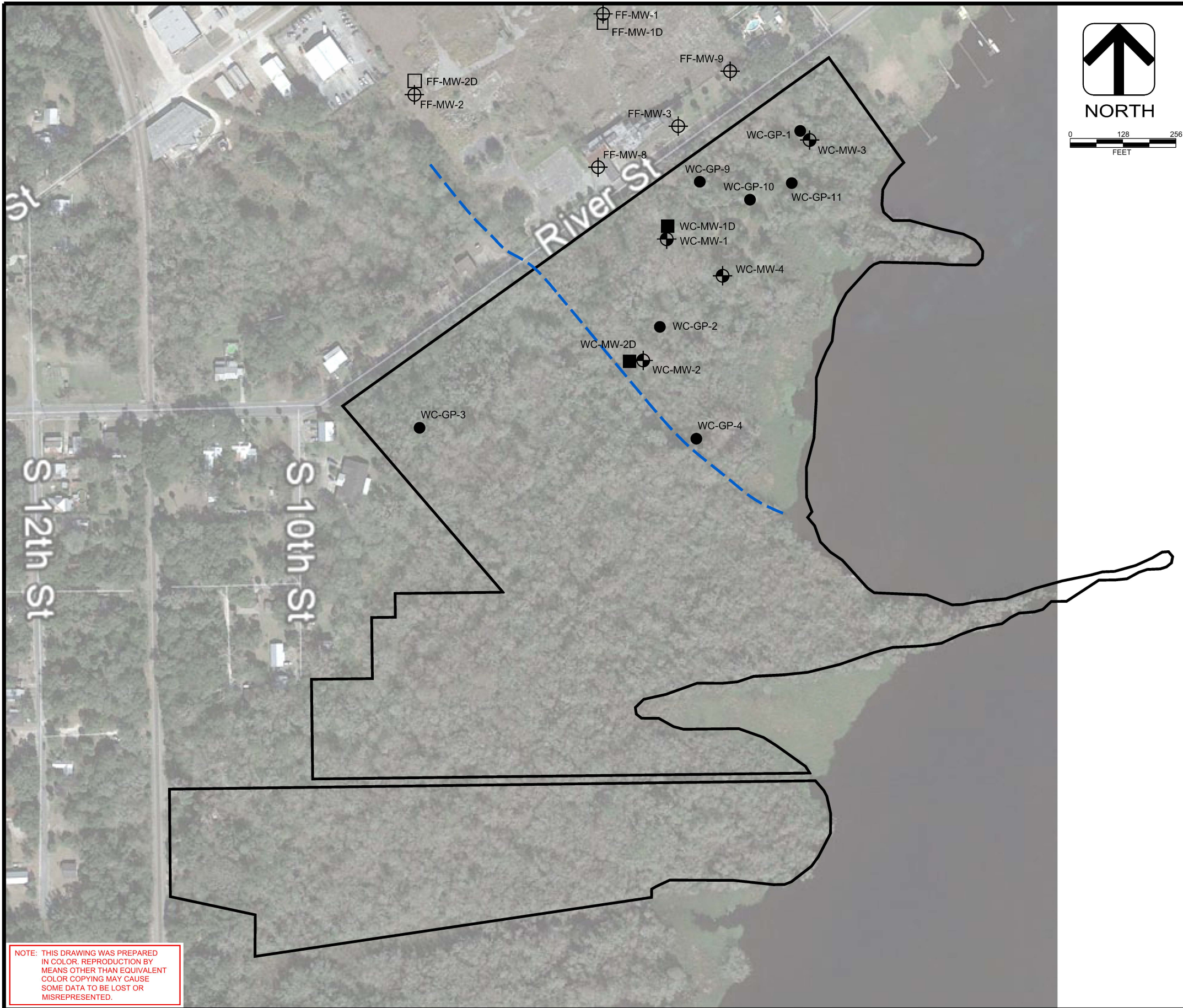
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CHK.BY	E. GROSS	JOB NO.	19-0668.25						
DATE	APRIL 2017	SCALE	AS SHOWN	NO.	DATE	REVISION	NO.	DATE	REVISION

FORMER WILSON CYPRESS COMPANY
PALATKA, FLORIDA



SOIL PROBE, BORING AND MONITORING
WELL LOCATIONS

DRAWING NO.
2



LEGEND

- PROPERTY BOUNDARY
- WC-GP-11 SOIL PROBE
- WC-MW-2 SHALLOW MONITORING WELL
- WC-MW-1D DEEP MONITORING WELL
- FF-MW-2 FLORIDA FURNITURE SHALLOW MONITORING WELL
- FF-MW-2D FLORIDA FURNITURE DEEP MONITORING WELL
- FF-GP-2 FLORIDA FURNITURE SOIL PROBE
- ESTIMATED EXTENT OF NARROW WASH STREAM

4/13/2017
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LEGEND

- PROPERTY BOUNDARY
- WC-GP-11 SOIL PROBE
- WC-MW-2 SHALLOW MONITORING WELL
- WC-MW-1D DEEP MONITORING WELL
- FF-MW-2 FLORIDA FURNITURE SHALLOW MONITORING WELL
- FF-MW-2D FLORIDA FURNITURE DEEP MONITORING WELL
- ESTIMATED EXTENT OF NARROW WASH STREAM
- (4.47) WATER TABLE ELEVATION
- 8 WATER TABLE CONTOUR
- FLOW DIRECTION

DR.BY	TJS / CRB	BOOK NO.							
CHK.BY	E. GROSS	JOB NO.	19-0668.25						
DATE	APRIL 2017	SCALE	AS SHOWN	NO.	DATE	REVISION	NO.	DATE	REVISION

FORMER WILSON CYPRESS COMPANY
PALATKA, FLORIDA

AYRES
ASSOCIATES
Eau Claire, Wisconsin

WATER TABLE CONTOUR MAP

DRAWING NO.
3

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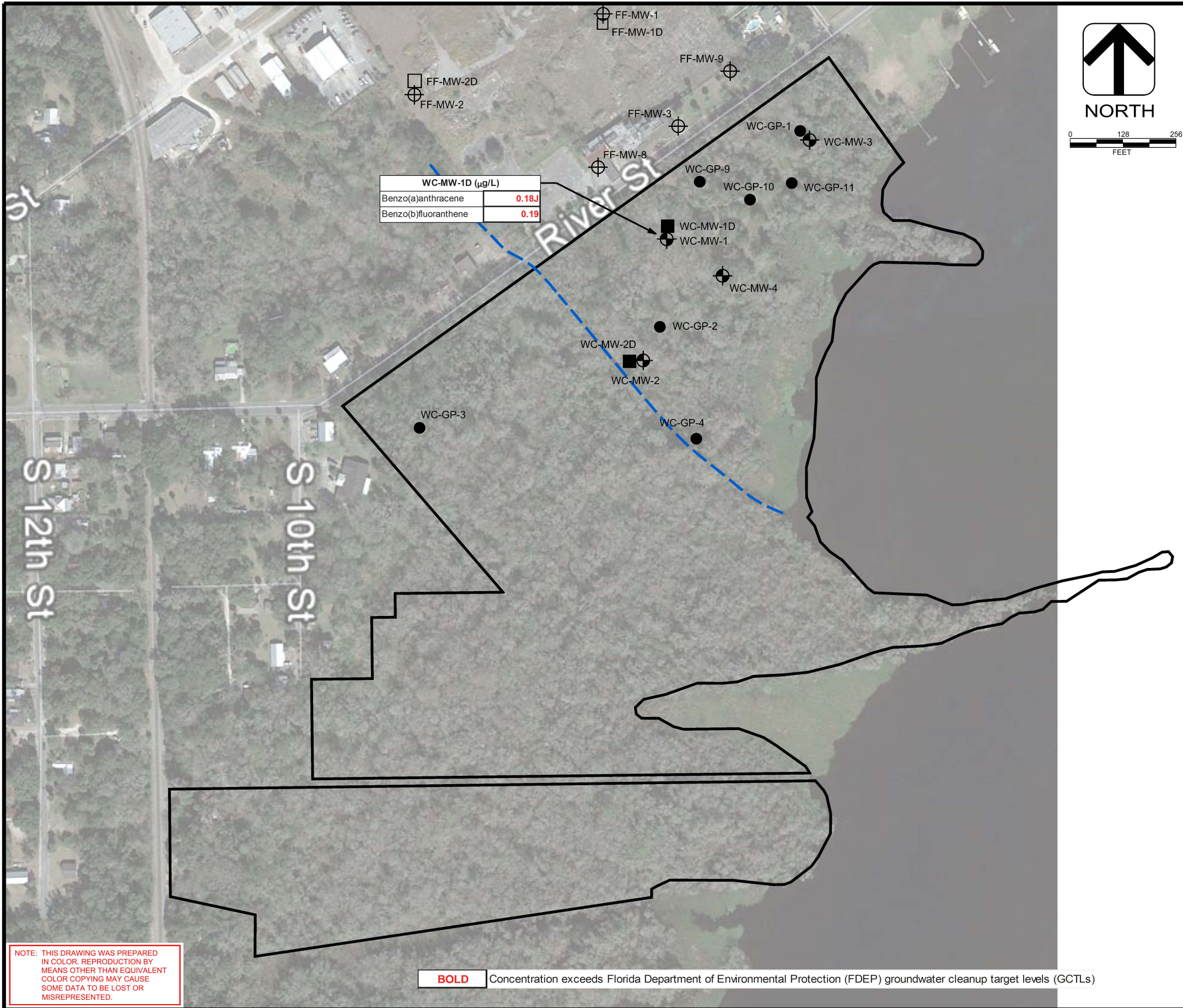
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-
- SECTION LOCATION MAP

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BOLD Concentration exceeds Florida Department of Environmental Protection (FDEP) groundwater cleanup target levels (GCTLs)

LEGEND

- PROPERTY BOUNDARY
- WC-GP-11 SOIL PROBE
- WC-MW-2 SHALLOW MONITORING WELL
- WC-MW-1D DEEP MONITORING WELL
- FF-MW-2 FLORIDA FURNITURE SHALLOW MONITORING WELL
- FF-MW-2D FLORIDA FURNITURE DEEP MONITORING WELL
- ESTIMATED EXTENT OF NARROW WASH STREAM

DR.BY	TJS / CRB	BOOK NO.							
CHK.BY	E. GROSS	JOB NO.	19-0668.25						
DATE	APRIL 2017	SCALE	AS SHOWN	NO.	DATE	REVISION	NO.	DATE	REVISION

FORMER WILSON CYPRESS COMPANY
PALATKA, FLORIDA



SUMMARY OF ANALYTE EXCEEDANCES IN GROUNDWATER

Tables

Table 1
Groundwater Elevation Data
Former Wilson Cypress Company, PID# 42-10-27-6850-0001-0260
Palatka, Florida

WELL ID	TOP OF CASING ELEVATION	2/22/2017		Vertical Gradient
		DEPTH TO WATER	GW ELEVATION	
WC-MW-1	4.95	4.59	0.36	0.0154
WC-MW-1D	4.77	4.11	0.66	
WC-MW-2	5.17	4.56	0.61	-0.00240
WC-MW-2D	5.17	4.60	0.57	
WC-MW-3	4.24	4.52	-0.28	
WC-MW-4	5.43	5.60	-0.17	

Note:

1. All wells surveyed to USGS datum. Wells surveyed to top of PVC casing.
2. Benchmark is a set nail and disk stamped "cardino trav" next to the manhole at the intersection of Morris Street and Emmett Street, north-northeast of project site (elevation of 19.411 ft. msl)

Table 2
Summary of Hydraulic Conductivity Test Results
Wilson Cypress Site
Palatka, Florida

Well Number /Test ¹	Hydraulic Conductivity ² (ft/sec)	Hydraulic Conductivity ³ (cm/sec)	Material Surrounding ⁴ Screen (USCS)
WC-MW-1 Slug Out	2.12×10^{-5}	6.5×10^{-4}	SM, PT, OL, Wood
WC-MW-1D Slug In	1.87×10^{-6}	5.70×10^{-5}	SP, ML, Limestone
WC-MW-2 Slug Out	1.57×10^{-5}	4.78×10^{-4}	PT
WC-MW-2D Slug In	7.60×10^{-5}	2.32×10^{-3}	SP
WC-MW-2D Slug Out	8.34×10^{-5}	2.54×10^{-3}	SP
WC-MW-4 Slug Out	4.86×10^{-5}	1.48×10^{-3}	SP, PT, Wood

Notes:

¹Slug in test = falling head test, Slug out test = rising head test

²ft/sec = hydraulic conductivity in units of feet per second

³cm/sec = hydraulic conductivity in units of centimeters per second

⁴See Figure 3 for Unified Soil Classification System (USCS) soil descriptions

Table 3
Summary of Soil Sample Laboratory Analytical Results
Former Wilson Cypress Company, PID# 42-10-27-6850-0001-0260, Palatka, Florida
2/15/2017 - 2/20/2017

	Analytical Result (mg/Kg)						Soil standards	
Boring Number/Depth	WC-MW-1D 0'-2.5'	WC-MW-2D 0'-2.5'	WC-MW-3 2.5'-5'	WC-MW-4 2.5'-5'	WC-MW-4 2.5'-5' D	WC-GP-1 2.5'-5'		
Sampling Date	2/15/2017	2/14/2017	2/15/2017	2/14/2017	2/14/2017	2/14/2017	FDEP Soil Cleanup Target Levels (SCTL) ¹	
Soil Type	FILL/SM/SP	SM & SC	SP & PT/OL	SP & WOOD	SP & WOOD	SM, GP, & WOOD	Direct Exposure (DE) (Residential) ²	Direct Exposure (Commercial/Industrial) ³
Metals (EPA 6010/7471)	Analytical Result (mg/Kg)							
Arsenic	0.53	2.4	67	<0.28	0.35	1.2	2.1 (3.70-7.02)	12
Barium	36	69	17	18	12	210	120	130,000
Cadmium	0.18	0.95	<0.072	0.11J	0.054J	1.2	82 (0.008-0.015)	1700
Chromium	8.4	22	8.5	3.1	1.7	18	210 (6.9-9.0)	470
Lead	63	51	6500	9.3	10	440	400 (4.0-7.0)	1400
Mercury	0.039	0.058	0.22	0.018	0.013	0.63	3	17
Selenium	<0.22	<0.24	<0.43	<0.23	<0.23	<0.25	440 (0.17-0.34)	11000
Silver	0.053J	0.32	2.6	0.12J	<0.036	0.41	410	8200
VOC (EPA 8260)	Analytical Result (mg/Kg)						FDEP SCTL ¹	
	Analytical Result (mg/Kg)						DE Residential Soil ²	DE Commercial/Industrial Soil ³
Acetone	0.068	<0.0037	0.43J	0.39J	--	0.037	11000	68000
Carbon Disulfide	<0.0015	<0.0018	0.0046J	<0.0019	--	<0.0017	270	1500
Methyl Ethyl Ketone (2-Butanone)	0.0028J	<0.0031	0.042	0.035	--	0.0036J	16000	110000
p-Cymene	<0.0016	<0.0019	<0.0028	<0.002	--	<0.0018	960	5600
PAH (EPA 8270D SIM)	Analytical Result (mg/Kg)						FDEP SCTL ¹	
	Analytical Result (mg/Kg)						DE Residential Soil ²	DE Commercial/Industrial Soil ³
1-Methylnaphthalene	<0.0027	<0.03	<0.027	<0.0029	<0.0029	<0.031	200	1800
2-Methylnaphthalene	<0.0038	<0.042	<0.038	<0.004	<0.004	<0.043	210	2100
Acenaphthene	<0.0036	<0.041	<0.036	<0.0038	<0.0039	<0.042	2,400	20000
Acenaphthylene	<0.0048	<0.054	<0.048	<0.0051	<0.0051	<0.055	1,800	20000
Anthracene	<0.005	<0.056	0.092J	<0.0052	<0.0053	<0.057	21,000	300,000
Benzo(a)anthracene	0.022	0.082J	<0.039	0.014	<0.0042	0.16	ns	ns
Benzo(a)pyrene	0.024	0.095J	<0.081	0.025	<0.0088	0.19	0.1	0.7
Benzo(b)fluoranthene	0.045	0.26000	0.097	0.042	<0.0063	0.31	ns	ns
Benzo(g,h,i)perylene	0.026	0.18000	0.067J	0.026	<0.0071	0.2	2,500	52,000
Benzo(k)fluoranthene	0.017	0.085J	<0.06	0.015	<0.0065	0.12	ns	ns
Chrysene	0.033	0.15000	0.076J	0.023	<0.0052	0.27	ns	ns
Dibenz(a,h)anthracene	0.0058J	<0.05	<0.044	0.0064J	<0.0048	<0.051	ns	ns
Fluoranthene	0.037	0.17000	0.12	0.019	<0.0066	0.62	3,200	59,000
Fluorene	<0.0041	<0.046	<0.041	<0.0044	<0.0044	<0.047	2,600	33000
Indeno(1,2,3-cd)pyrene	0.025	0.17000	0.058J	0.027	<0.0052	0.2	ns	ns
Naphthalene	<0.0029	<0.033	<0.029	<0.0031	<0.0031	<0.034	55	300
Phenanthrene	0.011	<0.043	0.091J	0.0052J	<0.0041	0.34	2,200	36000
Pyrene	0.033	0.14000	0.11	0.017	<0.0036	0.47	2,400	45000
Total Benzo(a)pyrene Equivalents	0.039203	0.17220	0.080326	0.039873	0.0076201	0.28397	0.1	0.7

BOLD	Concentration exceeds Florida Department of Environmental Protection (FDEP) Soil Cleanup Target Level (SCTL) for resident direct exposure.
Bold	Concentration exceeds FDEP SCTL for commercial/industrial exposure.
()	Background concentrations of trace metals (by county) based on a 1999 study completed by the University of Florida, "Background Concentrations of Trace Metals in Florida Surface Soils..." http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.691.4671&rep=rep1&type=pdf
ns	No FDEP SCTL established.
<	Concentration less than laboratory method detection limit (MDL).
mg/Kg	Concentration reported as milligrams per kilogram, equivalent to parts per million (ppm).
FDEP SCTL	¹ FDEP has SCTLs which are presented in Table II in Florida Administrative Code (F.A.C.) Chapter 62-777, (effective 4/17/2005): http://www.dep.state.fl.us/waste/quick_topics/rules/documents/62-777/62-777_TableII_SoilCTLs.pdf ² Direct Exposure (DE) protection of a resident. Florida Legislature expects the most potential exposures during routine activities are limited to the top two feet of contaminated soil. ³ Direct Exposure protection of a commercial/industrial property. Florida Legislature expects the most potential exposures during routine activities are limited to the top two feet of contaminated soil.
J	Result was greater than or equal to the MDL but below the Practical Quantitation Limit (PQL).

Table 3 (continued)
Summary of Soil Sample Laboratory Analytical Results
Former Wilson Cypress Company, PID# 42-10-27-6850-0001-0260, Palatka, Florida
2/15/2017 - 2/20/2017

	Analytical Result (mg/Kg)						Soil standards	
Boring Number/Depth	WC-GP-2 0'-2.5'	WC-GP-3 0'-1'	WC-GP-4 1'-2'	WC-GP-9 2.5'-5'	WC-GP-10 2.5'-5'	WC-GP-11 0'-2.5'		
Sampling Date	2/14/2017	2/20/2017	2/20/2017	2/15/2017	2/14/2017	2/15/2017	FDEP Soil Cleanup Target Levels (SCTL)¹	
Soil Type	ML	SP	SC	SM, ML & WOOD	SM & SP	SM & SP	Direct Exposure (DE) (Residential)²	Direct Exposure (Commercial/Industrial)³
Metals (EPA 6010/7471)	Analytical Result (mg/Kg)							
Arsenic	2.8	<0.23	0.73	0.88	<0.25	0.45	2.1 (3.70-7.02)	12
Barium	91	14	64	21	15	15	120	130,000
Cadmium	1	0.081J	0.078J	<0.045	<0.035	0.15J	82 (0.008-0.015)	1700
Chromium	13	1.7	17	3.1	3.1	4.4	210 (6.9-9.0)	470
Lead	180	7.8	20	200	15	14	400 (4.0-7.0)	1400
Mercury	0.15	0.023	0.042	0.017	0.0084	0.018	3	17
Selenium	<0.34	<0.19	<0.24	<0.27	<0.21	<0.24	440 (0.17-0.34)	11000
Silver	0.62	0.034J	<0.039	0.047J	0.056J	<0.038	410	8200
							FDEP SCTL¹	
VOC (EPA 8260)	Analytical Result (mg/Kg)						DE Residential Soil²	DE Commercial/Industrial Soil³
Acetone	0.052	0.059	<0.0028	0.19	0.062	0.068	11000	68000
Carbon Disulfide	<0.0038	<0.0027	<0.0014	<0.0021	<0.0017	<0.0017	270	1500
Methyl Ethyl Ketone (2-Butanone)	<0.0065	<0.0047	<0.0024	0.014	0.0057J	0.017	16000	110000
p-Cymene	<0.004	<0.0029	<0.0015	<0.0023	0.0026J	<0.0018	960	5600
							FDEP SCTL¹	
PAH (EPA 8270D SIM)	Analytical Result (mg/Kg)						DE Residential Soil²	DE Commercial/Industrial Soil³
1-Methylnaphthalene	<0.021	<0.011	<0.012	<0.0033	<0.0026	<0.06	200	1800
2-Methylnaphthalene	<0.03	<0.015	<0.016	<0.0046	<0.0037	<0.084	210	2100
Acenaphthene	<0.029	<0.014	<0.015	<0.0044	<0.0035	<0.08	2,400	20000
Acenaphthylene	0.046J	<0.019	<0.02	0.021	<0.0047	<0.11	1,800	20000
Anthracene	<0.039	<0.02	<0.021	0.01J	<0.0048	<0.11	21,000	300,000
Benzo(a)anthracene	0.26	<0.016	<0.017	0.05	0.0073J	<0.088	ns	ns
Benzo(a)pyrene	0.32	<0.033	<0.035	0.077	0.0084J	<0.18	0.1	0.7
Benzo(b)fluoranthene	0.49	<0.024	<0.025	0.11	0.015	<0.13	ns	ns
Benzo(g,h,i)perylene	0.26	<0.026	<0.028	0.078	0.0081J	<0.15	2,500	52,000
Benzo(k)fluoranthene	0.19	<0.024	<0.026	0.04	0.006J	<0.13	ns	ns
Chrysene	0.42	<0.019	<0.021	0.081	0.01	<0.11	ns	ns
Dibenz(a,h)anthracene	0.061J	<0.018	<0.019	0.017	<0.0044	<0.099	ns	ns
Fluoranthene	0.65	<0.025	<0.026	0.12	0.013	<0.14	3,200	59,000
Fluorene	<0.033	<0.016	<0.018	<0.005	<0.004	<0.091	2,600	33000
Indeno(1,2,3-cd)pyrene	0.29	<0.019	<0.021	0.08	0.0081J	<0.11	ns	ns
Naphthalene	<0.023	<0.012	<0.012	<0.012	<0.0028	<0.065	55	300
Phenanthrene	0.23	<0.015	<0.016	0.051	<0.0038	<0.085	2,200	36000
Pyrene	0.52	<0.013	<0.014	0.1	0.012	<0.074	2,400	45000
Total Benzo(a)pyrene Equivalents	0.48732	0.0285795	0.0302905	0.118481	0.01371	0.156605	0.1	0.7

BOLD	Concentration exceeds Florida Department of Environmental Protection (FDEP) Soil Cleanup Target Level (SCTL) for resident direct exposure.
Bold	Concentration exceeds FDEP SCTL for commercial/industrial exposure.
()	Background concentrations of trace metals (by county) based on a 1999 study completed by the University of Florida, "Background Concentrations of Trace Metals in Florida Surface Soils..." http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.691.4671&rep=rep1&type=pdf
ns	No FDEP SCTL established.
<	Concentration less than laboratory method detection limit (MDL).
mg/Kg	Concentration reported as milligrams per kilogram, equivalent to parts per million (ppm).
FDEP SCTL	¹ FDEP has SCTLs which are presented in Table II in Florida Administrative Code (F.A.C.) Chapter 62-777, (effective 4/17/2005): http://www.dep.state.fl.us/waste/quick_topics/rules/documents/62-777/62-777_TableII_SoiCTLs.pdf ² Direct Exposure (DE) protection of a resident. Florida Legislature expects the most potential exposures during routine activities are limited to the top two feet of contaminated soil. ³ Direct Exposure protection of a commercial/industrial property. Florida Legislature expects the most potential exposures during routine activities are limited to the top two feet of contaminated soil.
J	Result was greater than or equal to the MDL but below the Practical Quantitation Limit (PQL).

Table 4
Summary of Groundwater Sample Laboratory Analytical Results
Former Wilson Cypress Company, PID# 42-10-27-6850-0001-0260, Palatka, Florida
2/21/2017 - 2/22/2017

	Analytical Result (µg/L)					FDEP
Well Number	WC-MW-1	WC-MW-1D	WC-MW-2	WC-MW-2D	WC-MW-2D D	Groundwater Cleanup
Sampling Date	2/22/2017	2/22/2017	2/21/2017	2/21/2017	2/21/2017	Target Level (GCTL)¹
Metals (EPA 6010/7470)						
	Analytical Result (µg/L)					
Arsenic	<8.5	<8.5	<8.5	<8.5	---	10*
Barium	52	35	57	51	---	2,000*
Cadmium	<0.32	<0.32	<0.32	<0.32	---	5*
Chromium	1.2	0.82J	1	0.83J	---	100*
Lead	<1.3	<1.3	<1.3	<1.3	---	15*
Mercury	0.013J	0.011J	<0.011	<0.011	---	2*
Selenium	<6.8	<6.8	<6.8	<6.8	---	50*
Silver	<0.44	<0.44	<0.44	<0.44	---	100**
VOCs (EPA 8260)						
	Analytical Result (µg/L)					
Acetone	<2.1	55	2.3J	<2.1	<2.1	6300
Benzene	<0.16	0.54J	<0.16	<0.16	<0.16	1
Carbon Disulfide	<0.21	5.5	<0.21	<0.21	<0.21	700
Chloromethane	<0.21	1.4	<0.21	<0.21	<0.21	2.7
Methyl Ethyl Ketone (2-Butanone)	<0.43	7.8	<0.43	<0.43	<0.43	4200
p-Cymene	<0.15	<0.15	<0.15	<0.15	<0.15	ns
Toluene	<0.23	1	<0.23	<0.23	<0.23	40
PAH (EPA 8270 SIM)						
	Analytical Result (µg/L)					
1-Methylnaphthalene	<0.20	<0.20	<0.20	<0.20	---	28
2-Methylnaphthalene	<0.2	<0.2	<0.2	<0.2	---	28
Acenaphthene	<0.16	<0.16	<0.16	<0.16	---	20
Acenaphthylene	<0.17	<0.17	<0.17	<0.17	---	210
Anthracene	<0.14	<0.14	<0.14	<0.14	---	2100
Benzo(a)anthracene	<0.049	0.18J	<0.049	<0.049	---	0.05
Benzo(a)pyrene	<0.15	0.15J	<0.15	<0.15	---	0.2*
Benzo(b)fluoranthene	<0.05	0.19	<0.05	<0.05	---	0.05
Benzo(g,h,i)perylene	<0.19	<0.19	<0.19	<0.19	---	210
Benzo(k)fluoranthene	<0.19	<0.19	<0.19	<0.19	---	0.5
Chrysene	<0.13	0.21	<0.13	<0.13	---	4.8
Dibenz(a,h)anthracene	<0.095	<0.095	<0.095	<0.095	---	0.005
Fluoranthene	<0.15	0.2J	<0.15	<0.15	---	280
Fluorene	<0.15	<0.15	<0.15	<0.15	---	280
Indeno(1,2,3-cd)pyrene	<0.045	<0.045	<0.045	<0.045	---	0.05
Naphthalene	<0.27	<0.27	<0.27	<0.27	<0.27	14#
Phenanthrene	<0.16	<0.16	<0.16	<0.16	---	210
Pyrene	<0.14	0.2J	<0.14	<0.14	---	210

BOLD	Concentration exceeds Florida Department of Environmental Protection (FDEP) groundwater cleanup target levels (GCTLs).
*	Maximum Contaminant Level (MCL) provided in Chapter 62-550 Florida Administrative Code (F.A.C.), Drinking Water Standards, Monitoring and Reporting
**	Secondary MCL provided in Chapter 62-550 Florida Administrative Code (F.A.C.), Drinking Water Standards, Monitoring and Reporting
#	Groundwater CTLs for class C carcinogens with no cancer slope factor were developed using the reference dose divided by a factor of 10, as described in the February 2005 Final Technical report: Development of Cleanup Target Levels (CTLs) for Chapter 62-777, F.A.C.
---	Not Analyzed
<	Concentration less than laboratory method detection limit.
µg/L	Standards reported as micrograms per liter, equivalent to parts per billion (ppb), except as noted.
¹	FDEP Groundwater Cleanup Target Level (GCTL), located in Chapter 62-777, Table I, F.A.C.
J	Estimated concentration was greater than or equal to the Method Detection Limit (MDL) but below the Practical Quantitation Limit (PQL).

Table 4 (continued)
Summary of Groundwater Sample Laboratory Analytical Results
Former Wilson Cypress Company, PID# 42-10-27-6850-0001-0260, Palatka, Florida
2/21/2017 - 2/22/2017

Well Number	Analytical Result (µg/L)			FDEP Groundwater Cleanup Target Level (GCTL) ¹
	WC-MW-3	WC-MW-4	WC-MW-4 D	
Sampling Date	2/22/2017	2/22/2017	2/22/2017	
Metals (EPA 6010/7470)	Analytical Result (µg/L)			
Arsenic	<8.5	<8.5	<8.5	10*
Barium	92	54	54	2,000*
Cadmium	<0.32	<0.32	<0.32	5*
Chromium	0.76J	1.1	1.2	100*
Lead	<1.3	<1.3	<1.3	15*
Mercury	<0.011	<0.011	<0.011	2*
Selenium	<6.8	<6.8	<6.8	50*
Silver	<0.44	<0.44	<0.44	100**
VOCs (EPA 8260)	Analytical Result (µg/L)			
Acetone	3J	7.9	---	6300
Benzene	<0.16	<0.16	---	1
Carbon Disulfide	<0.21	<0.21	---	700
Chloromethane	<0.21	<0.21	---	2.7
Methyl Ethyl Ketone (2-Butanone)	<0.43	<0.43	---	4200
p-Cymene	<0.15	0.63J	---	ns
Toluene	<0.23	<0.23	---	40
PAH (EPA 8270 SIM)	Analytical Result (µg/L)			
1-Methylnaphthalene	<0.20	<0.20	---	28
2-Methylnaphthalene	<0.2	<0.2	---	28
Acenaphthene	<0.16	<0.16	---	20
Acenaphthylene	<0.17	<0.17	---	210
Anthracene	<0.14	<0.14	---	2100
Benzo(a)anthracene	<0.049	<0.049	---	0.05
Benzo(a)pyrene	<0.15	<0.15	---	0.2*
Benzo(b)fluoranthene	<0.05	<0.05	---	0.05
Benzo(g,h,i)perylene	<0.19	<0.19	---	210
Benzo(k)fluoranthene	<0.19	<0.19	---	0.5
Chrysene	<0.13	<0.13	---	4.8
Dibenz(a,h)anthracene	<0.095	<0.095	---	0.005
Fluoranthene	<0.15	<0.15	---	280
Fluorene	<0.15	<0.15	---	280
Indeno(1,2,3-cd)pyrene	<0.045	<0.045	---	0.05
Naphthalene	<0.27	<0.27	---	14#
Phenanthrene	<0.16	<0.16	---	210
Pyrene	<0.14	<0.14	---	210

BOLD	Concentration exceeds Florida Department of Environmental Protection (FDEP) groundwater cleanup target levels (GCTLs).
*	Maximum Contaminant Level (MCL) provided in Chapter 62-550 Florida Administrative Code (F.A.C.), Drinking Water Stand
**	Secondary MCL provided in Chapter 62-550 Florida Administrative Code (F.A.C.), Drinking Water Standards, Monitoring and
#	Groundwater CTLs for class C carcinogens with no cancer slope factor were developed using the reference dose divided by as described in the February 2005 Final Technical report: Development of Cleanup Target Levels (CTLs) for Chapter 62-777
---	Not Analyzed
<	Concentration less than laboratory method detection limit.
µg/L	Standards reported as micrograms per liter, equivalent to parts per billion (ppb), except as noted.
¹	FDEP Groundwater Cleanup Target Level (GCTL), located in Chapter 62-777, Table I, F.A.C.
J	Estimated concentration was greater than or equal to the Method Detection Limit (MDL) but below the Practical Quantitation

Table 5
Water Quality Field Parameter Data
Former Wilson Cypress Company, PID# 42-10-27-6850-0001-0260
Palatka, Florida

Well ID	February 21-22, 2017					
	Temperature (°F)	PH	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)
WC-MW-1	69.97	6.35	769.72	0.11	-55.86	1.81
WC-MW-1D	71.26	7.21	872.13	0.13	-170.76	12.46
WC-MW-2	70.39	6.39	877.71	0.03	-110.84	27.66
WC-MW-2D	71.31	6.84	752.87	0.04	-160.88	3.60
WC-MW-3	69.08	6.76	954.38	52.50	-114.39	18.79
WC-MW-4	69.42	6.21	918.29	52.50	-63.61	0.51

--- Measurement not obtained

Appendix A

**Geologic Logs & Monitoring Well Construction/Well
Development Forms**

BORING LOG

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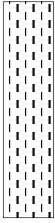
Boring/Well Number: WC-GP-1		Permit Number:		FDEP Facility Identification Number:	
Site Name: Wilson Cypress		Borehole Start Date: 02/14/17	Borehole Start Time: 2:20	☐ AM ☒ PM	
		End Date: 02/14/17	End Time: 2:30	☐ AM ☒ PM	
Environmental Contractor: Ayres Associates		Geologist's Name: Jeff Steiner		Environmental Technician's Name: Jeff Steiner	
Drilling Company: TransAmerican Drilling & Testing		Pavement Thickness (inches): N/A	Borehole Diameter (inches): 2 inches	Borehole Depth (feet): 15 feet	
Drilling Method(s): DP	Apparent Borehole DTW (in feet from soil moisture content): 5 feet	Measured Well DTW (in feet after water recharges in well): N/A	OVA (list model and check type): ☐ FID ☒ PID		
Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☒ Backfill ☐ Stockpile ☐ Other (describe if other or multiple items are checked):					
Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☒ Backfill ☐ Other (describe)					

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Graphic Log	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DP	0'-2.5'	30	N/A	N/A	N/A	7.8	1	SAND, moist, fine grained, poorly graded, no odor, tan	SP		M	Lab Sample: WC-GP-1 2.5'-5'
DP	2.5'-5'	30	N/A	N/A	N/A	30.9	2	SAND, silty, moist, no odor, dark brown	SM		M	
							3	GRAVEL, little sand, moist, large gravel, poorly graded, no odor	GP		M	
DP	5'-7.5'	30	N/A	N/A	N/A	5.0	4	WOOD, moist	WOOD		M	
							5	PEAT, some silt and clay, some wood, wet, black	PT		W	
DP	7.5'-10'	30	N/A	N/A	N/A	12.7	6				W	
							7				W	
							8				W	
DP	10'-12.5'	30	N/A	N/A	N/A	11.9	9	SAND, wet, fine grained, poorly graded, gray	SP		W	
							10	PEAT, ORGANIC, some silt, clay & wood, wet, low plasticity, very weathered, H2S odor, black	PT/OL		W	
DP	12.5'-15'	30	N/A	N/A	N/A	10.3	11				W	
							12				W	

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill CuttingsMoisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG

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Boring/Well Number: WC-GP-1		FDEP Facility Identification Number:			Site Name: Wilson Cypress		Borehole Start Date: End Date:				
Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Graphic Log	Moisture Content
							13	PEAT, ORGANIC, some silt, clay & wood, wet, low plasticity, very weathered, H2S odor, black	PT/OL		W
							14				W
							15				W
							16	EOB @ 15'			
							17				
							18				
							19				
							20				
							21				
							22				
							23				
							24				
							25				
							26				
							27				
							28				
							29				
							30				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = DrillMoisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG

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Boring/Well Number: WC-GP-2		Permit Number:		FDEP Facility Identification Number:	
Site Name: Wilson Cypress		Borehole Start Date: 02/14/17	Borehole Start Time: 11:10	☒ AM ☐ PM	
		End Date: 02/14/17	End Time: 11:20	☒ AM ☐ PM	
Environmental Contractor: Ayres Associates		Geologist's Name: Jeff Steiner		Environmental Technician's Name: Jeff Steiner	
Drilling Company: TransAmerican Drilling & Testing		Pavement Thickness (inches): N/A	Borehole Diameter (inches): 2 inches	Borehole Depth (feet): 10 feet	
Drilling Method(s): DP	Apparent Borehole DTW (in feet from soil moisture content): 3 feet	Measured Well DTW (in feet after water recharges in well): N/A	OVA (list model and check type): ☐ FID ☒ PID		
Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☒ Backfill ☐ Stockpile ☐ Other (describe if other or multiple items are checked):					
Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☒ Backfill ☐ Other (describe)					

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Graphic Log	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DP	0'-2.5'	30	N/A	N/A	N/A	11.1	1	SILT, trace clay and sand, moist, non-plastic, no odor, black	ML		M	Lab Sample: WC-GP-2 0'-2.5'
							2				M	
DP	2.5'-5'	30	N/A	N/A	N/A	12.7	3				M	
							4	WOOD, fine wood chips/sawdust, wet, no odor, brown	WOOD		M	
							5				M	
DP	5'-7.5'	30	N/A	N/A	N/A	16.1	6				W	
							7				W	
DP	7.5'-10'	30	N/A	N/A	N/A	15.7	8				W	
							9	PEAT, some silt and clay, wet, highly weathered, no odor, dark brown to black	PT		W	
							10				W	
							11	EOB @ 10'			W	
							12				W	

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill CuttingsMoisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG

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Boring/Well Number: WC-GP-3		Permit Number:		FDEP Facility Identification Number:	
Site Name: Wilson Cypress		Borehole Start Date: 02/20/17	Borehole Start Time: 9:30	☒ AM ☐ PM	
		End Date: 02/20/17	End Time: 9:50	☒ AM ☐ PM	
Environmental Contractor: Ayes Associates		Geologist's Name: Jeff Steiner		Environmental Technician's Name: Jeff Steiner	
Drilling Company: TransAmerican Drilling & Testing		Pavement Thickness (inches): N/A	Borehole Diameter (inches): 2 inches	Borehole Depth (feet): 3 feet	
Drilling Method(s): HA	Apparent Borehole DTW (in feet from soil moisture content): >3'		Measured Well DTW (in feet after water recharges in well): N/A	OVA (list model and check type): ☐ FID ☒ PID	
Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☒ Backfill ☐ Stockpile ☐ Other (describe if other or multiple items are checked):					
Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☒ Backfill ☐ Other (describe)					

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Graphic Log	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
HA	0'-1'	30	N/A	N/A	N/A	5.0	1	SAND, some organics, dry, very fine-fine grained, poorly graded, no odor, tan	SP		D	Lab Sample: WC-GP-3 0'-1'
HA	1'-2'	30	N/A	N/A	N/A	4.6	2				D	
HA	2'-3'	30	N/A	N/A	N/A	4.5	3				D	
							4	EOB @ 3'				
							5					
							6					
							7					
							8					
							9					
							10					
							11					
							12					

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill CuttingsMoisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG

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Boring/Well Number: WC-GP-4		Permit Number:		FDEP Facility Identification Number:	
Site Name: Wilson Cypress		Borehole Start Date: 02/20/17	Borehole Start Time: 9:00	☒ AM ☐ PM	
		End Date: 02/20/17	End Time: 9:15	☒ AM ☐ PM	
Environmental Contractor: Ayes Associates		Geologist's Name: Jeff Steiner		Environmental Technician's Name: Jeff Steiner	
Drilling Company: TransAmerican Drilling & Testing		Pavement Thickness (inches): N/A	Borehole Diameter (inches): 2 inches	Borehole Depth (feet): 3 feet	
Drilling Method(s): HA	Apparent Borehole DTW (in feet from soil moisture content): 2'	Measured Well DTW (in feet after water recharges in well): N/A	OVA (list model and check type): ☐ FID ☒ PID		
Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☒ Backfill ☐ Stockpile ☐ Other (describe if other or multiple items are checked):					
Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☒ Backfill ☐ Other (describe)					

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Graphic Log	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
HA	0'-1'	30	N/A	N/A	N/A	0.3	1	SAND, clayey, some organics, moist, very fine-fine grained, low plasticity, some oxidation, no odor, gray/tan	SC		M	Lab Sample: WC-GP-4 1'-2'
HA	1'-2'	30	N/A	N/A	N/A	3.2	2				M	
HA	2'-3'	30	N/A	N/A	N/A	4.6	3	SAND, silty, little clay, little small gravel, wet, fine-medium grained, no odor, tan	SM		W	
							4	EOB @ 3'				
							5					
							6					
							7					
							8					
							9					
							10					
							11					
							12					

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill CuttingsMoisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG

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Boring/Well Number: WC-GP-9		Permit Number:		FDEP Facility Identification Number:	
Site Name: Wilson Cypress		Borehole Start Date: 02/15/17	Borehole Start Time: 10:00	☒ AM ☐ PM	
		End Date: 02/15/17	End Time: 10:15	☒ AM ☐ PM	
Environmental Contractor: Ayres Associates		Geologist's Name: Jeff Steiner		Environmental Technician's Name: Jeff Steiner	
Drilling Company: TransAmerican Drilling & Testing		Pavement Thickness (inches): N/A	Borehole Diameter (inches): 2 inches	Borehole Depth (feet): 10 feet	
Drilling Method(s): DP	Apparent Borehole DTW (in feet from soil moisture content): 4'	Measured Well DTW (in feet after water recharges in well): N/A	OVA (list model and check type): ☐ FID ☒ PID		
Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☒ Backfill ☐ Stockpile ☐ Other (describe if other or multiple items are checked):					
Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☒ Backfill ☐ Other (describe)					

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Graphic Log	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DP	0'-2.5'	30	N/A	N/A	N/A	5.6	1	SAND, silty, moist, very fine grained, no odor, green	SM		M	Lab Sample: WC-GP-9 2.5'-5'
							2	SILT, moist, non-plastic, no odor, black	ML		M	
DP	2.5'-5'	30	N/A	N/A	N/A	7.9	3	SAND, silty, moist, black	SM		M	
							4	SILT, moist, low plasticity, black	ML		M	
DP	5'-7.5'	30	N/A	N/A	N/A	11.4	5	WOOD, woodchips/sawdust, wet	WOOD		W	
							6	PEAT, with wood, occasional sand lense, wet, no odor, black	PT		W	
DP	7.5'-10'	30	N/A	N/A	N/A	11.3	7				W	
							8				W	
							9	ORGANIC SILT, with peat, some wood, wet, no odor, black	OL		W	
							10				W	
							11	EOB @ 10'				
							12					

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill CuttingsMoisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG

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Boring/Well Number: WC-GP-10		Permit Number:		FDEP Facility Identification Number:	
Site Name: Wilson Cypress		Borehole Start Date: 02/14/17	Borehole Start Time: 12:20	☐ AM ☒ PM	
		End Date: 02/14/17	End Time: 12:30	☐ AM ☒ PM	
Environmental Contractor: Ayres Associates		Geologist's Name: Jeff Steiner		Environmental Technician's Name: Jeff Steiner	
Drilling Company: TransAmerican Drilling & Testing		Pavement Thickness (inches): N/A	Borehole Diameter (inches): 2 inches	Borehole Depth (feet): 10 feet	
Drilling Method(s): DP	Apparent Borehole DTW (in feet from soil moisture content): 4'	Measured Well DTW (in feet after water recharges in well): N/A	OVA (list model and check type): ☐ FID ☒ PID		
Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☒ Backfill ☐ Stockpile ☐ Other (describe if other or multiple items are checked):					
Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☒ Backfill ☐ Other (describe)					

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Graphic Log	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DP	0'-2.5'	30	N/A	N/A	N/A	15.9	1	SAND, silty, trace clay, moist, fine grained, no odor, dark brown	SM		M	Lab Sample: WC-GP-10 2.5'-5'
							2				M	
DP	2.5'-5'	30	N/A	N/A	N/A	32.7	3				M	
							4				M	
DP	5'-7.5'	30	N/A	N/A	N/A	13.4	5	SAND, wet, fine grained, poorly graded, no odor, white	SP		W	
							6				W	
							7				W	
DP	7.5'-10'	30	N/A	N/A	N/A	14.0	8				W	
							9	PEAT and wood, some silty sand, trace clay	PT		W	
							10				W	
							11	EOB @ 10'				
							12					

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill CuttingsMoisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG

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Boring/Well Number: WC-GP-11		Permit Number:		FDEP Facility Identification Number:	
Site Name: Wilson Cypress		Borehole Start Date: 02/15/17	Borehole Start Time: 9:45	☒ AM ☐ PM	
		End Date: 02/15/17	End Time: 9:55	☒ AM ☐ PM	
Environmental Contractor: Ayres Associates		Geologist's Name: Jeff Steiner		Environmental Technician's Name: Jeff Steiner	
Drilling Company: TransAmerican Drilling & Testing		Pavement Thickness (inches): N/A	Borehole Diameter (inches): 2 inches	Borehole Depth (feet): 10 feet	
Drilling Method(s): DP	Apparent Borehole DTW (in feet from soil moisture content): 2'	Measured Well DTW (in feet after water recharges in well): N/A	OVA (list model and check type): ☐ FID ☒ PID		
Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☒ Backfill ☐ Stockpile ☐ Other (describe if other or multiple items are checked):					
Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☒ Backfill ☐ Other (describe)					

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Graphic Log	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DP	0'-2.5'	30	N/A	N/A	N/A	10.2	1	SAND, silty, trace clay and bark, moist, black	SM		M	Lab Sample: WC-GP-11 0'-2.5'
							2				M	
DP	2.5'-5'	30	N/A	N/A	N/A	10.3	3	SAND, wet, poorly graded, gray	SP		W	
							4				W	
DP	5'-7.5'	0	N/A	N/A	N/A	--	5	PEAT with wood, silty, wet, H2S odor, black	PT		W	
							6				W	
DP	7.5'-10'	30	N/A	N/A	N/A	8.9	7	PEAT/ORGANIC SILT, with wood, silty, trace clay, wet, low plasticity, H2S odor, black	PT/OL		W	
							8				W	
							9				W	
							10				W	
							11	EOB @ 10'				
							12					

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill CuttingsMoisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG

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Boring/Well Number: WC-MW-1		Permit Number:		FDEP Facility Identification Number:	
Site Name: Wilson Cypress		Borehole Start Date: 02/15/17	Borehole Start Time: 10:15 ☒ AM ☐ PM		
		End Date: 02/15/17	End Time: 11:00 ☒ AM ☐ PM		
Environmental Contractor: Ayres Associates		Geologist's Name: Jeff Steiner		Environmental Technician's Name: Jeff Steiner	
Drilling Company: TransAmerican Drilling & Testing		Pavement Thickness (inches): N/A	Borehole Diameter (inches): 2 inches		Borehole Depth (feet): 12 feet
Drilling Method(s): DP	Apparent Borehole DTW (in feet from soil moisture content): 3'	Measured Well DTW (in feet after water recharges in well): 4.59	OVA (list model and check type): ☐ FID ☒ PID		
Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☒ Spread ☐ Backfill ☐ Stockpile ☐ Other (describe if other or multiple items are checked):					
Borehole Completion (check one): ☒ Well ☐ Grout ☐ Bentonite ☐ Backfill ☐ Other (describe)					

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Graphic Log	Well Diagram	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DP	0'-2.5'	30	N/A	N/A	N/A	9.7	1	SAND, silty	SM/ FILL			M	Lab Sample: WC-MW-1D 0'-2.5'
							2	SAND, moist, poorly graded, white	SP/ FILL			M	
DP	2.5'-5'	30	N/A	N/A	N/A	11.6	3	SAND, silty, some organics (roots), black	SM/ FILL			M	
							4	WOOD chops, wet, brown	WOOD			W	
DP	5'-7.5'	30	N/A	N/A	N/A	14.2	5					W	
							6	PEAT, silty, some wood, wet, very weathered, black	PT			W	
DP	7.5'-10'	30	N/A	N/A	N/A	11.1	7					W	
							8	ORGANIC SILT, some wood, some clay, wet, low plasticity	OL			W	
DP	10'-12.5'	30	N/A	N/A	N/A	10.1	9					W	
							10					W	
DP	12.5'-15'	30	N/A	N/A	N/A	12.5	11					W	
							12					W	

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Direct Push; SC = Sonic Core; DC = Drill Cuttings

Moisture Content Codes: D = Dry; M = Moist; W = Wet; S = Saturated

BORING LOG

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Boring/Well Number: WC-MW-1		FDEP Facility Identification Number:			Site Name: Wilson Cypress		Borehole Start Date: End Date:					
Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Graphic Log	Well Diagram	Moisture Content
							13	EOB @ 12', well set at 12.2' bgs				
							14					
							15					
							16					
							17					
							18					
							19					
							20					
							21					
							22					
							23					
							24					
							25					
							26					
							27					
							28					
							29					
							30					

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill CuttingMoisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG

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Boring/Well Number: WC-MW-1D		Permit Number:		FDEP Facility Identification Number:	
Site Name: Wilson Cypress		Borehole Start Date: 02/15/17	Borehole Start Time: 10:15 ☒ AM ☐ PM		
		End Date: 02/15/17	End Time: 11:00 ☒ AM ☐ PM		
Environmental Contractor: Ayres Associates		Geologist's Name: Jeff Steiner		Environmental Technician's Name: Jeff Steiner	
Drilling Company: TransAmerican Drilling & Testing		Pavement Thickness (inches): N/A	Borehole Diameter (inches): 2 inches		Borehole Depth (feet): 29 feet
Drilling Method(s): DP	Apparent Borehole DTW (in feet from soil moisture content): 3'	Measured Well DTW (in feet after water recharges in well): 4.11	OVA (list model and check type): ☐ FID ☒ PID		
Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☒ Spread ☐ Backfill ☐ Stockpile ☐ Other (describe if other or multiple items are checked):					
Borehole Completion (check one): ☒ Well ☐ Grout ☐ Bentonite ☐ Backfill ☐ Other (describe)					

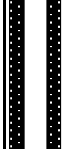
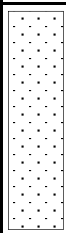
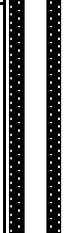
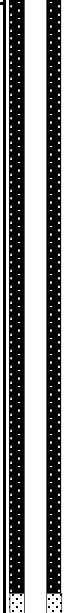
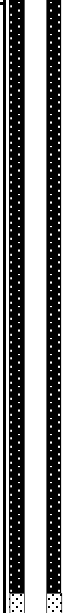
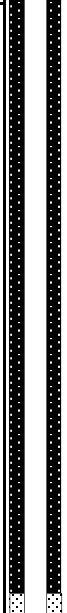
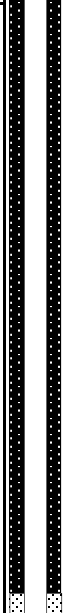
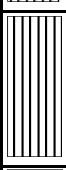
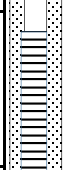
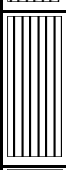
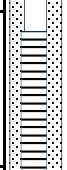
Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Graphic Log	Well Diagram	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DP	0'-2.5'	30	N/A	N/A	N/A	9.7	1	SAND, silty	SM/ FILL			M	Lab Sample: WC-MW-1D 0'-2.5'
						2	SAND, moist, poorly graded, white	SP/ FILL		M			
DP	2.5'-5'	30	N/A	N/A	N/A	11.6	3	SAND, silty, some organics (roots), black	SM/ FILL			M	
						4	WOOD chops, wet, brown	WOOD		W			
DP	5'-7.5'	30	N/A	N/A	N/A	14.2	5					W	
						6	PEAT, silty, some wood, wet, very weathered, black	PT		W			
DP	7.5'-10'	30	N/A	N/A	N/A	11.1	7					W	
						8	ORGANIC SILT, some wood, some clay, wet, low plasticity	OL		W			
DP	10'-12.5'	30	N/A	N/A	N/A	10.1	9					W	
						10				W			
DP	12.5'-15'	30	N/A	N/A	N/A	12.5	11					W	
						12				W			

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Direct Push; SC = Sonic Core; DC = Drill Cuttings

Moisture Content Codes: D = Dry; M = Moist; W = Wet; S = Saturated

BORING LOG

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Boring/Well Number: WC-MW-1D				FDEP Facility Identification Number:				Site Name: Wilson Cypress		Borehole Start Date: End Date:			
Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Graphic Log	Well Diagram	Moisture Content	
DP	15'-17.5'	30	N/A	N/A	N/A	6.8	13	SAND, clayey, wet, very fine grained, wet, gray	SC			W	
							14			W			
DP	17.5'-20'	30	N/A	N/A	N/A	8.6	15	SAND, wet, very fine grained, poorly graded, no odor, wet	SP			W	
							16			W			
DP	20'-22.5'	30	N/A	N/A	N/A	12.6	17					W	
							18	CLAY, some sand and silt, wet, low plasticity, no odor, dark brown	CL			W	
DP	22.5'-25'	30	N/A	N/A	N/A	7.8	19					W	
							20	CLAY, some sand and silt, some roots, wet, low plasticity, no odor, dark brown				W	
DP	25'-27.5'	30	N/A	N/A	N/A	9.8	21					W	
							22					W	
DP	27.5'-30'	30	N/A	N/A	N/A	9.3	23					W	
							24					W	
							25					W	
							26	SILT, some sand, trace clay and organics, wet, non-plastic, grades into sand toward the bottom	ML			W	
							27					W	
							28	SAND, wet, poorly graded, white-gray	SP			W	
							29	LIMESTONE (sandy), refusal at 29'	LS			W	
							30	EOB @ 29', well set at 30.1' bgs				W	

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cutting

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG

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Boring/Well Number: WC-MW-2		Permit Number:		FDEP Facility Identification Number:	
Site Name: Wilson Cypress		Borehole Start Date: 02/14/17	Borehole Start Time: 10:40 ☒ AM ☐ PM		
		End Date: 02/14/17	End Time: 11:05 ☒ AM ☐ PM		
Environmental Contractor: Ayres Associates		Geologist's Name: Jeff Steiner		Environmental Technician's Name: Jeff Steiner	
Drilling Company: TransAmerican Drilling & Testing		Pavement Thickness (inches): N/A	Borehole Diameter (inches): 2 inches		Borehole Depth (feet): 14
Drilling Method(s): DP	Apparent Borehole DTW (in feet from soil moisture content): 4'	Measured Well DTW (in feet after water recharges in well): 4.56	OVA (list model and check type): ☐ FID ☒ PID		
Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☒ Spread ☐ Backfill ☐ Stockpile ☐ Other <i>(describe if other or multiple items are checked):</i>					
Borehole Completion (check one): ☒ Well ☐ Grout ☐ Bentonite ☐ Backfill ☐ Other (describe)					

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Graphic Log	Well Diagram	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DP	0'-2.5'	30	N/A	N/A	N/A	7.1	1	SAND, silty, some organics, moist, very fine grained, no odor,	SM			M	Lab Sample: WC-MW-2D 0'-2.5'
							2	SAND, clayey, moist, no odor, black	SC			M	
DP	2.5'-5'	30	N/A	N/A	N/A	21.2	3					M	
							4	WOOD, silty, some sand, wet, brown	WOOD			W	
DP	5'-7.5'	30	N/A	N/A	N/A	13.4	5					W	
							6	PEAT, some wood, some silty clay, wet, very weathered, no odor, black	PT			W	
DP	7.5'-10'	30	N/A	N/A	N/A	8.6	7					W	
							8					W	
DP	10'-12.5'	30	N/A	N/A	N/A	13.2	9					W	
							10					W	
DP	12.5'-14'	30	N/A	N/A	N/A	11.5	11					W	
							12					W	

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Direct Push; SC = Sonic Core; DC = Drill Cuttings

Moisture Content Codes: D = Dry; M = Moist; W = Wet; S = Saturated

BORING LOG

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Boring/Well Number: WC-MW-2			FDEP Facility Identification Number:			Site Name: Wilson Cypress			Borehole Start Date: End Date:			
Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Graphic Log	Well Diagram	Moisture Content
							13	PEAT, some wood, some silty clay, wet, very weathered, no odor, black	PT			W
							14	EOB @ 14', well set at 13.3' bgs				W
							15					
							16					
							17					
							18					
							19					
							20					
							21					
							22					
							23					
							24					
							25					
							26					
							27					
							28					
							29					
							30					

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill CuttingMoisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG

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Boring/Well Number: WC-MW-2D		Permit Number:		FDEP Facility Identification Number:	
Site Name: Wilson Cypress		Borehole Start Date: 02/14/17	Borehole Start Time: 10:40 ☒ AM ☐ PM		
		End Date: 02/14/17	End Time: 11:05 ☒ AM ☐ PM		
Environmental Contractor: Ayres Associates		Geologist's Name: Jeff Steiner		Environmental Technician's Name: Jeff Steiner	
Drilling Company: TransAmerican Drilling & Testing	Pavement Thickness (inches): N/A	Borehole Diameter (inches): 2 inches		Borehole Depth (feet): 24.7	
Drilling Method(s): DP	Apparent Borehole DTW (in feet from soil moisture content): 4'	Measured Well DTW (in feet after water recharges in well): 4.60	OVA (list model and check type): ☐ FID ☒ PID		
Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☒ Spread ☐ Backfill ☐ Stockpile ☐ Other (describe if other or multiple items are checked):					
Borehole Completion (check one): ☒ Well ☐ Grout ☐ Bentonite ☐ Backfill ☐ Other (describe)					

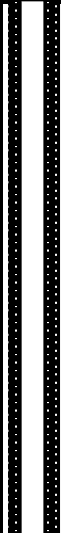
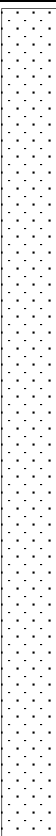
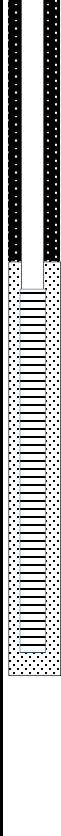
Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Graphic Log	Well Diagram	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DP	0'-2.5'	30	N/A	N/A	N/A	7.1	1	SAND, silty, some organics, moist, very fine grained, no odor,	SM			M	Lab Sample: WC-MW-2D 0'-2.5'
							2	SAND, clayey, moist, no odor, black	SC			M	
DP	2.5'-5'	30	N/A	N/A	N/A	21.2	3					M	
							4	WOOD, silty, some sand, wet, brown	WOOD			W	
DP	5'-7.5'	30	N/A	N/A	N/A	13.4	5					W	
							6	PEAT, some wood, some silty clay, wet, very weathered, no odor, black	PT			W	
DP	7.5'-10'	30	N/A	N/A	N/A	8.6	7					W	
							8					W	
DP	10'-12.5'	30	N/A	N/A	N/A	13.2	9					W	
							10					W	
DP	12.5'-15'	30	N/A	N/A	N/A	11.5	11					W	
							12					W	

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Direct Push; SC = Sonic Core; DC = Drill Cuttings

Moisture Content Codes: D = Dry; M = Moist; W = Wet; S = Saturated

BORING LOG

Page 2 of

Boring/Well Number: WC-MW-2D				FDEP Facility Identification Number:				Site Name: Wilson Cypress		Borehole Start Date: End Date:									
Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Graphic Log	Well Diagram	Moisture Content							
DP	15'-17.5'	30	N/A	N/A	N/A	10.2	13	PEAT, some wood, some silty clay, wet, very weathered, no odor, black	PT			W							
							14					W							
							15					W							
DP	17.5'-20'	30	N/A	N/A	12.9	16	W												
						17	W												
						18	W												
DP	20'-22.5'	30	N/A	N/A	16.1	19	W												
						20	W												
						21	W												
DP	22.5'-25'	30	N/A	N/A	13.0	22	SAND, wet, fine grained, poorly graded, no odor, light brown to white	SP			W								
						23					W								
						24					W								
DP	25'-27.5'	30	N/A	N/A	9.2	25					clay lense at 23'				W				
						26									W				
						27									W				
DP	27.5'-30'	30	N/A	N/A	10.0	28									EOB @ 30', well set at 27.4' bgs				W
						29													W
						30													W

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill CuttingMoisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG

Page 1 of 2

Boring/Well Number: WC-MW-3		Permit Number:		FDEP Facility Identification Number:	
Site Name: Wilson Cypress		Borehole Start Date: 02/15/17	Borehole Start Time: 9:30 ☒ AM ☐ PM		
		End Date: 02/15/17	End Time: 9:40 ☒ AM ☐ PM		
Environmental Contractor: Ayres Associates		Geologist's Name: Jeff Steiner		Environmental Technician's Name: Jeff Steiner	
Drilling Company: TransAmerican Drilling & Testing	Pavement Thickness (inches): N/A	Borehole Diameter (inches): 2 inches		Borehole Depth (feet): 15	
Drilling Method(s): DP	Apparent Borehole DTW (in feet from soil moisture content): 2'	Measured Well DTW (in feet after water recharges in well): 4.52		OVA (list model and check type): ☐ FID ☒ PID	
Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☒ Spread ☐ Backfill ☐ Stockpile ☐ Other <i>(describe if other or multiple items are checked):</i>					
Borehole Completion (check one): ☒ Well ☐ Grout ☐ Bentonite ☐ Backfill ☐ Other (describe)					

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Graphic Log	Well Diagram	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DP	0'-2.5'	30	N/A	N/A	N/A	3.1	1	SAND, silty, trace clay and organics, moist, very fine grained, slight hydrocarbon odor	SM			M	Lab Sample: WC-MW-3 2.5'-5'
							2					M	
DP	2.5'-5'	30	N/A	N/A	N/A	25.5	3	SAND, wet, very fine grained, poorly graded, white-gray	SP			W	
							4					W	
DP	5'-7.5'	30	N/A	N/A	N/A	15.6	5	PEAT/ORGANIC SILT, some wood and silt, wet, weathered	PT/OL			W	
							6					W	
DP	7.5'-10'	30	N/A	N/A	N/A	17.9	7					W	
							8					W	
DP	10'-12.5'	30	N/A	N/A	N/A	13.0	9					W	
							10	PEAT/ORGANIC SILT, some wood and silt, wet, highly weathered, slight hydrocarbon odor and sheen				W	
							11					W	
DP	12.5'-15'	30	N/A	N/A	N/A	11.4	12					W	

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Direct Push; SC = Sonic Core; DC = Drill Cuttings

Moisture Content Codes: D = Dry; M = Moist; W = Wet; S = Saturated

BORING LOG

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Boring/Well Number: WC-MW-3			FDEP Facility Identification Number:			Site Name: Wilson Cypress			Borehole Start Date: End Date:			
Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Graphic Log	Well Diagram	Moisture Content
							13	PEAT/ORGANIC SILT, some wood and silt, wet, highly weathered, slight hydrocarbon odor and sheen	PT/OL			W
							14	EOB @ 15', well set at 12.5' bgs				W
							15					
							16					
							17					
							18					
							19					
							20					
							21					
							22					
							23					
							24					
							25					
							26					
							27					
							28					
							29					
							30					

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill CuttingMoisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG

Page 1 of 2

Boring/Well Number: WC-MW-4		Permit Number:		FDEP Facility Identification Number:	
Site Name: Wilson Cypress		Borehole Start Date: 02/14/17	Borehole Start Time: 11:30 ☒ AM ☐ PM		
		End Date: 02/14/17	End Time: 11:40 ☒ AM ☐ PM		
Environmental Contractor: Ayres Associates		Geologist's Name: Jeff Steiner		Environmental Technician's Name: Jeff Steiner	
Drilling Company: TransAmerican Drilling & Testing		Pavement Thickness (inches): N/A	Borehole Diameter (inches): 2 inches		Borehole Depth (feet): 15
Drilling Method(s): DP	Apparent Borehole DTW (in feet from soil moisture content): 4'	Measured Well DTW (in feet after water recharges in well): 5.60		OVA (list model and check type): ☐ FID ☒ PID	
Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☒ Spread ☐ Backfill ☐ Stockpile ☐ Other <i>(describe if other or multiple items are checked):</i>					
Borehole Completion (check one): ☒ Well ☐ Grout ☐ Bentonite ☐ Backfill ☐ Other (describe)					

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Graphic Log	Well Diagram	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
DP	0'-2.5'	30	N/A	N/A	N/A	12.8	1	SAND, silty, dry, fine grained, no odor, brown	SM			D	Lab Sample: WC-MW-4 2.5'-5'
							2					D	
DP	2.5'-5'	30	N/A	N/A	N/A	13.1	3	SAND, moist, fine grained, poorly graded, no odor, white-gray	SP			M	
							4					M	
DP	5'-7.5'	0	N/A	N/A	N/A	--	5	WOOD, wet	WOOD			W	
							6	No Recovery				W	
DP	7.5'-10'	30	N/A	N/A	N/A	13.6	7					W	
							8	PEAT, some wood	PT			W	
DP	10'-12.5'	30	N/A	N/A	N/A	12.9	9					W	
							10					W	
DP	12.5'-15'	30	N/A	N/A	N/A	11.6	11	PEAT with wood, some silt and clay, wet, highly weathered, no odor				W	
							12					W	

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Direct Push; SC = Sonic Core; DC = Drill Cuttings

Moisture Content Codes: D = Dry; M = Moist; W = Wet; S = Saturated

BORING LOG

Page 2 of

Boring/Well Number: WC-MW-4			FDEP Facility Identification Number:			Site Name: Wilson Cypress			Borehole Start Date: End Date:			
Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Graphic Log	Well Diagram	Moisture Content
							13	PEAT with wood, some silt and clay, wet, highly weathered, no odor	PT			W
							14	EOB @ 15', well set at 13.0' bgs				W
							15					
							16					
							17					
							18					
							19					
							20					
							21					
							22					
							23					
							24					
							25					
							26					
							27					
							28					
							29					
							30					

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cutting
 Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

DEP Form #: 62-520.900(3)
Form Title: <u>MONITORING WELL COMPLETION REPORT</u>
Effective Date: <u>July 12, 2009</u>
DEP Application No. _____ (Filled in by DEP)

Florida Department of Environmental Protection

Bob Martinez Center, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400

MONITORING WELL COMPLETION REPORT

PART I: GENERAL INFORMATION

Well ID: WC-MW-1	Site Name: Wilson Cypress		Well Install Date 2/15/17
Facility ID	Alternate ID	FLUWID #	WMD Permit #
Well Purpose ☐ Background ☐ Intermediate ☐ Compliance ☒ Other (explain) Determine if there's any groundwater contamination, for potential redevelopment purposes			
Latitude (to nearest 0.1 seconds) 29.6399950		Longitude (to nearest 0.1 seconds) -81.6373700	
Latitude and Longitude collection method: ☐ DGPS ☒ AGPS ☐ MAP ☐ ZIPCODE ☐ DPHO ☐ UNKNOWN ☐ OTHER			

PART II: WELL CONSTRUCTION DETAILS

Contractor Name Mark Santorelli				Contractor License #	
Company Name Transamerica					
Construction Method: ☒ Hollow Stem Auger ☐ Solid Stem Auger ☐ Water/Mud Rotary ☐ Air Rotary ☐ Cable Tool ☒ Direct Push ☐ Sonic ☐ Other (describe)				Aquifer Monitored Undefined surficial aquifer	
Top of Casing Elevation (NVGD or NAVD)			Ground Surface Elevation (NVGD or NAVD)		
Casing					
Material	Inside Diameter	Outside Diameter	Depth (ft.)		
			From	To	
Sch. 40 PVC	2"	2.375"	0	5.2	
Screen					
Material	Inside Diameter	Outside Diameter	Depth (ft.)		Slot Size
			From	To	
Sch. 40 PVC	2"	2.375"	5.2	15.2	0.006"
Annulus					
Material including additives for sealant	Size of Material	Amount (# of bags)	Depth (ft.)		Installation Method
			From	To	
Cement grout	grout	1	0	4.2	pour/settle

PART III: WELL DEVELOPMENT DETAILS

Well Development Date 2/18/17	Well Development Method: ☐ Surge/Pump ☒ Pump ☐ Compressed Air Other (explain)		
Development Duration 40 min	peristaltic pump		
Pumping Rate ~100 mL/min	Maximum Drawdown unknown	Well Purged Dry ☐ yes ☒ no	Pumping Condition ☒ continuous ☐ intermittent
Turbidity (if Measured): 1.806 (when sampled)		Stabilized Water Level (BLS) 4.59'	
Start: 11:40am	End: 12:20pm		
Water appearance (color and odor) at start of development:			
turbid, dark brown, BBQ/smoky odor/H2S			
Water appearance (color and odor) at end of development:			
clear, BBQ/smoky odor/H2S			

Report Prepared By:	Date
Erin Gross	4/3/17
Title/Company	License #
Environmental Scientist, Ayres Associates	

PLEASE ATTACH BORING LOG

Remarks:

Protop.

Bob Martinez Center, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400

PART III: WELL DEVELOPMENT DETAILS

Well Development Date 2/18/17	Well Development Method: ☐ Surge/Pump ☒ Pump ☐ Compressed Air Other (explain)		
Development Duration 40 min	peristaltic pump		
Pumping Rate ~100 mL/min	Maximum Drawdown unknown	Well Purged Dry ☐ yes ☒ no	Pumping Condition ☒ continuous ☐ intermittent
Turbidity (if Measured): 12.46 (when sampled)		Stabilized Water Level (BLS) 4.11'	
Start: 11:40am	End: 12:20pm		
Water appearance (color and odor) at start of development:			
turbid, dark brown, BBQ/smoky odor			
Water appearance (color and odor) at end of development:			
clear, BBQ/smoky odor			

Report Prepared By:	Date
Erin Gross	4/3/17
Title/Company	License #
Environmental Scientist, Ayres Associates	

PLEASE ATTACH BORING LOG

Remarks:

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DEP Form #: 62-520.900(3)
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Florida Department of Environmental Protection

Bob Martinez Center, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400

MONITORING WELL COMPLETION REPORT

PART I: GENERAL INFORMATION

Well ID: WC-MW-2	Site Name: Wilson Cypress	Well Install Date 2/14/17
Facility ID	Alternate ID	FLUWID #
WMD Permit #		
Well Purpose ☐ Background ☐ Intermediate ☐ Compliance ☒ Other (explain)		
Determine if there's any groundwater contamination, for potential redevelopment purposes		
Latitude (to nearest 0.1 seconds) 29.6392530		Longitude (to nearest 0.1 seconds) -81.6378170
Latitude and Longitude collection method: ☐ DGPS ☒ AGPS ☐ MAP ☐ ZIPCODE ☐ DPHO ☐ UNKNOWN ☐ OTHER		

PART II: WELL CONSTRUCTION DETAILS

Contractor Name Mark Santorelli	Contractor License #				
Company Name Transamerica					
Construction Method: ☒ Hollow Stem Auger ☐ Solid Stem Auger ☐ Water/Mud Rotary ☐ Air Rotary ☐ Cable Tool ☒ Direct Push ☐ Sonic ☐ Other (describe)	Aquifer Monitored Undefined surficial aquifer				
Top of Casing Elevation (NVGD or NAVD)	Ground Surface Elevation (NVGD or NAVD)				
Casing					
Material	Inside Diameter	Outside Diameter	Depth (ft.)		
			From	To	
Sch. 40 PVC	2"	2.375"	0	6	
Screen					
Material	Inside Diameter	Outside Diameter	Depth (ft.)		Slot Size
			From	To	
Sch. 40 PVC	2"	2.375"	6	16	0.006"
Annulus					
Material including additives for sealant	Size of Material	Amount (# of bags)	Depth (ft.)		Installation Method
			From	To	
Cement grout	grout	1	0	5	pour/settle

PART III: WELL DEVELOPMENT DETAILS

Well Development Date 2/18/17	Well Development Method: ☐ Surge/Pump ☒ Pump ☐ Compressed Air Other (explain)		
Development Duration 30 min	peristaltic pump		
Pumping Rate ~100 mL/min	Maximum Drawdown unknown	Well Purged Dry ☐ yes ☒ no	Pumping Condition ☒ continuous ☐ intermittent
Turbidity (if Measured): 27.66 (when sampled)		Stabilized Water Level (BLS) 4.56'	
Start: 1:30pm	End: 2:00pm		
Water appearance (color and odor) at start of development:			
turbid, silty, dark brown, H2S odor			
Water appearance (color and odor) at end of development:			
clear, tannin color (tan), H2S odor			

Report Prepared By:	Date
Erin Gross	4/3/17
Title/Company	License #
Environmental Scientist, Ayres Associates	

PLEASE ATTACH BORING LOG

Remarks:

Protop. Peat/wood at the screen.

DEP Form #: 62-520.900(3)
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Bob Martinez Center, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400

MONITORING WELL COMPLETION REPORT

PART I: GENERAL INFORMATION

Well ID: WC-MW-2D	Site Name: Wilson Cypress	Well Install Date 2/14/17
Facility ID	Alternate ID	FLUWID #
WMD Permit #		
Well Purpose ☐ Background ☐ Intermediate ☐ Compliance ☒ Other (explain)		
Determine if there's any groundwater contamination, for potential redevelopment purposes		
Latitude (to nearest 0.1 seconds) 29.6392530		Longitude (to nearest 0.1 seconds) -81.6378170
Latitude and Longitude collection method: ☐ DGPS ☒ AGPS ☐ MAP ☐ ZIPCODE ☐ DPHO ☐ UNKNOWN ☐ OTHER		

PART II: WELL CONSTRUCTION DETAILS

Contractor Name Mark Santorelli	Contractor License #				
Company Name Transamerica					
Construction Method: ☒ Hollow Stem Auger ☐ Solid Stem Auger ☐ Water/Mud Rotary ☐ Air Rotary ☐ Cable Tool ☒ Direct Push ☐ Sonic ☐ Other (describe)	Aquifer Monitored Undefined surficial aquifer				
Top of Casing Elevation (NVGD or NAVD)	Ground Surface Elevation (NVGD or NAVD)				
Casing					
Material	Inside Diameter	Outside Diameter	Depth (ft.)		
			From	To	
Sch. 40 PVC	2"	2.375"	0	25.2	
Screen					
Material	Inside Diameter	Outside Diameter	Depth (ft.)		Slot Size
			From	To	
Sch. 40 PVC	2"	2.375"	25.2	30.2	0.006"
Annulus					
Material including additives for sealant	Size of Material	Amount (# of bags)	Depth (ft.)		Installation Method
			From	To	
Cement grout	grout	3	0	24.2	pour/settle

PART III: WELL DEVELOPMENT DETAILS

Well Development Date 2/18/17	Well Development Method: ☐ Surge/Pump ☒ Pump ☐ Compressed Air Other (explain)		
Development Duration 30 min	peristaltic pump		
Pumping Rate ~100 mL/min	Maximum Drawdown unknown	Well Purged Dry ☐ yes ☒ no	Pumping Condition ☒ continuous ☐ intermittent
Turbidity (if Measured): 3.596 (when sampled)		Stabilized Water Level (BLS)	
Start: 1:30pm	End: 2:00pm	4.60'	
Water appearance (color and odor) at start of development:			
turbid, silty, dark brown, H2S odor			
Water appearance (color and odor) at end of development:			
clear, H2S odor			

Report Prepared By:	Date
Erin Gross	4/3/17
Title/Company	License #
Environmental Scientist, Ayres Associates	

PLEASE ATTACH BORING LOG

Remarks:

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DEP Form #: 62-520.900(3)
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DEP Application No. _____ (Filled in by DEP)

Florida Department of Environmental Protection

Bob Martinez Center, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400

MONITORING WELL COMPLETION REPORT

PART I: GENERAL INFORMATION

Well ID: WC-MW-3	Site Name: Wilson Cypress		Well Install Date 2/15/17
Facility ID	Alternate ID	FLUWID #	WMD Permit #
Well Purpose ☐ Background ☐ Intermediate ☐ Compliance ☒ Other (explain) Determine if there's any groundwater contamination, for potential redevelopment purposes			
Latitude (to nearest 0.1 seconds) 29.6406580		Longitude (to nearest 0.1 seconds) -81.6363700	
Latitude and Longitude collection method: ☐ DGPS ☒ AGPS ☐ MAP ☐ ZIPCODE ☐ DPHO ☐ UNKNOWN ☐ OTHER			

PART II: WELL CONSTRUCTION DETAILS

Contractor Name Mark Santorelli			Contractor License #		
Company Name Transamerica					
Construction Method: ☒ Hollow Stem Auger ☐ Solid Stem Auger ☐ Water/Mud Rotary ☐ Air Rotary ☐ Cable Tool ☒ Direct Push ☐ Sonic ☐ Other (describe)			Aquifer Monitored Undefined surficial aquifer		
Top of Casing Elevation (NVGD or NAVD)			Ground Surface Elevation (NVGD or NAVD)		
Casing					
Material	Inside Diameter	Outside Diameter	Depth (ft.)		
			From	To	
Sch. 40 PVC	2"	2.375"	0	5.5	
Screen					
Material	Inside Diameter	Outside Diameter	Depth (ft.)		Slot Size
			From	To	
Sch. 40 PVC	2"	2.375"	5.5	15.5	0.006"
Annulus					
Material including additives for sealant	Size of Material	Amount (# of bags)	Depth (ft.)		Installation Method
			From	To	
Cement grout	grout	1	0	4.5	pour/settle

PART III: WELL DEVELOPMENT DETAILS

Well Development Date 2/18/17	Well Development Method: ☐ Surge/Pump ☒ Pump ☐ Compressed Air Other (explain)		
Development Duration 15 min	peristaltic pump		
Pumping Rate ~100 mL/min	Maximum Drawdown unknown	Well Purged Dry ☐ yes ☒ no	Pumping Condition ☒ continuous ☐ intermittent
Turbidity (if Measured): 18.79 (when sampled)		Stabilized Water Level (BLS) 4.52'	
Start: 2:40pm	End: 2:55pm		
Water appearance (color and odor) at start of development:			
turbid, silty, dark brown, H2S & hydrocarbon odor			
Water appearance (color and odor) at end of development:			
clear, tan (tannins), H2S & hydrocarbon odor			

Report Prepared By:	Date
Erin Gross	4/3/17
Title/Company	License #
Environmental Scientist, Ayres Associates	

PLEASE ATTACH BORING LOG

Remarks:

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DEP Form #: 62-520.900(3)
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Effective Date: <u>July 12, 2009</u>
DEP Application No. _____ (Filled in by DEP)

Florida Department of Environmental Protection

Bob Martinez Center, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400

MONITORING WELL COMPLETION REPORT

PART I: GENERAL INFORMATION

Well ID: WC-MW-4	Site Name: Wilson Cypress	Well Install Date 2/14/17
Facility ID	Alternate ID	FLUWID #
WMD Permit #		
Well Purpose ☐ Background ☐ Intermediate ☐ Compliance ☒ Other (explain)		
Determine if there's any groundwater contamination, for potential redevelopment purposes		
Latitude (to nearest 0.1 seconds) 29.6396980		Longitude (to nearest 0.1 seconds) -81.6369290
Latitude and Longitude collection method: ☐ DGPS ☒ AGPS ☐ MAP ☐ ZIPCODE ☐ DPHO ☐ UNKNOWN ☐ OTHER		

PART II: WELL CONSTRUCTION DETAILS

Contractor Name Mark Santorelli	Contractor License #				
Company Name Transamerica					
Construction Method: ☒ Hollow Stem Auger ☐ Solid Stem Auger ☐ Water/Mud Rotary ☐ Air Rotary ☐ Cable Tool ☒ Direct Push ☐ Sonic ☐ Other (describe)	Aquifer Monitored Undefined surficial aquifer				
Top of Casing Elevation (NVGD or NAVD)	Ground Surface Elevation (NVGD or NAVD)				
Casing					
Material	Inside Diameter	Outside Diameter	Depth (ft.)		
			From	To	
Sch. 40 PVC	2"	2.375"	0	5.1	
Screen					
Material	Inside Diameter	Outside Diameter	Depth (ft.)		Slot Size
			From	To	
Sch. 40 PVC	2"	2.375"	5.1	15.1	0.006"
Annulus					
Material including additives for sealant	Size of Material	Amount (# of bags)	Depth (ft.)		Installation Method
			From	To	
Cement grout	grout	1	0	4.1	pour/settle

PART III: WELL DEVELOPMENT DETAILS

Well Development Date 2/18/17	Well Development Method: ☐ Surge/Pump ☒ Pump ☐ Compressed Air Other (explain)		
Development Duration 15 min	peristaltic pump		
Pumping Rate ~100 mL/min	Maximum Drawdown unknown	Well Purged Dry ☐ yes ☒ no	Pumping Condition ☒ continuous ☐ intermittent
Turbidity (if Measured): 0.5075 (when sampled)		Stabilized Water Level (BLS) 5.60'	
Start: 2:15pm	End: 2:30pm		
Water appearance (color and odor) at start of development:			
turbid, silty, dark brown, H2S odor			
Water appearance (color and odor) at end of development:			
clear, H2S odor			

Report Prepared By:	Date
Erin Gross	4/3/17
Title/Company	License #
Environmental Scientist, Ayres Associates	

PLEASE ATTACH BORING LOG

Remarks:

Protop. Peat/wood screen.

Appendix B
Hydraulic Conductivity Test Data



Ayres Associates
5201 E. Terrace Drive, Suite 200
Madison, WI 53718

Slug Test Analysis Report

Project: Palatka - Wilson Cypress

Number: 19-0668.25

Client: City of Palatka

Location: Wilson Cypress Site

Slug Test: WC-MW-1 Slug Out

Test Well: WC-MW-1

Test Conducted by: Jeff Steiner

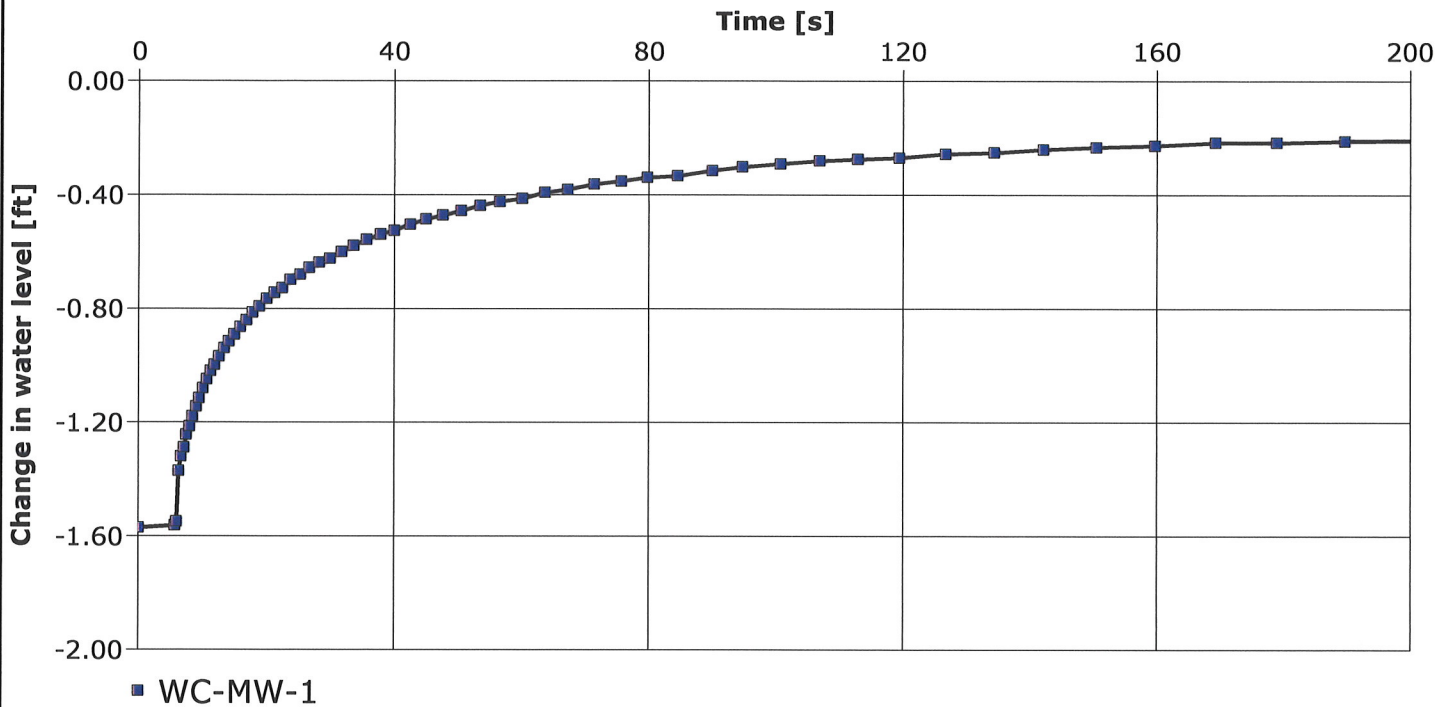
Test Date: 2/23/2017

Analysis Performed by: Jeff Steiner

WC-MW-1 Slug Out Time_Drawdown

Analysis Date: 3/24/2017

Aquifer Thickness: 11.00 ft





Ayres Associates
5201 E. Terrace Drive, Suite 200
Madison, WI 53718

Slug Test Analysis Report

Project: Palatka - Wilson Cypress

Number: 19-0668.25

Client: City of Palatka

Location: Wilson Cypress Site

Slug Test: WC-MW-1 Slug Out

Test Well: WC-MW-1

Test Conducted by: Jeff Steiner

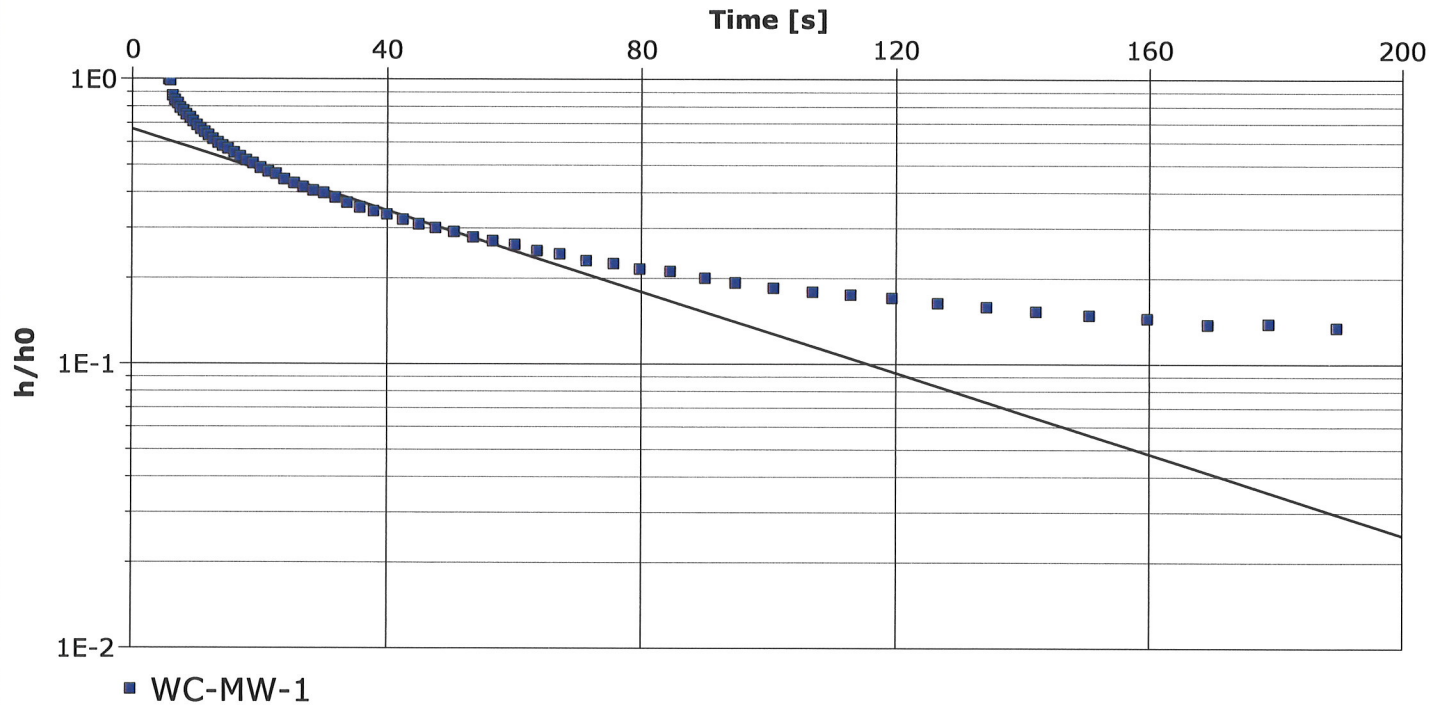
Test Date: 2/23/2017

Analysis Performed by: Jeff Steiner

WC-MW-1 Slug Out Bouwer & Rice

Analysis Date: 3/24/2017

Aquifer Thickness: 11.00 ft



Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [ft/s]
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WC-MW-1	2.12×10^{-5}
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Ayres Associates
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Madison, WI 53718

Slug Test Analysis Report

Project: Palatka - Wilson Cypress

Number: 19-0668.25

Client: City of Palatka

Location: Wilson Cypress Site

Slug Test: WC-MW-1D Slug In

Test Well: WC-MW-1D

Test Conducted by: Jeff Steiner

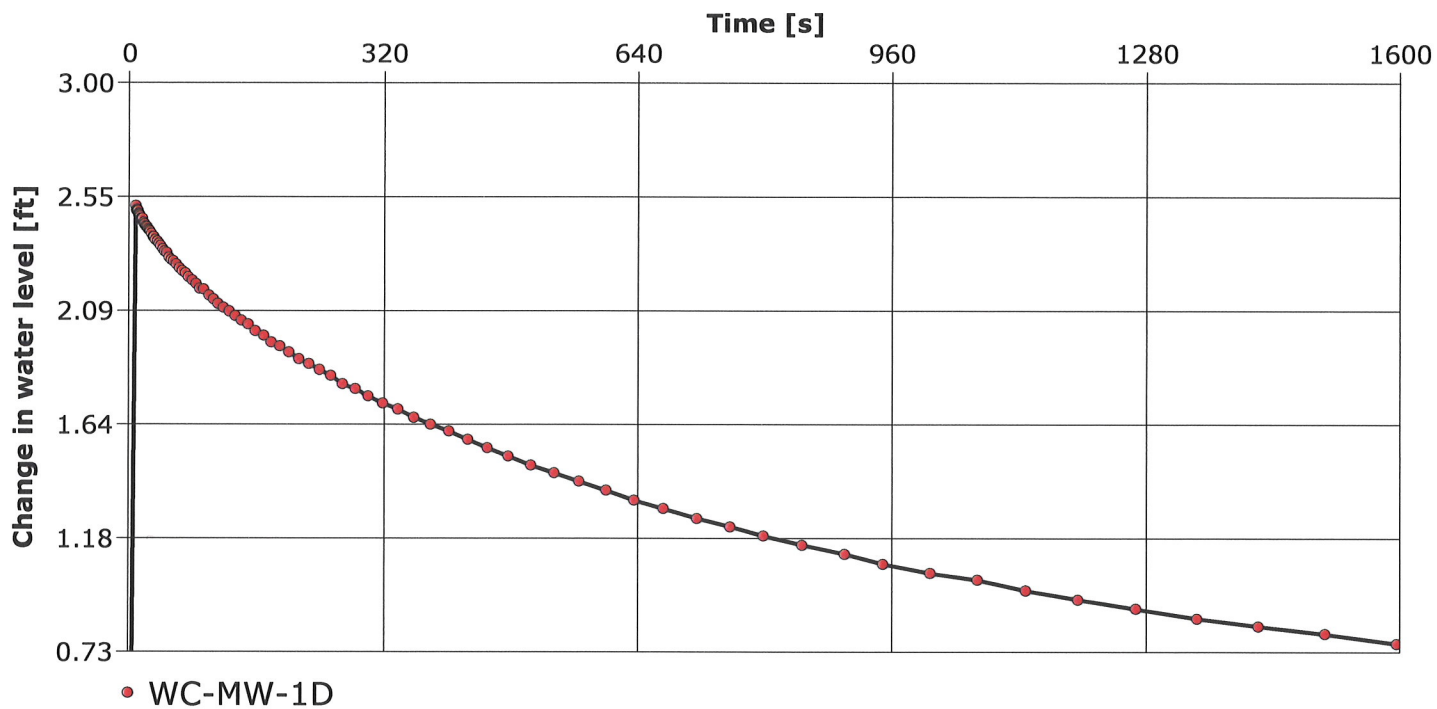
Test Date: 2/23/2017

Analysis Performed by: Jeff Steiner

WC-MW-1D Slug In Time_Drawdown

Analysis Date: 3/24/2017

Aquifer Thickness: 28.00 ft





Ayres Associates
5201 E. Terrace Drive, Suite 200
Madison, WI 53718

Slug Test Analysis Report

Project: Palatka - Wilson Cypress

Number: 19-0668.25

Client: City of Palatka

Location: Wilson Cypress Site

Slug Test: WC-MW-1D Slug In

Test Well: WC-MW-1D

Test Conducted by: Jeff Steiner

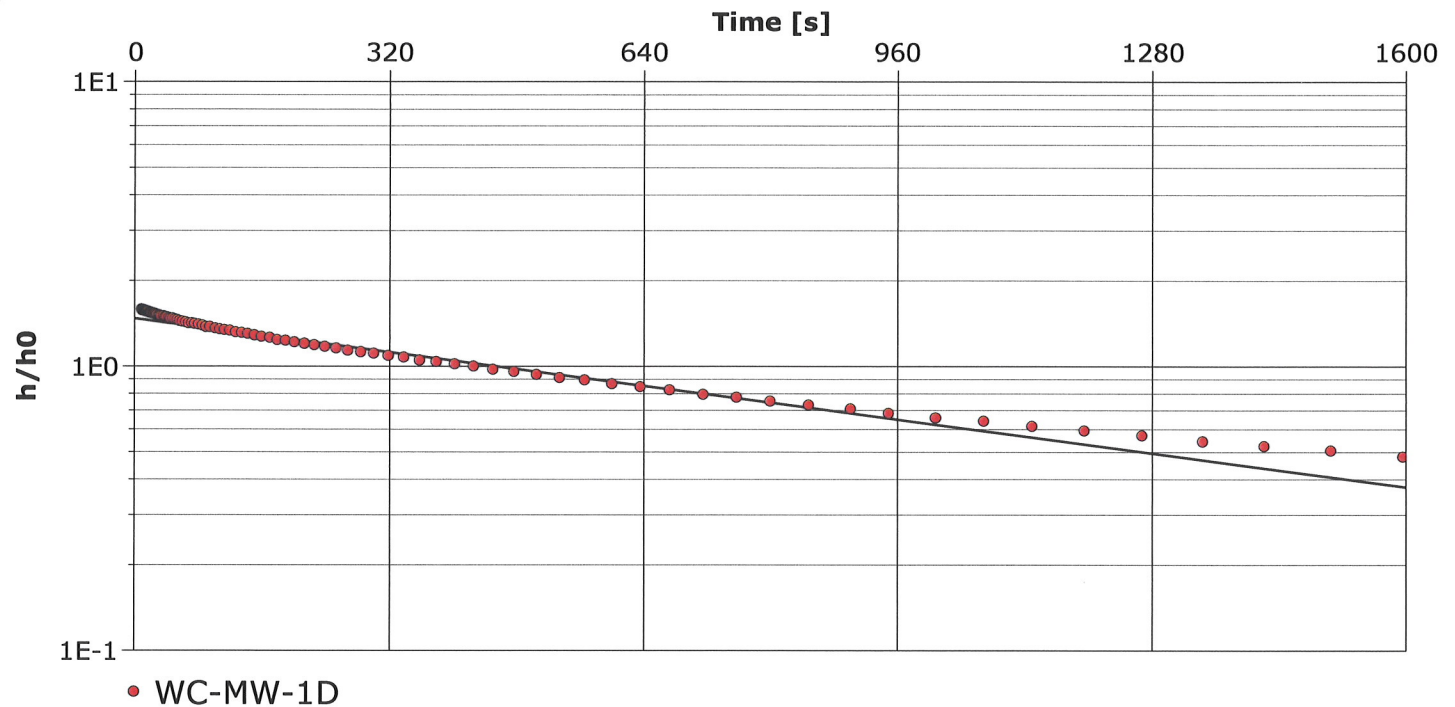
Test Date: 2/23/2017

Analysis Performed by: Jeff Steiner

WC-MW-1D Slug In Bouwer & Rice

Analysis Date: 3/24/2017

Aquifer Thickness: 28.00 ft



Calculation using Bouwer & Rice

Observation Well

Hydraulic
Conductivity
[ft/s]

WC-MW-1D

1.87×10^{-6}



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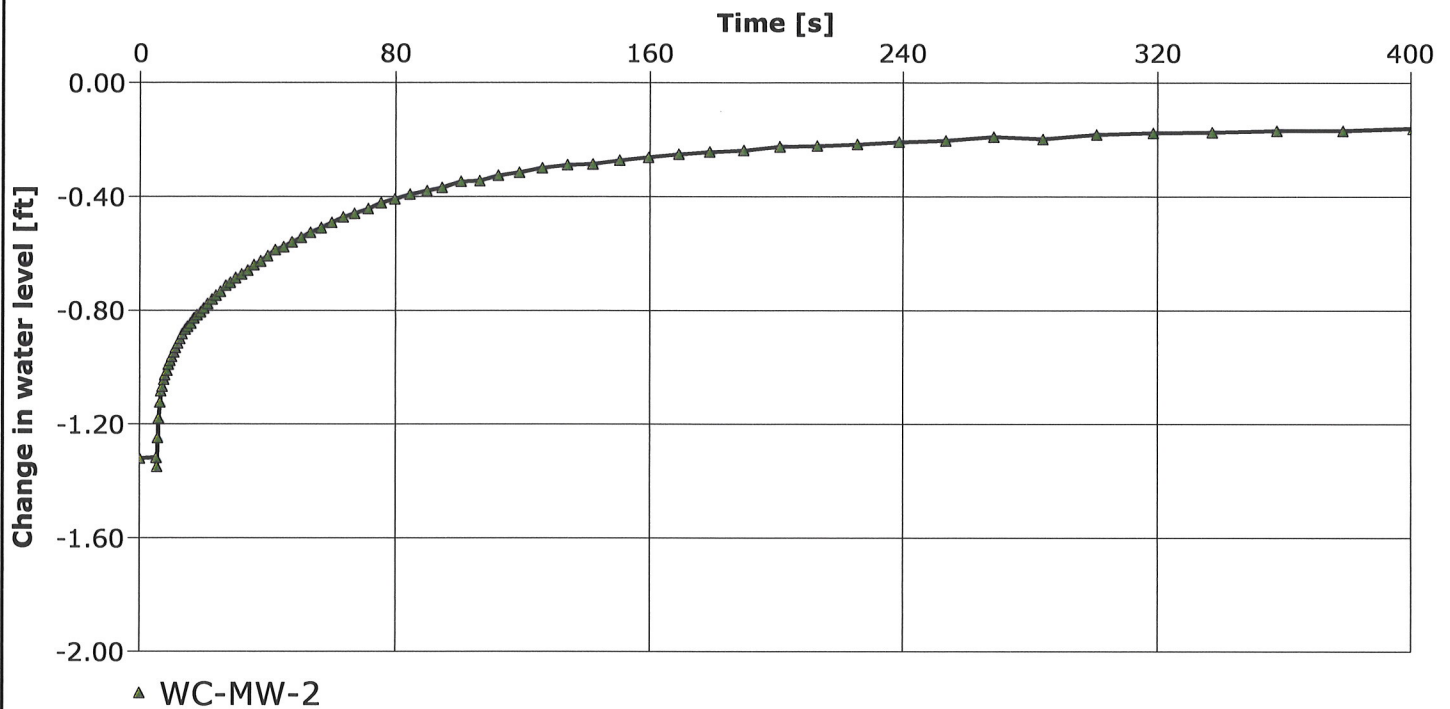
Slug Test Analysis Report

Project: Palatka - Wilson Cypress

Number: 19-0668.25

Client: City of Palatka

Location: Wilson Cypress Site	Slug Test: WC-MW-2 Slug Out	Test Well: WC-MW-2
Test Conducted by: Jeff Steiner		Test Date: 2/23/2017
Analysis Performed by: Jeff Steiner	WC-MW-2 Slug Out Time_Drawdown	Analysis Date: 3/27/2017
Aquifer Thickness: 13.00 ft		





Ayres Associates
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Madison, WI 53718

Slug Test Analysis Report

Project: Palatka - Wilson Cypress

Number: 19-0668.25

Client: City of Palatka

Location: Wilson Cypress Site

Slug Test: WC-MW-2 Slug Out

Test Well: WC-MW-2

Test Conducted by: Jeff Steiner

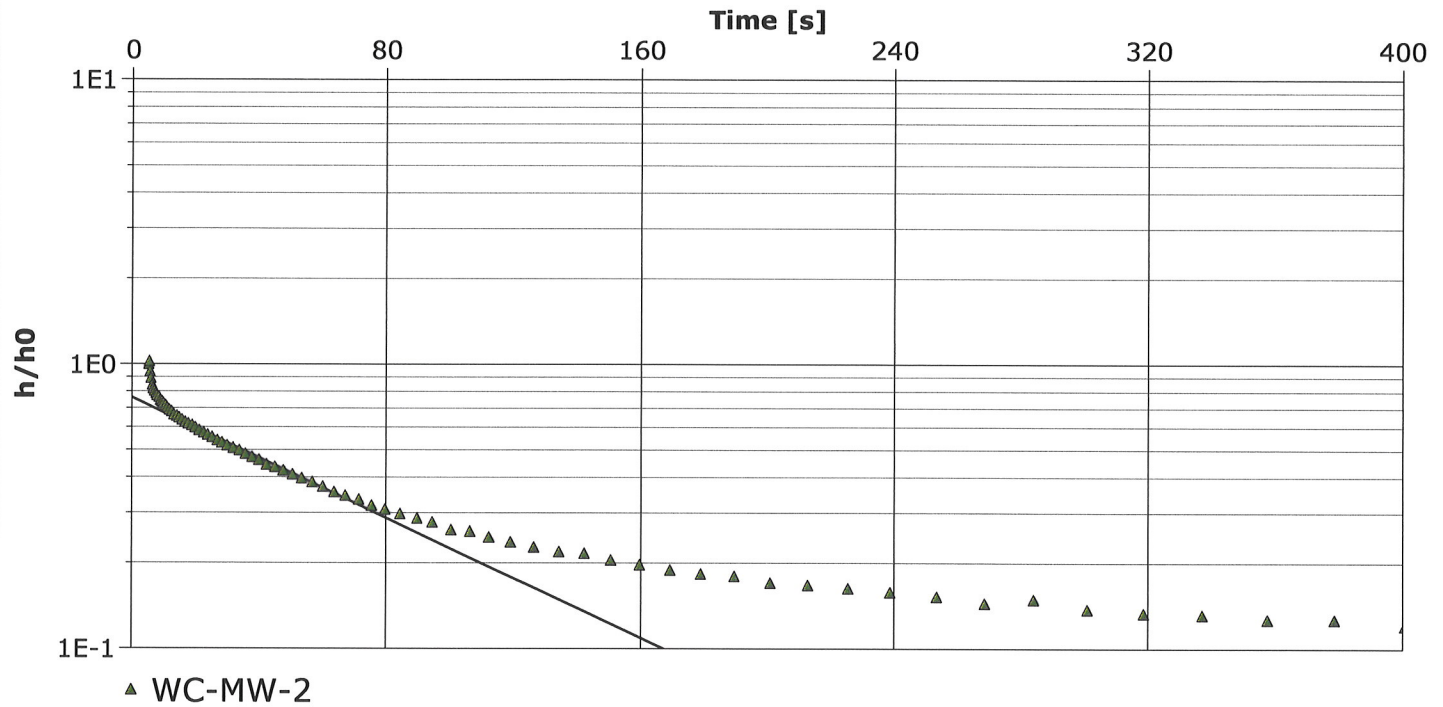
Test Date: 2/23/2017

Analysis Performed by: Jeff Steiner

WC-MW-2 Slug Out Bouwer & Rice

Analysis Date: 3/27/2017

Aquifer Thickness: 13.00 ft



Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [ft/s]
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WC-MW-2	1.57×10^{-5}
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Slug Test Analysis Report

Project: Palatka - Wilson Cypress

Number: 19-0668.25

Client: City of Palatka

Location: Wilson Cypress Site

Slug Test: WC-MW-2D Slug In

Test Well: WC-MW-2D

Test Conducted by: Jeff Steiner

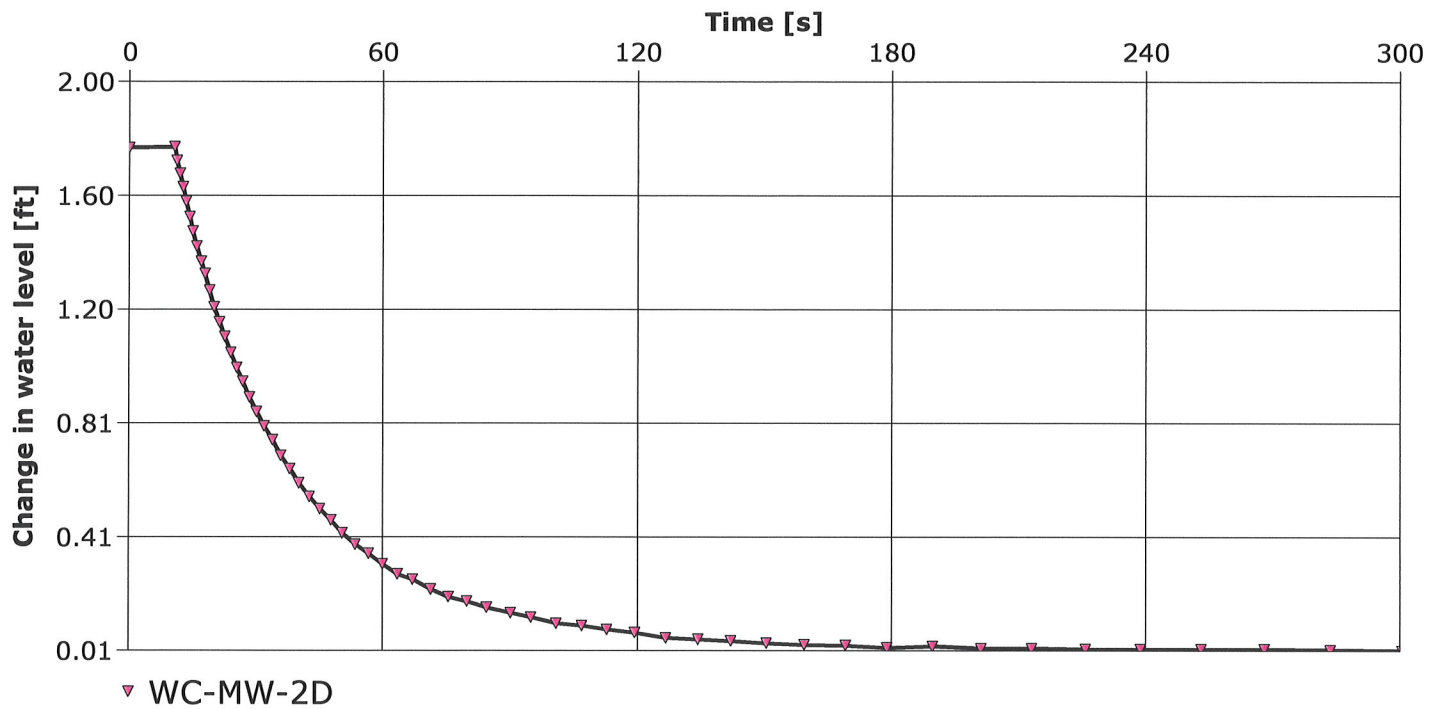
Test Date: 2/23/2017

Analysis Performed by: Jeff Steiner

WC-MW-2D Slug In Time_Drawdown

Analysis Date: 3/27/2017

Aquifer Thickness: 26.00 ft





Ayres Associates
5201 E. Terrace Drive, Suite 200
Madison, WI 53718

Slug Test Analysis Report

Project: Palatka - Wilson Cypress

Number: 19-0668.25

Client: City of Palatka

Location: Wilson Cypress Site

Slug Test: WC-MW-2D Slug In

Test Well: WC-MW-2D

Test Conducted by: Jeff Steiner

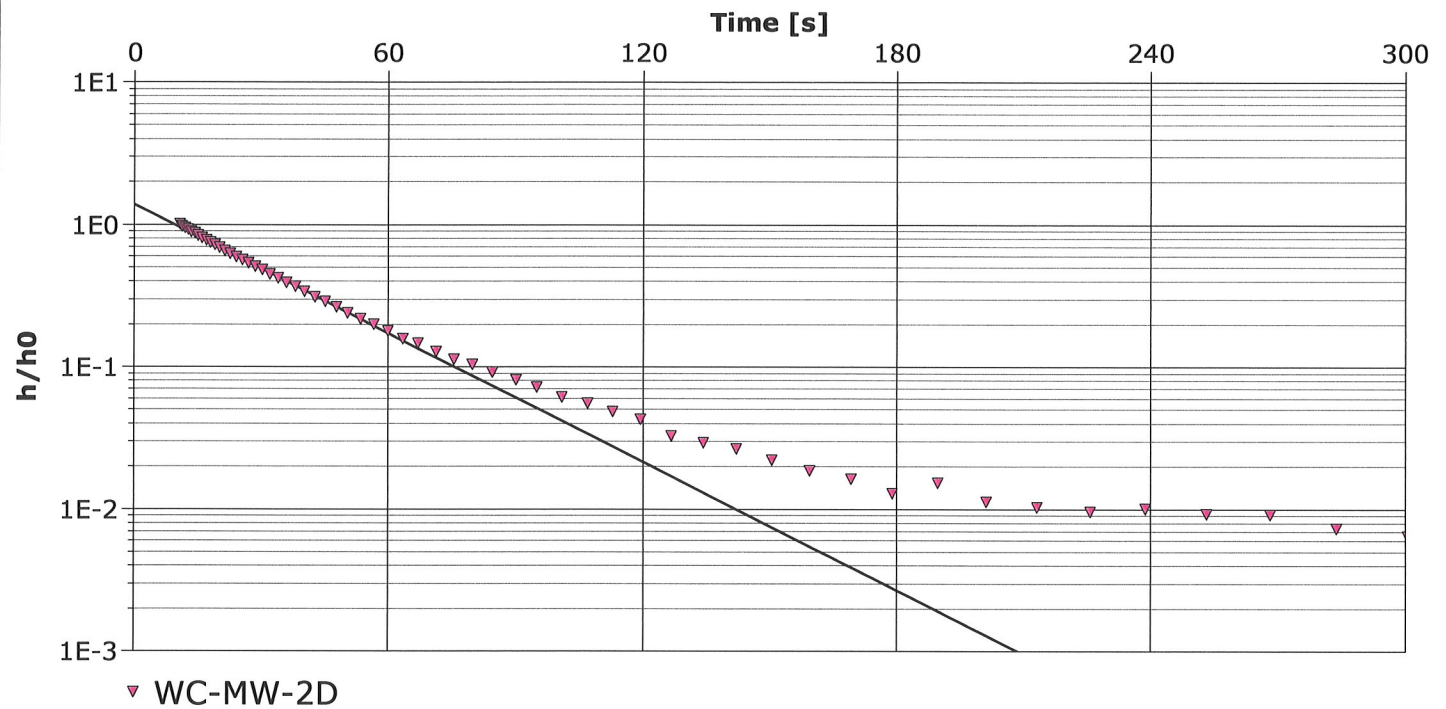
Test Date: 2/23/2017

Analysis Performed by: Jeff Steiner

WC-MW-2D Slug In Bouwer & Rice

Analysis Date: 3/27/2017

Aquifer Thickness: 26.00 ft



Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [ft/s]
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WC-MW-2D	7.60×10^{-5}
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Ayres Associates
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Madison, WI 53718

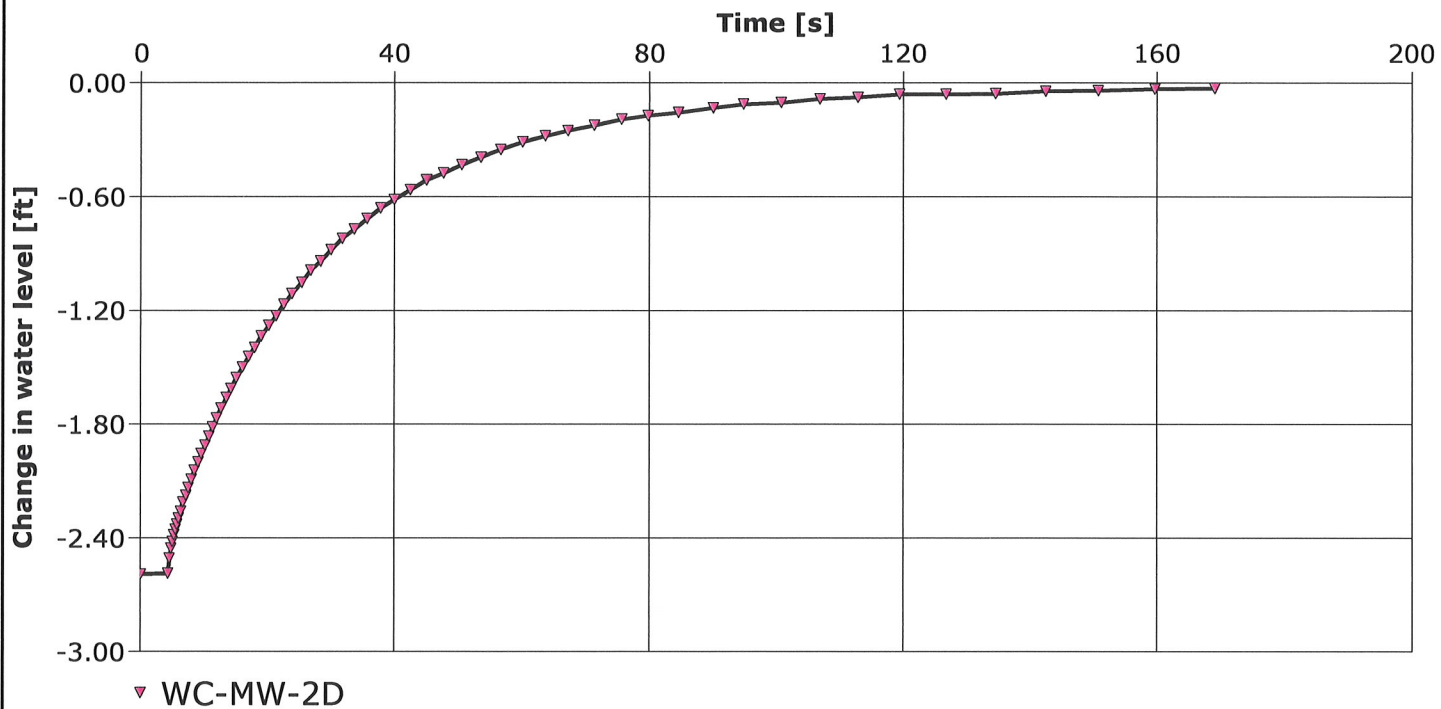
Slug Test Analysis Report

Project: Palatka - Wilson Cypress

Number: 19-0668.25

Client: City of Palatka

Location: Wilson Cypress Site	Slug Test: WC-MW-2D Slug Out	Test Well: WC-MW-2D
Test Conducted by: Jeff Steiner		Test Date: 2/23/2017
Analysis Performed by: Jeff Steiner	WC-MW-2D Slug Out Time_Drawdown	Analysis Date: 3/27/2017
Aquifer Thickness: 26.00 ft		





Ayres Associates
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Madison, WI 53718

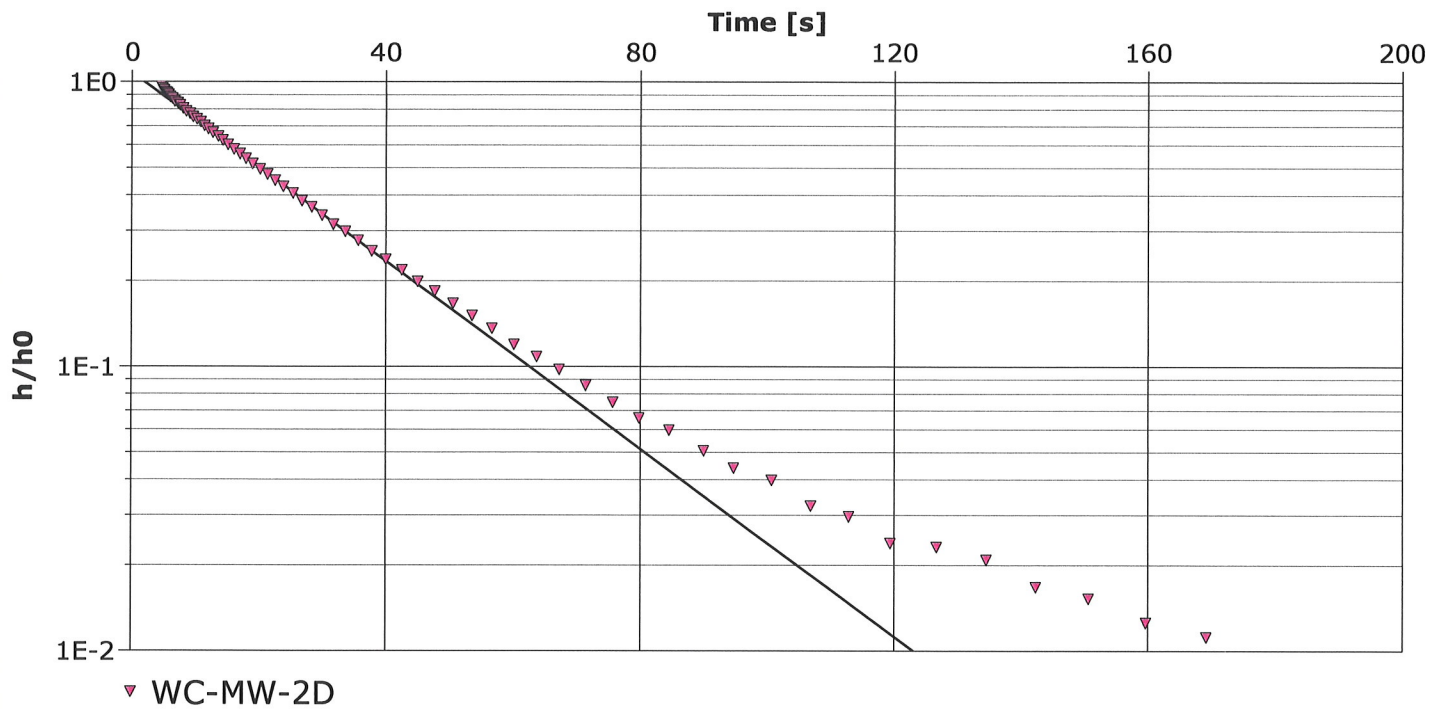
Slug Test Analysis Report

Project: Palatka - Wilson Cypress

Number: 19-0668.25

Client: City of Palatka

Location: Wilson Cypress Site	Slug Test: WC-MW-2D Slug Out	Test Well: WC-MW-2D
Test Conducted by: Jeff Steiner		Test Date: 2/23/2017
Analysis Performed by: Jeff Steiner	WC-MW-2D Slug Out Bouwer & Rice	Analysis Date: 3/27/2017
Aquifer Thickness: 26.00 ft		



Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [ft/s]	
WC-MW-2D	8.34×10^{-5}	



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Madison, WI 53718

Slug Test Analysis Report

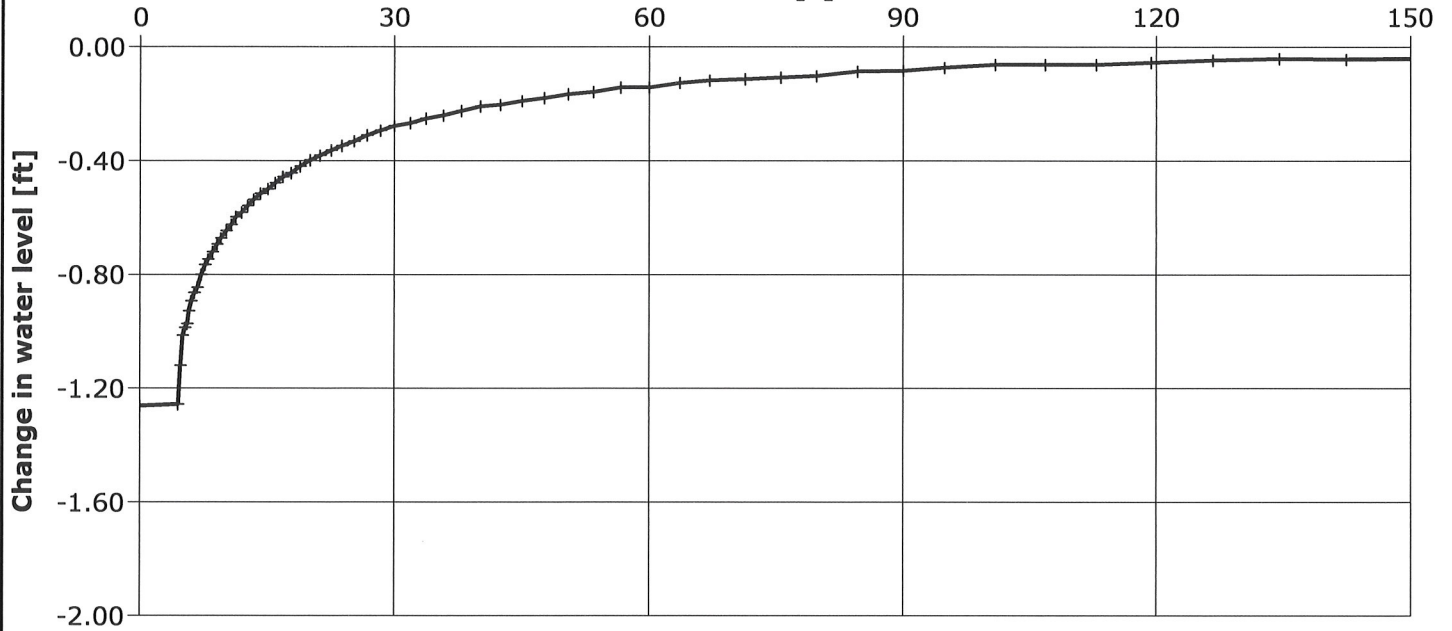
Project: Palatka - Wilson Cypress

Number: 19-0668.25

Client: City of Palatka

Location: Wilson Cypress Site	Slug Test: WC-MW-4 Slug Out	Test Well: WC-MW-4
Test Conducted by: Jeff Steiner		Test Date: 2/23/2017
Analysis Performed by: Jeff Steiner	WC-MW-4 Slug Out Time_Drawdown	Analysis Date: 3/27/2017
Aquifer Thickness: 11.00 ft		

Time [s]



+ WC-MW-4



Ayres Associates
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Madison, WI 53718

Slug Test Analysis Report

Project: Palatka - Wilson Cypress

Number: 19-0668.25

Client: City of Palatka

Location: Wilson Cypress Site

Slug Test: WC-MW-4 Slug Out

Test Well: WC-MW-4

Test Conducted by: Jeff Steiner

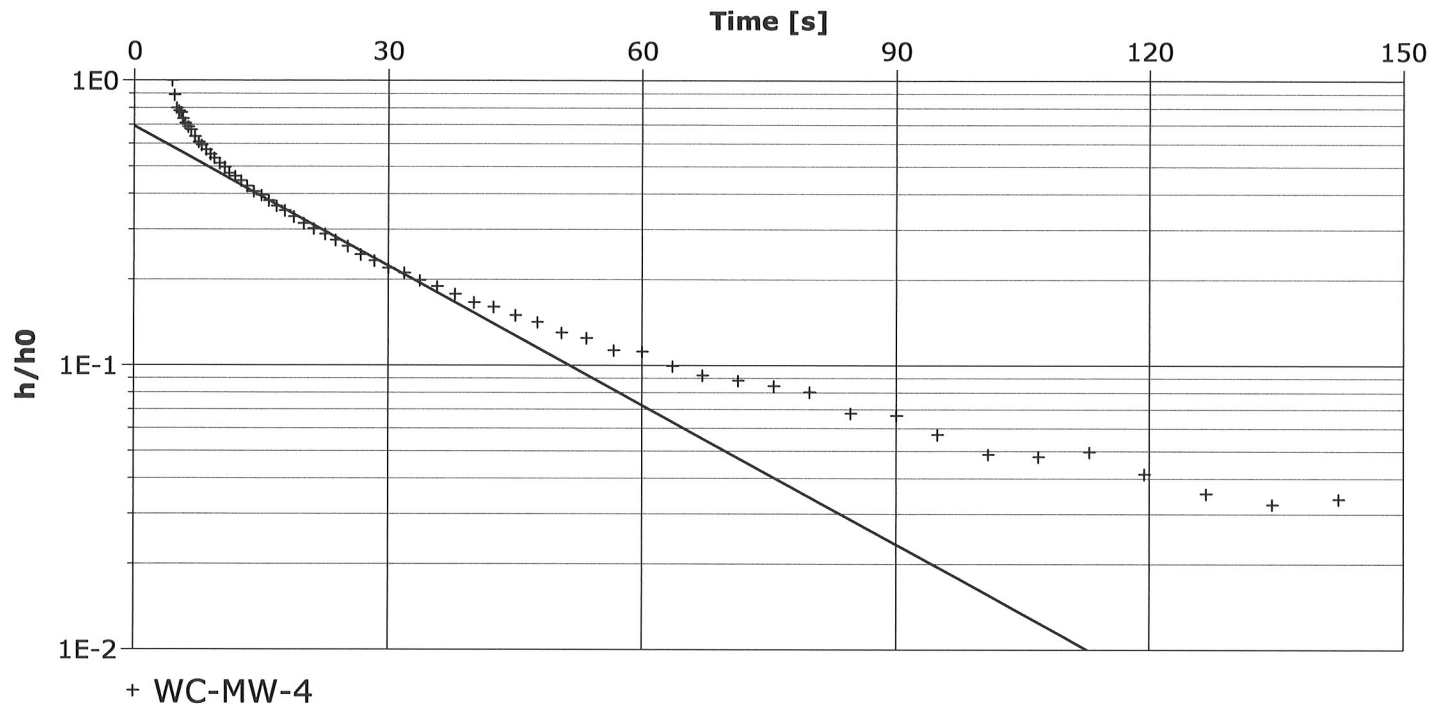
Test Date: 2/23/2017

Analysis Performed by: Jeff Steiner

WC-MW-4 Slug Out Bouwer & Rice

Analysis Date: 3/27/2017

Aquifer Thickness: 11.00 ft



Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [ft/s]
------------------	----------------------------------

WC-MW-4	4.86×10^{-5}
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Appendix C
Laboratory Analytical Reports for Soil Samples

March 6, 2017

Ben Peotter
Ayres Associates
5201 E. Terrace Dr, Suite 200
Madison, WI 53718

RE: Workorder: J1701809 Wilson Cypress

Dear Ben Peotter:

Enclosed are the analytical results for sample(s) received by the laboratory on Monday, February 20, 2017. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. The analytical results for the samples contained in this report were submitted for analysis as outlined by the Chain of Custody and results pertain only to these samples.

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

Sincerely,



Jason Gebhardt - Lab Manager
JGebhardt@AELLab.com

Enclosures

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SAMPLE SUMMARY

Workorder: J1701809 Wilson Cypress

Lab ID	Sample ID	Matrix	Date Collected	Date Received
J1701809001	WC-GP-4 (1-2)	Soil	2/20/2017 10:05	2/20/2017 12:50
J1701809002	WC-GP-3 (0-1)	Soil	2/20/2017 10:05	2/20/2017 12:50

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ANALYTICAL RESULTS

Workorder: J1701809 Wilson Cypress

Lab ID: **J1701809001**

Date Received: 02/20/17 12:50 Matrix: Soil

Sample ID: **WC-GP-4 (1-2)**

Date Collected: 02/20/17 10:05

Results for sample J1701809001 are reported on a dry weight basis.

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis, Soils			Preparation Method: SW-846 3050B Analytical Method: SW-846 6010					
Arsenic	0.73		mg/Kg	1	0.32	0.29	2/28/2017 15:38	J
Barium	64		mg/Kg	1	0.065	0.037	2/28/2017 15:38	J
Cadmium	0.078	I	mg/Kg	1	0.19	0.041	2/28/2017 15:38	J
Chromium	17		mg/Kg	1	0.13	0.077	2/28/2017 15:38	J
Lead	20		mg/Kg	1	0.23	0.066	2/28/2017 15:38	J
Selenium	0.24	U	mg/Kg	1	0.65	0.24	2/28/2017 15:38	J
Silver	0.039	U	mg/Kg	1	0.13	0.039	2/28/2017 15:38	J

Analysis Desc: SW846 7471A Analysis, Soil			Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A					
Mercury	0.042		mg/Kg	1	0.010	0.0015	2/22/2017 13:52	J

SEMIVOLATILES

Analysis Desc: 8270D-SIM Analysis, Soil			Preparation Method: SW-846 3550B Analytical Method: SW-846 8270D (SIM)					
1-Methylnaphthalene	0.012	U	mg/Kg	1	0.040	0.012	2/25/2017 06:20	J
2-Methylnaphthalene	0.016	U	mg/Kg	1	0.040	0.016	2/25/2017 06:20	J
Acenaphthene	0.015	U	mg/Kg	1	0.040	0.015	2/25/2017 06:20	J
Acenaphthylene	0.020	U	mg/Kg	1	0.040	0.020	2/25/2017 06:20	J
Anthracene	0.021	U	mg/Kg	1	0.040	0.021	2/25/2017 06:20	J
Benzo[a]anthracene	0.017	U	mg/Kg	1	0.040	0.017	2/25/2017 06:20	J
Benzo[a]pyrene	0.035	U	mg/Kg	1	0.040	0.035	2/25/2017 06:20	J
Benzo[b]fluoranthene	0.025	U	mg/Kg	1	0.040	0.025	2/25/2017 06:20	J
Benzo[g,h,i]perylene	0.028	U	mg/Kg	1	0.040	0.028	2/25/2017 06:20	J
Benzo[k]fluoranthene	0.026	U	mg/Kg	1	0.040	0.026	2/25/2017 06:20	J
Chrysene	0.021	U	mg/Kg	1	0.040	0.021	2/25/2017 06:20	J
Dibenzo[a,h]anthracene	0.019	U	mg/Kg	1	0.040	0.019	2/25/2017 06:20	J
Fluoranthene	0.026	U	mg/Kg	1	0.040	0.026	2/25/2017 06:20	J
Fluorene	0.018	U	mg/Kg	1	0.040	0.018	2/25/2017 06:20	J
Indeno(1,2,3-cd)pyrene	0.021	U	mg/Kg	1	0.040	0.021	2/25/2017 06:20	J
Naphthalene	0.012	U	mg/Kg	1	0.040	0.012	2/25/2017 06:20	J
Phenanthrene	0.016	U	mg/Kg	1	0.040	0.016	2/25/2017 06:20	J
Pyrene	0.014	U	mg/Kg	1	0.040	0.014	2/25/2017 06:20	J
Nitrobenzene-d5 (S)	78		%	1	33-134		2/25/2017 06:20	
2-Fluorobiphenyl (S)	81		%	1	37-127		2/25/2017 06:20	

Report ID: 472215 - 249341

Page 3 of 17

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ANALYTICAL RESULTS

Workorder: J1701809 Wilson Cypress

Lab ID: **J1701809001**

Date Received: 02/20/17 12:50 Matrix: Soil

Sample ID: **WC-GP-4 (1-2)**

Date Collected: 02/20/17 10:05

Results for sample J1701809001 are reported on a dry weight basis.

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
p-Terphenyl-d14 (S)	96		%	1	42-141		2/25/2017 06:20	

VOLATILES

Analysis Desc: 8260C Analysis, Soil

Preparation Method: SW-846 5035

Analytical Method: SW-846 8260C

1,1,1,2-Tetrachloroethane	3.4	U	ug/Kg	1	6.7	3.4	2/28/2017 10:45	J
1,1,1-Trichloroethane	3.1	U	ug/Kg	1	6.7	3.1	2/28/2017 10:45	J
1,1,2,2-Tetrachloroethane	4.4	U	ug/Kg	1	6.7	4.4	2/28/2017 10:45	J
1,1,2-Trichloroethane	3.0	U	ug/Kg	1	6.7	3.0	2/28/2017 10:45	J
1,1-Dichloroethane	2.8	U	ug/Kg	1	6.7	2.8	2/28/2017 10:45	J
1,1-Dichloroethylene	2.7	U,J4	ug/Kg	1	6.7	2.7	2/28/2017 10:45	J
1,1-Dichloropropene	2.4	U	ug/Kg	1	6.7	2.4	2/28/2017 10:45	J
1,2,3-Trichlorobenzene	3.1	U	ug/Kg	1	6.7	3.1	2/28/2017 10:45	J
1,2,3-Trichloropropane	3.0	U	ug/Kg	1	6.7	3.0	2/28/2017 10:45	J
1,2,4-Trichlorobenzene	3.2	U	ug/Kg	1	6.7	3.2	2/28/2017 10:45	J
1,2,4-Trimethylbenzene	2.3	U,J4	ug/Kg	1	6.7	2.3	2/28/2017 10:45	J
1,2-Dibromo-3-Chloropropane	8.8	U	ug/Kg	1	11	8.8	2/28/2017 10:45	J
1,2-Dichlorobenzene	3.0	U,J4	ug/Kg	1	6.7	3.0	2/28/2017 10:45	J
1,2-Dichloroethane	3.1	U	ug/Kg	1	6.7	3.1	2/28/2017 10:45	J
1,2-Dichloropropane	2.8	U	ug/Kg	1	6.7	2.8	2/28/2017 10:45	J
1,3,5-Trimethylbenzene	2.2	U	ug/Kg	1	6.7	2.2	2/28/2017 10:45	J
1,3-Dichlorobenzene	2.8	U,J4	ug/Kg	1	6.7	2.8	2/28/2017 10:45	J
1,3-Dichloropropane	3.6	U	ug/Kg	1	6.7	3.6	2/28/2017 10:45	J
1,4-Dichlorobenzene	2.6	U	ug/Kg	1	6.7	2.6	2/28/2017 10:45	J
2,2-Dichloropropane	2.2	U	ug/Kg	1	11	2.2	2/28/2017 10:45	J
2-Butanone (MEK)	4.7	U	ug/Kg	1	11	4.7	2/28/2017 10:45	J
2-Chlorotoluene	2.3	U	ug/Kg	1	6.7	2.3	2/28/2017 10:45	J
2-Hexanone	4.2	U	ug/Kg	1	11	4.2	2/28/2017 10:45	J
4-Chlorotoluene	2.8	U	ug/Kg	1	6.7	2.8	2/28/2017 10:45	J
4-Methyl-2-pentanone (MIBK)	2.4	U	ug/Kg	1	11	2.4	2/28/2017 10:45	J
Acetone	59		ug/Kg	1	22	5.6	2/28/2017 10:45	J
Benzene	2.7	U,J4	ug/Kg	1	6.7	2.7	2/28/2017 10:45	J
Bromobenzene	2.8	U	ug/Kg	1	6.7	2.8	2/28/2017 10:45	J
Bromodichloromethane	3.0	U	ug/Kg	1	6.7	3.0	2/28/2017 10:45	J
Bromoform	4.3	U	ug/Kg	1	11	4.3	2/28/2017 10:45	J
Bromomethane	2.9	U	ug/Kg	1	6.7	2.9	2/28/2017 10:45	J
Carbon Disulfide	2.7	U	ug/Kg	1	11	2.7	2/28/2017 10:45	J
Carbon Tetrachloride	3.2	U	ug/Kg	1	6.7	3.2	2/28/2017 10:45	J
Chlorobenzene	3.2	U,J4	ug/Kg	1	6.7	3.2	2/28/2017 10:45	J

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ANALYTICAL RESULTS

Workorder: J1701809 Wilson Cypress

Lab ID: **J1701809001**

Date Received: 02/20/17 12:50 Matrix: Soil

Sample ID: **WC-GP-4 (1-2)**

Date Collected: 02/20/17 10:05

Results for sample J1701809001 are reported on a dry weight basis.

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Chloroethane	2.2	U	ug/Kg	1	6.7	2.2	2/28/2017 10:45	J
Chloroform	2.9	U,J4	ug/Kg	1	6.7	2.9	2/28/2017 10:45	J
Chloromethane	2.3	U	ug/Kg	1	6.7	2.3	2/28/2017 10:45	J
Dibromochloromethane	2.9	U	ug/Kg	1	6.7	2.9	2/28/2017 10:45	J
Dichlorodifluoromethane	1.9	U	ug/Kg	1	6.7	1.9	2/28/2017 10:45	J
Ethylbenzene	2.4	U,J4	ug/Kg	1	6.7	2.4	2/28/2017 10:45	J
Ethylene Dibromide (EDB)	3.1	U	ug/Kg	1	6.7	3.1	2/28/2017 10:45	J
Hexachlorobutadiene	3.6	U	ug/Kg	1	6.7	3.6	2/28/2017 10:45	J
Isopropylbenzene	2.8	U	ug/Kg	1	6.7	2.8	2/28/2017 10:45	J
Methyl tert-butyl Ether (MTBE)	2.5	U	ug/Kg	1	6.7	2.5	2/28/2017 10:45	J
Methylene Chloride	6.3	U	ug/Kg	1	22	6.3	2/28/2017 10:45	J
Naphthalene	3.9	U	ug/Kg	1	6.7	3.9	2/28/2017 10:45	J
Styrene	2.2	U	ug/Kg	1	6.7	2.2	2/28/2017 10:45	J
Tetrachloroethylene (PCE)	2.7	U,J4	ug/Kg	1	6.7	2.7	2/28/2017 10:45	J
Toluene	3.1	U,J4	ug/Kg	1	6.7	3.1	2/28/2017 10:45	J
Trichloroethene	2.3	U,J4	ug/Kg	1	6.7	2.3	2/28/2017 10:45	J
Trichlorofluoromethane	2.0	U	ug/Kg	1	6.7	2.0	2/28/2017 10:45	J
Vinyl Chloride	2.7	U,J4	ug/Kg	1	6.7	2.7	2/28/2017 10:45	J
Xylene (Total)	8.5	U	ug/Kg	1	20	8.5	2/28/2017 10:45	J
cis-1,2-Dichloroethylene	3.2	U,J4	ug/Kg	1	6.7	3.2	2/28/2017 10:45	J
cis-1,3-Dichloropropene	2.4	U	ug/Kg	1	6.7	2.4	2/28/2017 10:45	J
n-Butylbenzene	2.4	U	ug/Kg	1	6.7	2.4	2/28/2017 10:45	J
n-propylbenzene	2.5	U	ug/Kg	1	6.7	2.5	2/28/2017 10:45	J
p-Isopropyltoluene	2.9	U	ug/Kg	1	6.7	2.9	2/28/2017 10:45	J
sec-butylbenzene	2.5	U	ug/Kg	1	6.7	2.5	2/28/2017 10:45	J
tert-butylbenzene	2.5	U	ug/Kg	1	6.7	2.5	2/28/2017 10:45	J
trans-1,2-Dichloroethylene	2.2	U	ug/Kg	1	6.7	2.2	2/28/2017 10:45	J
trans-1,3-Dichloropropylene	1.7	U	ug/Kg	1	6.7	1.7	2/28/2017 10:45	J
1,2-Dichloroethane-d4 (S)	105		%	1	69-134		2/28/2017 10:45	
Toluene-d8 (S)	101		%	1	72-122		2/28/2017 10:45	
Bromofluorobenzene (S)	86		%	1	79-126		2/28/2017 10:45	

VOLATILES

Analysis Desc: Percent
Solids,SM2540G,Soil

Analytical Method: SM 2540G

Percent Moisture	23	%	1		3/2/2017 10:00	J
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ANALYTICAL RESULTS

Workorder: J1701809 Wilson Cypress

Lab ID: **J1701809002**

Date Received: 02/20/17 12:50 Matrix: Soil

Sample ID: **WC-GP-3 (0-1)**

Date Collected: 02/20/17 10:05

Results for sample J1701809002 are reported on a dry weight basis.

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis, Soils			Preparation Method: SW-846 3050B Analytical Method: SW-846 6010					
Arsenic	0.23	U	mg/Kg	1	0.25	0.23	2/28/2017 16:06	J
Barium	14		mg/Kg	1	0.051	0.029	2/28/2017 16:06	J
Cadmium	0.081	I	mg/Kg	1	0.15	0.032	2/28/2017 16:06	J
Chromium	1.7		mg/Kg	1	0.10	0.060	2/28/2017 16:06	J
Lead	7.8		mg/Kg	1	0.18	0.051	2/28/2017 16:06	J
Selenium	0.19	U	mg/Kg	1	0.51	0.19	2/28/2017 16:06	J
Silver	0.034	I	mg/Kg	1	0.10	0.030	2/28/2017 16:06	J
Analysis Desc: SW846 7471A Analysis, Soil			Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A					
Mercury	0.023		mg/Kg	1	0.0048	0.00067	2/22/2017 13:55	J
SEMIVOLATILES								
Analysis Desc: 8270D-SIM Analysis, Soil			Preparation Method: SW-846 3550B Analytical Method: SW-846 8270D (SIM)					
1-Methylnaphthalene	0.011	U	mg/Kg	1	0.037	0.011	2/25/2017 06:49	J
2-Methylnaphthalene	0.015	U	mg/Kg	1	0.037	0.015	2/25/2017 06:49	J
Acenaphthene	0.014	U	mg/Kg	1	0.037	0.014	2/25/2017 06:49	J
Acenaphthylene	0.019	U	mg/Kg	1	0.037	0.019	2/25/2017 06:49	J
Anthracene	0.020	U	mg/Kg	1	0.037	0.020	2/25/2017 06:49	J
Benzo[a]anthracene	0.016	U	mg/Kg	1	0.037	0.016	2/25/2017 06:49	J
Benzo[a]pyrene	0.033	U	mg/Kg	1	0.037	0.033	2/25/2017 06:49	J
Benzo[b]fluoranthene	0.024	U	mg/Kg	1	0.037	0.024	2/25/2017 06:49	J
Benzo[g,h,i]perylene	0.026	U	mg/Kg	1	0.037	0.026	2/25/2017 06:49	J
Benzo[k]fluoranthene	0.024	U	mg/Kg	1	0.037	0.024	2/25/2017 06:49	J
Chrysene	0.019	U	mg/Kg	1	0.037	0.019	2/25/2017 06:49	J
Dibenzo[a,h]anthracene	0.018	U	mg/Kg	1	0.037	0.018	2/25/2017 06:49	J
Fluoranthene	0.025	U	mg/Kg	1	0.037	0.025	2/25/2017 06:49	J
Fluorene	0.016	U	mg/Kg	1	0.037	0.016	2/25/2017 06:49	J
Indeno(1,2,3-cd)pyrene	0.019	U	mg/Kg	1	0.037	0.019	2/25/2017 06:49	J
Naphthalene	0.012	U	mg/Kg	1	0.037	0.012	2/25/2017 06:49	J
Phenanthrene	0.015	U	mg/Kg	1	0.037	0.015	2/25/2017 06:49	J
Pyrene	0.013	U	mg/Kg	1	0.037	0.013	2/25/2017 06:49	J
Nitrobenzene-d5 (S)	69		%	1	33-134		2/25/2017 06:49	
2-Fluorobiphenyl (S)	72		%	1	37-127		2/25/2017 06:49	

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ANALYTICAL RESULTS

Workorder: J1701809 Wilson Cypress

Lab ID: **J1701809002**

Date Received: 02/20/17 12:50 Matrix: Soil

Sample ID: **WC-GP-3 (0-1)**

Date Collected: 02/20/17 10:05

Results for sample J1701809002 are reported on a dry weight basis.

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
p-Terphenyl-d14 (S)	97		%	1	42-141		2/25/2017 06:49	

VOLATILES

Analysis Desc: 8260C Analysis, Soil

Preparation Method: SW-846 5035

Analytical Method: SW-846 8260C

1,1,1,2-Tetrachloroethane	1.7	U	ug/Kg	1	3.4	1.7	2/28/2017 11:12	J
1,1,1-Trichloroethane	1.6	U	ug/Kg	1	3.4	1.6	2/28/2017 11:12	J
1,1,2,2-Tetrachloroethane	2.2	U	ug/Kg	1	3.4	2.2	2/28/2017 11:12	J
1,1,2-Trichloroethane	1.5	U	ug/Kg	1	3.4	1.5	2/28/2017 11:12	J
1,1-Dichloroethane	1.4	U	ug/Kg	1	3.4	1.4	2/28/2017 11:12	J
1,1-Dichloroethylene	1.3	U	ug/Kg	1	3.4	1.3	2/28/2017 11:12	J
1,1-Dichloropropene	1.2	U	ug/Kg	1	3.4	1.2	2/28/2017 11:12	J
1,2,3-Trichlorobenzene	1.5	U	ug/Kg	1	3.4	1.5	2/28/2017 11:12	J
1,2,3-Trichloropropane	1.5	U	ug/Kg	1	3.4	1.5	2/28/2017 11:12	J
1,2,4-Trichlorobenzene	1.6	U	ug/Kg	1	3.4	1.6	2/28/2017 11:12	J
1,2,4-Trimethylbenzene	1.1	U	ug/Kg	1	3.4	1.1	2/28/2017 11:12	J
1,2-Dibromo-3-Chloropropane	4.4	U	ug/Kg	1	5.6	4.4	2/28/2017 11:12	J
1,2-Dichlorobenzene	1.5	U	ug/Kg	1	3.4	1.5	2/28/2017 11:12	J
1,2-Dichloroethane	1.6	U	ug/Kg	1	3.4	1.6	2/28/2017 11:12	J
1,2-Dichloropropane	1.4	U	ug/Kg	1	3.4	1.4	2/28/2017 11:12	J
1,3,5-Trimethylbenzene	1.1	U	ug/Kg	1	3.4	1.1	2/28/2017 11:12	J
1,3-Dichlorobenzene	1.4	U	ug/Kg	1	3.4	1.4	2/28/2017 11:12	J
1,3-Dichloropropane	1.8	U	ug/Kg	1	3.4	1.8	2/28/2017 11:12	J
1,4-Dichlorobenzene	1.3	U	ug/Kg	1	3.4	1.3	2/28/2017 11:12	J
2,2-Dichloropropane	1.1	U	ug/Kg	1	5.6	1.1	2/28/2017 11:12	J
2-Butanone (MEK)	2.4	U	ug/Kg	1	5.6	2.4	2/28/2017 11:12	J
2-Chlorotoluene	1.1	U	ug/Kg	1	3.4	1.1	2/28/2017 11:12	J
2-Hexanone	2.1	U	ug/Kg	1	5.6	2.1	2/28/2017 11:12	J
4-Chlorotoluene	1.4	U	ug/Kg	1	3.4	1.4	2/28/2017 11:12	J
4-Methyl-2-pentanone (MIBK)	1.2	U	ug/Kg	1	5.6	1.2	2/28/2017 11:12	J
Acetone	2.8	U	ug/Kg	1	11	2.8	2/28/2017 11:12	J
Benzene	1.4	U	ug/Kg	1	3.4	1.4	2/28/2017 11:12	J
Bromobenzene	1.4	U	ug/Kg	1	3.4	1.4	2/28/2017 11:12	J
Bromodichloromethane	1.5	U	ug/Kg	1	3.4	1.5	2/28/2017 11:12	J
Bromoform	2.2	U	ug/Kg	1	5.6	2.2	2/28/2017 11:12	J
Bromomethane	1.4	U	ug/Kg	1	3.4	1.4	2/28/2017 11:12	J
Carbon Disulfide	1.4	U	ug/Kg	1	5.6	1.4	2/28/2017 11:12	J
Carbon Tetrachloride	1.6	U	ug/Kg	1	3.4	1.6	2/28/2017 11:12	J
Chlorobenzene	1.6	U	ug/Kg	1	3.4	1.6	2/28/2017 11:12	J

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ANALYTICAL RESULTS

Workorder: J1701809 Wilson Cypress

Lab ID: **J1701809002**

Date Received: 02/20/17 12:50 Matrix: Soil

Sample ID: **WC-GP-3 (0-1)**

Date Collected: 02/20/17 10:05

Results for sample J1701809002 are reported on a dry weight basis.

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Chloroethane	1.1	U	ug/Kg	1	3.4	1.1	2/28/2017 11:12	J
Chloroform	1.5	U	ug/Kg	1	3.4	1.5	2/28/2017 11:12	J
Chloromethane	1.1	U	ug/Kg	1	3.4	1.1	2/28/2017 11:12	J
Dibromochloromethane	1.5	U	ug/Kg	1	3.4	1.5	2/28/2017 11:12	J
Dichlorodifluoromethane	0.94	U	ug/Kg	1	3.4	0.94	2/28/2017 11:12	J
Ethylbenzene	1.2	U	ug/Kg	1	3.4	1.2	2/28/2017 11:12	J
Ethylene Dibromide (EDB)	1.5	U	ug/Kg	1	3.4	1.5	2/28/2017 11:12	J
Hexachlorobutadiene	1.8	U	ug/Kg	1	3.4	1.8	2/28/2017 11:12	J
Isopropylbenzene	1.4	U	ug/Kg	1	3.4	1.4	2/28/2017 11:12	J
Methyl tert-butyl Ether (MTBE)	1.3	U	ug/Kg	1	3.4	1.3	2/28/2017 11:12	J
Methylene Chloride	3.1	U	ug/Kg	1	11	3.1	2/28/2017 11:12	J
Naphthalene	1.9	U	ug/Kg	1	3.4	1.9	2/28/2017 11:12	J
Styrene	1.1	U	ug/Kg	1	3.4	1.1	2/28/2017 11:12	J
Tetrachloroethylene (PCE)	1.4	U	ug/Kg	1	3.4	1.4	2/28/2017 11:12	J
Toluene	1.5	U	ug/Kg	1	3.4	1.5	2/28/2017 11:12	J
Trichloroethene	1.1	U	ug/Kg	1	3.4	1.1	2/28/2017 11:12	J
Trichlorofluoromethane	1.0	U	ug/Kg	1	3.4	1.0	2/28/2017 11:12	J
Vinyl Chloride	1.4	U	ug/Kg	1	3.4	1.4	2/28/2017 11:12	J
Xylene (Total)	4.3	U	ug/Kg	1	10	4.3	2/28/2017 11:12	J
cis-1,2-Dichloroethylene	1.6	U	ug/Kg	1	3.4	1.6	2/28/2017 11:12	J
cis-1,3-Dichloropropene	1.2	U	ug/Kg	1	3.4	1.2	2/28/2017 11:12	J
n-Butylbenzene	1.2	U	ug/Kg	1	3.4	1.2	2/28/2017 11:12	J
n-propylbenzene	1.3	U	ug/Kg	1	3.4	1.3	2/28/2017 11:12	J
p-Isopropyltoluene	1.5	U	ug/Kg	1	3.4	1.5	2/28/2017 11:12	J
sec-butylbenzene	1.3	U	ug/Kg	1	3.4	1.3	2/28/2017 11:12	J
tert-butylbenzene	1.2	U	ug/Kg	1	3.4	1.2	2/28/2017 11:12	J
trans-1,2-Dichloroethylene	1.1	U	ug/Kg	1	3.4	1.1	2/28/2017 11:12	J
trans-1,3-Dichloropropylene	0.84	U	ug/Kg	1	3.4	0.84	2/28/2017 11:12	J
1,2-Dichloroethane-d4 (S)	103		%	1	69-134		2/28/2017 11:12	
Toluene-d8 (S)	98		%	1	72-122		2/28/2017 11:12	
Bromofluorobenzene (S)	95		%	1	79-126		2/28/2017 11:12	

VOLATILES

Analysis Desc: Percent
Solids, SM2540G, Soil

Analytical Method: SM 2540G

Percent Moisture	3.2	%	1		3/2/2017 10:00	J
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ANALYTICAL RESULTS QUALIFIERS

Workorder: J1701809 Wilson Cypress

PARAMETER QUALIFIERS

- U The compound was analyzed for but not detected.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J4 Estimated Result

LAB QUALIFIERS

- J DOH Certification #E82574(AEL-JAX)(FL NELAC Certification)

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QUALITY CONTROL DATA

Workorder: J1701809 Wilson Cypress

QC Batch: DGMJ/2570 Analysis Method: SW-846 7471A
QC Batch Method: SW-846 7471A Prepared: 02/22/2017 11:00
Associated Lab Samples: J1701809001, J1701809002

METHOD BLANK: 2278825

Parameter	Units	Blank Result	Reporting Limit Qualifiers
METALS			
Mercury	mg/Kg	0.00042	0.00042 U

LABORATORY CONTROL SAMPLE & LCSD: 2278826 2278827

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
METALS										
Mercury	mg/Kg	0.06	0.061	0.063	101	106	80-120	4	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2278828 2278829 Original: J1701716001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
METALS											
Mercury	mg/Kg	0.044	0.098	0.16	0.18	79	90	80-120	9	20 J4	

QC Batch: EXTj/3192 Analysis Method: SW-846 8270D (SIM)
QC Batch Method: SW-846 3550B Prepared: 02/24/2017 13:30
Associated Lab Samples: J1701809001, J1701809002

METHOD BLANK: 2281570

Parameter	Units	Blank Result	Reporting Limit Qualifiers
SEMIVOLATILES			
Naphthalene	mg/Kg	0.0025	0.0025 U
2-Methylnaphthalene	mg/Kg	0.0032	0.0032 U
1-Methylnaphthalene	mg/Kg	0.0023	0.0023 U
Acenaphthylene	mg/Kg	0.0041	0.0041 U
Acenaphthene	mg/Kg	0.0031	0.0031 U
Fluorene	mg/Kg	0.0035	0.0035 U
Phenanthrene	mg/Kg	0.0033	0.0033 U

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QUALITY CONTROL DATA

Workorder: J1701809 Wilson Cypress

METHOD BLANK: 2281570

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Anthracene	mg/Kg	0.0042	0.0042	U
Fluoranthene	mg/Kg	0.0053	0.0053	U
Pyrene	mg/Kg	0.0029	0.0029	U
Benzo[a]anthracene	mg/Kg	0.0034	0.0034	U
Chrysene	mg/Kg	0.0042	0.0042	U
Benzo[b]fluoranthene	mg/Kg	0.0051	0.0051	U
Benzo[k]fluoranthene	mg/Kg	0.0052	0.0052	U
Benzo[a]pyrene	mg/Kg	0.0070	0.0070	U
Indeno(1,2,3-cd)pyrene	mg/Kg	0.0042	0.0042	U
Dibenzo[a,h]anthracene	mg/Kg	0.0038	0.0038	U
Benzo[g,h,i]perylene	mg/Kg	0.0057	0.0057	U
Nitrobenzene-d5 (S)	%	64	33-134	
2-Fluorobiphenyl (S)	%	61	37-127	
p-Terphenyl-d14 (S)	%	97	42-141	

LABORATORY CONTROL SAMPLE: 2281571

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
SEMIVOLATILES						
Naphthalene	mg/Kg	0.2	0.15	77	38-120	
2-Methylnaphthalene	mg/Kg	0.2	0.16	78	39-120	
1-Methylnaphthalene	mg/Kg	0.2	0.16	82	43-120	
Acenaphthylene	mg/Kg	0.2	0.15	77	39-118	
Acenaphthene	mg/Kg	0.2	0.17	85	44-117	
Fluorene	mg/Kg	0.2	0.18	88	47-121	
Phenanthrene	mg/Kg	0.2	0.16	83	49-122	
Anthracene	mg/Kg	0.2	0.17	86	50-123	
Fluoranthene	mg/Kg	0.2	0.19	96	51-126	
Pyrene	mg/Kg	0.2	0.17	87	51-127	
Benzo[a]anthracene	mg/Kg	0.2	0.17	84	52-126	
Chrysene	mg/Kg	0.2	0.19	95	52-128	
Benzo[b]fluoranthene	mg/Kg	0.2	0.16	80	43-132	
Benzo[k]fluoranthene	mg/Kg	0.2	0.18	90	46-133	
Benzo[a]pyrene	mg/Kg	0.2	0.17	83	42-129	
Indeno(1,2,3-cd)pyrene	mg/Kg	0.2	0.17	85	39-135	
Dibenzo[a,h]anthracene	mg/Kg	0.2	0.18	93	40-139	
Benzo[g,h,i]perylene	mg/Kg	0.2	0.18	88	41-133	
Nitrobenzene-d5 (S)	%			78	33-134	
2-Fluorobiphenyl (S)	%			74	37-127	
p-Terphenyl-d14 (S)	%			99	42-141	

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QUALITY CONTROL DATA

Workorder: J1701809 Wilson Cypress

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2281572 2281573 Original: J1701924004

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	Qualifiers
SEMIVOLATILES										
Naphthalene	mg/Kg	0	0.2	0.17	0.17	80	82	38-120	3	30
2-Methylnaphthalene	mg/Kg	0	0.2	0.17	0.17	80	83	39-120	3	30
1-Methylnaphthalene	mg/Kg	0	0.2	0.18	0.18	86	87	43-120	2	30
Acenaphthylene	mg/Kg	0	0.2	0.17	0.17	80	82	39-118	2	30
Acenaphthene	mg/Kg	0	0.2	0.18	0.19	87	89	44-117	2	30
Fluorene	mg/Kg	0	0.2	0.19	0.19	89	91	47-121	2	30
Phenanthrene	mg/Kg	0	0.2	0.18	0.18	85	86	49-122	1	30
Anthracene	mg/Kg	0	0.2	0.19	0.19	89	89	50-123	0	30
Fluoranthene	mg/Kg	0	0.2	0.20	0.21	98	98	51-126	1	30
Pyrene	mg/Kg	0	0.2	0.18	0.18	88	88	51-127	1	30
Benzo[a]anthracene	mg/Kg	0	0.2	0.18	0.18	86	86	52-126	1	30
Chrysene	mg/Kg	0	0.2	0.20	0.20	96	96	52-128	0	30
Benzo[b]fluoranthene	mg/Kg	0	0.2	0.17	0.17	83	83	43-132	0	30
Benzo[k]fluoranthene	mg/Kg	0	0.2	0.19	0.19	90	89	46-133	1	30
Benzo[a]pyrene	mg/Kg	0	0.2	0.18	0.18	85	87	42-129	2	30
Indeno(1,2,3-cd)pyrene	mg/Kg	0	0.2	0.18	0.18	86	87	39-135	1	30
Dibenzo[a,h]anthracene	mg/Kg	0	0.2	0.21	0.20	100	96	40-139	4	30
Benzo[g,h,i]perylene	mg/Kg	0	0.2	0.18	0.18	89	88	41-133	0	30
Nitrobenzene-d5 (S)	%					77	78	33-134	2	30
2-Fluorobiphenyl (S)	%					75	76	37-127	2	30
p-Terphenyl-d14 (S)	%					96	95	42-141	0	30

QC Batch: DGMj/2594

Analysis Method: SW-846 6010

QC Batch Method: SW-846 3050B

Prepared: 02/27/2017 10:31

Associated Lab Samples: J1701809001, J1701809002

METHOD BLANK: 2281973

Parameter	Units	Blank Result	Reporting Limit Qualifiers
METALS			
Silver	mg/Kg	0.030	0.030 U
Arsenic	mg/Kg	0.23	0.23 U
Barium	mg/Kg	0.028	0.028 U
Cadmium	mg/Kg	0.031	0.031 U
Chromium	mg/Kg	0.059	0.059 U
Lead	mg/Kg	0.050	0.050 U
Selenium	mg/Kg	0.19	0.19 U

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QUALITY CONTROL DATA

Workorder: J1701809 Wilson Cypress

LABORATORY CONTROL SAMPLE & LCSD: 2281974 2281975

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
METALS										
Silver	mg/Kg	10	9.7	9.3	97	93	80-120	4	20	
Arsenic	mg/Kg	10	11	11	112	109	80-120	3	20	
Barium	mg/Kg	10	11	11	108	106	80-120	2	20	
Cadmium	mg/Kg	10	11	11	110	108	80-120	3	20	
Chromium	mg/Kg	10	11	11	109	106	80-120	3	20	
Lead	mg/Kg	10	10	10	103	100	80-120	3	20	
Selenium	mg/Kg	10	11	11	112	108	80-120	4	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2281976 2281977 Original: J1701925001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	RPD	Qualifiers
METALS											
Silver	mg/Kg	0	9.9	12	12	101	101	75-125	1	20	
Arsenic	mg/Kg	0.74	9.9	12	12	90	90	75-125	1	20	
Barium	mg/Kg	0	9.9	37	37	303	304	75-125	1	20	
Cadmium	mg/Kg	0.011	9.9	12	12	103	102	75-125	0	20	
Chromium	mg/Kg	12	9.9	30	31	129	133	75-125	2	20	
Lead	mg/Kg	4.5	9.9	17	17	93	92	75-125	0	20	
Selenium	mg/Kg	0	9.9	11	11	91	90	75-125	0	20	

QC Batch: MSVj/3352

Analysis Method: SW-846 8260C

QC Batch Method: SW-846 5035

Prepared: 02/28/2017 09:50

Associated Lab Samples: J1701809001, J1701809002

METHOD BLANK: 2284202

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
VOLATILES				
Dichlorodifluoromethane	ug/Kg	0.84	0.84	U
Chloromethane	ug/Kg	1.0	1.0	U
Vinyl Chloride	ug/Kg	1.2	1.2	U
Bromomethane	ug/Kg	1.3	1.3	U
Chloroethane	ug/Kg	1.0	1.0	U
Trichlorofluoromethane	ug/Kg	0.91	0.91	U
Acetone	ug/Kg	2.5	2.5	U
1,1-Dichloroethylene	ug/Kg	1.2	1.2	U

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QUALITY CONTROL DATA

Workorder: J1701809 Wilson Cypress

METHOD BLANK: 2284202

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Methylene Chloride	ug/Kg	2.8	2.8	U
Carbon Disulfide	ug/Kg	1.2	1.2	U
trans-1,2-Dichloroethylene	ug/Kg	0.98	0.98	U
Methyl tert-butyl Ether (MTBE)	ug/Kg	1.1	1.1	U
1,1-Dichloroethane	ug/Kg	1.3	1.3	U
2-Butanone (MEK)	ug/Kg	2.1	2.1	U
cis-1,2-Dichloroethylene	ug/Kg	1.4	1.4	U
Chloroform	ug/Kg	1.3	1.3	U
2,2-Dichloropropane	ug/Kg	0.97	0.97	U
1,2-Dichloroethane	ug/Kg	1.4	1.4	U
1,1,1-Trichloroethane	ug/Kg	1.4	1.4	U
1,1-Dichloropropene	ug/Kg	1.1	1.1	U
Carbon Tetrachloride	ug/Kg	1.4	1.4	U
Benzene	ug/Kg	1.2	1.2	U
1,2-Dichloropropane	ug/Kg	1.2	1.2	U
Trichloroethene	ug/Kg	1.0	1.0	U
Bromodichloromethane	ug/Kg	1.3	1.3	U
cis-1,3-Dichloropropene	ug/Kg	1.1	1.1	U
4-Methyl-2-pentanone (MIBK)	ug/Kg	1.1	1.1	U
trans-1,3-Dichloropropylene	ug/Kg	0.75	0.75	U
1,1,2-Trichloroethane	ug/Kg	1.3	1.3	U
Toluene	ug/Kg	1.4	1.4	U
1,3-Dichloropropane	ug/Kg	1.6	1.6	U
2-Hexanone	ug/Kg	1.9	1.9	U
Dibromochloromethane	ug/Kg	1.3	1.3	U
Ethylene Dibromide (EDB)	ug/Kg	1.4	1.4	U
Tetrachloroethylene (PCE)	ug/Kg	1.2	1.2	U
1,1,1,2-Tetrachloroethane	ug/Kg	1.5	1.5	U
Chlorobenzene	ug/Kg	1.4	1.4	U
Ethylbenzene	ug/Kg	1.1	1.1	U
Bromoform	ug/Kg	1.9	1.9	U
Styrene	ug/Kg	0.98	0.98	U
1,1,2,2-Tetrachloroethane	ug/Kg	2.0	2.0	U
1,2,3-Trichloropropane	ug/Kg	1.4	1.4	U
Isopropylbenzene	ug/Kg	1.2	1.2	U
Bromobenzene	ug/Kg	1.2	1.2	U
n-propylbenzene	ug/Kg	1.1	1.1	U
2-Chlorotoluene	ug/Kg	1.0	1.0	U
4-Chlorotoluene	ug/Kg	1.2	1.2	U
1,3,5-Trimethylbenzene	ug/Kg	1.0	1.0	U
tert-butylbenzene	ug/Kg	1.1	1.1	U
1,2,4-Trimethylbenzene	ug/Kg	1.0	1.0	U
sec-butylbenzene	ug/Kg	1.1	1.1	U
1,3-Dichlorobenzene	ug/Kg	1.3	1.3	U

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QUALITY CONTROL DATA

Workorder: J1701809 Wilson Cypress

METHOD BLANK: 2284202

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,4-Dichlorobenzene	ug/Kg	1.1	1.1	U
1,2-Dichlorobenzene	ug/Kg	1.3	1.3	U
p-Isopropyltoluene	ug/Kg	1.3	1.3	U
n-Butylbenzene	ug/Kg	1.1	1.1	U
1,2-Dibromo-3-Chloropropane	ug/Kg	3.9	3.9	U
1,2,4-Trichlorobenzene	ug/Kg	1.4	1.4	U
Naphthalene	ug/Kg	1.7	1.7	U
Hexachlorobutadiene	ug/Kg	1.6	1.6	U
1,2,3-Trichlorobenzene	ug/Kg	1.4	1.4	U
Xylene (Total)	ug/Kg	3.8	3.8	U
1,2-Dichloroethane-d4 (S)	%	102	69-134	
Toluene-d8 (S)	%	98	72-122	
Bromofluorobenzene (S)	%	89	79-126	

LABORATORY CONTROL SAMPLE & LCSD: 2284203 2284204

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
VOLATILES										
Vinyl Chloride	ug/Kg	20	21	20	103	100	70-130	3		
1,1-Dichloroethylene	ug/Kg	20	21	21	104	107	70-130	3		
Methyl tert-butyl Ether (MTBE)	ug/Kg	20	21	22	103	110	70-130	6		
cis-1,2-Dichloroethylene	ug/Kg	20	20	20	102	99	70-130	3		
Chloroform	ug/Kg	20	21	21	104	104	70-130	1		
Benzene	ug/Kg	20	21	21	105	103	70-130	2		
Trichloroethene	ug/Kg	20	21	20	103	98	70-130	5		
Toluene	ug/Kg	20	20	19	101	96	70-130	5		
Tetrachloroethylene (PCE)	ug/Kg	20	23	23	114	117	70-130	2		
Chlorobenzene	ug/Kg	20	21	20	105	101	70-130	4		
Ethylbenzene	ug/Kg	20	20	20	100	101	70-130	1		
1,2,4-Trimethylbenzene	ug/Kg	20	21	19	103	96	70-130	7		
1,3-Dichlorobenzene	ug/Kg	20	21	20	104	100	70-130	4		
1,2-Dichlorobenzene	ug/Kg	20	21	20	103	99	70-130	4		
Xylene (Total)	ug/Kg	60	61	62	101	103	70-130	2		
1,2-Dichloroethane-d4 (S)	%				98	98	69-134	1		
Toluene-d8 (S)	%				101	95	72-122	6		
Bromofluorobenzene (S)	%				100	99	79-126	1		

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QUALITY CONTROL DATA

Workorder: J1701809 Wilson Cypress

MATRIX SPIKE SAMPLE: 2284205

Original: J1701809001

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
VOLATILES							
Vinyl Chloride	ug/Kg	0	26	12	37	70-130	
1,1-Dichloroethylene	ug/Kg	0	26	15	44	70-130	
Methyl tert-butyl Ether (MTBE)	ug/Kg	0	26	33	98	70-130	
cis-1,2-Dichloroethylene	ug/Kg	0	26	17	51	70-130	
Chloroform	ug/Kg	0	26	20	60	70-130	
Benzene	ug/Kg	0	26	17	50	70-130	
Trichloroethene	ug/Kg	0	26	16	48	70-130	
Toluene	ug/Kg	0	26	13	40	70-130	
Tetrachloroethylene (PCE)	ug/Kg	0	26	11	33	70-130	
Chlorobenzene	ug/Kg	0	26	13	40	70-130	
Ethylbenzene	ug/Kg	0	26	16	49	70-130	
1,2,4-Trimethylbenzene	ug/Kg	0.67	26	12	36	70-130	
1,3-Dichlorobenzene	ug/Kg	0	26	12	35	70-130	
1,2-Dichlorobenzene	ug/Kg	0	26	13	40	70-130	
Xylene (Total)	ug/Kg	0	77	50	50	70-130	
1,2-Dichloroethane-d4 (S)	%	105			132	69-134	
Toluene-d8 (S)	%	101			93	72-122	
Bromofluorobenzene (S)	%	86			89	79-126	

QUALITY CONTROL DATA QUALIFIERS

Workorder: J1701809 Wilson Cypress

QUALITY CONTROL PARAMETER QUALIFIERS

- U The compound was analyzed for but not detected.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J4 Estimated Result

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: J1701809 Wilson Cypress

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
J1701809001	WC-GP-4 (1-2)	SW-846 7471A	DGMj/2570	SW-846 7471A	CVAj/1344
J1701809002	WC-GP-3 (0-1)	SW-846 7471A	DGMj/2570	SW-846 7471A	CVAj/1344
J1701809001	WC-GP-4 (1-2)	SW-846 3550B	EXTj/3192	SW-846 8270D (SIM)	MSSj/1911
J1701809002	WC-GP-3 (0-1)	SW-846 3550B	EXTj/3192	SW-846 8270D (SIM)	MSSj/1911
J1701809001	WC-GP-4 (1-2)	SW-846 3050B	DGMj/2594	SW-846 6010	ICPj/1810
J1701809002	WC-GP-3 (0-1)	SW-846 3050B	DGMj/2594	SW-846 6010	ICPj/1810
J1701809001	WC-GP-4 (1-2)	SW-846 5035	MSVj/3352	SW-846 8260C	MSVj/3353
J1701809002	WC-GP-3 (0-1)	SW-846 5035	MSVj/3352	SW-846 8260C	MSVj/3353
J1701809001	WC-GP-4 (1-2)			SM 2540G	WCAj/3599
J1701809002	WC-GP-3 (0-1)			SM 2540G	WCAj/3599

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1701809

ge 1 of 1

[illegible]

Client: Ayres Assoc.Project name: Wilson cypressDate/Time Rcvd: 2-20-17 1250Log-In request number: J1701809Received by: ByCompleted by: By**Cooler/Shipping Information:**Courier: ☒ AEL ☒ Client ☐ UPS ☐ Blue Streak ☐ FedEx ☐ AES ☐ ASAP ☐ Other (describe): _____Type: ☐ Cooler ☐ Box ☐ Other (describe) _____

Cooler temperature: Identify the cooler and document the temperature blank or ice water measurement

Cooler ID					
Temp (°C)	<u>4</u>				
Temp taken from	☐ Sample Bottle ☒ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler
Temp measured with	☒ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):

Other Information:

Any discrepancies should be explained in the "Comments" section below.

CHECKLIST	YES	NO	NA
1. Were custody seals on shipping container(s) intact?			☒
2. Were custody papers properly included with samples?	☒		
3. Were custody papers properly filled out (ink, signed, match labels)?	☒		
4. Did all bottles arrive in good condition (unbroken)?	☒		
5. Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?	☒		
6. Did the sample labels agree with the chain of custody?	☒		
7. Were correct bottles used for the tests indicated?	☒		
8. Were proper sample preservation techniques indicated on the label?	☒		
9. Were samples received within holding times?	☒		
10. Were all VOA vials free of the presence of air bubbles?			☒
11. Have all Soil VOA Vials and Encores been placed in a freezer within 48 hours of collection?	☒		
12. Were samples in direct contact with wet ice? If "No," check one: ☐ NO ICE ☐ BLUE ICE	☒		
13. Was the cooler temperature less than 6°C?	☒		
14. Where pH preservation is required, are sample pHs checked and any anomalies recorded by Sample control? Are all <2 or >10? Note: VOA samples are checked by laboratory analysts.			☒
15. Was sufficient sample volume provided to perform all tests?	☒		
16. If for Bacteriological testing, were containers supplied by AEL? (See QA officer if answer is no)			☒
17. Were all sample containers provided by AEL? (Other than Bacteriological)	☒		
18. Were samples accepted into the laboratory?	☒		
19. When necessary to split samples into other bottles, is it noted in the comments?	☒		

Comments: (Note all sample(s) and container (s)) with a "No" checklist response in this comment section)



Project No.: J1701809
Client Name: Ayres Associates
ProjectID: Wilson Cypress

I. Receipt

No Exceptions were encountered.

II. Holding Times

Preparation: All holding times were met.
Analysis: All holding times were met.

III. Method

Analysis: SW-846 6010
Preparation: SW-846 3050B

IV. Preparation

Sample preparation proceeded normally.

V. Analysis

A. Calibration: All acceptance criteria were met.
B. Blanks: All acceptance criteria were met.
C. Duplicates: All acceptance criteria were met.
D. Spikes: The matrix spike recovery of chromium for J1701925001 was outside control criteria due to the presence of target analytes in the sample. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicates the analytical batch was in control. The matrix spike outlier suggests a potential high bias in this matrix. The affected sample is qualified to indicate matrix interference.
E. Serial Dilution: All acceptance criteria were met.
F. Samples: Sample analyses proceeded normally.
G. Other:

I certify that this data package is in compliance with the terms and conditions agreed to by Advanced Environmental Laboratories, Inc. and by the client, both technically and for completeness, except for the conditions detailed above. The Quality Assurance Officer, or designee, as verified by the following signature, has authorized release of the data contained in this data package:

Jason Gebhardt, Lab Manager



Queue: MSVj

Batch Number: 3353

I. Receipt

No Exceptions were encountered.

II. Holding Times

Preparation: All holding times were met.

Analysis: All holding times were met.

III. Method

Analysis: SW-846 8260B/C

Preparation: SW-846 5035

IV. Preparation

Sample preparation proceeded normally.

V. Analysis

A. Calibration: All acceptance criteria were met.

B. Blanks: All acceptance criteria were met.

C. Surrogates: The upper control criterion was exceeded for the following surrogate in J1701925005: bromofluorobenzene. No target analytes were associated in the samples. The error associated with an elevated recovery equates to a high bias. The quality of the sample data is not significantly affected. No further corrective action was required.

D. Spikes: The matrix spike (MS) recoveries of several analytes for J1701809001 were outside control criteria. Recoveries in the Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) were acceptable, which indicates the analytical batch was in control. The matrix spike outlier suggests a potential low bias in this matrix. The affected sample is qualified to indicate matrix interference.

E. Internal Standard: All acceptance criteria were met.

F. Samples: J1701925003, J1702020002, -003, and -004 were analyzed at dilution due to high target analyte levels. The lowest possible dilution was performed to allow the analyte value to be within the calibration curve's highest level and to prevent possible carry over in the following sample analyses.

The following samples were analyzed at dilution due to high non-target background components: J1701703008, -011, J1701925004, -006, and -007. This was necessary to allow for accurate detection of all internal standards, surrogates and analytes.

G. Other:

I certify that this data package is in compliance with the terms and conditions agreed to by Advanced Environmental Laboratories, Inc. and by the client, both technically and for completeness, except for the conditions detailed above. The Quality Assurance Officer, or designee, as verified by the following signature, has authorized release of the data contained in this data package:

March 6, 2017

Ben Peotter
Ayres Associates
5201 E. Terrace Dr, Suite 200
Madison, WI 53718

RE: Workorder: J1701809 Wilson Cypress

Dear Ben Peotter:

Enclosed are the analytical results for sample(s) received by the laboratory on Monday, February 20, 2017. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. The analytical results for the samples contained in this report were submitted for analysis as outlined by the Chain of Custody and results pertain only to these samples.

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

Sincerely,



Jason Gebhardt - Lab Manager
JGebhardt@AELLab.com

Enclosures

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SAMPLE SUMMARY

Workorder: J1701809 Wilson Cypress

Lab ID	Sample ID	Matrix	Date Collected	Date Received
J1701809001	WC-GP-4 (1-2)	Soil	2/20/2017 10:05	2/20/2017 12:50
J1701809002	WC-GP-3 (0-1)	Soil	2/20/2017 10:05	2/20/2017 12:50

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ANALYTICAL RESULTS

Workorder: J1701809 Wilson Cypress

Lab ID: **J1701809001**

Date Received: 02/20/17 12:50 Matrix: Soil

Sample ID: **WC-GP-4 (1-2)**

Date Collected: 02/20/17 10:05

Results for sample J1701809001 are reported on a dry weight basis.

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis, Soils			Preparation Method: SW-846 3050B Analytical Method: SW-846 6010					
Arsenic	0.73		mg/Kg	1	0.32	0.29	2/28/2017 15:38	J
Barium	64		mg/Kg	1	0.065	0.037	2/28/2017 15:38	J
Cadmium	0.078	I	mg/Kg	1	0.19	0.041	2/28/2017 15:38	J
Chromium	17		mg/Kg	1	0.13	0.077	2/28/2017 15:38	J
Lead	20		mg/Kg	1	0.23	0.066	2/28/2017 15:38	J
Selenium	0.24	U	mg/Kg	1	0.65	0.24	2/28/2017 15:38	J
Silver	0.039	U	mg/Kg	1	0.13	0.039	2/28/2017 15:38	J

Analysis Desc: SW846 7471A Analysis, Soil			Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A					
Mercury	0.042		mg/Kg	1	0.010	0.0015	2/22/2017 13:52	J

SEMIVOLATILES

Analysis Desc: 8270D-SIM Analysis, Soil			Preparation Method: SW-846 3550B Analytical Method: SW-846 8270D (SIM)					
1-Methylnaphthalene	0.012	U	mg/Kg	1	0.040	0.012	2/25/2017 06:20	J
2-Methylnaphthalene	0.016	U	mg/Kg	1	0.040	0.016	2/25/2017 06:20	J
Acenaphthene	0.015	U	mg/Kg	1	0.040	0.015	2/25/2017 06:20	J
Acenaphthylene	0.020	U	mg/Kg	1	0.040	0.020	2/25/2017 06:20	J
Anthracene	0.021	U	mg/Kg	1	0.040	0.021	2/25/2017 06:20	J
Benzo[a]anthracene	0.017	U	mg/Kg	1	0.040	0.017	2/25/2017 06:20	J
Benzo[a]pyrene	0.035	U	mg/Kg	1	0.040	0.035	2/25/2017 06:20	J
Benzo[b]fluoranthene	0.025	U	mg/Kg	1	0.040	0.025	2/25/2017 06:20	J
Benzo[g,h,i]perylene	0.028	U	mg/Kg	1	0.040	0.028	2/25/2017 06:20	J
Benzo[k]fluoranthene	0.026	U	mg/Kg	1	0.040	0.026	2/25/2017 06:20	J
Chrysene	0.021	U	mg/Kg	1	0.040	0.021	2/25/2017 06:20	J
Dibenzo[a,h]anthracene	0.019	U	mg/Kg	1	0.040	0.019	2/25/2017 06:20	J
Fluoranthene	0.026	U	mg/Kg	1	0.040	0.026	2/25/2017 06:20	J
Fluorene	0.018	U	mg/Kg	1	0.040	0.018	2/25/2017 06:20	J
Indeno(1,2,3-cd)pyrene	0.021	U	mg/Kg	1	0.040	0.021	2/25/2017 06:20	J
Naphthalene	0.012	U	mg/Kg	1	0.040	0.012	2/25/2017 06:20	J
Phenanthrene	0.016	U	mg/Kg	1	0.040	0.016	2/25/2017 06:20	J
Pyrene	0.014	U	mg/Kg	1	0.040	0.014	2/25/2017 06:20	J
Nitrobenzene-d5 (S)	78		%	1	33-134		2/25/2017 06:20	
2-Fluorobiphenyl (S)	81		%	1	37-127		2/25/2017 06:20	

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ANALYTICAL RESULTS

Workorder: J1701809 Wilson Cypress

Lab ID: **J1701809001**

Date Received: 02/20/17 12:50 Matrix: Soil

Sample ID: **WC-GP-4 (1-2)**

Date Collected: 02/20/17 10:05

Results for sample J1701809001 are reported on a dry weight basis.

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
p-Terphenyl-d14 (S)	96		%	1	42-141		2/25/2017 06:20	

VOLATILES

Analysis Desc: 8260C Analysis, Soil

Preparation Method: SW-846 5035

Analytical Method: SW-846 8260C

1,1,1,2-Tetrachloroethane	3.4	U	ug/Kg	1	6.7	3.4	2/28/2017 10:45	J
1,1,1-Trichloroethane	3.1	U	ug/Kg	1	6.7	3.1	2/28/2017 10:45	J
1,1,2,2-Tetrachloroethane	4.4	U	ug/Kg	1	6.7	4.4	2/28/2017 10:45	J
1,1,2-Trichloroethane	3.0	U	ug/Kg	1	6.7	3.0	2/28/2017 10:45	J
1,1-Dichloroethane	2.8	U	ug/Kg	1	6.7	2.8	2/28/2017 10:45	J
1,1-Dichloroethylene	2.7	U,J4	ug/Kg	1	6.7	2.7	2/28/2017 10:45	J
1,1-Dichloropropene	2.4	U	ug/Kg	1	6.7	2.4	2/28/2017 10:45	J
1,2,3-Trichlorobenzene	3.1	U	ug/Kg	1	6.7	3.1	2/28/2017 10:45	J
1,2,3-Trichloropropane	3.0	U	ug/Kg	1	6.7	3.0	2/28/2017 10:45	J
1,2,4-Trichlorobenzene	3.2	U	ug/Kg	1	6.7	3.2	2/28/2017 10:45	J
1,2,4-Trimethylbenzene	2.3	U,J4	ug/Kg	1	6.7	2.3	2/28/2017 10:45	J
1,2-Dibromo-3-Chloropropane	8.8	U	ug/Kg	1	11	8.8	2/28/2017 10:45	J
1,2-Dichlorobenzene	3.0	U,J4	ug/Kg	1	6.7	3.0	2/28/2017 10:45	J
1,2-Dichloroethane	3.1	U	ug/Kg	1	6.7	3.1	2/28/2017 10:45	J
1,2-Dichloropropane	2.8	U	ug/Kg	1	6.7	2.8	2/28/2017 10:45	J
1,3,5-Trimethylbenzene	2.2	U	ug/Kg	1	6.7	2.2	2/28/2017 10:45	J
1,3-Dichlorobenzene	2.8	U,J4	ug/Kg	1	6.7	2.8	2/28/2017 10:45	J
1,3-Dichloropropane	3.6	U	ug/Kg	1	6.7	3.6	2/28/2017 10:45	J
1,4-Dichlorobenzene	2.6	U	ug/Kg	1	6.7	2.6	2/28/2017 10:45	J
2,2-Dichloropropane	2.2	U	ug/Kg	1	11	2.2	2/28/2017 10:45	J
2-Butanone (MEK)	4.7	U	ug/Kg	1	11	4.7	2/28/2017 10:45	J
2-Chlorotoluene	2.3	U	ug/Kg	1	6.7	2.3	2/28/2017 10:45	J
2-Hexanone	4.2	U	ug/Kg	1	11	4.2	2/28/2017 10:45	J
4-Chlorotoluene	2.8	U	ug/Kg	1	6.7	2.8	2/28/2017 10:45	J
4-Methyl-2-pentanone (MIBK)	2.4	U	ug/Kg	1	11	2.4	2/28/2017 10:45	J
Acetone	59		ug/Kg	1	22	5.6	2/28/2017 10:45	J
Benzene	2.7	U,J4	ug/Kg	1	6.7	2.7	2/28/2017 10:45	J
Bromobenzene	2.8	U	ug/Kg	1	6.7	2.8	2/28/2017 10:45	J
Bromodichloromethane	3.0	U	ug/Kg	1	6.7	3.0	2/28/2017 10:45	J
Bromoform	4.3	U	ug/Kg	1	11	4.3	2/28/2017 10:45	J
Bromomethane	2.9	U	ug/Kg	1	6.7	2.9	2/28/2017 10:45	J
Carbon Disulfide	2.7	U	ug/Kg	1	11	2.7	2/28/2017 10:45	J
Carbon Tetrachloride	3.2	U	ug/Kg	1	6.7	3.2	2/28/2017 10:45	J
Chlorobenzene	3.2	U,J4	ug/Kg	1	6.7	3.2	2/28/2017 10:45	J

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ANALYTICAL RESULTS

Workorder: J1701809 Wilson Cypress

Lab ID: **J1701809001**

Date Received: 02/20/17 12:50 Matrix: Soil

Sample ID: **WC-GP-4 (1-2)**

Date Collected: 02/20/17 10:05

Results for sample J1701809001 are reported on a dry weight basis.

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Chloroethane	2.2	U	ug/Kg	1	6.7	2.2	2/28/2017 10:45	J
Chloroform	2.9	U,J4	ug/Kg	1	6.7	2.9	2/28/2017 10:45	J
Chloromethane	2.3	U	ug/Kg	1	6.7	2.3	2/28/2017 10:45	J
Dibromochloromethane	2.9	U	ug/Kg	1	6.7	2.9	2/28/2017 10:45	J
Dichlorodifluoromethane	1.9	U	ug/Kg	1	6.7	1.9	2/28/2017 10:45	J
Ethylbenzene	2.4	U,J4	ug/Kg	1	6.7	2.4	2/28/2017 10:45	J
Ethylene Dibromide (EDB)	3.1	U	ug/Kg	1	6.7	3.1	2/28/2017 10:45	J
Hexachlorobutadiene	3.6	U	ug/Kg	1	6.7	3.6	2/28/2017 10:45	J
Isopropylbenzene	2.8	U	ug/Kg	1	6.7	2.8	2/28/2017 10:45	J
Methyl tert-butyl Ether (MTBE)	2.5	U	ug/Kg	1	6.7	2.5	2/28/2017 10:45	J
Methylene Chloride	6.3	U	ug/Kg	1	22	6.3	2/28/2017 10:45	J
Naphthalene	3.9	U	ug/Kg	1	6.7	3.9	2/28/2017 10:45	J
Styrene	2.2	U	ug/Kg	1	6.7	2.2	2/28/2017 10:45	J
Tetrachloroethylene (PCE)	2.7	U,J4	ug/Kg	1	6.7	2.7	2/28/2017 10:45	J
Toluene	3.1	U,J4	ug/Kg	1	6.7	3.1	2/28/2017 10:45	J
Trichloroethene	2.3	U,J4	ug/Kg	1	6.7	2.3	2/28/2017 10:45	J
Trichlorofluoromethane	2.0	U	ug/Kg	1	6.7	2.0	2/28/2017 10:45	J
Vinyl Chloride	2.7	U,J4	ug/Kg	1	6.7	2.7	2/28/2017 10:45	J
Xylene (Total)	8.5	U	ug/Kg	1	20	8.5	2/28/2017 10:45	J
cis-1,2-Dichloroethylene	3.2	U,J4	ug/Kg	1	6.7	3.2	2/28/2017 10:45	J
cis-1,3-Dichloropropene	2.4	U	ug/Kg	1	6.7	2.4	2/28/2017 10:45	J
n-Butylbenzene	2.4	U	ug/Kg	1	6.7	2.4	2/28/2017 10:45	J
n-propylbenzene	2.5	U	ug/Kg	1	6.7	2.5	2/28/2017 10:45	J
p-Isopropyltoluene	2.9	U	ug/Kg	1	6.7	2.9	2/28/2017 10:45	J
sec-butylbenzene	2.5	U	ug/Kg	1	6.7	2.5	2/28/2017 10:45	J
tert-butylbenzene	2.5	U	ug/Kg	1	6.7	2.5	2/28/2017 10:45	J
trans-1,2-Dichloroethylene	2.2	U	ug/Kg	1	6.7	2.2	2/28/2017 10:45	J
trans-1,3-Dichloropropylene	1.7	U	ug/Kg	1	6.7	1.7	2/28/2017 10:45	J
1,2-Dichloroethane-d4 (S)	105		%	1	69-134		2/28/2017 10:45	
Toluene-d8 (S)	101		%	1	72-122		2/28/2017 10:45	
Bromofluorobenzene (S)	86		%	1	79-126		2/28/2017 10:45	

VOLATILES

Analysis Desc: Percent Solids,SM2540G,Soil Analytical Method: SM 2540G

Percent Moisture	23	%	1		3/2/2017 10:00	J
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ANALYTICAL RESULTS

Workorder: J1701809 Wilson Cypress

Lab ID: **J1701809002**

Date Received: 02/20/17 12:50 Matrix: Soil

Sample ID: **WC-GP-3 (0-1)**

Date Collected: 02/20/17 10:05

Results for sample J1701809002 are reported on a dry weight basis.

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis, Soils			Preparation Method: SW-846 3050B					
			Analytical Method: SW-846 6010					
Arsenic	0.23	U	mg/Kg	1	0.25	0.23	2/28/2017 16:06	J
Barium	14		mg/Kg	1	0.051	0.029	2/28/2017 16:06	J
Cadmium	0.081	I	mg/Kg	1	0.15	0.032	2/28/2017 16:06	J
Chromium	1.7		mg/Kg	1	0.10	0.060	2/28/2017 16:06	J
Lead	7.8		mg/Kg	1	0.18	0.051	2/28/2017 16:06	J
Selenium	0.19	U	mg/Kg	1	0.51	0.19	2/28/2017 16:06	J
Silver	0.034	I	mg/Kg	1	0.10	0.030	2/28/2017 16:06	J

Analysis Desc: SW846 7471A Analysis, Soil			Preparation Method: SW-846 7471A					
			Analytical Method: SW-846 7471A					
Mercury	0.023		mg/Kg	1	0.0048	0.00067	2/22/2017 13:55	J

SEMIVOLATILES

Analysis Desc: 8270D-SIM Analysis, Soil			Preparation Method: SW-846 3550B					
			Analytical Method: SW-846 8270D (SIM)					
1-Methylnaphthalene	0.011	U	mg/Kg	1	0.037	0.011	2/25/2017 06:49	J
2-Methylnaphthalene	0.015	U	mg/Kg	1	0.037	0.015	2/25/2017 06:49	J
Acenaphthene	0.014	U	mg/Kg	1	0.037	0.014	2/25/2017 06:49	J
Acenaphthylene	0.019	U	mg/Kg	1	0.037	0.019	2/25/2017 06:49	J
Anthracene	0.020	U	mg/Kg	1	0.037	0.020	2/25/2017 06:49	J
Benzo[a]anthracene	0.016	U	mg/Kg	1	0.037	0.016	2/25/2017 06:49	J
Benzo[a]pyrene	0.033	U	mg/Kg	1	0.037	0.033	2/25/2017 06:49	J
Benzo[b]fluoranthene	0.024	U	mg/Kg	1	0.037	0.024	2/25/2017 06:49	J
Benzo[g,h,i]perylene	0.026	U	mg/Kg	1	0.037	0.026	2/25/2017 06:49	J
Benzo[k]fluoranthene	0.024	U	mg/Kg	1	0.037	0.024	2/25/2017 06:49	J
Chrysene	0.019	U	mg/Kg	1	0.037	0.019	2/25/2017 06:49	J
Dibenzo[a,h]anthracene	0.018	U	mg/Kg	1	0.037	0.018	2/25/2017 06:49	J
Fluoranthene	0.025	U	mg/Kg	1	0.037	0.025	2/25/2017 06:49	J
Fluorene	0.016	U	mg/Kg	1	0.037	0.016	2/25/2017 06:49	J
Indeno(1,2,3-cd)pyrene	0.019	U	mg/Kg	1	0.037	0.019	2/25/2017 06:49	J
Naphthalene	0.012	U	mg/Kg	1	0.037	0.012	2/25/2017 06:49	J
Phenanthrene	0.015	U	mg/Kg	1	0.037	0.015	2/25/2017 06:49	J
Pyrene	0.013	U	mg/Kg	1	0.037	0.013	2/25/2017 06:49	J
Nitrobenzene-d5 (S)	69		%	1	33-134		2/25/2017 06:49	
2-Fluorobiphenyl (S)	72		%	1	37-127		2/25/2017 06:49	

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ANALYTICAL RESULTS

Workorder: J1701809 Wilson Cypress

Lab ID: **J1701809002**

Date Received: 02/20/17 12:50 Matrix: Soil

Sample ID: **WC-GP-3 (0-1)**

Date Collected: 02/20/17 10:05

Results for sample J1701809002 are reported on a dry weight basis.

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
p-Terphenyl-d14 (S)	97		%	1	42-141		2/25/2017 06:49	

VOLATILES

Analysis Desc: 8260C Analysis, Soil

Preparation Method: SW-846 5035

Analytical Method: SW-846 8260C

1,1,1,2-Tetrachloroethane	1.7	U	ug/Kg	1	3.4	1.7	2/28/2017 11:12	J
1,1,1-Trichloroethane	1.6	U	ug/Kg	1	3.4	1.6	2/28/2017 11:12	J
1,1,2,2-Tetrachloroethane	2.2	U	ug/Kg	1	3.4	2.2	2/28/2017 11:12	J
1,1,2-Trichloroethane	1.5	U	ug/Kg	1	3.4	1.5	2/28/2017 11:12	J
1,1-Dichloroethane	1.4	U	ug/Kg	1	3.4	1.4	2/28/2017 11:12	J
1,1-Dichloroethylene	1.3	U	ug/Kg	1	3.4	1.3	2/28/2017 11:12	J
1,1-Dichloropropene	1.2	U	ug/Kg	1	3.4	1.2	2/28/2017 11:12	J
1,2,3-Trichlorobenzene	1.5	U	ug/Kg	1	3.4	1.5	2/28/2017 11:12	J
1,2,3-Trichloropropane	1.5	U	ug/Kg	1	3.4	1.5	2/28/2017 11:12	J
1,2,4-Trichlorobenzene	1.6	U	ug/Kg	1	3.4	1.6	2/28/2017 11:12	J
1,2,4-Trimethylbenzene	1.1	U	ug/Kg	1	3.4	1.1	2/28/2017 11:12	J
1,2-Dibromo-3-Chloropropane	4.4	U	ug/Kg	1	5.6	4.4	2/28/2017 11:12	J
1,2-Dichlorobenzene	1.5	U	ug/Kg	1	3.4	1.5	2/28/2017 11:12	J
1,2-Dichloroethane	1.6	U	ug/Kg	1	3.4	1.6	2/28/2017 11:12	J
1,2-Dichloropropane	1.4	U	ug/Kg	1	3.4	1.4	2/28/2017 11:12	J
1,3,5-Trimethylbenzene	1.1	U	ug/Kg	1	3.4	1.1	2/28/2017 11:12	J
1,3-Dichlorobenzene	1.4	U	ug/Kg	1	3.4	1.4	2/28/2017 11:12	J
1,3-Dichloropropane	1.8	U	ug/Kg	1	3.4	1.8	2/28/2017 11:12	J
1,4-Dichlorobenzene	1.3	U	ug/Kg	1	3.4	1.3	2/28/2017 11:12	J
2,2-Dichloropropane	1.1	U	ug/Kg	1	5.6	1.1	2/28/2017 11:12	J
2-Butanone (MEK)	2.4	U	ug/Kg	1	5.6	2.4	2/28/2017 11:12	J
2-Chlorotoluene	1.1	U	ug/Kg	1	3.4	1.1	2/28/2017 11:12	J
2-Hexanone	2.1	U	ug/Kg	1	5.6	2.1	2/28/2017 11:12	J
4-Chlorotoluene	1.4	U	ug/Kg	1	3.4	1.4	2/28/2017 11:12	J
4-Methyl-2-pentanone (MIBK)	1.2	U	ug/Kg	1	5.6	1.2	2/28/2017 11:12	J
Acetone	2.8	U	ug/Kg	1	11	2.8	2/28/2017 11:12	J
Benzene	1.4	U	ug/Kg	1	3.4	1.4	2/28/2017 11:12	J
Bromobenzene	1.4	U	ug/Kg	1	3.4	1.4	2/28/2017 11:12	J
Bromodichloromethane	1.5	U	ug/Kg	1	3.4	1.5	2/28/2017 11:12	J
Bromoform	2.2	U	ug/Kg	1	5.6	2.2	2/28/2017 11:12	J
Bromomethane	1.4	U	ug/Kg	1	3.4	1.4	2/28/2017 11:12	J
Carbon Disulfide	1.4	U	ug/Kg	1	5.6	1.4	2/28/2017 11:12	J
Carbon Tetrachloride	1.6	U	ug/Kg	1	3.4	1.6	2/28/2017 11:12	J
Chlorobenzene	1.6	U	ug/Kg	1	3.4	1.6	2/28/2017 11:12	J

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ANALYTICAL RESULTS

Workorder: J1701809 Wilson Cypress

Lab ID: **J1701809002**

Date Received: 02/20/17 12:50 Matrix: Soil

Sample ID: **WC-GP-3 (0-1)**

Date Collected: 02/20/17 10:05

Results for sample J1701809002 are reported on a dry weight basis.

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Chloroethane	1.1	U	ug/Kg	1	3.4	1.1	2/28/2017 11:12	J
Chloroform	1.5	U	ug/Kg	1	3.4	1.5	2/28/2017 11:12	J
Chloromethane	1.1	U	ug/Kg	1	3.4	1.1	2/28/2017 11:12	J
Dibromochloromethane	1.5	U	ug/Kg	1	3.4	1.5	2/28/2017 11:12	J
Dichlorodifluoromethane	0.94	U	ug/Kg	1	3.4	0.94	2/28/2017 11:12	J
Ethylbenzene	1.2	U	ug/Kg	1	3.4	1.2	2/28/2017 11:12	J
Ethylene Dibromide (EDB)	1.5	U	ug/Kg	1	3.4	1.5	2/28/2017 11:12	J
Hexachlorobutadiene	1.8	U	ug/Kg	1	3.4	1.8	2/28/2017 11:12	J
Isopropylbenzene	1.4	U	ug/Kg	1	3.4	1.4	2/28/2017 11:12	J
Methyl tert-butyl Ether (MTBE)	1.3	U	ug/Kg	1	3.4	1.3	2/28/2017 11:12	J
Methylene Chloride	3.1	U	ug/Kg	1	11	3.1	2/28/2017 11:12	J
Naphthalene	1.9	U	ug/Kg	1	3.4	1.9	2/28/2017 11:12	J
Styrene	1.1	U	ug/Kg	1	3.4	1.1	2/28/2017 11:12	J
Tetrachloroethylene (PCE)	1.4	U	ug/Kg	1	3.4	1.4	2/28/2017 11:12	J
Toluene	1.5	U	ug/Kg	1	3.4	1.5	2/28/2017 11:12	J
Trichloroethene	1.1	U	ug/Kg	1	3.4	1.1	2/28/2017 11:12	J
Trichlorofluoromethane	1.0	U	ug/Kg	1	3.4	1.0	2/28/2017 11:12	J
Vinyl Chloride	1.4	U	ug/Kg	1	3.4	1.4	2/28/2017 11:12	J
Xylene (Total)	4.3	U	ug/Kg	1	10	4.3	2/28/2017 11:12	J
cis-1,2-Dichloroethylene	1.6	U	ug/Kg	1	3.4	1.6	2/28/2017 11:12	J
cis-1,3-Dichloropropene	1.2	U	ug/Kg	1	3.4	1.2	2/28/2017 11:12	J
n-Butylbenzene	1.2	U	ug/Kg	1	3.4	1.2	2/28/2017 11:12	J
n-propylbenzene	1.3	U	ug/Kg	1	3.4	1.3	2/28/2017 11:12	J
p-Isopropyltoluene	1.5	U	ug/Kg	1	3.4	1.5	2/28/2017 11:12	J
sec-butylbenzene	1.3	U	ug/Kg	1	3.4	1.3	2/28/2017 11:12	J
tert-butylbenzene	1.2	U	ug/Kg	1	3.4	1.2	2/28/2017 11:12	J
trans-1,2-Dichloroethylene	1.1	U	ug/Kg	1	3.4	1.1	2/28/2017 11:12	J
trans-1,3-Dichloropropylene	0.84	U	ug/Kg	1	3.4	0.84	2/28/2017 11:12	J
1,2-Dichloroethane-d4 (S)	103		%	1	69-134		2/28/2017 11:12	
Toluene-d8 (S)	98		%	1	72-122		2/28/2017 11:12	
Bromofluorobenzene (S)	95		%	1	79-126		2/28/2017 11:12	

VOLATILES

Analysis Desc: Percent
Solids, SM2540G, Soil

Analytical Method: SM 2540G

Percent Moisture	3.2	%	1		3/2/2017 10:00	J
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ANALYTICAL RESULTS QUALIFIERS

Workorder: J1701809 Wilson Cypress

PARAMETER QUALIFIERS

- U The compound was analyzed for but not detected.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J4 Estimated Result

LAB QUALIFIERS

- J DOH Certification #E82574(AEL-JAX)(FL NELAC Certification)

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QUALITY CONTROL DATA

Workorder: J1701809 Wilson Cypress

QC Batch: DGMJ/2570 Analysis Method: SW-846 7471A
QC Batch Method: SW-846 7471A Prepared: 02/22/2017 11:00
Associated Lab Samples: J1701809001, J1701809002

METHOD BLANK: 2278825

Parameter	Units	Blank Result	Reporting Limit Qualifiers
METALS			
Mercury	mg/Kg	0.00042	0.00042 U

LABORATORY CONTROL SAMPLE & LCSD: 2278826 2278827

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
METALS										
Mercury	mg/Kg	0.06	0.061	0.063	101	106	80-120	4	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2278828 2278829 Original: J1701716001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
METALS											
Mercury	mg/Kg	0.044	0.098	0.16	0.18	79	90	80-120	9	20 J4	

QC Batch: EXTj/3192 Analysis Method: SW-846 8270D (SIM)
QC Batch Method: SW-846 3550B Prepared: 02/24/2017 13:30
Associated Lab Samples: J1701809001, J1701809002

METHOD BLANK: 2281570

Parameter	Units	Blank Result	Reporting Limit Qualifiers
SEMIVOLATILES			
Naphthalene	mg/Kg	0.0025	0.0025 U
2-Methylnaphthalene	mg/Kg	0.0032	0.0032 U
1-Methylnaphthalene	mg/Kg	0.0023	0.0023 U
Acenaphthylene	mg/Kg	0.0041	0.0041 U
Acenaphthene	mg/Kg	0.0031	0.0031 U
Fluorene	mg/Kg	0.0035	0.0035 U
Phenanthrene	mg/Kg	0.0033	0.0033 U

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QUALITY CONTROL DATA

Workorder: J1701809 Wilson Cypress

METHOD BLANK: 2281570

Parameter	Units	Blank Result	Reporting Limit Qualifiers
Anthracene	mg/Kg	0.0042	0.0042 U
Fluoranthene	mg/Kg	0.0053	0.0053 U
Pyrene	mg/Kg	0.0029	0.0029 U
Benzo[a]anthracene	mg/Kg	0.0034	0.0034 U
Chrysene	mg/Kg	0.0042	0.0042 U
Benzo[b]fluoranthene	mg/Kg	0.0051	0.0051 U
Benzo[k]fluoranthene	mg/Kg	0.0052	0.0052 U
Benzo[a]pyrene	mg/Kg	0.0070	0.0070 U
Indeno(1,2,3-cd)pyrene	mg/Kg	0.0042	0.0042 U
Dibenzo[a,h]anthracene	mg/Kg	0.0038	0.0038 U
Benzo[g,h,i]perylene	mg/Kg	0.0057	0.0057 U
Nitrobenzene-d5 (S)	%	64	33-134
2-Fluorobiphenyl (S)	%	61	37-127
p-Terphenyl-d14 (S)	%	97	42-141

LABORATORY CONTROL SAMPLE: 2281571

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
SEMIVOLATILES					
Naphthalene	mg/Kg	0.2	0.15	77	38-120
2-Methylnaphthalene	mg/Kg	0.2	0.16	78	39-120
1-Methylnaphthalene	mg/Kg	0.2	0.16	82	43-120
Acenaphthylene	mg/Kg	0.2	0.15	77	39-118
Acenaphthene	mg/Kg	0.2	0.17	85	44-117
Fluorene	mg/Kg	0.2	0.18	88	47-121
Phenanthrene	mg/Kg	0.2	0.16	83	49-122
Anthracene	mg/Kg	0.2	0.17	86	50-123
Fluoranthene	mg/Kg	0.2	0.19	96	51-126
Pyrene	mg/Kg	0.2	0.17	87	51-127
Benzo[a]anthracene	mg/Kg	0.2	0.17	84	52-126
Chrysene	mg/Kg	0.2	0.19	95	52-128
Benzo[b]fluoranthene	mg/Kg	0.2	0.16	80	43-132
Benzo[k]fluoranthene	mg/Kg	0.2	0.18	90	46-133
Benzo[a]pyrene	mg/Kg	0.2	0.17	83	42-129
Indeno(1,2,3-cd)pyrene	mg/Kg	0.2	0.17	85	39-135
Dibenzo[a,h]anthracene	mg/Kg	0.2	0.18	93	40-139
Benzo[g,h,i]perylene	mg/Kg	0.2	0.18	88	41-133
Nitrobenzene-d5 (S)	%			78	33-134
2-Fluorobiphenyl (S)	%			74	37-127
p-Terphenyl-d14 (S)	%			99	42-141

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QUALITY CONTROL DATA

Workorder: J1701809 Wilson Cypress

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2281572 2281573 Original: J1701924004

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	Qualifiers
SEMIVOLATILES										
Naphthalene	mg/Kg	0	0.2	0.17	0.17	80	82	38-120	3	30
2-Methylnaphthalene	mg/Kg	0	0.2	0.17	0.17	80	83	39-120	3	30
1-Methylnaphthalene	mg/Kg	0	0.2	0.18	0.18	86	87	43-120	2	30
Acenaphthylene	mg/Kg	0	0.2	0.17	0.17	80	82	39-118	2	30
Acenaphthene	mg/Kg	0	0.2	0.18	0.19	87	89	44-117	2	30
Fluorene	mg/Kg	0	0.2	0.19	0.19	89	91	47-121	2	30
Phenanthrene	mg/Kg	0	0.2	0.18	0.18	85	86	49-122	1	30
Anthracene	mg/Kg	0	0.2	0.19	0.19	89	89	50-123	0	30
Fluoranthene	mg/Kg	0	0.2	0.20	0.21	98	98	51-126	1	30
Pyrene	mg/Kg	0	0.2	0.18	0.18	88	88	51-127	1	30
Benzo[a]anthracene	mg/Kg	0	0.2	0.18	0.18	86	86	52-126	1	30
Chrysene	mg/Kg	0	0.2	0.20	0.20	96	96	52-128	0	30
Benzo[b]fluoranthene	mg/Kg	0	0.2	0.17	0.17	83	83	43-132	0	30
Benzo[k]fluoranthene	mg/Kg	0	0.2	0.19	0.19	90	89	46-133	1	30
Benzo[a]pyrene	mg/Kg	0	0.2	0.18	0.18	85	87	42-129	2	30
Indeno(1,2,3-cd)pyrene	mg/Kg	0	0.2	0.18	0.18	86	87	39-135	1	30
Dibenzo[a,h]anthracene	mg/Kg	0	0.2	0.21	0.20	100	96	40-139	4	30
Benzo[g,h,i]perylene	mg/Kg	0	0.2	0.18	0.18	89	88	41-133	0	30
Nitrobenzene-d5 (S)	%					77	78	33-134	2	30
2-Fluorobiphenyl (S)	%					75	76	37-127	2	30
p-Terphenyl-d14 (S)	%					96	95	42-141	0	30

QC Batch: DGMj/2594

Analysis Method: SW-846 6010

QC Batch Method: SW-846 3050B

Prepared: 02/27/2017 10:31

Associated Lab Samples: J1701809001, J1701809002

METHOD BLANK: 2281973

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
METALS				
Silver	mg/Kg	0.030	0.030	U
Arsenic	mg/Kg	0.23	0.23	U
Barium	mg/Kg	0.028	0.028	U
Cadmium	mg/Kg	0.031	0.031	U
Chromium	mg/Kg	0.059	0.059	U
Lead	mg/Kg	0.050	0.050	U
Selenium	mg/Kg	0.19	0.19	U

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QUALITY CONTROL DATA

Workorder: J1701809 Wilson Cypress

LABORATORY CONTROL SAMPLE & LCSD: 2281974 2281975

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
METALS										
Silver	mg/Kg	10	9.7	9.3	97	93	80-120	4	20	
Arsenic	mg/Kg	10	11	11	112	109	80-120	3	20	
Barium	mg/Kg	10	11	11	108	106	80-120	2	20	
Cadmium	mg/Kg	10	11	11	110	108	80-120	3	20	
Chromium	mg/Kg	10	11	11	109	106	80-120	3	20	
Lead	mg/Kg	10	10	10	103	100	80-120	3	20	
Selenium	mg/Kg	10	11	11	112	108	80-120	4	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2281976 2281977 Original: J1701925001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	RPD	Qualifiers
METALS											
Silver	mg/Kg	0	9.9	12	12	101	101	75-125	1	20	
Arsenic	mg/Kg	0.74	9.9	12	12	90	90	75-125	1	20	
Barium	mg/Kg	0	9.9	37	37	303	304	75-125	1	20	
Cadmium	mg/Kg	0.011	9.9	12	12	103	102	75-125	0	20	
Chromium	mg/Kg	12	9.9	30	31	129	133	75-125	2	20	
Lead	mg/Kg	4.5	9.9	17	17	93	92	75-125	0	20	
Selenium	mg/Kg	0	9.9	11	11	91	90	75-125	0	20	

QC Batch: MSVj/3352

Analysis Method: SW-846 8260C

QC Batch Method: SW-846 5035

Prepared: 02/28/2017 09:50

Associated Lab Samples: J1701809001, J1701809002

METHOD BLANK: 2284202

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
VOLATILES				
Dichlorodifluoromethane	ug/Kg	0.84	0.84	U
Chloromethane	ug/Kg	1.0	1.0	U
Vinyl Chloride	ug/Kg	1.2	1.2	U
Bromomethane	ug/Kg	1.3	1.3	U
Chloroethane	ug/Kg	1.0	1.0	U
Trichlorofluoromethane	ug/Kg	0.91	0.91	U
Acetone	ug/Kg	2.5	2.5	U
1,1-Dichloroethylene	ug/Kg	1.2	1.2	U

Report ID: 472215 - 249341

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QUALITY CONTROL DATA

Workorder: J1701809 Wilson Cypress

METHOD BLANK: 2284202

Parameter	Units	Blank Result	Reporting Limit Qualifiers
Methylene Chloride	ug/Kg	2.8	2.8 U
Carbon Disulfide	ug/Kg	1.2	1.2 U
trans-1,2-Dichloroethylene	ug/Kg	0.98	0.98 U
Methyl tert-butyl Ether (MTBE)	ug/Kg	1.1	1.1 U
1,1-Dichloroethane	ug/Kg	1.3	1.3 U
2-Butanone (MEK)	ug/Kg	2.1	2.1 U
cis-1,2-Dichloroethylene	ug/Kg	1.4	1.4 U
Chloroform	ug/Kg	1.3	1.3 U
2,2-Dichloropropane	ug/Kg	0.97	0.97 U
1,2-Dichloroethane	ug/Kg	1.4	1.4 U
1,1,1-Trichloroethane	ug/Kg	1.4	1.4 U
1,1-Dichloropropene	ug/Kg	1.1	1.1 U
Carbon Tetrachloride	ug/Kg	1.4	1.4 U
Benzene	ug/Kg	1.2	1.2 U
1,2-Dichloropropane	ug/Kg	1.2	1.2 U
Trichloroethene	ug/Kg	1.0	1.0 U
Bromodichloromethane	ug/Kg	1.3	1.3 U
cis-1,3-Dichloropropene	ug/Kg	1.1	1.1 U
4-Methyl-2-pentanone (MIBK)	ug/Kg	1.1	1.1 U
trans-1,3-Dichloropropylene	ug/Kg	0.75	0.75 U
1,1,2-Trichloroethane	ug/Kg	1.3	1.3 U
Toluene	ug/Kg	1.4	1.4 U
1,3-Dichloropropane	ug/Kg	1.6	1.6 U
2-Hexanone	ug/Kg	1.9	1.9 U
Dibromochloromethane	ug/Kg	1.3	1.3 U
Ethylene Dibromide (EDB)	ug/Kg	1.4	1.4 U
Tetrachloroethylene (PCE)	ug/Kg	1.2	1.2 U
1,1,1,2-Tetrachloroethane	ug/Kg	1.5	1.5 U
Chlorobenzene	ug/Kg	1.4	1.4 U
Ethylbenzene	ug/Kg	1.1	1.1 U
Bromoform	ug/Kg	1.9	1.9 U
Styrene	ug/Kg	0.98	0.98 U
1,1,2,2-Tetrachloroethane	ug/Kg	2.0	2.0 U
1,2,3-Trichloropropane	ug/Kg	1.4	1.4 U
Isopropylbenzene	ug/Kg	1.2	1.2 U
Bromobenzene	ug/Kg	1.2	1.2 U
n-propylbenzene	ug/Kg	1.1	1.1 U
2-Chlorotoluene	ug/Kg	1.0	1.0 U
4-Chlorotoluene	ug/Kg	1.2	1.2 U
1,3,5-Trimethylbenzene	ug/Kg	1.0	1.0 U
tert-butylbenzene	ug/Kg	1.1	1.1 U
1,2,4-Trimethylbenzene	ug/Kg	1.0	1.0 U
sec-butylbenzene	ug/Kg	1.1	1.1 U
1,3-Dichlorobenzene	ug/Kg	1.3	1.3 U

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QUALITY CONTROL DATA

Workorder: J1701809 Wilson Cypress

METHOD BLANK: 2284202

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,4-Dichlorobenzene	ug/Kg	1.1	1.1	U
1,2-Dichlorobenzene	ug/Kg	1.3	1.3	U
p-Isopropyltoluene	ug/Kg	1.3	1.3	U
n-Butylbenzene	ug/Kg	1.1	1.1	U
1,2-Dibromo-3-Chloropropane	ug/Kg	3.9	3.9	U
1,2,4-Trichlorobenzene	ug/Kg	1.4	1.4	U
Naphthalene	ug/Kg	1.7	1.7	U
Hexachlorobutadiene	ug/Kg	1.6	1.6	U
1,2,3-Trichlorobenzene	ug/Kg	1.4	1.4	U
Xylene (Total)	ug/Kg	3.8	3.8	U
1,2-Dichloroethane-d4 (S)	%	102	69-134	
Toluene-d8 (S)	%	98	72-122	
Bromofluorobenzene (S)	%	89	79-126	

LABORATORY CONTROL SAMPLE & LCSD: 2284203 2284204

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
VOLATILES										
Vinyl Chloride	ug/Kg	20	21	20	103	100	70-130	3		
1,1-Dichloroethylene	ug/Kg	20	21	21	104	107	70-130	3		
Methyl tert-butyl Ether (MTBE)	ug/Kg	20	21	22	103	110	70-130	6		
cis-1,2-Dichloroethylene	ug/Kg	20	20	20	102	99	70-130	3		
Chloroform	ug/Kg	20	21	21	104	104	70-130	1		
Benzene	ug/Kg	20	21	21	105	103	70-130	2		
Trichloroethene	ug/Kg	20	21	20	103	98	70-130	5		
Toluene	ug/Kg	20	20	19	101	96	70-130	5		
Tetrachloroethylene (PCE)	ug/Kg	20	23	23	114	117	70-130	2		
Chlorobenzene	ug/Kg	20	21	20	105	101	70-130	4		
Ethylbenzene	ug/Kg	20	20	20	100	101	70-130	1		
1,2,4-Trimethylbenzene	ug/Kg	20	21	19	103	96	70-130	7		
1,3-Dichlorobenzene	ug/Kg	20	21	20	104	100	70-130	4		
1,2-Dichlorobenzene	ug/Kg	20	21	20	103	99	70-130	4		
Xylene (Total)	ug/Kg	60	61	62	101	103	70-130	2		
1,2-Dichloroethane-d4 (S)	%				98	98	69-134	1		
Toluene-d8 (S)	%				101	95	72-122	6		
Bromofluorobenzene (S)	%				100	99	79-126	1		

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QUALITY CONTROL DATA

Workorder: J1701809 Wilson Cypress

MATRIX SPIKE SAMPLE: 2284205

Original: J1701809001

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
VOLATILES							
Vinyl Chloride	ug/Kg	0	26	12	37	70-130	
1,1-Dichloroethylene	ug/Kg	0	26	15	44	70-130	
Methyl tert-butyl Ether (MTBE)	ug/Kg	0	26	33	98	70-130	
cis-1,2-Dichloroethylene	ug/Kg	0	26	17	51	70-130	
Chloroform	ug/Kg	0	26	20	60	70-130	
Benzene	ug/Kg	0	26	17	50	70-130	
Trichloroethene	ug/Kg	0	26	16	48	70-130	
Toluene	ug/Kg	0	26	13	40	70-130	
Tetrachloroethylene (PCE)	ug/Kg	0	26	11	33	70-130	
Chlorobenzene	ug/Kg	0	26	13	40	70-130	
Ethylbenzene	ug/Kg	0	26	16	49	70-130	
1,2,4-Trimethylbenzene	ug/Kg	0.67	26	12	36	70-130	
1,3-Dichlorobenzene	ug/Kg	0	26	12	35	70-130	
1,2-Dichlorobenzene	ug/Kg	0	26	13	40	70-130	
Xylene (Total)	ug/Kg	0	77	50	50	70-130	
1,2-Dichloroethane-d4 (S)	%	105			132	69-134	
Toluene-d8 (S)	%	101			93	72-122	
Bromofluorobenzene (S)	%	86			89	79-126	

QUALITY CONTROL DATA QUALIFIERS

Workorder: J1701809 Wilson Cypress

QUALITY CONTROL PARAMETER QUALIFIERS

- U The compound was analyzed for but not detected.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J4 Estimated Result

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: J1701809 Wilson Cypress

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
J1701809001	WC-GP-4 (1-2)	SW-846 7471A	DGMj/2570	SW-846 7471A	CVAj/1344
J1701809002	WC-GP-3 (0-1)	SW-846 7471A	DGMj/2570	SW-846 7471A	CVAj/1344
J1701809001	WC-GP-4 (1-2)	SW-846 3550B	EXTj/3192	SW-846 8270D (SIM)	MSSj/1911
J1701809002	WC-GP-3 (0-1)	SW-846 3550B	EXTj/3192	SW-846 8270D (SIM)	MSSj/1911
J1701809001	WC-GP-4 (1-2)	SW-846 3050B	DGMj/2594	SW-846 6010	ICPj/1810
J1701809002	WC-GP-3 (0-1)	SW-846 3050B	DGMj/2594	SW-846 6010	ICPj/1810
J1701809001	WC-GP-4 (1-2)	SW-846 5035	MSVj/3352	SW-846 8260C	MSVj/3353
J1701809002	WC-GP-3 (0-1)	SW-846 5035	MSVj/3352	SW-846 8260C	MSVj/3353
J1701809001	WC-GP-4 (1-2)			SM 2540G	WCAj/3599
J1701809002	WC-GP-3 (0-1)			SM 2540G	WCAj/3599

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1701809

ge 1 of 1

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• 954.889.2288 • Fax 954.889.2281

813.630.9616 • Fax 813.630.4377

[illegible]

Client: Ayres Assoc.Project name: Wilson cypressDate/Time Rcvd: 2-20-17 1250Log-In request number: JT701809Received by: ByCompleted by: By**Cooler/Shipping Information:**Courier: ☒ AEL ☒ Client ☐ UPS ☐ Blue Streak ☐ FedEx ☐ AES ☐ ASAP ☐ Other (describe): _____Type: ☐ Cooler ☐ Box ☐ Other (describe) _____

Cooler temperature: Identify the cooler and document the temperature blank or ice water measurement

Cooler ID					
Temp (°C)	<u>4</u>				
Temp taken from	☐ Sample Bottle ☒ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler
Temp measured with	☒ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):

Other Information:

Any discrepancies should be explained in the "Comments" section below.

CHECKLIST	YES	NO	NA
1. Were custody seals on shipping container(s) intact?			☒
2. Were custody papers properly included with samples?	☒		
3. Were custody papers properly filled out (ink, signed, match labels)?	☒		
4. Did all bottles arrive in good condition (unbroken)?	☒		
5. Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?	☒		
6. Did the sample labels agree with the chain of custody?	☒		
7. Were correct bottles used for the tests indicated?	☒		
8. Were proper sample preservation techniques indicated on the label?	☒		
9. Were samples received within holding times?	☒		
10. Were all VOA vials free of the presence of air bubbles?			☒
11. Have all Soil VOA Vials and Encores been placed in a freezer within 48 hours of collection?	☒		
12. Were samples in direct contact with wet ice? If "No," check one: ☐ NO ICE ☐ BLUE ICE	☒		
13. Was the cooler temperature less than 6°C?	☒		
14. Where pH preservation is required, are sample pHs checked and any anomalies recorded by Sample control? Are all <2 or >10? Note: VOA samples are checked by laboratory analysts.			☒
15. Was sufficient sample volume provided to perform all tests?	☒		
16. If for Bacteriological testing, were containers supplied by AEL? (See QA officer if answer is no)			☒
17. Were all sample containers provided by AEL? (Other than Bacteriological)	☒		
18. Were samples accepted into the laboratory?	☒		
19. When necessary to split samples into other bottles, is it noted in the comments?	☒		

Comments: (Note all sample(s) and container (s)) with a "No" checklist response in this comment section)



Project No.: J1701809
Client Name: Ayres Associates
ProjectID: Wilson Cypress

I. Receipt

No Exceptions were encountered.

II. Holding Times

Preparation: All holding times were met.
Analysis: All holding times were met.

III. Method

Analysis: SW-846 6010
Preparation: SW-846 3050B

IV. Preparation

Sample preparation proceeded normally.

V. Analysis

A. Calibration: All acceptance criteria were met.
B. Blanks: All acceptance criteria were met.
C. Duplicates: All acceptance criteria were met.
D. Spikes: The matrix spike recovery of chromium for J1701925001 was outside control criteria due to the presence of target analytes in the sample. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicates the analytical batch was in control. The matrix spike outlier suggests a potential high bias in this matrix. The affected sample is qualified to indicate matrix interference.
E. Serial Dilution: All acceptance criteria were met.
F. Samples: Sample analyses proceeded normally.
G. Other:

I certify that this data package is in compliance with the terms and conditions agreed to by Advanced Environmental Laboratories, Inc. and by the client, both technically and for completeness, except for the conditions detailed above. The Quality Assurance Officer, or designee, as verified by the following signature, has authorized release of the data contained in this data package:

Jason Gebhardt, Lab Manager



Queue: MSVj

Batch Number: 3353

I. Receipt

No Exceptions were encountered.

II. Holding Times

Preparation: All holding times were met.

Analysis: All holding times were met.

III. Method

Analysis: SW-846 8260B/C

Preparation: SW-846 5035

IV. Preparation

Sample preparation proceeded normally.

V. Analysis

A. Calibration: All acceptance criteria were met.

B. Blanks: All acceptance criteria were met.

C. Surrogates: The upper control criterion was exceeded for the following surrogate in J1701925005: bromofluorobenzene. No target analytes were associated in the samples. The error associated with an elevated recovery equates to a high bias. The quality of the sample data is not significantly affected. No further corrective action was required.

D. Spikes: The matrix spike (MS) recoveries of several analytes for J1701809001 were outside control criteria. Recoveries in the Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) were acceptable, which indicates the analytical batch was in control. The matrix spike outlier suggests a potential low bias in this matrix. The affected sample is qualified to indicate matrix interference.

E. Internal Standard: All acceptance criteria were met.

F. Samples: J1701925003, J1702020002, -003, and -004 were analyzed at dilution due to high target analyte levels. The lowest possible dilution was performed to allow the analyte value to be within the calibration curve's highest level and to prevent possible carry over in the following sample analyses.

The following samples were analyzed at dilution due to high non-target background components: J1701703008, -011, J1701925004, -006, and -007. This was necessary to allow for accurate detection of all internal standards, surrogates and analytes.

G. Other:

I certify that this data package is in compliance with the terms and conditions agreed to by Advanced Environmental Laboratories, Inc. and by the client, both technically and for completeness, except for the conditions detailed above. The Quality Assurance Officer, or designee, as verified by the following signature, has authorized release of the data contained in this data package:

Appendix D

Low-Flow Groundwater Sampling Stabilization Logs

**Troll 9000**

2/22/2017

Low-Flow System**ISI Low-Flow Log****Project Information:**

Operator Name EG
Company Name Ayres
Project Name Palatka
Site Name Wilson Cypress

Pump Information:

Pump Model/Type peristaltic
Tubing Type Idpe
Tubing Diameter 0.25 [in]
Tubing Length 16 [ft]
Pump placement from TOC 18 [ft]

Well Information:

Well ID WC-MW-1
Well diameter 2 [in]
Well total depth 16 [ft]
Depth to top of screen 6 [ft]
Screen length 10 [in]
Depth to Water 4.59 [ft]

Pumping information:

Final pumping rate 100 [mL/min]
Flowcell volume 754.44 [mL]
Calculated Sample Rate 453 [sec]
Sample rate 120 [sec]
Stabilized drawdown 6 [in]

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [μ S/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-30 +/-5 %	+/-20	+/-0.2	+/-20
Last 5 Readings	8:01:10	70.26	6.35	780.85	0.75	0.21	-44.73
	8:03:10	70.08	6.36	772.87	0.64	0.17	-47.99
	8:05:12	70.00	6.36	771.12	0.90	0.13	-51.02
	8:07:12	69.97	6.35	769.90	1.89	0.12	-53.12
	8:09:13	69.97	6.35	769.72	1.81	0.11	-55.86
Variance in last 3 readings	8:05:12	-0.08	0.00	-1.75	0.26	-0.03	-3.04
	8:07:12	-0.03	-0.01	-1.22	0.99	-0.01	-2.10
	8:09:13	0.00	0.00	-0.17	-0.08	-0.01	-2.74

Notes:

**Troll 9000**

2/22/2017

Low-Flow System**ISI Low-Flow Log****Project Information:**

Operator Name EG
Company Name Ayres
Project Name Palatka
Site Name Wilson Cypress

Pump Information:

Pump Model/Type peristaltic
Tubing Type Idpe
Tubing Diameter 0.25 [in]
Tubing Length 32 [ft]
Pump placement from TOC 34 [ft]

Well Information:

Well ID WC-MW-1D
Well diameter 2 [in]
Well total depth 32 [ft]
Depth to top of screen 27 [ft]
Screen length 5 [in]
Depth to Water 4.11 [ft]

Pumping information:

Final pumping rate 100 [mL/min]
Flowcell volume 908.89 [mL]
Calculated Sample Rate 546 [sec]
Sample rate 120 [sec]
Stabilized drawdown 6 [in]

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [μ S/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-30 +/-5 %	+/-20	+/-0.2	+/-20
Last 5 Readings	8:19:03	71.09	7.03	864.37	23.68	0.51	-138.12
	8:21:04	71.05	7.08	866.57	18.58	0.33	-151.17
	8:23:06	71.09	7.14	868.79	16.70	0.23	-160.15
	8:25:06	71.18	7.18	870.12	13.84	0.18	-165.75
	8:27:06	71.26	7.21	872.13	12.46	0.13	-170.76
Variance in last 3 readings	8:23:06	0.04	0.06	2.21	-1.88	-0.09	-8.98
	8:25:06	0.10	0.04	1.33	-2.87	-0.05	-5.60
	8:27:06	0.08	0.03	2.01	-1.37	-0.05	-5.01

Notes:

**Troll 9000**

2/21/2017

Low-Flow System**ISI Low-Flow Log****Project Information:**

Operator Name EG
Company Name Ayres
Project Name Palatka
Site Name Wilson Cypress

Pump Information:

Pump Model/Type peristaltic
Tubing Type Idpe
Tubing Diameter 0.25 [in]
Tubing Length 16 [ft]
Pump placement from TOC 18 [ft]

Well Information:

Well ID WC-MW-2D
Well diameter 2 [in]
Well total depth 16 [ft]
Depth to top of screen 6 [ft]
Screen length 10 [in]
Depth to Water 4.56 [ft]

Pumping information:

Final pumping rate 100 [mL/min]
Flowcell volume 754.44 [mL]
Calculated Sample Rate 453 [sec]
Sample rate 120 [sec]
Stabilized drawdown 6 [in]

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [μ S/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-30 +/-5 %	+/-20	+/-0.2 +/-10 %	+/-20
Last 5 Readings	14:33:04	70.37	6.40	874.15	40.64	0.05	-105.66
	14:35:05	70.38	6.39	873.68	32.29	0.04	-107.89
	14:37:05	70.35	6.39	873.45	45.47	0.04	-109.43
	14:39:06	70.35	6.39	875.81	57.57	0.03	-110.58
	14:41:07	70.39	6.39	877.71	27.66	0.03	-110.84
Variance in last 3 readings	14:37:05	-0.03	0.00	-0.23	13.18	0.00	-1.54
	14:39:06	0.00	0.00	2.36	12.10	0.00	-1.16
	14:41:07	0.04	0.00	1.90	-29.91	0.00	-0.26

Notes:

**Troll 9000**

2/21/2017

Low-Flow System**ISI Low-Flow Log****Project Information:**

Operator Name EG
Company Name Ayres
Project Name Palatka
Site Name Wilson Cypress

Pump Information:

Pump Model/Type peristaltic
Tubing Type Idpe
Tubing Diameter 0.25 [in]
Tubing Length 32 [ft]
Pump placement from TOC 34 [ft]

Well Information:

Well ID WC-MW-2D
Well diameter 2 [in]
Well total depth 32 [ft]
Depth to top of screen 27 [ft]
Screen length 5 [in]
Depth to Water 4.6 [ft]

Pumping information:

Final pumping rate 100 [mL/min]
Flowcell volume 908.89 [mL]
Calculated Sample Rate 546 [sec]
Sample rate 120 [sec]
Stabilized drawdown 6 [in]

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [μ S/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-30 +/-5 %	+/-20	+/-0.2 +/-10 %	+/-20
Last 5 Readings	13:59:32	71.32	6.82	752.17	7.22	0.05	-159.04
	14:01:33	71.35	6.83	752.52	5.97	0.05	-159.86
	14:03:35	71.37	6.83	752.70	4.26	0.04	-160.11
	14:05:34	71.34	6.83	752.70	4.05	0.04	-160.54
	14:07:35	71.31	6.84	752.87	3.60	0.04	-160.88
Variance in last 3 readings	14:03:35	0.03	0.00	0.18	-1.71	0.00	-0.26
	14:05:34	-0.03	0.00	0.00	-0.21	0.00	-0.43
	14:07:35	-0.02	0.00	0.18	-0.46	0.00	-0.34

Notes:

**Troll 9000**

2/22/2017

Low-Flow System**ISI Low-Flow Log****Project Information:**

Operator Name EG
Company Name Ayres
Project Name Palatka
Site Name Wilson Cypress

Pump Information:

Pump Model/Type peristaltic
Tubing Type Idpe
Tubing Diameter 0.25 [in]
Tubing Length 15.5 [ft]
Pump placement from TOC 17.5 [ft]

Well Information:

Well ID WC-MW-3
Well diameter 2 [in]
Well total depth 15.5 [ft]
Depth to top of screen 5.5 [ft]
Screen length 10 [in]
Depth to Water 4.52 [ft]

Pumping information:

Final pumping rate 100 [mL/min]
Flowcell volume 749.62 [mL]
Calculated Sample Rate 450 [sec]
Sample rate 120 [sec]
Stabilized drawdown 6 [in]

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [μ S/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-30 +/-5 %	+/-20	+/-0.2 +/-10 %	+/-20
Last 5 Readings	6:54:06	69.32	6.67	949.61	25.29	52.50	-69.82
	6:56:06	69.27	6.72	950.13	20.90	52.50	-96.47
	6:58:06	69.15	6.75	951.45	22.42	52.50	-106.35
	7:00:07	69.13	6.76	951.98	17.82	52.50	-111.44
	7:02:08	69.08	6.76	954.38	18.79	52.50	-114.39
Variance in last 3 readings	6:58:06	-0.12	0.02	1.32	1.52	0.00	-9.88
	7:00:07	-0.02	0.01	0.53	-4.60	0.00	-5.09
	7:02:08	-0.05	0.01	2.40	0.97	0.00	-2.95

Notes:

**Troll 9000**

2/22/2017

Low-Flow System**ISI Low-Flow Log****Project Information:**

Operator Name EG
Company Name Ayres
Project Name Palatka
Site Name Wilson Cypress

Pump Information:

Pump Model/Type peristaltic
Tubing Type Idpe
Tubing Diameter 0.25 [in]
Tubing Length 15.1 [ft]
Pump placement from TOC 17.1 [ft]

Well Information:

Well ID WC-MW-4
Well diameter 2 [in]
Well total depth 15.1 [ft]
Depth to top of screen 5.1 [ft]
Screen length 10 [in]
Depth to Water 5.6 [ft]

Pumping information:

Final pumping rate 100 [mL/min]
Flowcell volume 745.76 [mL]
Calculated Sample Rate 448 [sec]
Sample rate 120 [sec]
Stabilized drawdown 6 [in]

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [μ S/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-30 +/-5 %	+/-20	+/-0.2	+/-20
Last 5 Readings	7:23:17	69.62	6.24	919.04	0.94	52.50	-48.38
	7:25:18	69.54	6.22	916.56	3.30	52.50	-53.17
	7:28:15	69.50	6.21	915.58	0.62	52.50	-58.74
	7:30:16	69.43	6.21	916.31	0.60	52.50	-61.47
	7:32:16	69.42	6.21	918.29	0.51	52.50	-63.61
Variance in last 3 readings	7:28:15	-0.05	-0.01	-0.99	-2.68	0.00	-5.56
	7:30:16	-0.07	0.00	0.74	-0.02	0.00	-2.74
	7:32:16	-0.01	0.00	1.98	-0.10	0.00	-2.14

Notes:

Appendix E
Laboratory Analytical Reports for Groundwater Samples

March 6, 2017

Ben Peotter
Ayres Associates
5201 E. Terrace Dr, Suite 200
Madison, WI 53718

RE: Workorder: J1701929 Wilson Cypress

Dear Ben Peotter:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, February 22, 2017. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. The analytical results for the samples contained in this report were submitted for analysis as outlined by the Chain of Custody and results pertain only to these samples.

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

Sincerely,



Jason Gebhardt - Lab Manager
JGebhardt@AELLab.com

Enclosures

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SAMPLE SUMMARY

Workorder: J1701929 Wilson Cypress

Lab ID	Sample ID	Matrix	Date Collected	Date Received
J1701929001	WC-MW-20	Water	2/21/2017 16:10	2/22/2017 12:20
J1701929002	WC-MW-20D	Water	2/21/2017 16:10	2/22/2017 12:20
J1701929003	WC-MW-2	Water	2/21/2017 16:45	2/22/2017 12:20
J1701929004	WC-MW-3	Water	2/22/2017 09:05	2/22/2017 12:20
J1701929005	WC-MW-4	Water	2/22/2017 09:35	2/22/2017 12:20
J1701929006	WC-MW-4D	Water	2/22/2017 09:35	2/22/2017 12:20
J1701929007	WC-MW-1	Water	2/22/2017 10:10	2/22/2017 12:20
J1701929008	WC-MW-1D	Water	2/22/2017 10:30	2/22/2017 12:20

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ANALYTICAL RESULTS

Workorder: J1701929 Wilson Cypress

Lab ID: **J1701929001**
Sample ID: **WC-MW-20**

Date Received: 02/22/17 12:20 Matrix: Water
Date Collected: 02/21/17 16:10

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis, Water			Analytical Method: SW-846 6010					
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	3/1/2017 16:00	J
Barium	0.051		mg/L	1	0.0020	0.00028	3/1/2017 16:00	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	3/1/2017 16:00	J
Chromium	0.00083	I	mg/L	1	0.0010	0.00050	3/1/2017 16:00	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	3/1/2017 16:00	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	3/1/2017 16:00	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	3/1/2017 16:00	J
Analysis Desc: SW846 7470A			Preparation Method: SW-846 7470A					
Analysis, Water			Analytical Method: SW-846 7470A					
Mercury	0.000011	U	mg/L	1	0.00010	0.000011	2/27/2017 13:44	J
SEMIVOLATILES								
Analysis Desc: 8270D-SIM Analysis, Water			Preparation Method: SW-846 3510C					
			Analytical Method: SW-846 8270D (SIM)					
1-Methylnaphthalene	0.20	U	ug/L	1	0.20	0.20	2/24/2017 15:36	J
2-Methylnaphthalene	0.20	U	ug/L	1	0.20	0.20	2/24/2017 15:36	J
Acenaphthene	0.16	U	ug/L	1	0.20	0.16	2/24/2017 15:36	J
Acenaphthylene	0.17	U	ug/L	1	0.20	0.17	2/24/2017 15:36	J
Anthracene	0.14	U	ug/L	1	0.20	0.14	2/24/2017 15:36	J
Benzo[a]anthracene	0.049	U	ug/L	1	0.20	0.049	2/24/2017 15:36	J
Benzo[a]pyrene	0.15	U	ug/L	1	0.20	0.15	2/24/2017 15:36	J
Benzo[b]fluoranthene	0.050	U	ug/L	1	0.10	0.050	2/24/2017 15:36	J
Benzo[g,h,i]perylene	0.19	U	ug/L	1	0.20	0.19	2/24/2017 15:36	J
Benzo[k]fluoranthene	0.19	U	ug/L	1	0.20	0.19	2/24/2017 15:36	J
Chrysene	0.13	U	ug/L	1	0.20	0.13	2/24/2017 15:36	J
Dibenzo[a,h]anthracene	0.095	U	ug/L	1	0.20	0.095	2/24/2017 15:36	J
Fluoranthene	0.15	U	ug/L	1	0.20	0.15	2/24/2017 15:36	J
Fluorene	0.15	U	ug/L	1	0.20	0.15	2/24/2017 15:36	J
Indeno(1,2,3-cd)pyrene	0.045	U	ug/L	1	0.20	0.045	2/24/2017 15:36	J
Naphthalene	0.19	U	ug/L	1	0.20	0.19	2/24/2017 15:36	J
Phenanthrene	0.16	U	ug/L	1	0.20	0.16	2/24/2017 15:36	J
Pyrene	0.14	U	ug/L	1	0.20	0.14	2/24/2017 15:36	J
Nitrobenzene-d5 (S)	84		%	1	34-139		2/24/2017 15:36	
2-Fluorobiphenyl (S)	80		%	1	36-125		2/24/2017 15:36	

Report ID: 472818 - 243038

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ANALYTICAL RESULTS

Workorder: J1701929 Wilson Cypress

Lab ID: **J1701929001**

Date Received: 02/22/17 12:20 Matrix: Water

Sample ID: **WC-MW-20**

Date Collected: 02/21/17 16:10

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
p-Terphenyl-d14 (S)	113		%	1	41-138		2/24/2017 15:36	

VOLATILES

Analysis Desc: 8260C Analysis, Water

Preparation Method: SW-846 5030B

Analytical Method: SW-846 8260C

1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	2/27/2017 11:30	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	2/27/2017 11:30	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	2/27/2017 11:30	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	2/27/2017 11:30	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	2/27/2017 11:30	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	2/27/2017 11:30	J
1,1-Dichloropropene	0.22	U	ug/L	1	1.0	0.22	2/27/2017 11:30	J
1,2,3-Trichlorobenzene	0.54	U	ug/L	1	5.0	0.54	2/27/2017 11:30	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	2/27/2017 11:30	J
1,2,4-Trichlorobenzene	0.35	U	ug/L	1	1.0	0.35	2/27/2017 11:30	J
1,2,4-Trimethylbenzene	0.18	U	ug/L	1	1.0	0.18	2/27/2017 11:30	J
1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	5.0	0.11	2/27/2017 11:30	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	2/27/2017 11:30	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	2/27/2017 11:30	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	2/27/2017 11:30	J
1,3,5-Trimethylbenzene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 11:30	J
1,3-Dichlorobenzene	0.19	U	ug/L	1	1.0	0.19	2/27/2017 11:30	J
1,3-Dichloropropane	0.24	U	ug/L	1	1.0	0.24	2/27/2017 11:30	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	2/27/2017 11:30	J
2,2-Dichloropropane	0.22	U	ug/L	1	5.0	0.22	2/27/2017 11:30	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	2/27/2017 11:30	J
2-Chlorotoluene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 11:30	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	2/27/2017 11:30	J
4-Chlorotoluene	0.17	U	ug/L	1	1.0	0.17	2/27/2017 11:30	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	5.0	0.47	2/27/2017 11:30	J
Acetone	2.1	U	ug/L	1	5.0	2.1	2/27/2017 11:30	J
Benzene	0.16	U	ug/L	1	1.0	0.16	2/27/2017 11:30	J
Bromobenzene	0.24	U	ug/L	1	1.0	0.24	2/27/2017 11:30	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	2/27/2017 11:30	J
Bromoform	0.43	U	ug/L	1	5.0	0.43	2/27/2017 11:30	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	2/27/2017 11:30	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	2/27/2017 11:30	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	2/27/2017 11:30	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	2/27/2017 11:30	J

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ANALYTICAL RESULTS

Workorder: J1701929 Wilson Cypress

Lab ID: **J1701929001**

Date Received: 02/22/17 12:20 Matrix: Water

Sample ID: **WC-MW-20**

Date Collected: 02/21/17 16:10

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Chloroethane	0.33	U	ug/L	1	1.0	0.33	2/27/2017 11:30	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	2/27/2017 11:30	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	2/27/2017 11:30	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	2/27/2017 11:30	J
Dichlorodifluoromethane	0.15	U	ug/L	1	1.0	0.15	2/27/2017 11:30	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	2/27/2017 11:30	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	1.0	0.020	2/27/2017 11:30	J
Hexachlorobutadiene	0.63	U	ug/L	1	5.0	0.63	2/27/2017 11:30	J
Isopropylbenzene	0.14	U	ug/L	1	1.0	0.14	2/27/2017 11:30	J
Methyl tert-butyl Ether (MTBE)	0.17	U	ug/L	1	1.0	0.17	2/27/2017 11:30	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	2/27/2017 11:30	J
Naphthalene	0.27	U	ug/L	1	5.0	0.27	2/27/2017 11:30	J
Styrene	0.23	U	ug/L	1	1.0	0.23	2/27/2017 11:30	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	2/27/2017 11:30	J
Toluene	0.23	U	ug/L	1	1.0	0.23	2/27/2017 11:30	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	2/27/2017 11:30	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	2/27/2017 11:30	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	2/27/2017 11:30	J
Xylene (Total)	0.53	U	ug/L	1	3.0	0.53	2/27/2017 11:30	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	2/27/2017 11:30	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	2/27/2017 11:30	J
n-Butylbenzene	0.17	U	ug/L	1	1.0	0.17	2/27/2017 11:30	J
n-propylbenzene	0.63	U	ug/L	1	1.0	0.63	2/27/2017 11:30	J
p-Isopropyltoluene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 11:30	J
sec-butylbenzene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 11:30	J
tert-butylbenzene	0.19	U	ug/L	1	1.0	0.19	2/27/2017 11:30	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	2/27/2017 11:30	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	5.0	0.18	2/27/2017 11:30	J
1,2-Dichloroethane-d4 (S)	97		%	1	70-128		2/27/2017 11:30	
Toluene-d8 (S)	99		%	1	77-119		2/27/2017 11:30	
Bromofluorobenzene (S)	99		%	1	86-123		2/27/2017 11:30	

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ANALYTICAL RESULTS

Workorder: J1701929 Wilson Cypress

Lab ID: **J1701929002**

Date Received: 02/22/17 12:20 Matrix: Water

Sample ID: **WC-MW-20D**

Date Collected: 02/21/17 16:10

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
VOLATILES								
Analysis Desc: 8260C Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260C					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	2/27/2017 11:56	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	2/27/2017 11:56	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	2/27/2017 11:56	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	2/27/2017 11:56	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	2/27/2017 11:56	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	2/27/2017 11:56	J
1,1-Dichloropropene	0.22	U	ug/L	1	1.0	0.22	2/27/2017 11:56	J
1,2,3-Trichlorobenzene	0.54	U	ug/L	1	5.0	0.54	2/27/2017 11:56	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	2/27/2017 11:56	J
1,2,4-Trichlorobenzene	0.35	U	ug/L	1	1.0	0.35	2/27/2017 11:56	J
1,2,4-Trimethylbenzene	0.18	U	ug/L	1	1.0	0.18	2/27/2017 11:56	J
1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	5.0	0.11	2/27/2017 11:56	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	2/27/2017 11:56	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	2/27/2017 11:56	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	2/27/2017 11:56	J
1,3,5-Trimethylbenzene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 11:56	J
1,3-Dichlorobenzene	0.19	U	ug/L	1	1.0	0.19	2/27/2017 11:56	J
1,3-Dichloropropane	0.24	U	ug/L	1	1.0	0.24	2/27/2017 11:56	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	2/27/2017 11:56	J
2,2-Dichloropropane	0.22	U	ug/L	1	5.0	0.22	2/27/2017 11:56	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	2/27/2017 11:56	J
2-Chlorotoluene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 11:56	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	2/27/2017 11:56	J
4-Chlorotoluene	0.17	U	ug/L	1	1.0	0.17	2/27/2017 11:56	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	5.0	0.47	2/27/2017 11:56	J
Acetone	2.1	U	ug/L	1	5.0	2.1	2/27/2017 11:56	J
Benzene	0.16	U	ug/L	1	1.0	0.16	2/27/2017 11:56	J
Bromobenzene	0.24	U	ug/L	1	1.0	0.24	2/27/2017 11:56	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	2/27/2017 11:56	J
Bromoform	0.43	U	ug/L	1	5.0	0.43	2/27/2017 11:56	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	2/27/2017 11:56	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	2/27/2017 11:56	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	2/27/2017 11:56	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	2/27/2017 11:56	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	2/27/2017 11:56	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	2/27/2017 11:56	J

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ANALYTICAL RESULTS

Workorder: J1701929 Wilson Cypress

Lab ID: **J1701929002**
Sample ID: **WC-MW-20D**

Date Received: 02/22/17 12:20 Matrix: Water
Date Collected: 02/21/17 16:10

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Chloromethane	0.21	U	ug/L	1	1.0	0.21	2/27/2017 11:56	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	2/27/2017 11:56	J
Dichlorodifluoromethane	0.15	U	ug/L	1	1.0	0.15	2/27/2017 11:56	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	2/27/2017 11:56	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	1.0	0.020	2/27/2017 11:56	J
Hexachlorobutadiene	0.63	U	ug/L	1	5.0	0.63	2/27/2017 11:56	J
Isopropylbenzene	0.14	U	ug/L	1	1.0	0.14	2/27/2017 11:56	J
Methyl tert-butyl Ether (MTBE)	0.17	U	ug/L	1	1.0	0.17	2/27/2017 11:56	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	2/27/2017 11:56	J
Naphthalene	0.27	U	ug/L	1	5.0	0.27	2/27/2017 11:56	J
Styrene	0.23	U	ug/L	1	1.0	0.23	2/27/2017 11:56	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	2/27/2017 11:56	J
Toluene	0.23	U	ug/L	1	1.0	0.23	2/27/2017 11:56	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	2/27/2017 11:56	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	2/27/2017 11:56	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	2/27/2017 11:56	J
Xylene (Total)	0.53	U	ug/L	1	3.0	0.53	2/27/2017 11:56	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	2/27/2017 11:56	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	2/27/2017 11:56	J
n-Butylbenzene	0.17	U	ug/L	1	1.0	0.17	2/27/2017 11:56	J
n-propylbenzene	0.63	U	ug/L	1	1.0	0.63	2/27/2017 11:56	J
p-Isopropyltoluene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 11:56	J
sec-butylbenzene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 11:56	J
tert-butylbenzene	0.19	U	ug/L	1	1.0	0.19	2/27/2017 11:56	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	2/27/2017 11:56	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	5.0	0.18	2/27/2017 11:56	J
1,2-Dichloroethane-d4 (S)	96		%	1	70-128		2/27/2017 11:56	
Toluene-d8 (S)	98		%	1	77-119		2/27/2017 11:56	
Bromofluorobenzene (S)	102		%	1	86-123		2/27/2017 11:56	

Lab ID: **J1701929003**
Sample ID: **WC-MW-2**

Date Received: 02/22/17 12:20 Matrix: Water
Date Collected: 02/21/17 16:45

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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ANALYTICAL RESULTS

Workorder: J1701929 Wilson Cypress

Lab ID: **J1701929003**

Date Received: 02/22/17 12:20 Matrix: Water

Sample ID: **WC-MW-2**

Date Collected: 02/21/17 16:45

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: SW846 6010B		Preparation Method: SW-846 3010A						
Analysis, Water		Analytical Method: SW-846 6010						
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	3/1/2017 16:43	J
Barium	0.057		mg/L	1	0.0020	0.00028	3/1/2017 16:43	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	3/1/2017 16:43	J
Chromium	0.0010		mg/L	1	0.0010	0.00050	3/1/2017 16:43	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	3/1/2017 16:43	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	3/1/2017 16:43	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	3/1/2017 16:43	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A
Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	2/27/2017 13:47	J
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SEMIVOLATILES

Analysis Desc: 8270D-SIM Analysis,
Water

Preparation Method: SW-846 3510C
Analytical Method: SW-846 8270D (SIM)

1-Methylnaphthalene	0.20	U	ug/L	1	0.20	0.20	2/24/2017 16:04	J
2-Methylnaphthalene	0.20	U	ug/L	1	0.20	0.20	2/24/2017 16:04	J
Acenaphthene	0.16	U	ug/L	1	0.20	0.16	2/24/2017 16:04	J
Acenaphthylene	0.17	U	ug/L	1	0.20	0.17	2/24/2017 16:04	J
Anthracene	0.14	U	ug/L	1	0.20	0.14	2/24/2017 16:04	J
Benzo[a]anthracene	0.049	U	ug/L	1	0.20	0.049	2/24/2017 16:04	J
Benzo[a]pyrene	0.15	U	ug/L	1	0.20	0.15	2/24/2017 16:04	J
Benzo[b]fluoranthene	0.050	U	ug/L	1	0.10	0.050	2/24/2017 16:04	J
Benzo[g,h,i]perylene	0.19	U	ug/L	1	0.20	0.19	2/24/2017 16:04	J
Benzo[k]fluoranthene	0.19	U	ug/L	1	0.20	0.19	2/24/2017 16:04	J
Chrysene	0.13	U	ug/L	1	0.20	0.13	2/24/2017 16:04	J
Dibenzo[a,h]anthracene	0.095	U	ug/L	1	0.20	0.095	2/24/2017 16:04	J
Fluoranthene	0.15	U	ug/L	1	0.20	0.15	2/24/2017 16:04	J
Fluorene	0.15	U	ug/L	1	0.20	0.15	2/24/2017 16:04	J
Indeno(1,2,3-cd)pyrene	0.045	U	ug/L	1	0.20	0.045	2/24/2017 16:04	J
Naphthalene	0.19	U	ug/L	1	0.20	0.19	2/24/2017 16:04	J
Phenanthrene	0.16	U	ug/L	1	0.20	0.16	2/24/2017 16:04	J
Pyrene	0.14	U	ug/L	1	0.20	0.14	2/24/2017 16:04	J
Nitrobenzene-d5 (S)	84		%	1	34-139		2/24/2017 16:04	
2-Fluorobiphenyl (S)	81		%	1	36-125		2/24/2017 16:04	
p-Terphenyl-d14 (S)	109		%	1	41-138		2/24/2017 16:04	

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ANALYTICAL RESULTS

Workorder: J1701929 Wilson Cypress

Lab ID: **J1701929003**

Date Received: 02/22/17 12:20 Matrix: Water

Sample ID: **WC-MW-2**

Date Collected: 02/21/17 16:45

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
VOLATILES								
Analysis Desc: 8260C Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260C					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	2/27/2017 12:23	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	2/27/2017 12:23	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	2/27/2017 12:23	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	2/27/2017 12:23	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	2/27/2017 12:23	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	2/27/2017 12:23	J
1,1-Dichloropropene	0.22	U	ug/L	1	1.0	0.22	2/27/2017 12:23	J
1,2,3-Trichlorobenzene	0.54	U	ug/L	1	5.0	0.54	2/27/2017 12:23	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	2/27/2017 12:23	J
1,2,4-Trichlorobenzene	0.35	U	ug/L	1	1.0	0.35	2/27/2017 12:23	J
1,2,4-Trimethylbenzene	0.18	U	ug/L	1	1.0	0.18	2/27/2017 12:23	J
1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	5.0	0.11	2/27/2017 12:23	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	2/27/2017 12:23	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	2/27/2017 12:23	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	2/27/2017 12:23	J
1,3,5-Trimethylbenzene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 12:23	J
1,3-Dichlorobenzene	0.19	U	ug/L	1	1.0	0.19	2/27/2017 12:23	J
1,3-Dichloropropane	0.24	U	ug/L	1	1.0	0.24	2/27/2017 12:23	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	2/27/2017 12:23	J
2,2-Dichloropropane	0.22	U	ug/L	1	5.0	0.22	2/27/2017 12:23	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	2/27/2017 12:23	J
2-Chlorotoluene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 12:23	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	2/27/2017 12:23	J
4-Chlorotoluene	0.17	U	ug/L	1	1.0	0.17	2/27/2017 12:23	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	5.0	0.47	2/27/2017 12:23	J
Acetone	2.3	I	ug/L	1	5.0	2.1	2/27/2017 12:23	J
Benzene	0.16	U	ug/L	1	1.0	0.16	2/27/2017 12:23	J
Bromobenzene	0.24	U	ug/L	1	1.0	0.24	2/27/2017 12:23	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	2/27/2017 12:23	J
Bromoform	0.43	U	ug/L	1	5.0	0.43	2/27/2017 12:23	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	2/27/2017 12:23	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	2/27/2017 12:23	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	2/27/2017 12:23	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	2/27/2017 12:23	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	2/27/2017 12:23	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	2/27/2017 12:23	J

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ANALYTICAL RESULTS

Workorder: J1701929 Wilson Cypress

Lab ID: **J1701929003**

Date Received: 02/22/17 12:20 Matrix: Water

Sample ID: **WC-MW-2**

Date Collected: 02/21/17 16:45

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Chloromethane	0.21	U	ug/L	1	1.0	0.21	2/27/2017 12:23	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	2/27/2017 12:23	J
Dichlorodifluoromethane	0.15	U	ug/L	1	1.0	0.15	2/27/2017 12:23	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	2/27/2017 12:23	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	1.0	0.020	2/27/2017 12:23	J
Hexachlorobutadiene	0.63	U	ug/L	1	5.0	0.63	2/27/2017 12:23	J
Isopropylbenzene	0.14	U	ug/L	1	1.0	0.14	2/27/2017 12:23	J
Methyl tert-butyl Ether (MTBE)	0.17	U	ug/L	1	1.0	0.17	2/27/2017 12:23	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	2/27/2017 12:23	J
Naphthalene	0.27	U	ug/L	1	5.0	0.27	2/27/2017 12:23	J
Styrene	0.23	U	ug/L	1	1.0	0.23	2/27/2017 12:23	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	2/27/2017 12:23	J
Toluene	0.23	U	ug/L	1	1.0	0.23	2/27/2017 12:23	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	2/27/2017 12:23	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	2/27/2017 12:23	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	2/27/2017 12:23	J
Xylene (Total)	0.53	U	ug/L	1	3.0	0.53	2/27/2017 12:23	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	2/27/2017 12:23	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	2/27/2017 12:23	J
n-Butylbenzene	0.17	U	ug/L	1	1.0	0.17	2/27/2017 12:23	J
n-propylbenzene	0.63	U	ug/L	1	1.0	0.63	2/27/2017 12:23	J
p-Isopropyltoluene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 12:23	J
sec-butylbenzene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 12:23	J
tert-butylbenzene	0.19	U	ug/L	1	1.0	0.19	2/27/2017 12:23	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	2/27/2017 12:23	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	5.0	0.18	2/27/2017 12:23	J
1,2-Dichloroethane-d4 (S)	95		%	1	70-128		2/27/2017 12:23	
Toluene-d8 (S)	100		%	1	77-119		2/27/2017 12:23	
Bromofluorobenzene (S)	100		%	1	86-123		2/27/2017 12:23	

Lab ID: **J1701929004**

Date Received: 02/22/17 12:20 Matrix: Water

Sample ID: **WC-MW-3**

Date Collected: 02/22/17 09:05

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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ANALYTICAL RESULTS

Workorder: J1701929 Wilson Cypress

Lab ID: **J1701929004**

Date Received: 02/22/17 12:20 Matrix: Water

Sample ID: **WC-MW-3**

Date Collected: 02/22/17 09:05

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: SW846 6010B		Preparation Method: SW-846 3010A						
Analysis, Water		Analytical Method: SW-846 6010						
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	3/1/2017 16:47	J
Barium	0.092		mg/L	1	0.0020	0.00028	3/1/2017 16:47	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	3/1/2017 16:47	J
Chromium	0.00076	I	mg/L	1	0.0010	0.00050	3/1/2017 16:47	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	3/1/2017 16:47	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	3/1/2017 16:47	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	3/1/2017 16:47	J

Analysis Desc: SW846 7470A
Analysis, Water

Preparation Method: SW-846 7470A
Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	2/27/2017 13:50	J
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SEMIVOLATILES

Analysis Desc: 8270D-SIM Analysis,
Water

Preparation Method: SW-846 3510C
Analytical Method: SW-846 8270D (SIM)

1-Methylnaphthalene	0.20	U	ug/L	1	0.20	0.20	2/24/2017 16:32	J
2-Methylnaphthalene	0.20	U	ug/L	1	0.20	0.20	2/24/2017 16:32	J
Acenaphthene	0.16	U	ug/L	1	0.20	0.16	2/24/2017 16:32	J
Acenaphthylene	0.17	U	ug/L	1	0.20	0.17	2/24/2017 16:32	J
Anthracene	0.14	U	ug/L	1	0.20	0.14	2/24/2017 16:32	J
Benzo[a]anthracene	0.049	U	ug/L	1	0.20	0.049	2/24/2017 16:32	J
Benzo[a]pyrene	0.15	U	ug/L	1	0.20	0.15	2/24/2017 16:32	J
Benzo[b]fluoranthene	0.050	U	ug/L	1	0.10	0.050	2/24/2017 16:32	J
Benzo[g,h,i]perylene	0.19	U	ug/L	1	0.20	0.19	2/24/2017 16:32	J
Benzo[k]fluoranthene	0.19	U	ug/L	1	0.20	0.19	2/24/2017 16:32	J
Chrysene	0.13	U	ug/L	1	0.20	0.13	2/24/2017 16:32	J
Dibenzo[a,h]anthracene	0.095	U	ug/L	1	0.20	0.095	2/24/2017 16:32	J
Fluoranthene	0.15	U	ug/L	1	0.20	0.15	2/24/2017 16:32	J
Fluorene	0.15	U	ug/L	1	0.20	0.15	2/24/2017 16:32	J
Indeno(1,2,3-cd)pyrene	0.045	U	ug/L	1	0.20	0.045	2/24/2017 16:32	J
Naphthalene	0.19	U	ug/L	1	0.20	0.19	2/24/2017 16:32	J
Phenanthrene	0.16	U	ug/L	1	0.20	0.16	2/24/2017 16:32	J
Pyrene	0.14	U	ug/L	1	0.20	0.14	2/24/2017 16:32	J
Nitrobenzene-d5 (S)	71		%	1	34-139		2/24/2017 16:32	
2-Fluorobiphenyl (S)	69		%	1	36-125		2/24/2017 16:32	
p-Terphenyl-d14 (S)	112		%	1	41-138		2/24/2017 16:32	

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ANALYTICAL RESULTS

Workorder: J1701929 Wilson Cypress

Lab ID: **J1701929004**

Date Received: 02/22/17 12:20 Matrix: Water

Sample ID: **WC-MW-3**

Date Collected: 02/22/17 09:05

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
VOLATILES								
Analysis Desc: 8260C Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260C					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	2/27/2017 12:49	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	2/27/2017 12:49	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	2/27/2017 12:49	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	2/27/2017 12:49	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	2/27/2017 12:49	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	2/27/2017 12:49	J
1,1-Dichloropropene	0.22	U	ug/L	1	1.0	0.22	2/27/2017 12:49	J
1,2,3-Trichlorobenzene	0.54	U	ug/L	1	5.0	0.54	2/27/2017 12:49	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	2/27/2017 12:49	J
1,2,4-Trichlorobenzene	0.35	U	ug/L	1	1.0	0.35	2/27/2017 12:49	J
1,2,4-Trimethylbenzene	0.18	U	ug/L	1	1.0	0.18	2/27/2017 12:49	J
1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	5.0	0.11	2/27/2017 12:49	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	2/27/2017 12:49	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	2/27/2017 12:49	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	2/27/2017 12:49	J
1,3,5-Trimethylbenzene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 12:49	J
1,3-Dichlorobenzene	0.19	U	ug/L	1	1.0	0.19	2/27/2017 12:49	J
1,3-Dichloropropane	0.24	U	ug/L	1	1.0	0.24	2/27/2017 12:49	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	2/27/2017 12:49	J
2,2-Dichloropropane	0.22	U	ug/L	1	5.0	0.22	2/27/2017 12:49	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	2/27/2017 12:49	J
2-Chlorotoluene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 12:49	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	2/27/2017 12:49	J
4-Chlorotoluene	0.17	U	ug/L	1	1.0	0.17	2/27/2017 12:49	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	5.0	0.47	2/27/2017 12:49	J
Acetone	3.0	I	ug/L	1	5.0	2.1	2/27/2017 12:49	J
Benzene	0.16	U	ug/L	1	1.0	0.16	2/27/2017 12:49	J
Bromobenzene	0.24	U	ug/L	1	1.0	0.24	2/27/2017 12:49	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	2/27/2017 12:49	J
Bromoform	0.43	U	ug/L	1	5.0	0.43	2/27/2017 12:49	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	2/27/2017 12:49	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	2/27/2017 12:49	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	2/27/2017 12:49	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	2/27/2017 12:49	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	2/27/2017 12:49	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	2/27/2017 12:49	J

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ANALYTICAL RESULTS

Workorder: J1701929 Wilson Cypress

Lab ID: **J1701929004**
Sample ID: **WC-MW-3**

Date Received: 02/22/17 12:20 Matrix: Water
Date Collected: 02/22/17 09:05

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Chloromethane	0.21	U	ug/L	1	1.0	0.21	2/27/2017 12:49	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	2/27/2017 12:49	J
Dichlorodifluoromethane	0.15	U	ug/L	1	1.0	0.15	2/27/2017 12:49	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	2/27/2017 12:49	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	1.0	0.020	2/27/2017 12:49	J
Hexachlorobutadiene	0.63	U	ug/L	1	5.0	0.63	2/27/2017 12:49	J
Isopropylbenzene	0.14	U	ug/L	1	1.0	0.14	2/27/2017 12:49	J
Methyl tert-butyl Ether (MTBE)	0.17	U	ug/L	1	1.0	0.17	2/27/2017 12:49	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	2/27/2017 12:49	J
Naphthalene	0.27	U	ug/L	1	5.0	0.27	2/27/2017 12:49	J
Styrene	0.23	U	ug/L	1	1.0	0.23	2/27/2017 12:49	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	2/27/2017 12:49	J
Toluene	0.23	U	ug/L	1	1.0	0.23	2/27/2017 12:49	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	2/27/2017 12:49	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	2/27/2017 12:49	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	2/27/2017 12:49	J
Xylene (Total)	0.53	U	ug/L	1	3.0	0.53	2/27/2017 12:49	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	2/27/2017 12:49	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	2/27/2017 12:49	J
n-Butylbenzene	0.17	U	ug/L	1	1.0	0.17	2/27/2017 12:49	J
n-propylbenzene	0.63	U	ug/L	1	1.0	0.63	2/27/2017 12:49	J
p-Isopropyltoluene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 12:49	J
sec-butylbenzene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 12:49	J
tert-butylbenzene	0.19	U	ug/L	1	1.0	0.19	2/27/2017 12:49	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	2/27/2017 12:49	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	5.0	0.18	2/27/2017 12:49	J
1,2-Dichloroethane-d4 (S)	97		%	1	70-128		2/27/2017 12:49	
Toluene-d8 (S)	98		%	1	77-119		2/27/2017 12:49	
Bromofluorobenzene (S)	98		%	1	86-123		2/27/2017 12:49	

Lab ID: **J1701929005**
Sample ID: **WC-MW-4**

Date Received: 02/22/17 12:20 Matrix: Water
Date Collected: 02/22/17 09:35

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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METALS

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ANALYTICAL RESULTS

Workorder: J1701929 Wilson Cypress

Lab ID: **J1701929005**

Date Received: 02/22/17 12:20 Matrix: Water

Sample ID: **WC-MW-4**

Date Collected: 02/22/17 09:35

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: SW846 6010B		Preparation Method: SW-846 3010A						
Analysis, Water		Analytical Method: SW-846 6010						
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	3/1/2017 16:51	J
Barium	0.054		mg/L	1	0.0020	0.00028	3/1/2017 16:51	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	3/1/2017 16:51	J
Chromium	0.0011		mg/L	1	0.0010	0.00050	3/1/2017 16:51	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	3/1/2017 16:51	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	3/1/2017 16:51	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	3/1/2017 16:51	J

Analysis Desc: SW846 7470A Preparation Method: SW-846 7470A
Analysis, Water Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	2/27/2017 13:53	J
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SEMIVOLATILES

Analysis Desc: 8270D-SIM Analysis, Water Preparation Method: SW-846 3510C
Analytical Method: SW-846 8270D (SIM)

1-Methylnaphthalene	0.20	U	ug/L	1	0.20	0.20	2/24/2017 17:00	J
2-Methylnaphthalene	0.20	U	ug/L	1	0.20	0.20	2/24/2017 17:00	J
Acenaphthene	0.16	U	ug/L	1	0.20	0.16	2/24/2017 17:00	J
Acenaphthylene	0.17	U	ug/L	1	0.20	0.17	2/24/2017 17:00	J
Anthracene	0.14	U	ug/L	1	0.20	0.14	2/24/2017 17:00	J
Benzo[a]anthracene	0.049	U	ug/L	1	0.20	0.049	2/24/2017 17:00	J
Benzo[a]pyrene	0.15	U	ug/L	1	0.20	0.15	2/24/2017 17:00	J
Benzo[b]fluoranthene	0.050	U	ug/L	1	0.10	0.050	2/24/2017 17:00	J
Benzo[g,h,i]perylene	0.19	U	ug/L	1	0.20	0.19	2/24/2017 17:00	J
Benzo[k]fluoranthene	0.19	U	ug/L	1	0.20	0.19	2/24/2017 17:00	J
Chrysene	0.13	U	ug/L	1	0.20	0.13	2/24/2017 17:00	J
Dibenzo[a,h]anthracene	0.095	U	ug/L	1	0.20	0.095	2/24/2017 17:00	J
Fluoranthene	0.15	U	ug/L	1	0.20	0.15	2/24/2017 17:00	J
Fluorene	0.15	U	ug/L	1	0.20	0.15	2/24/2017 17:00	J
Indeno(1,2,3-cd)pyrene	0.045	U	ug/L	1	0.20	0.045	2/24/2017 17:00	J
Naphthalene	0.19	U	ug/L	1	0.20	0.19	2/24/2017 17:00	J
Phenanthrene	0.16	U	ug/L	1	0.20	0.16	2/24/2017 17:00	J
Pyrene	0.14	U	ug/L	1	0.20	0.14	2/24/2017 17:00	J
Nitrobenzene-d5 (S)	70		%	1	34-139		2/24/2017 17:00	
2-Fluorobiphenyl (S)	70		%	1	36-125		2/24/2017 17:00	
p-Terphenyl-d14 (S)	109		%	1	41-138		2/24/2017 17:00	

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ANALYTICAL RESULTS

Workorder: J1701929 Wilson Cypress

Lab ID: **J1701929005**

Date Received: 02/22/17 12:20 Matrix: Water

Sample ID: **WC-MW-4**

Date Collected: 02/22/17 09:35

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
VOLATILES								
Analysis Desc: 8260C Analysis, Water			Preparation Method: SW-846 5030B					
			Analytical Method: SW-846 8260C					
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	2/27/2017 13:15	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	2/27/2017 13:15	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	2/27/2017 13:15	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	2/27/2017 13:15	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	2/27/2017 13:15	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	2/27/2017 13:15	J
1,1-Dichloropropene	0.22	U	ug/L	1	1.0	0.22	2/27/2017 13:15	J
1,2,3-Trichlorobenzene	0.54	U	ug/L	1	5.0	0.54	2/27/2017 13:15	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	2/27/2017 13:15	J
1,2,4-Trichlorobenzene	0.35	U	ug/L	1	1.0	0.35	2/27/2017 13:15	J
1,2,4-Trimethylbenzene	0.18	U	ug/L	1	1.0	0.18	2/27/2017 13:15	J
1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	5.0	0.11	2/27/2017 13:15	J
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	2/27/2017 13:15	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	2/27/2017 13:15	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	2/27/2017 13:15	J
1,3,5-Trimethylbenzene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 13:15	J
1,3-Dichlorobenzene	0.19	U	ug/L	1	1.0	0.19	2/27/2017 13:15	J
1,3-Dichloropropane	0.24	U	ug/L	1	1.0	0.24	2/27/2017 13:15	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	2/27/2017 13:15	J
2,2-Dichloropropane	0.22	U	ug/L	1	5.0	0.22	2/27/2017 13:15	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	2/27/2017 13:15	J
2-Chlorotoluene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 13:15	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	2/27/2017 13:15	J
4-Chlorotoluene	0.17	U	ug/L	1	1.0	0.17	2/27/2017 13:15	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	5.0	0.47	2/27/2017 13:15	J
Acetone	7.9		ug/L	1	5.0	2.1	2/27/2017 13:15	J
Benzene	0.16	U	ug/L	1	1.0	0.16	2/27/2017 13:15	J
Bromobenzene	0.24	U	ug/L	1	1.0	0.24	2/27/2017 13:15	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	2/27/2017 13:15	J
Bromoform	0.43	U	ug/L	1	5.0	0.43	2/27/2017 13:15	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	2/27/2017 13:15	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	2/27/2017 13:15	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	2/27/2017 13:15	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	2/27/2017 13:15	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	2/27/2017 13:15	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	2/27/2017 13:15	J

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ANALYTICAL RESULTS

Workorder: J1701929 Wilson Cypress

Lab ID: **J1701929005**

Date Received: 02/22/17 12:20 Matrix: Water

Sample ID: **WC-MW-4**

Date Collected: 02/22/17 09:35

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Chloromethane	0.21	U	ug/L	1	1.0	0.21	2/27/2017 13:15	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	2/27/2017 13:15	J
Dichlorodifluoromethane	0.15	U	ug/L	1	1.0	0.15	2/27/2017 13:15	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	2/27/2017 13:15	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	1.0	0.020	2/27/2017 13:15	J
Hexachlorobutadiene	0.63	U	ug/L	1	5.0	0.63	2/27/2017 13:15	J
Isopropylbenzene	0.14	U	ug/L	1	1.0	0.14	2/27/2017 13:15	J
Methyl tert-butyl Ether (MTBE)	0.17	U	ug/L	1	1.0	0.17	2/27/2017 13:15	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	2/27/2017 13:15	J
Naphthalene	0.27	U	ug/L	1	5.0	0.27	2/27/2017 13:15	J
Styrene	0.23	U	ug/L	1	1.0	0.23	2/27/2017 13:15	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	2/27/2017 13:15	J
Toluene	0.23	U	ug/L	1	1.0	0.23	2/27/2017 13:15	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	2/27/2017 13:15	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	2/27/2017 13:15	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	2/27/2017 13:15	J
Xylene (Total)	0.53	U	ug/L	1	3.0	0.53	2/27/2017 13:15	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	2/27/2017 13:15	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	2/27/2017 13:15	J
n-Butylbenzene	0.17	U	ug/L	1	1.0	0.17	2/27/2017 13:15	J
n-propylbenzene	0.63	U	ug/L	1	1.0	0.63	2/27/2017 13:15	J
p-Isopropyltoluene	0.63	I	ug/L	1	1.0	0.15	2/27/2017 13:15	J
sec-butylbenzene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 13:15	J
tert-butylbenzene	0.19	U	ug/L	1	1.0	0.19	2/27/2017 13:15	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	2/27/2017 13:15	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	5.0	0.18	2/27/2017 13:15	J
1,2-Dichloroethane-d4 (S)	98		%	1	70-128		2/27/2017 13:15	
Toluene-d8 (S)	100		%	1	77-119		2/27/2017 13:15	
Bromofluorobenzene (S)	96		%	1	86-123		2/27/2017 13:15	

Lab ID: **J1701929006**

Date Received: 02/22/17 12:20 Matrix: Water

Sample ID: **WC-MW-4D**

Date Collected: 02/22/17 09:35

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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METALS

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ANALYTICAL RESULTS

Workorder: J1701929 Wilson Cypress

Lab ID: **J1701929006**
Sample ID: **WC-MW-4D**

Date Received: 02/22/17 12:20 Matrix: Water
Date Collected: 02/22/17 09:35

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: SW846 6010B		Preparation Method: SW-846 3010A						
Analysis, Water		Analytical Method: SW-846 6010						
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	3/1/2017 16:56	J
Barium	0.054		mg/L	1	0.0020	0.00028	3/1/2017 16:56	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	3/1/2017 16:56	J
Chromium	0.0012		mg/L	1	0.0010	0.00050	3/1/2017 16:56	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	3/1/2017 16:56	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	3/1/2017 16:56	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	3/1/2017 16:56	J

Analysis Desc: SW846 7470A Preparation Method: SW-846 7470A
Analysis, Water Analytical Method: SW-846 7470A

Mercury	0.000011	U	mg/L	1	0.00010	0.000011	2/27/2017 13:56	J
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Lab ID: **J1701929007**
Sample ID: **WC-MW-1**

Date Received: 02/22/17 12:20 Matrix: Water
Date Collected: 02/22/17 10:10

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B		Preparation Method: SW-846 3010A						
Analysis, Water		Analytical Method: SW-846 6010						
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	3/1/2017 17:00	J
Barium	0.052		mg/L	1	0.0020	0.00028	3/1/2017 17:00	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	3/1/2017 17:00	J
Chromium	0.0012		mg/L	1	0.0010	0.00050	3/1/2017 17:00	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	3/1/2017 17:00	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	3/1/2017 17:00	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	3/1/2017 17:00	J

Analysis Desc: SW846 7470A Preparation Method: SW-846 7470A
Analysis, Water Analytical Method: SW-846 7470A

Mercury	0.000013	I	mg/L	1	0.00010	0.000011	2/27/2017 14:00	J
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SEMIVOLATILES

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ANALYTICAL RESULTS

Workorder: J1701929 Wilson Cypress

Lab ID: **J1701929007**

Date Received: 02/22/17 12:20 Matrix: Water

Sample ID: **WC-MW-1**

Date Collected: 02/22/17 10:10

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: 8270D-SIM Analysis, Water		Preparation Method: SW-846 3510C						
		Analytical Method: SW-846 8270D (SIM)						
1-Methylnaphthalene	0.20	U	ug/L	1	0.20	0.20	2/24/2017 17:27	J
2-Methylnaphthalene	0.20	U	ug/L	1	0.20	0.20	2/24/2017 17:27	J
Acenaphthene	0.16	U	ug/L	1	0.20	0.16	2/24/2017 17:27	J
Acenaphthylene	0.17	U	ug/L	1	0.20	0.17	2/24/2017 17:27	J
Anthracene	0.14	U	ug/L	1	0.20	0.14	2/24/2017 17:27	J
Benzo[a]anthracene	0.049	U	ug/L	1	0.20	0.049	2/24/2017 17:27	J
Benzo[a]pyrene	0.15	U	ug/L	1	0.20	0.15	2/24/2017 17:27	J
Benzo[b]fluoranthene	0.050	U	ug/L	1	0.10	0.050	2/24/2017 17:27	J
Benzo[g,h,i]perylene	0.19	U	ug/L	1	0.20	0.19	2/24/2017 17:27	J
Benzo[k]fluoranthene	0.19	U	ug/L	1	0.20	0.19	2/24/2017 17:27	J
Chrysene	0.13	U	ug/L	1	0.20	0.13	2/24/2017 17:27	J
Dibenzo[a,h]anthracene	0.095	U	ug/L	1	0.20	0.095	2/24/2017 17:27	J
Fluoranthene	0.15	U	ug/L	1	0.20	0.15	2/24/2017 17:27	J
Fluorene	0.15	U	ug/L	1	0.20	0.15	2/24/2017 17:27	J
Indeno(1,2,3-cd)pyrene	0.045	U	ug/L	1	0.20	0.045	2/24/2017 17:27	J
Naphthalene	0.19	U	ug/L	1	0.20	0.19	2/24/2017 17:27	J
Phenanthrene	0.16	U	ug/L	1	0.20	0.16	2/24/2017 17:27	J
Pyrene	0.14	U	ug/L	1	0.20	0.14	2/24/2017 17:27	J
Nitrobenzene-d5 (S)	85		%	1	34-139		2/24/2017 17:27	
2-Fluorobiphenyl (S)	84		%	1	36-125		2/24/2017 17:27	
p-Terphenyl-d14 (S)	114		%	1	41-138		2/24/2017 17:27	

VOLATILES

Analysis Desc: 8260C Analysis, Water		Preparation Method: SW-846 5030B						
		Analytical Method: SW-846 8260C						
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	2/27/2017 13:41	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	2/27/2017 13:41	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	2/27/2017 13:41	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	2/27/2017 13:41	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	2/27/2017 13:41	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	2/27/2017 13:41	J
1,1-Dichloropropene	0.22	U	ug/L	1	1.0	0.22	2/27/2017 13:41	J
1,2,3-Trichlorobenzene	0.54	U	ug/L	1	5.0	0.54	2/27/2017 13:41	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	2/27/2017 13:41	J
1,2,4-Trichlorobenzene	0.35	U	ug/L	1	1.0	0.35	2/27/2017 13:41	J
1,2,4-Trimethylbenzene	0.18	U	ug/L	1	1.0	0.18	2/27/2017 13:41	J
1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	5.0	0.11	2/27/2017 13:41	J

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ANALYTICAL RESULTS

Workorder: J1701929 Wilson Cypress

Lab ID: **J1701929007**

Date Received: 02/22/17 12:20 Matrix: Water

Sample ID: **WC-MW-1**

Date Collected: 02/22/17 10:10

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	2/27/2017 13:41	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	2/27/2017 13:41	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	2/27/2017 13:41	J
1,3,5-Trimethylbenzene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 13:41	J
1,3-Dichlorobenzene	0.19	U	ug/L	1	1.0	0.19	2/27/2017 13:41	J
1,3-Dichloropropane	0.24	U	ug/L	1	1.0	0.24	2/27/2017 13:41	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	2/27/2017 13:41	J
2,2-Dichloropropane	0.22	U	ug/L	1	5.0	0.22	2/27/2017 13:41	J
2-Butanone (MEK)	0.43	U	ug/L	1	5.0	0.43	2/27/2017 13:41	J
2-Chlorotoluene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 13:41	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	2/27/2017 13:41	J
4-Chlorotoluene	0.17	U	ug/L	1	1.0	0.17	2/27/2017 13:41	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	5.0	0.47	2/27/2017 13:41	J
Acetone	2.1	U	ug/L	1	5.0	2.1	2/27/2017 13:41	J
Benzene	0.16	U	ug/L	1	1.0	0.16	2/27/2017 13:41	J
Bromobenzene	0.24	U	ug/L	1	1.0	0.24	2/27/2017 13:41	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	2/27/2017 13:41	J
Bromoform	0.43	U	ug/L	1	5.0	0.43	2/27/2017 13:41	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	2/27/2017 13:41	J
Carbon Disulfide	0.21	U	ug/L	1	1.0	0.21	2/27/2017 13:41	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	2/27/2017 13:41	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	2/27/2017 13:41	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	2/27/2017 13:41	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	2/27/2017 13:41	J
Chloromethane	0.21	U	ug/L	1	1.0	0.21	2/27/2017 13:41	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	2/27/2017 13:41	J
Dichlorodifluoromethane	0.15	U	ug/L	1	1.0	0.15	2/27/2017 13:41	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	2/27/2017 13:41	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	1.0	0.020	2/27/2017 13:41	J
Hexachlorobutadiene	0.63	U	ug/L	1	5.0	0.63	2/27/2017 13:41	J
Isopropylbenzene	0.14	U	ug/L	1	1.0	0.14	2/27/2017 13:41	J
Methyl tert-butyl Ether (MTBE)	0.17	U	ug/L	1	1.0	0.17	2/27/2017 13:41	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	2/27/2017 13:41	J
Naphthalene	0.27	U	ug/L	1	5.0	0.27	2/27/2017 13:41	J
Styrene	0.23	U	ug/L	1	1.0	0.23	2/27/2017 13:41	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	2/27/2017 13:41	J
Toluene	0.23	U	ug/L	1	1.0	0.23	2/27/2017 13:41	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	2/27/2017 13:41	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	2/27/2017 13:41	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	2/27/2017 13:41	J

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ANALYTICAL RESULTS

Workorder: J1701929 Wilson Cypress

Lab ID: **J1701929007**

Date Received: 02/22/17 12:20 Matrix: Water

Sample ID: **WC-MW-1**

Date Collected: 02/22/17 10:10

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Xylene (Total)	0.53	U	ug/L	1	3.0	0.53	2/27/2017 13:41	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	2/27/2017 13:41	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	2/27/2017 13:41	J
n-Butylbenzene	0.17	U	ug/L	1	1.0	0.17	2/27/2017 13:41	J
n-propylbenzene	0.63	U	ug/L	1	1.0	0.63	2/27/2017 13:41	J
p-Isopropyltoluene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 13:41	J
sec-butylbenzene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 13:41	J
tert-butylbenzene	0.19	U	ug/L	1	1.0	0.19	2/27/2017 13:41	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	2/27/2017 13:41	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	5.0	0.18	2/27/2017 13:41	J
1,2-Dichloroethane-d4 (S)	99		%	1	70-128		2/27/2017 13:41	
Toluene-d8 (S)	98		%	1	77-119		2/27/2017 13:41	
Bromofluorobenzene (S)	94		%	1	86-123		2/27/2017 13:41	

Lab ID: **J1701929008**

Date Received: 02/22/17 12:20 Matrix: Water

Sample ID: **WC-MW-1D**

Date Collected: 02/22/17 10:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B			Preparation Method: SW-846 3010A					
Analysis, Water			Analytical Method: SW-846 6010					
Arsenic	0.0085	U	mg/L	1	0.010	0.0085	3/1/2017 17:04	J
Barium	0.035		mg/L	1	0.0020	0.00028	3/1/2017 17:04	J
Cadmium	0.00032	U	mg/L	1	0.00060	0.00032	3/1/2017 17:04	J
Chromium	0.00082	I	mg/L	1	0.0010	0.00050	3/1/2017 17:04	J
Lead	0.0013	U	mg/L	1	0.0070	0.0013	3/1/2017 17:04	J
Selenium	0.0068	U	mg/L	1	0.020	0.0068	3/1/2017 17:04	J
Silver	0.00044	U	mg/L	1	0.0040	0.00044	3/1/2017 17:04	J
Analysis Desc: SW846 7470A			Preparation Method: SW-846 7470A					
Analysis, Water			Analytical Method: SW-846 7470A					
Mercury	0.000011	I	mg/L	1	0.00010	0.000011	2/27/2017 14:03	J

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ANALYTICAL RESULTS

Workorder: J1701929 Wilson Cypress

Lab ID: **J1701929008**

Date Received: 02/22/17 12:20 Matrix: Water

Sample ID: **WC-MW-1D**

Date Collected: 02/22/17 10:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc: 8270D-SIM Analysis, Water		Preparation Method: SW-846 3510C						
		Analytical Method: SW-846 8270D (SIM)						
1-Methylnaphthalene	0.20	U	ug/L	1	0.20	0.20	2/24/2017 14:13	J
2-Methylnaphthalene	0.20	U	ug/L	1	0.20	0.20	2/24/2017 14:13	J
Acenaphthene	0.16	U	ug/L	1	0.20	0.16	2/24/2017 14:13	J
Acenaphthylene	0.17	U	ug/L	1	0.20	0.17	2/24/2017 14:13	J
Anthracene	0.14	U	ug/L	1	0.20	0.14	2/24/2017 14:13	J
Benzo[a]anthracene	0.18	I	ug/L	1	0.20	0.049	2/24/2017 14:13	J
Benzo[a]pyrene	0.15	I	ug/L	1	0.20	0.15	2/24/2017 14:13	J
Benzo[b]fluoranthene	0.19		ug/L	1	0.10	0.050	2/24/2017 14:13	J
Benzo[g,h,i]perylene	0.19	U	ug/L	1	0.20	0.19	2/24/2017 14:13	J
Benzo[k]fluoranthene	0.19	U	ug/L	1	0.20	0.19	2/24/2017 14:13	J
Chrysene	0.21		ug/L	1	0.20	0.13	2/24/2017 14:13	J
Dibenzo[a,h]anthracene	0.095	U	ug/L	1	0.20	0.095	2/24/2017 14:13	J
Fluoranthene	0.20	I	ug/L	1	0.20	0.15	2/24/2017 14:13	J
Fluorene	0.15	U	ug/L	1	0.20	0.15	2/24/2017 14:13	J
Indeno(1,2,3-cd)pyrene	0.045	U	ug/L	1	0.20	0.045	2/24/2017 14:13	J
Naphthalene	0.19	U	ug/L	1	0.20	0.19	2/24/2017 14:13	J
Phenanthrene	0.16	U	ug/L	1	0.20	0.16	2/24/2017 14:13	J
Pyrene	0.20	I	ug/L	1	0.20	0.14	2/24/2017 14:13	J
Nitrobenzene-d5 (S)	77		%	1	34-139		2/24/2017 14:13	
2-Fluorobiphenyl (S)	72		%	1	36-125		2/24/2017 14:13	
p-Terphenyl-d14 (S)	109		%	1	41-138		2/24/2017 14:13	

VOLATILES

Analysis Desc: 8260C Analysis, Water		Preparation Method: SW-846 5030B						
		Analytical Method: SW-846 8260C						
1,1,1,2-Tetrachloroethane	0.26	U	ug/L	1	1.0	0.26	2/27/2017 14:07	J
1,1,1-Trichloroethane	0.22	U	ug/L	1	1.0	0.22	2/27/2017 14:07	J
1,1,2,2-Tetrachloroethane	0.20	U	ug/L	1	1.0	0.20	2/27/2017 14:07	J
1,1,2-Trichloroethane	0.30	U	ug/L	1	1.0	0.30	2/27/2017 14:07	J
1,1-Dichloroethane	0.14	U	ug/L	1	1.0	0.14	2/27/2017 14:07	J
1,1-Dichloroethylene	0.18	U	ug/L	1	1.0	0.18	2/27/2017 14:07	J
1,1-Dichloropropene	0.22	U	ug/L	1	1.0	0.22	2/27/2017 14:07	J
1,2,3-Trichlorobenzene	0.54	U	ug/L	1	5.0	0.54	2/27/2017 14:07	J
1,2,3-Trichloropropane	0.30	U	ug/L	1	1.0	0.30	2/27/2017 14:07	J
1,2,4-Trichlorobenzene	0.35	U	ug/L	1	1.0	0.35	2/27/2017 14:07	J
1,2,4-Trimethylbenzene	0.18	U	ug/L	1	1.0	0.18	2/27/2017 14:07	J
1,2-Dibromo-3-Chloropropane	0.11	U	ug/L	1	5.0	0.11	2/27/2017 14:07	J

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ANALYTICAL RESULTS

Workorder: J1701929 Wilson Cypress

Lab ID: **J1701929008**

Date Received: 02/22/17 12:20 Matrix: Water

Sample ID: **WC-MW-1D**

Date Collected: 02/22/17 10:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
1,2-Dichlorobenzene	0.18	U	ug/L	1	1.0	0.18	2/27/2017 14:07	J
1,2-Dichloroethane	0.23	U	ug/L	1	1.0	0.23	2/27/2017 14:07	J
1,2-Dichloropropane	0.20	U	ug/L	1	1.0	0.20	2/27/2017 14:07	J
1,3,5-Trimethylbenzene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 14:07	J
1,3-Dichlorobenzene	0.19	U	ug/L	1	1.0	0.19	2/27/2017 14:07	J
1,3-Dichloropropane	0.24	U	ug/L	1	1.0	0.24	2/27/2017 14:07	J
1,4-Dichlorobenzene	0.22	U	ug/L	1	1.0	0.22	2/27/2017 14:07	J
2,2-Dichloropropane	0.22	U	ug/L	1	5.0	0.22	2/27/2017 14:07	J
2-Butanone (MEK)	7.8		ug/L	1	5.0	0.43	2/27/2017 14:07	J
2-Chlorotoluene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 14:07	J
2-Hexanone	0.44	U	ug/L	1	5.0	0.44	2/27/2017 14:07	J
4-Chlorotoluene	0.17	U	ug/L	1	1.0	0.17	2/27/2017 14:07	J
4-Methyl-2-pentanone (MIBK)	0.47	U	ug/L	1	5.0	0.47	2/27/2017 14:07	J
Acetone	55		ug/L	1	5.0	2.1	2/27/2017 14:07	J
Benzene	0.54	I	ug/L	1	1.0	0.16	2/27/2017 14:07	J
Bromobenzene	0.24	U	ug/L	1	1.0	0.24	2/27/2017 14:07	J
Bromodichloromethane	0.25	U	ug/L	1	1.0	0.25	2/27/2017 14:07	J
Bromoform	0.43	U	ug/L	1	5.0	0.43	2/27/2017 14:07	J
Bromomethane	0.24	U	ug/L	1	1.0	0.24	2/27/2017 14:07	J
Carbon Disulfide	5.5		ug/L	1	1.0	0.21	2/27/2017 14:07	J
Carbon Tetrachloride	0.36	U	ug/L	1	1.0	0.36	2/27/2017 14:07	J
Chlorobenzene	0.21	U	ug/L	1	1.0	0.21	2/27/2017 14:07	J
Chloroethane	0.33	U	ug/L	1	1.0	0.33	2/27/2017 14:07	J
Chloroform	0.18	U	ug/L	1	1.0	0.18	2/27/2017 14:07	J
Chloromethane	1.4		ug/L	1	1.0	0.21	2/27/2017 14:07	J
Dibromochloromethane	0.33	U	ug/L	1	1.0	0.33	2/27/2017 14:07	J
Dichlorodifluoromethane	0.15	U	ug/L	1	1.0	0.15	2/27/2017 14:07	J
Ethylbenzene	0.24	U	ug/L	1	1.0	0.24	2/27/2017 14:07	J
Ethylene Dibromide (EDB)	0.020	U	ug/L	1	1.0	0.020	2/27/2017 14:07	J
Hexachlorobutadiene	0.63	U	ug/L	1	5.0	0.63	2/27/2017 14:07	J
Isopropylbenzene	0.14	U	ug/L	1	1.0	0.14	2/27/2017 14:07	J
Methyl tert-butyl Ether (MTBE)	0.17	U	ug/L	1	1.0	0.17	2/27/2017 14:07	J
Methylene Chloride	2.5	U	ug/L	1	5.0	2.5	2/27/2017 14:07	J
Naphthalene	0.27	U	ug/L	1	5.0	0.27	2/27/2017 14:07	J
Styrene	0.23	U	ug/L	1	1.0	0.23	2/27/2017 14:07	J
Tetrachloroethylene (PCE)	0.36	U	ug/L	1	1.0	0.36	2/27/2017 14:07	J
Toluene	1.0		ug/L	1	1.0	0.23	2/27/2017 14:07	J
Trichloroethene	0.29	U	ug/L	1	1.0	0.29	2/27/2017 14:07	J
Trichlorofluoromethane	0.32	U	ug/L	1	1.0	0.32	2/27/2017 14:07	J
Vinyl Chloride	0.20	U	ug/L	1	1.0	0.20	2/27/2017 14:07	J

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ANALYTICAL RESULTS

Workorder: J1701929 Wilson Cypress

Lab ID: **J1701929008**

Date Received: 02/22/17 12:20 Matrix: Water

Sample ID: **WC-MW-1D**

Date Collected: 02/22/17 10:30

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Xylene (Total)	0.53	U	ug/L	1	3.0	0.53	2/27/2017 14:07	J
cis-1,2-Dichloroethylene	0.24	U	ug/L	1	1.0	0.24	2/27/2017 14:07	J
cis-1,3-Dichloropropene	0.16	U	ug/L	1	1.0	0.16	2/27/2017 14:07	J
n-Butylbenzene	0.17	U	ug/L	1	1.0	0.17	2/27/2017 14:07	J
n-propylbenzene	0.63	U	ug/L	1	1.0	0.63	2/27/2017 14:07	J
p-Isopropyltoluene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 14:07	J
sec-butylbenzene	0.15	U	ug/L	1	1.0	0.15	2/27/2017 14:07	J
tert-butylbenzene	0.19	U	ug/L	1	1.0	0.19	2/27/2017 14:07	J
trans-1,2-Dichloroethylene	0.20	U	ug/L	1	1.0	0.20	2/27/2017 14:07	J
trans-1,3-Dichloropropylene	0.18	U	ug/L	1	5.0	0.18	2/27/2017 14:07	J
1,2-Dichloroethane-d4 (S)	98		%	1	70-128		2/27/2017 14:07	
Toluene-d8 (S)	98		%	1	77-119		2/27/2017 14:07	
Bromofluorobenzene (S)	97		%	1	86-123		2/27/2017 14:07	

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ANALYTICAL RESULTS QUALIFIERS

Workorder: J1701929 Wilson Cypress

PARAMETER QUALIFIERS

- U The compound was analyzed for but not detected.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

LAB QUALIFIERS

- J DOH Certification #E82574(AEL-JAX)(FL NELAC Certification)

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QUALITY CONTROL DATA

Workorder: J1701929 Wilson Cypress

QC Batch:	EXTj/3182	Analysis Method:	SW-846 8270D (SIM)
QC Batch Method:	SW-846 3510C	Prepared:	02/23/2017 09:30
Associated Lab Samples:	J1701929001, J1701929003, J1701929004, J1701929005, J1701929007, J1701929008		

METHOD BLANK: 2280724

Parameter	Units	Blank Result	Reporting Limit Qualifiers
SEMIVOLATILES			
Naphthalene	ug/L	0.19	0.19 U
2-Methylnaphthalene	ug/L	0.20	0.20 U
1-Methylnaphthalene	ug/L	0.20	0.20 U
Acenaphthylene	ug/L	0.17	0.17 U
Acenaphthene	ug/L	0.16	0.16 U
Fluorene	ug/L	0.15	0.15 U
Phenanthrene	ug/L	0.16	0.16 U
Anthracene	ug/L	0.14	0.14 U
Fluoranthene	ug/L	0.15	0.15 U
Pyrene	ug/L	0.14	0.14 U
Benzo[a]anthracene	ug/L	0.049	0.049 U
Chrysene	ug/L	0.13	0.13 U
Benzo[b]fluoranthene	ug/L	0.050	0.050 U
Benzo[k]fluoranthene	ug/L	0.19	0.19 U
Benzo[a]pyrene	ug/L	0.15	0.15 U
Indeno(1,2,3-cd)pyrene	ug/L	0.045	0.045 U
Dibenzo[a,h]anthracene	ug/L	0.095	0.095 U
Benzo[g,h,i]perylene	ug/L	0.19	0.19 U
Nitrobenzene-d5 (S)	%	85	34-139
2-Fluorobiphenyl (S)	%	82	36-125
p-Terphenyl-d14 (S)	%	86	41-138

LABORATORY CONTROL SAMPLE: 2280725

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
SEMIVOLATILES					
Naphthalene	ug/L	20	18	91	43-120
2-Methylnaphthalene	ug/L	20	17	85	39-123
1-Methylnaphthalene	ug/L	20	18	89	41-123
Acenaphthylene	ug/L	20	20	98	35-121
Acenaphthene	ug/L	20	20	99	46-120
Fluorene	ug/L	20	20	100	48-124
Phenanthrene	ug/L	20	21	103	49-125
Anthracene	ug/L	20	21	105	49-127
Fluoranthene	ug/L	20	22	112	48-130

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QUALITY CONTROL DATA

Workorder: J1701929 Wilson Cypress

LABORATORY CONTROL SAMPLE: 2280725

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Pyrene	ug/L	20	22	111	48-131	
Benzo[a]anthracene	ug/L	20	21	106	49-130	
Chrysene	ug/L	20	22	111	49-130	
Benzo[b]fluoranthene	ug/L	20	17	85	43-134	
Benzo[k]fluoranthene	ug/L	20	18	91	44-134	
Benzo[a]pyrene	ug/L	20	17	87	43-130	
Indeno(1,2,3-cd)pyrene	ug/L	20	16	79	38-137	
Dibenzo[a,h]anthracene	ug/L	20	16	78	34-141	
Benzo[g,h,i]perylene	ug/L	20	16	82	34-138	
Nitrobenzene-d5 (S)	%			94	34-139	
2-Fluorobiphenyl (S)	%			87	36-125	
p-Terphenyl-d14 (S)	%			102	41-138	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2282203 2282204 Original: J1701982001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	RPD	Qualifiers
SEMIVOLATILES											
Naphthalene	ug/L	0.28	20	14	15	70	74	43-120	6	30	
2-Methylnaphthalene	ug/L	0	20	14	14	68	70	39-123	2	30	
1-Methylnaphthalene	ug/L	0	20	14	15	71	74	41-123	3	30	
Acenaphthylene	ug/L	0	20	16	17	80	86	35-121	8	30	
Acenaphthene	ug/L	0	20	16	17	81	87	46-120	7	30	
Fluorene	ug/L	0	20	17	18	87	90	48-124	3	30	
Phenanthrene	ug/L	0	20	20	20	98	98	49-125	0	30	
Anthracene	ug/L	0	20	19	17	95	86	49-127	9	30	
Fluoranthene	ug/L	0	20	22	22	109	108	48-130	2	30	
Pyrene	ug/L	0	20	22	21	110	105	48-131	5	30	
Benzo[a]anthracene	ug/L	0	20	21	20	103	100	49-130	3	30	
Chrysene	ug/L	0	20	21	21	107	107	49-130	0	30	
Benzo[b]fluoranthene	ug/L	0	20	18	17	88	87	43-134	1	30	
Benzo[k]fluoranthene	ug/L	0	20	19	19	93	94	44-134	1	30	
Benzo[a]pyrene	ug/L	0	20	15	13	77	64	43-130	18	30	
Indeno(1,2,3-cd)pyrene	ug/L	0	20	18	19	91	93	38-137	2	30	
Dibenzo[a,h]anthracene	ug/L	0	20	19	19	94	95	34-141	1	30	
Benzo[g,h,i]perylene	ug/L	0	20	18	19	92	94	34-138	3	30	
Nitrobenzene-d5 (S)	%					69	80	34-139	14	30	
2-Fluorobiphenyl (S)	%					71	73	36-125	2	30	
p-Terphenyl-d14 (S)	%					102	98	41-138	4	30	

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QUALITY CONTROL DATA

Workorder: J1701929 Wilson Cypress

QC Batch:	DGMJ/2593	Analysis Method:	SW-846 6010
QC Batch Method:	SW-846 3010A	Prepared:	02/27/2017 07:45
Associated Lab Samples: J1701929001, J1701929003, J1701929004, J1701929005, J1701929006, J1701929007, J1701929008			

METHOD BLANK: 2281396

Parameter	Units	Blank Result	Reporting Limit Qualifiers
METALS			
Silver	mg/L	0.00044	0.00044 U
Arsenic	mg/L	0.0085	0.0085 U
Barium	mg/L	0.00028	0.00028 U
Cadmium	mg/L	0.00032	0.00032 U
Chromium	mg/L	0.00050	0.00050 U
Lead	mg/L	0.0013	0.0013 U
Selenium	mg/L	0.0068	0.0068 U

LABORATORY CONTROL SAMPLE & LCSD: 2281397 2281398

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
METALS										
Silver	mg/L	0.4	0.40	0.41	101	102	80-120	1	20	
Arsenic	mg/L	0.4	0.41	0.41	102	101	80-120	1	20	
Barium	mg/L	0.4	0.40	0.40	99	100	80-120	1	20	
Cadmium	mg/L	0.4	0.41	0.41	101	103	80-120	1	20	
Chromium	mg/L	0.4	0.41	0.41	102	103	80-120	1	20	
Lead	mg/L	0.4	0.38	0.38	96	96	80-120	0	20	
Selenium	mg/L	0.4	0.41	0.41	102	102	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2281399 2281400 Original: J1701929001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
METALS											
Silver	mg/L	0	0.4	0.42	0.42	104	105	75-125	0	20	
Arsenic	mg/L	0	0.4	0.42	0.42	104	104	75-125	0	20	
Barium	mg/L	0.051	0.4	0.45	0.45	99	99	75-125	1	20	
Cadmium	mg/L	0.00031	0.4	0.41	0.40	102	101	75-125	1	20	
Chromium	mg/L	0.00083	0.4	0.41	0.41	103	103	75-125	0	20	
Lead	mg/L	0	0.4	0.38	0.38	95	95	75-125	0	20	
Selenium	mg/L	0	0.4	0.39	0.40	99	99	75-125	0	20	

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QUALITY CONTROL DATA

Workorder: J1701929 Wilson Cypress

QC Batch: DGMj/2595 Analysis Method: SW-846 7470A
QC Batch Method: SW-846 7470A Prepared: 02/27/2017 11:00
Associated Lab Samples: J1701929001, J1701929003, J1701929004, J1701929005, J1701929006, J1701929007, J1701929008

METHOD BLANK: 2281978

Parameter	Units	Blank Result	Reporting Limit Qualifiers
METALS			
Mercury	mg/L	0.000011	0.000011 U

LABORATORY CONTROL SAMPLE & LCSD: 2281979 2281980

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
METALS										
Mercury	mg/L	0.002	0.0021	0.0021	105	107	80-120	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2281981 2281982 Original: J1701825001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
METALS											
Mercury	mg/L	8.5e-005	0.01	0.010	0.011	101	106	80-120	4	20	

QC Batch: MSVj/3348 Analysis Method: SW-846 8260C
QC Batch Method: SW-846 5030B Prepared: 02/27/2017 09:46
Associated Lab Samples: J1701929001, J1701929002, J1701929003, J1701929004, J1701929005, J1701929007, J1701929008

METHOD BLANK: 2283156

Parameter	Units	Blank Result	Reporting Limit Qualifiers
VOLATILES			
Dichlorodifluoromethane	ug/L	0.15	0.15 U
Chloromethane	ug/L	0.21	0.21 U
Vinyl Chloride	ug/L	0.20	0.20 U
Bromomethane	ug/L	0.24	0.24 U
Chloroethane	ug/L	0.33	0.33 U

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QUALITY CONTROL DATA

Workorder: J1701929 Wilson Cypress

METHOD BLANK: 2283156

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Trichlorofluoromethane	ug/L	0.32	0.32	U
Acetone	ug/L	2.1	2.1	U
1,1-Dichloroethylene	ug/L	0.18	0.18	U
Methylene Chloride	ug/L	2.5	2.5	U
Carbon Disulfide	ug/L	0.21	0.21	U
trans-1,2-Dichloroethylene	ug/L	0.20	0.20	U
Methyl tert-butyl Ether (MTBE)	ug/L	0.17	0.17	U
1,1-Dichloroethane	ug/L	0.14	0.14	U
2-Butanone (MEK)	ug/L	0.43	0.43	U
cis-1,2-Dichloroethylene	ug/L	0.24	0.24	U
Chloroform	ug/L	0.18	0.18	U
2,2-Dichloropropane	ug/L	0.22	0.22	U
1,2-Dichloroethane	ug/L	0.23	0.23	U
1,1,1-Trichloroethane	ug/L	0.22	0.22	U
1,1-Dichloropropene	ug/L	0.22	0.22	U
Carbon Tetrachloride	ug/L	0.36	0.36	U
Benzene	ug/L	0.16	0.16	U
1,2-Dichloropropane	ug/L	0.20	0.20	U
Trichloroethene	ug/L	0.29	0.29	U
Bromodichloromethane	ug/L	0.25	0.25	U
cis-1,3-Dichloropropene	ug/L	0.16	0.16	U
4-Methyl-2-pentanone (MIBK)	ug/L	0.47	0.47	U
trans-1,3-Dichloropropylene	ug/L	0.18	0.18	U
1,1,2-Trichloroethane	ug/L	0.30	0.30	U
Toluene	ug/L	0.23	0.23	U
1,3-Dichloropropane	ug/L	0.24	0.24	U
2-Hexanone	ug/L	0.44	0.44	U
Dibromochloromethane	ug/L	0.33	0.33	U
Ethylene Dibromide (EDB)	ug/L	0.020	0.020	U
Tetrachloroethylene (PCE)	ug/L	0.36	0.36	U
1,1,1,2-Tetrachloroethane	ug/L	0.26	0.26	U
Chlorobenzene	ug/L	0.21	0.21	U
Ethylbenzene	ug/L	0.24	0.24	U
Bromoform	ug/L	0.43	0.43	U
Styrene	ug/L	0.23	0.23	U
1,1,2,2-Tetrachloroethane	ug/L	0.20	0.20	U
1,2,3-Trichloropropane	ug/L	0.30	0.30	U
Isopropylbenzene	ug/L	0.14	0.14	U
Bromobenzene	ug/L	0.24	0.24	U
n-propylbenzene	ug/L	0.63	0.63	U
2-Chlorotoluene	ug/L	0.15	0.15	U
4-Chlorotoluene	ug/L	0.17	0.17	U
1,3,5-Trimethylbenzene	ug/L	0.15	0.15	U
tert-butylbenzene	ug/L	0.19	0.19	U

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QUALITY CONTROL DATA

Workorder: J1701929 Wilson Cypress

METHOD BLANK: 2283156

Parameter	Units	Blank Result	Reporting Limit Qualifiers
1,2,4-Trimethylbenzene	ug/L	0.18	0.18 U
sec-butylbenzene	ug/L	0.15	0.15 U
1,3-Dichlorobenzene	ug/L	0.19	0.19 U
1,4-Dichlorobenzene	ug/L	0.22	0.22 U
1,2-Dichlorobenzene	ug/L	0.18	0.18 U
p-Isopropyltoluene	ug/L	0.15	0.15 U
n-Butylbenzene	ug/L	0.17	0.17 U
1,2-Dibromo-3-Chloropropane	ug/L	0.11	0.11 U
1,2,4-Trichlorobenzene	ug/L	0.35	0.35 U
Naphthalene	ug/L	0.27	0.27 U
Hexachlorobutadiene	ug/L	0.63	0.63 U
1,2,3-Trichlorobenzene	ug/L	0.54	0.54 U
Xylene (Total)	ug/L	0.53	0.53 U
1,2-Dichloroethane-d4 (S)	%	99	70-128
Toluene-d8 (S)	%	98	77-119
Bromofluorobenzene (S)	%	98	86-123

LABORATORY CONTROL SAMPLE & LCSD: 2283157 2283158

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD Qualifiers
VOLATILES									
Vinyl Chloride	ug/L	20	21	19	103	97	70-130	6	30
1,1-Dichloroethylene	ug/L	20	21	20	104	99	70-130	4	30
Methyl tert-butyl Ether (MTBE)	ug/L	20	17	17	86	83	70-130	4	30
cis-1,2-Dichloroethylene	ug/L	20	20	19	99	97	70-130	3	30
Chloroform	ug/L	20	19	19	97	95	70-130	3	30
Benzene	ug/L	20	20	20	99	98	70-130	0	30
Trichloroethene	ug/L	20	19	19	96	94	70-130	2	30
Toluene	ug/L	20	18	18	89	88	70-130	2	30
Tetrachloroethylene (PCE)	ug/L	20	18	17	88	87	70-130	1	30
Chlorobenzene	ug/L	20	18	17	88	85	70-130	3	30
Ethylbenzene	ug/L	20	18	18	89	89	70-130	1	30
1,2,4-Trimethylbenzene	ug/L	20	17	16	87	82	70-130	6	30
1,3-Dichlorobenzene	ug/L	20	18	18	90	90	70-130	0	30
1,2-Dichlorobenzene	ug/L	20	18	18	90	92	70-130	1	30
Xylene (Total)	ug/L	60	54	53	90	88	70-130	2	30
1,2-Dichloroethane-d4 (S)	%				106	108	70-128	2	
Toluene-d8 (S)	%				99	98	77-119	1	
Bromofluorobenzene (S)	%				97	104	86-123	6	

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QUALITY CONTROL DATA

Workorder: J1701929 Wilson Cypress

MATRIX SPIKE SAMPLE: 2283159

Original: J1701929001

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
VOLATILES							
Vinyl Chloride	ug/L	0	20	21	104	70-130	
1,1-Dichloroethylene	ug/L	0	20	21	104	70-130	
Methyl tert-butyl Ether (MTBE)	ug/L	0	20	18	88	70-130	
cis-1,2-Dichloroethylene	ug/L	0	20	21	104	70-130	
Chloroform	ug/L	0	20	20	101	70-130	
Benzene	ug/L	0	20	21	104	70-130	
Trichloroethene	ug/L	0	20	20	98	70-130	
Toluene	ug/L	0	20	20	101	70-130	
Tetrachloroethylene (PCE)	ug/L	0	20	19	95	70-130	
Chlorobenzene	ug/L	0	20	20	98	70-130	
Ethylbenzene	ug/L	0	20	21	103	70-130	
1,2,4-Trimethylbenzene	ug/L	0	20	19	97	70-130	
1,3-Dichlorobenzene	ug/L	0	20	21	106	70-130	
1,2-Dichlorobenzene	ug/L	0	20	22	108	70-130	
Xylene (Total)	ug/L	0	60	62	103	70-130	
1,2-Dichloroethane-d4 (S)	%	97			99	70-128	
Toluene-d8 (S)	%	99			97	77-119	
Bromofluorobenzene (S)	%	99			102	86-123	

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: J1701929 Wilson Cypress

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
J1701929001	WC-MW-20	SW-846 3510C	EXTj/3182	SW-846 8270D (SIM)	MSSj/1909
J1701929003	WC-MW-2	SW-846 3510C	EXTj/3182	SW-846 8270D (SIM)	MSSj/1909
J1701929004	WC-MW-3	SW-846 3510C	EXTj/3182	SW-846 8270D (SIM)	MSSj/1909
J1701929005	WC-MW-4	SW-846 3510C	EXTj/3182	SW-846 8270D (SIM)	MSSj/1909
J1701929007	WC-MW-1	SW-846 3510C	EXTj/3182	SW-846 8270D (SIM)	MSSj/1909
J1701929008	WC-MW-1D	SW-846 3510C	EXTj/3182	SW-846 8270D (SIM)	MSSj/1909
J1701929001	WC-MW-20	SW-846 3010A	DGMj/2593	SW-846 6010	ICPj/1809
J1701929003	WC-MW-2	SW-846 3010A	DGMj/2593	SW-846 6010	ICPj/1809
J1701929004	WC-MW-3	SW-846 3010A	DGMj/2593	SW-846 6010	ICPj/1809
J1701929005	WC-MW-4	SW-846 3010A	DGMj/2593	SW-846 6010	ICPj/1809
J1701929006	WC-MW-4D	SW-846 3010A	DGMj/2593	SW-846 6010	ICPj/1809
J1701929007	WC-MW-1	SW-846 3010A	DGMj/2593	SW-846 6010	ICPj/1809
J1701929008	WC-MW-1D	SW-846 3010A	DGMj/2593	SW-846 6010	ICPj/1809
J1701929001	WC-MW-20	SW-846 7470A	DGMj/2595	SW-846 7470A	CVAj/1346
J1701929003	WC-MW-2	SW-846 7470A	DGMj/2595	SW-846 7470A	CVAj/1346
J1701929004	WC-MW-3	SW-846 7470A	DGMj/2595	SW-846 7470A	CVAj/1346
J1701929005	WC-MW-4	SW-846 7470A	DGMj/2595	SW-846 7470A	CVAj/1346
J1701929006	WC-MW-4D	SW-846 7470A	DGMj/2595	SW-846 7470A	CVAj/1346
J1701929007	WC-MW-1	SW-846 7470A	DGMj/2595	SW-846 7470A	CVAj/1346
J1701929008	WC-MW-1D	SW-846 7470A	DGMj/2595	SW-846 7470A	CVAj/1346
J1701929001	WC-MW-20	SW-846 5030B	MSVj/3348	SW-846 8260C	MSVj/3349
J1701929002	WC-MW-20D	SW-846 5030B	MSVj/3348	SW-846 8260C	MSVj/3349
J1701929003	WC-MW-2	SW-846 5030B	MSVj/3348	SW-846 8260C	MSVj/3349
J1701929004	WC-MW-3	SW-846 5030B	MSVj/3348	SW-846 8260C	MSVj/3349
J1701929005	WC-MW-4	SW-846 5030B	MSVj/3348	SW-846 8260C	MSVj/3349
J1701929007	WC-MW-1	SW-846 5030B	MSVj/3348	SW-846 8260C	MSVj/3349
J1701929008	WC-MW-1D	SW-846 5030B	MSVj/3348	SW-846 8260C	MSVj/3349

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13025 • 954.889.2288 • Fax 954.889.2281
33619 • 813.630.9616 • Fax 813.630.4327

Client Name: Ayres Associates		Project Name: Wilson Cypress		BOTTLE SIZE & TYPE	40 mL	250 mL	250 mL									LABORATORY I.D. NUMBER
Address: 5201 E. Terrace Dr., #200		Project Number: 19-0668.25			glass	amber glass	plastic									
Medison, WI 53718		PO Number:														
Phone: 608 443 1200		FDEP Facility No:														
FAX:		FDEP Facility Address:														
Contact: Ben Peotter		Special Instructions: Send EDD														
Sampled By: EG i. JS				ANALYSIS REQUIRED	VOC	PAH	(dis) RCAA metals									
Turn Around Time: ☒ STANDARD ☐ RUSH																
AEL Profile #:																
SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING DATE TIME		MATRIX	NO. COUNT	Preservation									
							Field-Filtered?									
WC-MW-28			2/21/17	4:10pm	GW	5		X	X	X						001
WC-MW-20 D			2/21/17	4:10pm	GW	1		X								002
WC-MW-2			2/21/17	4:45pm	GW	5		X	X	X						003
WC-MW-3			2/21/17	9:05am	GW	5		X	X	X						004
WC-MW-4			2/22/17	9:35am	GW	5		X	X	X						005
WC-MW-4 D			2/22/17	9:35am	GW	1				X						006
WC-MW-1			2/22/17	10:10am	GW	5		X	X	X						007
WC-MW-1 D			2/22/17	10:30	GW	5		X	X	X						008

Matrix Code: WW = wastewater SW = surface water GW = ground water DW = drinking water O = oil A = air SO = soil SL = sludge Preservation Code: I = Ice H = (HCl) S = (H2SO4) N = (HNO3) T = (Sodium Thiosulfate)

Received on Ice ☒ Yes ☐ No ☐ Temp taken from sample ☐ Temp from blank ☐ Where required, pH checked Temp. when received (observed) 9 °C Temp. when received (corrected) 9 °C

DCN: AD-051 Form last revised 11/17/16

Device used for measuring Temp by unique identifier (circle IR temp gun used) J: 9A G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V

Relinquished by:	Date	Time	Received by:	Date	Time
<i>Eoinn Ryan</i>	2/22/17	11:00am	<i>Donna B...</i>	2/22/17	11:25
<i>Donna B...</i>	2/22/17	12:20	<i>Donna B...</i>	2/22/17	12:20

FOR DRINKING WATER USE:

(When PWS Information not otherwise supplied) PWS ID: _____

Contact Person: _____ Phone: _____

Supplier of Water: _____

Site Address: _____

Client: AvusProject name: Wilson CypressDate/Time Rcvd: 2-22-17 1220Log-In request number: 7701929Received by: BelCompleted by: BJ**Cooler/Shipping Information:**Courier: ☒ AEL ☐ Client ☐ UPS ☐ Blue Streak ☐ FedEx ☐ AES ☐ ASAP ☐ Other (describe):Type: ☒ Cooler ☐ Box ☐ Other (describe)

Cooler temperature: Identify the cooler and document the temperature blank or ice water measurement

Cooler ID						
Temp (°C)	<u>4</u>					
Temp taken from	☐ Sample Bottle ☒ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler
Temp measured with	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):

Other Information:

Any discrepancies should be explained in the "Comments" section below.

CHECKLIST				YES	NO	NA
1.	Were custody seals on shipping container(s) intact?					
2.	Were custody papers properly included with samples?					
3.	Were custody papers properly filled out (ink, signed, match labels)?					
4.	Did all bottles arrive in good condition (unbroken)?					
5.	Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?					
6.	Did the sample labels agree with the chain of custody?					
7.	Were correct bottles used for the tests indicated?					
8.	Were proper sample preservation techniques indicated on the label?					
9.	Were samples received within holding times?					
10.	Were all VOA vials free of the presence of air bubbles?					
11.	Have all Soil VOA Vials and Encores been placed in a freezer within 48 hours of collection?					
12.	Were samples in direct contact with wet ice? If "No," check one: ☐ NO ICE ☐ BLUE ICE					
13.	Was the cooler temperature less than 6°C?					
14.	Where pH preservation is required, are sample pHs checked and any anomalies recorded by Sample control? Are all <2 or >10? Note: VOA samples are checked by laboratory analysts.					
15.	Was sufficient sample volume provided to perform all tests?					
16.	If for Bacteriological testing, were containers supplied by AEL? (See QA officer if answer is no)					
17.	Were all sample containers provided by AEL? (Other than Bacteriological)					
18.	Were samples accepted into the laboratory?					
19.	When necessary to split samples into other bottles, is it noted in the comments?					

Comments: (Note all sample(s) and container (s)) with a "No" checklist response in this comment section)